SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017 & KS Q ISO/IEC 17025:2017

HCT Co., Ltd.
74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea
Phone : 82-31-645-6300, Fax : 82-31-645-6401, e-mail : hct.qm@hct.co.kr

CALIBRATION

Valid To : Jan. 07, 2026. Accreditation No : KC00-011

In recognition of the successful completion of the KOLAS evaluation process,
accreditation is granted to this laboratory to perform the following calibrations

Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site
102. Linear dimension			104. Form			10613	Outside micrometers	Y
10201	Balls	N	10401	Form testers	Y	10615	Particle counters	Y
10203	Electrical/machanical comperators	Y	10404	Optical flats	N	10617	Standard sieves	N
			10405	Optical parallels	N	10620	Welding gauges	N
10206	Dial/cylinder gauge testers	N	10406	Parallel blocks	N	10621	Optical micrometers	N
10207	Doctor blades	N	10407	Precision surface plates	Y	10622	Particle dilution Systems	Y
10209	End bars	N	10408	Profile gauges	N	201. Mass		
10210	Extensometers, linear displacement transducers	Y	10409	Roundness measurement instruments	Y	20105	Counter beam balances	Y
						20106	Dial platform scale balances	Y
10211	Filler gauges	N	10412	Straight edges	N	20108	Direct reading balances	Y
10212	Film applicators	N	10413	Straight rules	N	20109	Electric balances	Y
10213	Gap gauges	N	10415	Test bars	N	20112	Platform scale balances	Y
10214	Gauge blocks, by comparison	N	10416	Spherometers	N	20113	Spring scale balances	Y
10216	Height gauges/ measuring machines	Y	105. Complex geometry			20114	Trip balances	N
			10501	Base gauges for electric bulb	N	20116	Weights	Y
10219	Linear scales	N				202. Force		
10220	Standard measuring machines	Y	10503	Contact coordinate measuring machines	Y	20202	Force measuring devices	N
10223	Electronic micrometers	N				20203	Tension/compression testing machines	Y
10224	Height micrometers, riser blocks	N	10504	Non-contact coordinate measuring machines	Y			
						20204	Push-pull gauges	N
10225	Laser scan micrometers	Y	10505	Gauge block accessories	N	203. Torque		
10227	Standard tape rules, peripheral gauges	N	10508	Hardness indenters	N	20302	Torque measuring devices	N
			10511	Measuring microscopes, profile projectors	Y	20303	Torque wrenches/drivers	N
10228	Cylindrical plug/pin gauges, thread measuring wire gauges	N				204. Pressure		
			10512	Micro measuring microscopes	Y	20401	Altimeters	Y
10229	Radius gauges	N	10513	Orifice plates	N	20402	Manometers	Y
10230	Cylindrical ring gauges	N	10517	Stylus type roughness testers	Y	20406	Absolute pressure gauges	Y
10231	Step blocks	N				20408	Compound pressure gauges	Y
10232	Step gauges	N	10518	Socket gauges for electric bulb	N	20409	Differential pressure gauges	Y
10233	Taper thickness gauges	N				20411	Gauge pressure gauges	Y
10234	Ultrasonic thickness gauges	Y	10525	Thread plug gauges	N	20412	Pressure transducers /transmitters	Y
10235	Ultrasonic/ coating thickness specimens	N	10529	V-blocks, box blocks	N			
			106. Various dimensional			20413	Dial type vacuum gauges	Y
10236	Coating thickness testers	Y	10601	Inside/outside/gear tooth calipers, caliper gauges	Y	20414	Water Depth meters	Y
10237	Torque arms	N				206. Volume		
10238	Width measuring specimens	N	10603	Cylinder/bore gauges	Y	20601	Volumetric glasswares	N
103. Angle			10604	Depth gauges, depth micrometers	Y	20602	Pycnometers	N
10304	Bevel protractors	N				20605	Concrete air content meters	N
10311	Plate/square/electric levels	N	10605	Dial/digital gauges	Y	20606	Piston type volume meters	N
10317	Sine bars, plates, tables, centers	N	10608	Grind gauges	N	207. Density		
			10609	Micro indicators, test indicators	Y	20702	Liquid density meters	N
10318	Squareness testers, right angle testers	N				20704	Salinity meters	N
			10610	Micrometer heads	N	20705	Sucrise meters	N
10319	Cylindrical squares	N	10611	3-point micrometers	Y	20707	Chloride meters	N
10320	Precision squares	N	10612	Inside micrometers	Y	208. Viscosity		

Field Code	Item of Calibration	on-site
208. Viscosity		
20802	Dynamic viscometers; rotational, etc.	N
209. Fluid flow		
20901	Anemometers; hot-wire	N
20902	Anemometers; pitot tube, etc.	N
20908	Gas flowmeters; differential pressure	Y
20909	Liquid flowmeters; differential pressure	N
20910	Liquid flowmeters; electromagnetic	N
20911	Gas flowmeters; thermal mass, etc.	Y
20912	Liquid flowmeters; Coriolis, etc.	N
20914	Gas flowmeters; positive displacement	Y
20915	Liquid flowmeters; positive displacement	N
20916	Gas flowmeters; turbine	Y
20917	Liquid flowmeters; turbine	N
20918	Gas flowmeters; ultrasonic	Y
20919	Liquid flowmeters; ultrasonic	N
20920	Gas flowmeters; variable area	Y
20921	Liquid flowmeters; variable area	N
20922	Gas flowmeters; vortex	Y
20923	Liquid flowmeters; vortex	N
20925	Anemometers; vane, etc.	N
301. Time & frequency		
30102	Frequency standards	N
30103	General frequency sources	Y
30104	Frequency meters/counters	Y
30105	Time interval sources	Y
30106	Time interval meters/stop watches/timers	Y
302. Velocity & revolution		
30201	Standard RPM generators	Y
30202	Contact type tachometers	Y
30203	Photo tachometers /stroboscopes	Y
30205	Wow-flutter generators	Y
30206	Wow-flutter meters	Y
401. DC voltage& current		
40101	DC ammeters	Y
40102	Transconductance amplifiers	Y
40103	DC voltage/ current calibrators	Y
40104	Electrical temperature calibrators	Y
40105	DC current shunts	Y
40106	Galvanometers/null detectors	Y
40108	DC power supplies	Y
40110	DC voltage dividers	N
40111	DC voltage standards	Y
40112	DC voltmeters	Y
40113	Static/Ionic voltmeters	N
402. Resistance, capacitance inductance		
40201	Capacitance bridges /indicators	Y
40202	Decade capacitors	Y
40204	Standard capacitors	Y
40205	Earth testers	Y
40208	Inductors	Y
40210	Insulation testers	Y
40211	Q-meters	Y
40213	Resistance bridges & similar instruments	Y
40214	Resistance meters	Y
40215	Resistors	Y
40216	Electrical conductivity meters	N
40217	Impedance bridges/LCR meters	Y
403. AC voltage, current & power		
40301	AC ammeters	Y
40302	Clamp ammeters/voltmeters	Y
40303	AC voltage/current calibrators	Y
40304	Wattmeter calibrators	Y
40305	AC current shunts	Y
40310	Power factor meters	Y
40311	AC power meters	Y
40312	AC power supplies	Y
40313	Puncture/safety testers	Y
40314	Power recorders	Y
40318	AC voltmeters	Y
404. Other DC & LF measuremnets		
40401	LF amplifiers	Y
40402	DC/LF attenuators	Y
40403	Multimeter calibrators	Y
40404	Oscilloscope calibrators	Y
40406	Video signal generators	Y
40407	Audio distortion analyzers /meters	Y
40408	LF filters	Y
40409	LF/audio signal analyzers	Y
40410	Line frequency meters	Y
40411	Function generators	Y
40412	Genescopes	Y
40413	AC/DC high voltage voltmeters	Y
40416	Leakage current testers	Y
40417	Electronic AC/DC loads	Y
40419	Analogue/digital multimeters	Y
40420	Noise meters	Y
40421	Oscilloscopes	Y
40422	LF phase meters	Y
40423	Random wave generators	Y
40424	Voltage/current recorders	Y
40425	Relay test sets	Y
40426	LF signal generators	Y
40427	LF spectrum analyzers	Y
40429	Sweep generators	Y
40432	Transistor curve tracers	Y
40433	Waveform analyzers	Y
40434	AC/DC high voltage generators	Y
40435	AC/DC high voltage probes	Y
40436	Logic analyzers	Y
40437	Telephone testers	Y
40438	Video signal analyzers	Y
405. Low frequency electric & magnetic field		
40503	Flux meters	N
40504	Flux sources	N
40508	Magnetometers	N
40510	Reference/standard magnets	N
406. Radio frequency measurement		
40601	RF amplifiers	Y
40602	Coaxial attenuators	Y
40603	Waveguide attenuators	N
40605	Burst pulse generators	Y
40606	Attenuator calibrators	Y
40607	RF power meter calibrators	Y
40608	EMC transducers; current probes, absorbing clamps, etc.	Y
40610	Coaxial directional couplers /splitters	Y
40611	Waveguide directional couplers	N
40613	Electrostatic discharge generators	N
40614	EMC receivers	Y
40615	RF filters	Y
40616	RF impedance meters	Y
40617	RF impulse generators	Y
40618	Line impedance stabilization networks; LISN, CDN, ISN, etc.	Y
40619	Coaxial standard mismatches	Y
40621	Mobile communication test sets	Y
40622	Modulation meters	Y
40623	Network analyzers	Y
40624	Noise figure meters	Y
40625	Noise generators	Y
40626	Noise impulse simulators	Y
40635	RF power meters	Y
40636	Diode power sensors	Y
40637	Thermocouple power sensors	Y
40638	Pulse generators	Y
40639	Radar test sets	Y
40640	RF signal generators	Y
40641	RF spectrum analyzers	Y
40642	RF speed guns	Y
40643	Surge generators	Y
40645	RF terminations	Y
40646	Coaxial thermistor mounts	Y
40648	Transmission trouble testers	Y
40650	RF voltmeters	Y
40651	Vector voltmeters	Y
40652	Field strength meters	Y
40653	AM/FM test sources	Y
40654	Dip simulators	Y

Field Code	Item of Calibration	on-site
407. Field strength & antenna		
40701	Microwave leakage monitors	N
40702	Probes	N
40703	Dipole antennas	N
40704	Loop antennas	N
40705	Monopole antennas	N
40707	Horn antennas	N
501. Contact thermometry		
50101	Temperature generators; ovens, furnaces, isothermal liquid baths, ice-point baths, dry-block calibrators	Y
50102	Temperature indicators /recorders/controllers, temperature calibrators	Y
50103	Glass thermometers; liquid-in-glass, Beckmann	N
50104	Resistance thermometers; SPRT, IPRT, thermistors, etc.	Y
50105	Thermal expansion thermometers; bimetal, gas or liquid type	Y
50106	Thermomecoules: noble metal, base metal, pure metal, special type, etc.	Y
50107	Temperature transducers	Y
502. Non contact thermometry		
50204	Standard radiation thermometers	N
50205	Thermal image apparatus	N
50206	Blackbody furnaces	N
503. Humidity		
50301	Dew-point hygrometers; chilled mirror, alumina thin film, etc.	N
50302	Relative humidity hygrometers; polimer thin film, hair, etc.	Y
50304	Temperature humidity recorders;hygrothermograph, etc.	N
50305	Transducers; dew-point/ relative humidity	Y
50306	Humidity generators; two-pressure, flow mixing two-temperature, humidity gererator, constant temperature and humidity chamber, etc.	Y
601. Sound in air		
60102	Sound calibrators	N
60104	Microphones	N
60106	Sound level meters	Y
603. Vibration		
60301	Vibration calibrators	Y
60302	Vibration transducers	N
60303	Vibration measuring instruments	N
701. Photometry		
70101	Illuminance meters	Y
70102	Luminance meters	Y
70103	Total luminous flux meters	Y
70104	Luminous intensity meters	Y
702. Property of detectors & sources		
70202	Color temperature meters	Y
70203	Color temperature standard lamps	Y
70204	Colorimeters; source color	Y
70209	Total luminous flux standard lamps	N
70213	Display color analyzers; luminance, chromaticity, white balance, etc.	N
70214	Luminous intensity standard lamps	N
70215	Spectral irradiance standard lamps	N
70216	Total spectral radiant flux standard lamps	N
70217	Luminance standard sources	N
70218	Spectral radiance standard sources	N
70219	UV irradiance meters	N
70220	Spectral irradiance meters	N
70221	Total spectral radiant flux meters	Y
70222	Spectral radiance meters	N
70223	Spectral radiant intensity meters	N
703. Property of materials		
70301	Colorimeters; material color	Y
70306	Gloss meters	Y
70315	Optical densitometers	Y
70319	Reflectance meters	Y
70321	Refractometers	N
70323	Transmittance meters	Y
70325	Spectrophotometers including FT-IR spectrophotometers	Y
704. Fiber optics		
70402	Broadband light sources	N
70410	Optical attenuators	N
70413	Optical loss testers	N
70415	Optical multimeters	N
70417	Optical spectrum analyzers	N
70418	Optical time domain reflectometers; OTDR	N
70430	ASE light sources	N
70433	Optical power stabilized lasers and LDs	N
901. Chemical analysis		
90101	Breath alcohol anayzers	N
90102	Environmental air quality monitoring instruments	N
90103	Gas analyzers	N
90104	Exhaust gas test instruments	N

Note

1. This laboratory provides calibration services in permanent standard laboratory and at on-site.

2. Laboratory conducts on-site calibration should meet requirements of KOLAS-SR-007.

3. On-site calibration is allowed to items with marking 'Y', not allowed to items with marking 'N'.

4. Measurement uncertainty normally is quoted as an expanded uncertainty at a coverage probability of 95 %, which usually requires the use of a coverage factor of k=2. It expresses the lowest uncertainty of measurement that can be provided by accredited calbration laboratories in normal conditions.

5.Due to the calibration environment such as reference standards or customers' facilities, it is note that uncertainty of measurement on a calibration certificate may be expressed larger than measurement uncertainty on scope of accreditation in general.

102. Linear dimension

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Balls	10201	(0 ~ 100) mm	$\sqrt{(0.27\,\mu m)^2+(12\times10^{-6}\times l_0)^2}$	Gauge blocks, Standard measuring machines /HCT-CS-223-10201
Electrical /mechanical comparators	10203	(0 ~ 5) mm	0.12 µm	Gauge blocks /HCT-CS-334-10203
Dual/cylinder gaude testers	10206	(0 ~ 25) mm (25 ~ 100) mm	0.21 µm 0.25 µm	Gauge blocks, Electronic micrometers /HCT-CS-001-10206
Doctor blades	10207	(0 ~ 10) mm	1.7 µm	Height micrometers, Precision surface plates, Electronic micrometers /HCT-CS-335-10207
End bars	10209	(0 ~ 500) mm (500 ~ 1 000) mm	$\sqrt{(0.15\,\mu m)^2+(1.9\times10^{-6}\times l_0)^2}$ $\sqrt{(0.16\,\mu m)^2+(1.8\times10^{-6}\times l_0)^2}$	Gauge blocks, Electronic micrometers /HCT-CS-183-10209
Extensometers, linear displacement transducers	10210	(0 ~ 50) mm (50 ~ 100) mm (100 ~ 1 000) mm	$\sqrt{(0.14\,\mu m)^2+(2.0\times10^{-6}\times l_0)^2}$ $\sqrt{(0.78\,\mu m)^2+(2.0\times10^{-6}\times l_0)^2}$ $\sqrt{(7.8\,\mu m)^2+(1.8\times10^{-6}\times l_0)^2}$	Gauge blocks /HCT-CS-184-10210
Filter gauges	10211	(0.01 ~ 5) mm	0.33 µm	Standard measuring machines /HCT-CS-002-10211
Film applicators	10212	(0 ~ 10) mm	1.7 µm	Height micrometers, Precision surface plates, Electronic micrometers /HCT-CS-336-10212
Gap gauges	10213	(1 ~ 300) mm	2.7 µm	Height micrometers, Electronic micrometers /HCT-CS-003-10213
Gap gauges/measuring machines	10214	(0.5 ~ 100) mm	$\sqrt{(71nm)^2+(1.3\times10^{-6}\times l_0)^2}$	Gauge block comparators, Gauge blocks /HCT-CS-254-10214
Height gauges /measuring machines	10216	(0 ~ 1 000) mm	$\sqrt{(1.2\,\mu m)^2+(3.0\times10^{-6}\times l_0)^2}$	Gauge blocks /HCT-CS-005-10216
Linear scales	10219	(0 ~ 2 000) mm	$\sqrt{(1.5\,\mu m)^2+(1.4\times10^{-6}\times l_0)^2}$	Lasor interferometers
Standard measuring machines	10220	(0 ~ 500) mm	$\sqrt{(0.25\,\mu m)^2+(2.2\times10^{-6}\times l_0)^2}$	Gauge blocks, Long gauge blocks /HCT-CS-224-10220

102. Linear dimension

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Electronic micrometers	10223	(0 ~ 0.02) mm (0.02 ~ 0.2) mm (0.2 ~ 2) mm	0.08 µm 0.16 µm 0.76 µm	Gauge blocks /HCT-CS-006-10223
Height micrometers, Riser blocks Height micrometers Blocks Head Riser blocks	10224	 (0 ~ 610) mm (0 ~ 30) mm (0 ~ 600) mm	 $\sqrt{(1.2\,\mu m)^2+(2.8\times10^{-6}\times I_0)^2}$ $\sqrt{(1.3\,\mu m)^2+(2.8\times10^{-6}\times I_0)^2}$ $\sqrt{(1.2\,\mu m)^2+(2.8\times10^{-6}\times I_0)^2}$	Gauge blocks, Electronic micrometers /HCT-CS-007-10224
Laser scan micrometers	10225	(0.1 ~ 55) mm	0.56 µm	Pin gauges /HCT-CS-282-10225
Standard tape rules, periphral gauges	10227	(0 ~ 10) m (10 ~ 20) m (20 ~ 30) m (30 ~ 40) m (40 ~ 50) m	0.20 mm 0.24 mm 0.32 mm 0.42 mm 0.54 mm	Tape measure calibration system /HCT-CS-241-10227
Cyclindrical plug/pin gauges, thread measuring wire gauges	10228	 (0.1 ~ 100) mm	 $\sqrt{(0.29\,\mu m)^2+(2.8\times10^{-6}\times I_0)^2}$	Standard measuring machines /HCT-CS-008-10228
Radius gauges	10229	(0 ~ 50) mm	3.0 µm	Profile projectors /HCT-CS-225-10229
Cylindrical ring gauges	10230	(1 ~ 100) mm	$\sqrt{(0.77\,\mu m)^2+(3.0\times10^{-6}\times I_0)^2}$	Standard measuring machines Standard ring gauges /HCT-CS-226-10230
Step blocks	10231	(0 ~ 200) µm	0.33 µm	Electronic micrometers, Precision surface plates /HCT-CS-337-10231
Step gauges	10232	(0 ~ 1 000) mm	$\sqrt{(1.6\,\mu m)^2+(4.2\times10^{-6}\times I_0)^2}$	Gauge blocks Electronic micrometers /HCT-CS-009-10232
Taper thickness gauges	10233	(0.1 ~ 60) mm	0.03 mm	Profile projectors /HCT-CS-242-10233
Ultrasonic thickness gauges	10234	(0 ~ 100) mm	2.5 µm	Ultrasonic thickness specimens /HCT-CS-243-10234

Accreditation No. : KC00-011

102. Linear dimension

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Ultrasonic/coating thickness specimmens	10235			Gauge blocks Standard measuring machines
coating		(0 ~ 8) mm	1.4 μm	Electronic micrometers /HCT-CS-227-10235
Ultrasonic		(0 ~ 100) mm	$\sqrt{(1.4\,\mu m)^2+(1.8\times10^{-6}\times I_0)^2}$	
Coating thickness testers	10236	(0 ~ 0.25) mm	1.5 μm	Coating thickness specimens /HCT-CS-228-10236
		(0.25 ~ 1.05) mm	2.0 μm	
		(1.05 ~ 3.7) mm	6.9 μm	
		(3.7 ~ 7.9) mm	6.9 μm	
Torque arms	10237			Contact coordinate measuring machines, Standard measuring machine /HCT-CS-287-10237
Touque Arm		(0 ~ 500) mm	$\sqrt{(4.0\,\mu m)^2+(18\times10^{-6}\times I_0)^2}$	
Wire		(0 ~ 5) mm	0.7 μm	
Width measuring specimens	10238	(0 ~ 1 000) mm	$\sqrt{(1.8\,\mu m)^2+(17\times10^{-6}\times I_0)^2}$	Contact coordinate measuring machines /HCT-CS-338-10238

103. Angle

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Bevel protractors	10304			Angle gauge blocks,
Angle accuracy		0 ° ~ 90 °	1.3 ′	Precision surface plates,
		90 ° ~ 360 °	2.0 ′	Profile projectors
				/HCT-CS-251-10304
Angle of accessories		0 ° ~ 360 °	2.3 ′	
Plate/square/electric levels	10311			Fine angle generators,
Angle		±200 ″	0.3 ″	Electronic micrometers,
		±1 000 ″	0.5 ″	Squareness testers,
		±2 000 ″	0.9 ″	Precision surface plates
				/HCT-CS-252-10311
Squareness		(0 ~ 300) mm	2.3 μm	
Flatness		300 mm × 60 mm	1.0 μm	
Sine bars, plates, tables, centers	10317			Standard measuring machines, Angle gauge blocks,
Center length of both rollers		(50 ~ 200) mm	0.82 μm	Gauge blocks,
				Optical flats,
Flatness of flat		(50 ~ 200) mm	0.24 μm	Electronic micrometers,
				Precision surface plates
parallelism,between rollers		(50 ~ 200) mm	1.0 μm	/HCT-CS-326-10317
Parallelism of the measuring face and 2 rollers		(50 ~ 200) mm	0.27 μm	
Squareness testers, right angle testers	10318			Cylindrical squares, Precision surface plates,
Squareness		(0 ~ 400) mm	1.6 μm	Electronic micrometers
				/HCT-CS-327-10318
Cylindrical squares	10319			Squareness testers,
Squareness		(0 ~ 400) mm	$\sqrt{(2.0\,\mu m)^2+(1.2\times10^{-6}\times I_0)^2}$	right angle testers,
				Cylindrical squares,
Straightness		(0 ~ 400) mm	2.0 μm	Electronic micrometers,
				Standard measuring machines
				/HCT-CS-328-10319
Precision squares	10320			Cydrical squares,
Squareness		(0 ~ 450) mm	$\sqrt{(2.0\,\mu m)^2+(3.0\times10^{-6}\times I_0)^2}$	Squareness testers,
				right angle testers,
Parallelism		(0 ~ 450) mm	1.3 μm	Precision surface plates
				/HCT-CS-278-10320
Straightness		(0 ~ 450) mm	2.9 μm	

104. Form

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Form testers	10401			Form standard specimens,
Z-axis		(0 ~ 60) mm	0.15 μm	Angle gauge blocks,
				Standard scales,
X-axis		(0 ~ 200) mm	$\sqrt{(0.57\,\mu m)^2+(1.9\times10^{-6}\times I_0)^2}$	Gauge blocks,
				/HCT-CS-284-10401
Angle		(0 ~ 180) °	1.3 ´	
Optical flats	10404	Ø (10 ~ 130) mm	0.06 μm	Optical flats,
				Monochromatic light sources
				/HCT-CS-229-10404
Optical parallels	10405			Optical flats,
Flatness		Ø (10 ~ 30) mm	0.059 μm	Monochromatic light sources,
				Gauge block comparators
Parallelism		Ø (10 ~ 30) mm	0.080 μm	/HCT-CS-230-10405
Parallel blocks	10406			Electronic micrometers,
Parallelism		(0 ~ 1 000) mm	1.2 μm	Precision surface plates,
				Test bars
Flatness		(0 ~ 1 000) mm	1.2 μm	/HCT-CS-285-10406
Difference of both blocks		(0 ~ 1 000) mm	1.8 μm	
Precision surface plates	10407			Electric levels
Area		(0 ~ 2 500) ㎠	0.9 μm	/HCT-CS-010-10407
		(2 500 ~ 5 000) ㎠	1.2 μm	
		(5 000 ~ 10 000) ㎠	1.4 μm	
		(10 000 ~ 15 000) ㎠	1.5 μm	
		(15 000 ~ 30 000) ㎠	2.1 μm	
		(30 000 ~ 60 000) ㎠	2.5 μm	
Profile gauges	10408	(0 ~ 5) mm	0.9 μm	Gauge blocks
				/HCT-CS-359-10408
Roundness measurement instruments	10409			Roundness magnification specimens,
Accuracy of detector		(0 ~ 1 000) μm	0.23 μm	Cylinderical squares,
				Standard hemispgheres,
Rotation accuracy of circumference direction		(0 ~ 360) °	(0 ~ 360) °	Optical flats,
				/HCT-CS-279-10409
Rotation accuracy of shaftt direction		(0 ~ 360) °	16 nm	
Straightness		(0 ~ 300) mm	1.3 μm	

104. Form

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Straight edges	10412			Electronic micrometers,
Straightness		(0 ~ 2 000) mm	1.0 μm	Precision surface plates
				/HCT-CS-329-10412
Parallelism		(0 ~ 2 000) mm	5.5 μm	
Straight rules	10413	(0 ~ 3 000) mm	$\sqrt{(0.32\ \mathrm{mm})^2+(2.2\times10^{-6}\times I_0)^2}$	Tape measure calibration system
				/HCT-CS-244-10413
Test bars	10415			Roundness measurement,
Roundness		(0 ~ 100) mm	0.062 μm	instruments,
				Precision surface plates,
Cylindericity		(0 ~ 100) mm	0.26 μm	Electronic micrometers
				/HCT-CS-330-10415
Essentric		(0 ~ 100) mm	0.51 μm	
Spherometers	10416	(0 ~ 10) mm	0.14 μm	Gauge blocks,
				Optical flats
				/HCT-CS-340-10416

105. Complex geometry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Base gauges for electric bulb	10501			Standard measuring machines,
Go, Not Go Inner diameter		(10 ~ 40) mm	0.90 μm	Cylindrical ring gauges,
				Form testers,
Screw thread Inner diameter		(10 ~ 40) mm	2.0 μm	3-point micrometers
				/HCT-CS-360-10501
Pitch		(0.1 ~ 10) mm	1.1 μm	
Contact coordinate measuring machines	10503			Step gauges,
				Precision squares,
Accuracy		(0 ~ 600) mm	$\sqrt{(0.53\,\mu m)^2+(2.0\times10^{-6}\times I_0)^2}$	Straight edges
				/HCT-CS-011-10503
Straightness		(0 ~ 600) mm	2.1 μm	
Squareness		(0 ~ 600) mm	1.1″	
Non-contact coordinate measuring machines	10504			Standard scales
				/HCT-CS-012-10504
Accuracy		(0 ~ 1 000) mm	$\sqrt{(0.43\,\mu m)^2+(2.8\times10^{-6}\times I_0)^2}$	
Gauge block accessories	10505			Angle gauge blocks,
Flatness (close-contact plane)		(0 ~ 50) mm	0.04 μm	Precision surface plates,
				Profile prrojectors
				/HCT-CS-308-10505
Parallelism (Parallel jaw)		(0 ~ 150) mm	1.2 μm	
Round type jaw		(0 ~ 50) mm	$\sqrt{(0.26\,\mu m)^2+(4.0\times10^{-6}\times I_0)^2}$	
A type Parallel jaw		(0 ~ 50) mm	$\sqrt{(0.37\,\mu m)^2+(4.0\times10^{-6}\times I_0)^2}$	
Base block		(0 ~ 50) mm	$\sqrt{(0.68\,\mu m)^2+(4.0\times10^{-6}\times I_0)^2}$	
Center point		(0 ~ 20) mm	0.63 μm	
Hardness indenters	10508			Standard measuring machines,
Diameter		(0 ~ 13) mm	0.4 μm	Non-contact coordinate,
				measuring machines,
Radius		(0 ~ 7) mm	1.3 μm	profile projectors,
				/HCT-CS-361-10508
Angle		(0 ~ 173)°	0.028°	
Length		(0 ~ 5) mm	0.7 μm	

105. Complex geometry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Measuring microscopes, profile projectors	10511			Standard scales, Precision squares
Length accuracy		(0 ~ 300) mm	$\sqrt{(0.45\,\mu m)^2+(2.8\times10^{-6}\times I_0)^2}$	/HCT-CS-013-10511
Right angle accuracy		(0 ~ 360)°	1.7´	
Magnification accuracy		×2 ~ ×100	3.1×10^{-4}	
Squareness accuracy		(0 ~ 300) mm	3.6 μm	
Micro measuring microscopes	10512	(0 ~ 50) mm	2.7 μm	Standard scales /HCT-CS-014-10512
Orifice plates	10513			Contact coordinate
Inner diameter		(5 ~ 400) mm	$\sqrt{(2.2\ \mu m)^2+(18\times10^{-6}\times I)^2}$	standard measuring machines
Plate thickness		(0 ~ 25) mm	0.5 μm	/HCT-CS-362-10513
Stylus type roughness testers	10517			Roughness standard/
Rsm		(0 ~ 120) μm	0.9 μm	comparison specimens
Pt		(0 ~ 10) μm	0.075 μm	/HCT-CS-295-10517
Ra		(0 ~ 1) μm	0.018 μm	
		(1 ~ 3) μm	0.045 μm	
Rz		(0 ~ 3) μm	0.12 μm	
		(3 ~ 12) μm	0.15 μm	
Socket gauges for electric bulb Go, Not Go Screw thread outer	10518			Standard measuring machines, Gauge blocks, Form testers /HCT-CS-363-10518
diameter		(10 ~ 40) mm	0.31 μm	
Pitch		(0.1 ~ 10) mm	1.1 μm	
Thread plug gauges	10525			Standard measuring machines,
External diammeter		(1 ~ 100) mm	0.48 μm	Thread measuring wire gauges,
				Projectors
Effective diameter		(1 ~ 100) mm	1.6 μm	/HCT-CS-016-10525
Pitch		(0.2 ~ 6) mm	1.2 μm	
Half angle		(0 ~ 45)°	1.8´	

105. Complex geometry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
V-blocks, box blocks	10529			Pin gauges,
Flatness		(0 ~ 150) mm	1.0 μm	Electronic micrometers,
				Precision surface plates,
Parallelism		(0 ~ 150) mm	1.2 μm	Test bars
				/HCT-CS-283-10529
Gradient		(0 ~ 150) mm	0.6 μm	
Difference of both part		(0 ~ 150) mm	0.9 μm	
Squareness		(0 ~ 150) mm	$\sqrt{(2.0\,\mu m)^2+(3.0\times10^{-6}\times I_0)^2}$	

Accreditation No. : KC00-011

106. Various dimensional

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Inside/outside/gear tooth calipers, caliper gauges	10601	(0 ~ 150) mm (150 ~ 1 500) mm	$\sqrt{(3.8\,\mu m)^2+(6.4\times10^{-6}\times I_0)^2}$ $\sqrt{(7.6\,\mu m)^2+(6.8\times10^{-6}\times I_0)^2}$	Gauge blocks /HCT-CS-017-10601
Cylinder/bore gauges Cylinder gauges Bore gauges	10603	 (0 ~ 2) mm (0 ~ 2) mm	 0.78 µm 0.76 µm	Dial gauge testers, Gauge blocks /HCT-CS-019-10603
Depth gauges, depth micrometers	10604	(0 ~ 300) mm (300 ~ 1 000) mm	$\sqrt{(0.90\ \mu m)^2+(4.0\times10^{-6}\times I_0)^2}$ $\sqrt{(7.1\,\mu m)^2+(4.1\times10^{-6}\times I_0)^2}$	Gauge blocks /HCT-CS-020-10604
Dial/digital gauges	10605	(0 ~ 50) mm (50 ~ 150) mm	$\sqrt{(0.16\,\mu m)^2+(2.0\times10^{-6}\times I_0)^2}$ $\sqrt{(0.93\,\mu m)^2+(2.3\times10^{-6}\times I_0)^2}$	Gauge blocks /HCT-CS-021-10605
Grind gauges Slope depth Scraper stright	10608	 (0 ~ 100) µm (0 ~ 150) mm	 1.8 µm 1.0 µm	Height micrometers, Electronic micrometers /HCT-CS-364-10608
Micro indicators, Test indicators	10609	(0 ~ 2) mm	0.33 µm	Dial gauge testers /HCT-CS-022-10609
Micrometer heads	10610	(0 ~ 50) mm	0.61 µm	Gauge blocks, Electronic micrometers /HCT-CS-023-10610
3-point micrometers	10611	(1 ~ 200) mm	3.2 µm	Standard ring gauges /HCT-CS-231-10611
Inside micrometers	10612	(5 ~ 300) mm (300 ~ 1 500) mm	$\sqrt{(1.6\ \mu m)^2+(5.0\times10^{-6}\times I_0)^2}$ $\sqrt{(2.3\ \mu m)^2+(5.0\times10^{-6}\times I_0)^2}$	Gauge blocks /HCT-CS-026-10612
Outside micrometers	10613	(0 ~ 25) mm (25 ~ 500) mm (500 ~ 1 500) mm	$\sqrt{(0.36\,\mu m)^2+(4.2\times10^{-6}\times I_0)^2}$ $\sqrt{(1.6\,\mu m)^2+(4.0\times10^{-6}\times I_0)^2}$ $\sqrt{(2.5\,\mu m)^2+(4.0\times10^{-6}\times I_0)^2}$	Gauge blocks /HCT-CS-027-10613

106. Various dimensional

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Particle Counters	10615			Certified reference
Airbone particle counter				material (CRM),
Laser reference voltage		(0 ~ 10) V	5.4×10^{-4}	Particle counters,
Flow rate		(0 ~ 100) L/min	2.4×10^{-2}	Flowmeters
Threshold voltage		(0 ~ 10) V	5.4×10^{-4}	/HCT-CS-028-10615
Counting efficiency				
CPC		(0 ~ 1.0) μm	3.0 %	
OPC		(0.1 ~ 1.0) μm	4.7 %	
Liquid particle counter				/HCT-CS-029-10615
Laser reference voltage		(0 ~ 10) V	5.4×10^{-4}	
Flow rate		(0 ~ 25) mL/min	8.1×10^{-2}	
		(25 ~ 300) mL/min	5.0×10^{-2}	
Threshold voltage		(0 ~ 10) V	5.4×10^{-4}	
Standard sieves	10617			Profile projectors
Sieve opening		(0.01 ~ 8) mm	1.7 μm	/HCT-CS-232-10617
Wire rod diameter		(0.01 ~ 125) mm	2.6 μm	
Welding gauges	10620			Welding gauges
Height/depth measuring scale		(0 ~ 100) mm	0.009 mm	/HCT-CS-246-10620
Thick measuring scale		(0 ~ 16) mm	0.009 mm	
Rule measuring scale		(0 ~ 50) mm	0.096 mm	
Angle measuring scale		(0 ~ 90)°	0.13°	
Taper measuring scale		(0 ~ 7) mm	0.096 mm	
Optical micrometers	10621			Gauge blocks,
Depth		(0 ~ 25) mm	7.6 μm	Standard scales
Width		(0 ~ 1) mm	14 μm	/HCT-CS-365-10621
Particle dilution Systems	10622			ELECTRICAL PARTICLE SIZER,
PCRF		(30 ~ 100) nm	8.2×10^{-2}	CPC/HCT-CS-256-10622

Accreditation No. : KC00-011

201. Mass and related quantities

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Counter beam balances	20105	(0 ~ 311) g (311 ~ 2 610) g (2.61 ~ 20) kg	10 mg 82 mg 0.82 g	Standard weights /HCT-CS-233-20105
Dial platform scale balances	20106	 (0 ~ 30) kg (30 ~ 60) kg (60 ~ 100) kg	 0.06 kg 0.12 kg 0.29 kg	Standard weights /HCT-CS-309-20106
Dial reading balances	20108	(0 ~ 160) g	0.19 mg	Weights /HCT-CS-031-20108
Electric balences	20109	(0 ~ 2) g (2 ~ 5) g (5 ~ 20) g (20 ~ 50) g (50 ~ 100) g (100 ~ 200) g (200 ~ 500) g (0.5 ~ 1) kg (1 ~ 2) kg (2 ~ 5) kg (5 ~ 10) kg (10 ~ 30) kg (30 ~ 50) kg (50 ~ 100) kg (100 ~ 200) kg (200 ~ 300) kg (300 ~ 600) kg	0.032 mg 0.054 mg 0.063 mg 0.11 mg 0.14 mg 0.20 mg 0.49 mg 0.94 mg 1.8 mg 4.6 mg 9.4 mg 25 mg 0.44 g 1.6 g 3.4 g 5.3 g 11 g	Standard weights /HCT-CS-032-20109
Platform scale balences	20112	(0 ~ 20) kg (20 ~ 200) kg	1.2 g 58 g	Standard weights /HCT-CS-234-20112
Spring scale balences	20113	(0 ~ 1) kg (1 ~ 2) kg (2 ~ 5) kg (5 ~ 10) kg (10 ~ 30) kg (30 ~ 50) kg	2.9 g 5.8 g 12 g 29 g 58 g 0.12 kg	Standard weights /HCT-CS-235-20113
Trip balences	20114	(0 ~ 500) g	0.12 g	Standard Weights /HCT-CS-356-20114

Accreditation No. : KC00-011

201. Mass and related quantities

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Weights	20116			Standard weights,
F1 class		1 mg	0.002 2 mg	Mass comparators
		2 mg	0.002 2 mg	/HCT-CS-033-20116
		5 mg	0.002 2 mg	
		10 mg	0.002 8 mg	
		20 mg	0.003 4 mg	
		50 mg	0.004 1 mg	
		100 mg	0.005 4 mg	
		200 mg	0.006 7 mg	
		500 mg	0.008 4 mg	
		1 g	0.010 mg	
		2 g	0.013 mg	
		5 g	0.017 mg	
		10 g	0.022 mg	
		20 g	0.033 mg	
		50 g	0.061 mg	
		100 g	0.11 mg	
		200 g	0.22 mg	
		500 g	0.57 mg	
		1 kg	1.1 mg	
		2 kg	1.1 mg	
		5 kg	2.9 mg	
		10 kg	5.5 mg	
		20 kg	11 mg	

202. Force

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Force measuring devices	20202			Hydraulic force
Force		(0.5 ~ 5) kN	3.1×10^{-5}	calibration machines,
		(5 ~ 10) kN	2.8×10^{-4}	Deadweight force
		(10 ~ 20) kN	4.6×10^{-4}	calibration machines
		(20 ~ 50) kN	3.9×10^{-4}	/HCT-CS-253-20202
		(50 ~ 100) kN	3.4×10^{-4}	
Tension/compression testing machines	20203			Electric force measuring devices
Compression		(0 ~ 10) N	1.5×10^{-3}	/HCT-CS-236-20203
		(10 ~ 20) N	1.4×10^{-3}	
		(20 ~ 50) N	1.4×10^{-3}	
		(50 ~ 100) N	1.4×10^{-3}	
		(100 ~ 200) N	1.3×10^{-3}	
		(200 ~ 500) N	1.4×10^{-3}	
		(500 ~ 1 000) N	1.6×10^{-3}	
		(1 ~ 2) kN	1.6×10^{-3}	
		(2 ~ 5) kN	1.3×10^{-3}	
		(5 ~ 10) kN	2.1×10^{-3}	
		(10 ~ 20) kN	2.0×10^{-3}	
		(20 ~ 50) kN	1.9×10^{-3}	
		(50 ~ 100) kN	1.5×10^{-3}	
		(100 ~ 200) kN	1.5×10^{-3}	
		(200 ~ 500) kN	1.6×10^{-3}	
		(500 ~ 1 000) kN	1.6×10^{-3}	
Tension		(0 ~ 50) N	1.9×10^{-3}	
		(50 ~ 100) N	1.3×10^{-3}	
		(100 ~ 200) N	1.5×10^{-3}	
		(200 ~ 500) N	1.4×10^{-3}	
		(500 ~ 1 000) N	1.5×10^{-3}	
		(1 ~ 2) kN	1.3×10^{-3}	
		(2 ~ 5) kN	1.5×10^{-3}	
		(5 ~ 10) kN	2.0×10^{-3}	
		(10 ~ 20) kN	2.1×10^{-3}	
		(20 ~ 50) kN	2.0×10^{-3}	
		(50 ~ 100) kN	1.5×10^{-3}	
		(100 ~ 200) kN	1.6×10^{-3}	

202. Force

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Push-pull gauges	20204	(0.2 ~ 50) N	1.5×10^{-3}	Deadweight force
		(50 ~ 1 000) N	1.3×10^{-3}	calibration machines,
		(1 000 ~ 2 000) N	1.6×10^{-3}	Weights
		(2 000 ~ 5 000) N	1.5×10^{-3}	/HCT-CS-034-20204

203. Torque

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Torque measuring devices	20302	(0.005 ~ 100) N·m	7.1×10^{-3}	Weights, Torque arm /HCT-CS-036-20302
Torque wrenches/drivers	20303			Torque calibration machines
Clockwise		(0.06 ~ 0.6) N·m	1.4×10^{-2}	/HCT-CS-037-20303
		(0.6 ~ 1) N·m	9.9×10^{-3}	
		(1 ~ 2.5) N·m	8.0×10^{-3}	
		(2.5 ~ 5) N·m	4.6×10^{-3}	
		(5 ~ 10) N·m	6.9×10^{-3}	
		(10 ~ 25) N·m	4.6×10^{-3}	
		(25 ~ 50) N·m	3.8×10^{-3}	
		(50 ~ 100) N·m	5.8×10^{-3}	
		(100 ~ 250) N·m	4.4×10^{-3}	
		(250 ~ 500) N·m	1.7×10^{-3}	
		(500 ~ 1 000) N·m	6.9×10^{-3}	
		(1 000 ~ 2 000) N·m	7.4×10^{-3}	
Counterclockwise		(0.06 ~ 0.6) N·m	1.2×10^{-2}	
		(0.6 ~ 1) N·m	6.0×10^{-3}	
		(1 ~ 2.5) N·m	8.3×10^{-3}	
		(2.5 ~ 5) N·m	4.5×10^{-3}	
		(5 ~ 10) N·m	4.9×10^{-3}	
		(10 ~ 25) N·m	4.7×10^{-3}	
		(25 ~ 50) N·m	4.0×10^{-3}	
		(50 ~ 100) N·m	6.3×10^{-3}	
		(100 ~ 250) N·m	5.2×10^{-3}	
		(250 ~ 500) N·m	2.7×10^{-3}	
		(500 ~ 1 000) N·m	5.0×10^{-3}	
		(1 000 ~ 2 000) N·m	8.5×10^{-3}	

204. Pressure

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Altimeters	20401	(0 ~ 15) km	12 m	Pressure calibrators (PM500-BG200K) /HCT-CS-357-20401
Manometers	20402	(0 ~ 22) kPa	7.3×10^{-3}	Pressure calibrators /HCT-CS-344-20402
Absolute pressure gauges	20406	(0.005 ~ 7) MPa abs.	6.0×10^{-4}	Pressure calibrators (PM500-BG200K), (PACE 6000) /HCT-CS-255-20406
Compound pressure gauges	20408	(-0.095 ~ 7) MPa	1.8×10^{-4}	Pressure calibrators (PACE 6000) /HCT-CS-215-20408
Differential pressure gauges pneumatic	20409	(0 ~ 7) MPa	5.8×10^{-4}	Pressure calibrators (PACE 6000) /HCT-CS-215-20408
Gauge pressure gauges	20411	(0 ~ 500) kPa (0.5 ~ 10) MPa (10 ~ 100) MPa (100 ~ 200) MPa	1.2×10^{-4} 2.0×10^{-4} 8.1×10^{-5} 7.1×10^{-5}	Pneumatic pressure balances(PDPG-P), Hydraulic pressure balances(PG7302) /HCT-CS-039-20411
Pressure transducers /transmitters	20412	(-95 ~ 0) kPa (0 ~ 500) kPa (0.5 ~ 10) MPa (10 ~ 100) MPa (100 ~ 200) MPa (0.005 ~ 7) MPa abs.	2.8×10^{-3} 3.1×10^{-3} 3.4×10^{-3} 3.3×10^{-3} 2.8×10^{-3} 3.5×10^{-3}	Pressure calibrators (PM500-BG200K), (PACE 6000) Pneumatic pressure balances(PDPG-P), Hydraulic pressure balances(PG7302) /HCT-CS-169-20413
Dial type vacuum gauges	20413	(-95 ~ 0) kPa	2.0×10^{-2}	Pressure calibrators /HCT-CS-216-20413
Water Depth meters	20414	(0 ~ 2) MPa	1.2×10^{-2}	Pressure calibrators /HCT-CS-245-20414

206. Volume

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Volumetric glasswares	20601			Electric balances,
		(0.1 ~ 2) ml	2.4 μl	Weights, Pure water
		(2 ~ 10) ml	4.9 μl	/HCT-CS313-20601
		(10 ~ 25) ml	13 μl	
		(25 ~ 100) ml	26 μl	
		(100 ~ 250) ml	47 μl	
		(250 ~ 500) ml	70 μl	
		(500 ~ 1 000) ml	0.14 ml	
		(1 000 ~ 2 000) ml	0.22 ml	
		(2 000 ~ 5 000) ml	0.43 ml	
Pycnometers	20602			Electric balances,
		(0 ~ 50) ml	3.2 μl	Weights, Pure water
		(50 ~ 100) ml	7.0 μl	/HCT-CS313-20601
		(100 ~ 500) ml	30 μl	
Concrete air content meters	20605			Electric balances,
		(0 ~ 10) %	0.01 %	Weights, Pure water
				/HCT-CS-314-20605
Piston type volume meters	20606			Electric balances,
		(0.1 ~ 5) μl	18 nl	Weights, Pure water
		(5 ~ 10) μl	26 nl	/HCT-CS-315-20606
		(10 ~ 20) μl	36 nl	
		(20 ~ 50) μl	73 nl	
		(50 ~ 100) μl	0.12 μl	
		(0.1 ~ 0.2) ml	0.23 μl	
		(0.2 ~ 0.5) ml	0.53 μl	
		(0.5 ~ 1) ml	1.2 μl	
		(1 ~ 2) ml	2.3 μl	
		(2 ~ 5) ml	5.3 μl	
		(5 ~ 10) ml	12 μl	
		(10 ~ 20) ml	23 μl	

207.Density

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Liquid density meters	20702	(0 ~ 2) g/cm^3	0.000 14 g/cm^3	Density standard meterials /HCT-CS-351-20702
Salinity meters	20704	(0 ~ 26) %	0.012 %	NaCl /HCT-CS-352-20704
Sucrose meters	20705	(0 ~ 80) %	0.12 %	Sucrose /HCT-CS-294-20705
Chloride meters	20707	(0 ~ 1.5) %	0.002 4 %	Chloride ion standard solution /HCT-CS-353-20707

Accreditation No. : KC00-011

208. Viscosity

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Dynamic viscometers; rotaional, etc. Rotational viscometers	20802	(2.5 ~ 200 000) mPa · s	1.7×10^{-2}	Viscosity standard /HCT-CS-288-20802

209. Fluid flow

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Anemometers; hot-wire	20901	(0.1 ~ 2) m/s (2 ~ 55) m/s	5.8×10^{-2} 4.4×10^{-3}	Lasor Doppler /HCT-CS-272-20901
Anemometers; pitot tube, etc.	20902	(0.1 ~ 2) m/s (2 ~ 55) m/s	5.8×10^{-2} 4.4×10^{-3}	Lasor Doppler /HCT-CS-273-20902
Gas flowmeters; differential pressure	20908	(0.001 8 ~ 260) m^3/h	2.5×10^{-3}	Sonic nozzle /HCT-CS-312-20908
Liquid flowmeters; differential pressure	20909	(0.005 ~ 50) m^3/h	2.4×10^{-3}	Reference flowmeter /HCT-CS-313-20909
Liquid flowmeter; electromagnetic	20910	(0.005 ~ 50) m^3/h	2.4×10^{-3}	Reference flowmeter /HCT-CS-313-20909
Gas flowmeters; thermal mass, etc.	20911	(0.001 8 ~ 260) m^3/h	2.5×10^{-3}	Sonic nozzle /HCT-CS-312-20908
Liquid flowmeters; Coriolis, etc.	20912	(0.005 ~ 50) m^3/h	2.4×10^{-3}	Reference flowmeter /HCT-CS-313-20909
Gas flowmeters; positive displacement	20914	(0.001 8 ~ 260) m^3/h	2.5×10^{-3}	Sonic nozzle /HCT-CS-312-20908
Liquid flowmeters; positive displacement	20915	(0.005 ~ 50) m^3/h	2.4×10^{-3}	Reference flowmeter /HCT-CS-313-20909
Gas flowmeters; turbine	20916	(0.001 8 ~ 260) m^3/h	2.5×10^{-3}	Sonic nozzle /HCT-CS-312-20908
Liquid flowmeters; turbine	20917	(0.005 ~ 50) m^3/h	2.4×10^{-3}	Reference flowmeter /HCT-CS-313-20909
Gas flowmmeters; ultrasonic	20918	(0.001 8 ~ 260) m^3/h	2.5×10^{-3}	Sonic nozzle /HCT-CS-312-20908
Liquid flowmeters; ultrasonic	20919	(0.005 ~ 50) m^3/h	2.4×10^{-3}	Reference flowmeter /HCT-CS-313-20909
Gas flowmeters; variable area	20920	(0.001 8 ~ 260) m^3/h	2.5×10^{-3}	Sonic nozzle /HCT-CS-312-20908
Liquid flowmeters; variable area	20921	(0.005 ~ 50) m^3/h	2.4×10^{-3}	Reference flowmeter /HCT-CS-313-20909
Gas flowmeters; vortex	20922	(0.001 8 ~ 260) m^3/h	2.5×10^{-3}	Sonic nozzle /HCT-CS-312-20908
Liquid flowmeters; vortex	20923	(0.005 ~ 50) m^3/h	2.4×10^{-3}	Reference flowmeter /HCT-CS-313-20909
Anemometers; vane, etc.	20925	(0.1 ~ 2) m/s (2 ~ 55) m/s	5.8×10^{-2} 4.4×10^{-3}	Lasor Doppler /HCT-CS-274-20925

Accreditation No. : KC00-011

301. Time/frequency

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Frequency standards	30102			Atomic clock
Timebase Frequency		100 kHz ~ 10 MHz	2.4×10^{-12}	/HCT-CS-040-30102
General frequency sources	30103			Atomic clock
Output frequency		100 kHz ~ 100 MHz	2.7×10^{-12}	/HCT-CS-041-30103
Frequency meters/countters	30104			Standard frequency,
Input Frequency		0.1 Hz	6.2×10^{-11}	General frequency sources
		0.1 Hz ~ 3 GHz	6.2×10^{-12}	HCT-CS-042-30104
		(3 ~ 40) GHz	0.58 Hz	
Timebase Frequency		100 kHz ~ 10 MHz	2.7×10^{-12}	
Time interval sources	30105			Frequency counters
Time interval				/HCT-CS-043-30105
		(1 ~ 10) ns	6.2×10^{-7}	
		(10 ~ 100) ns	6.2×10^{-7}	
		100 ns ~ 1 µs	6.2×10^{-7}	
		(1 ~ 10) µs	6.2×10^{-7}	
		(10 ~ 100) µs	6.2×10^{-7}	
		100 µs ~ 1 ms	6.2×10^{-7}	
		(1 ~ 10) ms	6.2×10^{-7}	
		(10 ~ 100) ms	6.2×10^{-7}	
		100 ms ~ 1 s	6.2×10^{-7}	
Frequency		(1 ~ 10) Hz	6.2×10^{-7}	
		(10 ~ 100) Hz	6.2×10^{-7}	
		100 Hz ~ 1 kHz	6.2×10^{-7}	
		(1 ~ 10) kHz	6.2×10^{-7}	
		(10 ~ 100) kHz	6.2×10^{-7}	
		100 kHz ~ 1 MHz	6.2×10^{-7}	
		(1 ~ 10) MHz	6.2×10^{-7}	
		(10 ~ 100) MHz	6.2×10^{-7}	
		100 MHz ~ 1 GHz	6.2×10^{-7}	
Time interval meters	30106			Atomic clock
/Stop watches/Timers				/HCT-CS-044-30106
Relative time difference		day	2.8×10^{-7}	
		month	1.3×10^{-8}	
Timer		(1 ~ 60) s	6.2×10^{-6}	
		(60 ~ 6 000) s	6.2×10^{-5}	
		(6 000 ~ 86 400) s	6.2×10^{-5}	

302. Velocity & revolution

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Standard RPM generators	30201			Atomic clock
Revolution velocity measurement		(1 ~ 1 000) min^{-1}	6.2×10^{-2} min^{-1}	/HCT-CS-045-30201
		(1 000 ~ 100 000) min^{-1}	6.2×10^{-1} min^{-1}	
Centrifuge		100 min^{-1}	0.12 min^{-1}	
		(100 ~ 900) min^{-1}	1.1 min^{-1}	
		(900 ~ 1 000) min^{-1}	1.2 min^{-1}	
		(1 000 ~ 3 000) min^{-1}	1.4 min^{-1}	
		(3 000 ~ 6 000) min^{-1}	1.9 min^{-1}	
		(6 000 ~ 10 000) min^{-1}	2.6 min^{-1}	
		(10 000 ~ 20 000) min^{-1}	4.8 min^{-1}	
		(20 000 ~ 30 000) min^{-1}	7.1 min^{-1}	
		(30 000 ~ 40 000) min^{-1}	10 min^{-1}	
		(40 000 ~ 50 000) min^{-1}	12 min^{-1}	
		(50 000 ~ 60 000) min^{-1}	14 min^{-1}	
		(60 000 ~ 70 000) min^{-1}	17 min^{-1}	
		(80 000 ~ 90 000) min^{-1}	21 min^{-1}	
		(90 000 ~ 99 000) min^{-1}	23 min^{-1}	
Contact type tachometers	30202			Atomic clock
Revolution velocity measurement		(1 ~ 4 000) min^{-1}	6.2×10^{-2} min^{-1}	/HCT-CS-046-30202
Photo tachometers/stroboscopes	30203			Atomic clock
Photo-tachometer		1 min^{-1}	0.006 2 min^{-1}	/HCT-CS-047-30203
		(1 ~ 300) min^{-1}	6.2×10^{-3} min^{-1}	
		(300 ~ 6 000) min^{-1}	6.2×10^{-2} min^{-1}	
		(6 000 ~ 100 000) min^{-1}	6.2×10^{-1} min^{-1}	
Stroboscopic tachometer		1 min^{-1}	0.006 2 min^{-1}	
		(1 ~ 300) min^{-1}	6.2×10^{-3} min^{-1}	
		(300 ~ 6 000) min^{-1}	6.2×10^{-2} min^{-1}	
		(6 000 ~ 100 000) min^{-1}	6.2×10^{-1} min^{-1}	

302. Velocity & revolution

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Wow-flutter generators	30205			Atomic clock
Wow-flutter Deflection		(0.01 ~ 3) %	6.2×10^{-3}	/HCT-CS-049-30205
Frequency		0.1 Hz ~ 99.99 kHz	6.2×10^{-4}	
Level		100 Hz ~ 100 kHz		
		100 mV	1.3×10^{-3}	
		100 Hz ~ 100 kHz		
		(100 mV ~ 1 V)	1.1×10^{-3}	
		100 Hz ~ 100 kHz		
		(1 V ~ 10 V)	1.1×10^{-3}	
Wow-flutter meters	30206			Wow-flutter generators
Wow-flutter Deflection		0.01 %	2.4×10^{-4}	/HCT-CS-050-30206
		0.03 %	4.6×10^{-4}	
		0.1 %	1.6×10^{-3}	
		0.3 %	4.6×10^{-3}	
		1 %	1.5×10^{-2}	
		3 %	4.5×10^{-2}	
Input frequency		10 Hz	0.58 Hz	
		99.99 kHz	5.8 Hz	
Output frequency		3.00 kHz	0.58 Hz	
		3.15 kHz	0.58 Hz	
CCIR PULSE		10 ms ~ 100 ms	1.5×10^{-2}	

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
DC ammeters	40101			Current calibrators,
DC Current		(±)		Multimeter calibrators
		10 pA	7.1 fA	/HCT-CS-051-40101
		(10 ~ 40) pA	4.0×10^{-4}	
		(40 ~ 100) pA	3.6×10^{-4}	
		100 pA ~ 1 nA	1.2×10^{-4}	
		(1 ~ 4) nA	3.1×10^{-5}	
		(4 ~ 10) nA	2.7×10^{-5}	
		(10 ~ 40) nA	3.3×10^{-5}	
		40 nA~ 1 μA	2.8×10^{-5}	
		(1 ~ 4) μA	1.8×10^{-3}	
		(4 ~ 8) μA	9.3×10^{-4}	
		(8 ~ 10) μA	7.4×10^{-4}	
		(10 ~ 40) μA	2.3×10^{-4}	
		(40 ~ 80) μA	1.4×10^{-4}	
		(80 ~ 100) μA	1.2×10^{-4}	
		(100 ~ 400) μA	7.3×10^{-5}	
		(400 ~ 800) μA	5.5×10^{-5}	
		(0.8 ~ 1) mA	5.1×10^{-5}	
		(1 ~ 4) mA	6.5×10^{-5}	
		(4 ~ 8) mA	5.0×10^{-5}	
		(8 ~ 10) mA	4.8×10^{-5}	
		(10 ~ 40) mA	8.3×10^{-5}	
		(40 ~ 80) mA	6.5×10^{-5}	
		(80 ~ 100) mA	8.7×10^{-5}	
		(100 ~ 400) mA	1.5×10^{-4}	
		(400 ~ 800) mA	1.2×10^{-4}	
		(0.8 ~ 1) A	1.3×10^{-4}	
		(1 ~ 4) A	3.3×10^{-4}	
		(4 ~ 8) A	2.4×10^{-4}	
		(8 ~ 10) A	2.0×10^{-4}	
		(10 ~ 40) A	9.1×10^{-4}	
		(40 ~ 80) A	4.7×10^{-4}	
		(80 ~ 100) A	3.9×10^{-4}	

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Transconductance amplifiers	40102			Digital multimeters,
DC Current		0 μA	1.2 nA	Current shunts,
				Multimeter calibrators
		(+)		HCT-CS-052-40102
		(0 ~ 1) mA	2.8×10^{-5}	
		(1 ~ 10) mA	2.5×10^{-5}	
		10 mA ~ 1 A	2.8×10^{-5}	
		(1 ~ 10) A	3.5×10^{-5}	
		(10 ~ 100) A	4.5×10^{-5}	
		(-)		
		(0 ~ -1) mA	2.8×10^{-5}	
		(-1 ~ -10) mA	2.5×10^{-5}	
		-10 mA ~ -1 A	2.8×10^{-5}	
		(-1 ~ -10) A	3.5×10^{-5}	
		(-10 ~ -100) A	4.5×10^{-5}	
AC Current		50 Hz		
		100 μA	20 nA	
		(100 ~ 400) μA	1.9×10^{-4}	
		400 μA ~ 1 mA	1.5×10^{-4}	
		(1 ~ 4) mA	1.8×10^{-4}	
		(4 ~ 10) mA	1.4×10^{-4}	
		(10 ~ 40) mA	1.8×10^{-4}	
		(40 ~ 100) mA	1.4×10^{-4}	
		(100 ~ 400) mA	1.8×10^{-4}	
		400 mA ~ 1 A	1.4×10^{-4}	
		(1 ~ 4) A	1.9×10^{-4}	
		(4 ~ 10) A	1.4×10^{-4}	
		(10 ~ 40) A	2.0×10^{-4}	
		(40 ~ 100) A	1.6×10^{-4}	

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Transconductance amplifiers	40102			Digital multimeters,
AC Current		(50 ~ 100) Hz		Current shunts,
		100 μA	20 nA	Multimeter calibrators
		(100 ~ 400) μA	1.8×10^{-4}	HCT-CS-052-40102
		400 μA ~ 1 mA	1.5×10^{-4}	
		(1 ~ 4) mA	1.7×10^{-4}	
		(4 ~ 10) mA	1.4×10^{-4}	
		(10 ~ 40) mA	1.7×10^{-4}	
		(40 ~ 100) mA	1.4×10^{-4}	
		(100 ~ 400) mA	1.8×10^{-4}	
		400 mA ~ 1 A	1.3×10^{-4}	
		(1 ~ 4) A	1.8×10^{-4}	
		(4 ~ 10) A	1.4×10^{-4}	
		(10 ~ 40) A	2.0×10^{-4}	
		(40 ~ 100) A	1.6×10^{-4}	
		(100 Hz ~ 1 kHz)		
		100 μA	17 nA	
		(100 ~ 400) μA	1.6×10^{-4}	
		(400 ~ 800) μA	1.3×10^{-4}	
		800 μA ~ 1 mA	1.0×10^{-4}	
		(1 ~ 4) mA	1.5×10^{-4}	
		(4 ~ 10) mA	1.1×10^{-4}	
		(10 ~ 40) mA	1.5×10^{-4}	
		(40 ~ 100) mA	1.1×10^{-4}	
		(100 ~ 400) mA	1.5×10^{-4}	
		400 mA ~ 1 A	1.1×10^{-4}	
		(1 ~ 4) A	1.6×10^{-4}	
		(4 ~ 10) A	1.2×10^{-4}	
		(10 ~ 40) A	1.8×10^{-4}	
		(40 ~ 100) A	1.5×10^{-4}	

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Transconductance amplifiers	40102			Digital multimeters,
AC Current		(1 ~ 10) kHz		Current shunts,
		100 μA	21 nA	Multimeter calibrators
		(100 ~ 400) μA	1.9×10^{-4}	HCT-CS-052-40102
		400 μA ~ 4 mA	1.7×10^{-4}	
		(4 ~ 10) mA	1.4×10^{-4}	
		(10 ~ 40) mA	1.8×10^{-4}	
		(40 ~ 100) mA	1.4×10^{-4}	
		(100 ~ 400) mA	1.8×10^{-4}	
		400 mA ~ 1 A	1.3×10^{-4}	
		(1 ~ 4) A	2.0×10^{-4}	
		(4 ~ 10) A	1.7×10^{-4}	
		(10 ~ 40) A	2.8×10^{-4}	
		(40 ~ 100) A	2.6×10^{-4}	
		(10 ~ 100) kHz		
		100 μA	0.11 μA	
		(100 ~ 400) μA	1.4×10^{-3}	
		(400 ~ 800) μA	9.7×10^{-4}	
		(0.8 ~ 1) mA	9.0×10^{-4}	
		(1 ~ 4) mA	1.4×10^{-3}	
		(4 ~ 8) mA	9.6×10^{-4}	
		(8 ~ 10) mA	8.8×10^{-4}	
		(10 ~ 40) mA	1.4×10^{-3}	
		(40 ~ 80) mA	9.6×10^{-4}	
		(80 ~ 100) mA	8.8×10^{-4}	
		(100 ~ 400) mA	1.4×10^{-3}	
		(400 ~ 800) mA	9.6×10^{-4}	
		(0.8 ~ 1) A	8.8×10^{-4}	
		(1 ~ 4) A	1.4×10^{-3}	
		(4 ~ 8) A	9.7×10^{-4}	
		(8 ~ 10) A	8.9×10^{-4}	
		(10 ~ 40) A	1.4×10^{-3}	
		(40 ~ 80) A	1.0×10^{-3}	
		(80 ~ 100) A	9.2×10^{-4}	

Accreditation No. : KC00-011

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
DC Voltage/Current Calibrator	40103			Digital Multimeter,
DC Currnet		0 pA	26 fA	Current Shunt
		(±)		/HCT-CS-053-40103
		(0 ~ 10) pA	1.2×10^{-2}	
		(10 ~ 100) pA	1.2×10^{-2}	
		(0.1 ~ 1) nA	2.7×10^{-5}	
		(1 ~ 10) nA	1.5×10^{-5}	
		(10 ~ 100) nA	1.2×10^{-5}	
		(0.1 ~ 1) μA	1.1×10^{-5}	
		(1 ~ 10) μA	9.2×10^{-6}	
		(10 ~ 100) μA	1.1×10^{-5}	
		(0.1 ~ 1) mA	1.1×10^{-5}	
		(1 ~ 10) mA	9.1×10^{-6}	
		(10 ~ 100) mA	1.3×10^{-5}	
		(0.1 ~ 1) A	1.0×10^{-5}	
		(1 ~ 10) A	1.2×10^{-4}	
		(10 ~ 100) A	2.7×10^{-4}	
DC Voltage		0 mV	0.24 μV	
		(±)		
		(0 ~ 10) mV	1.7×10^{-5}	
		(10 ~ 100) mV	7.9×10^{-6}	
		(0.1 ~ 10) V	7.2×10^{-6}	
		(10 ~ 100) V	8.0×10^{-6}	
		(100 ~ 1 000) V	8.2×10^{-6}	

Accreditation No. : KC00-011

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Temperature Calibrator via	40104			Digital Multimeter
Electrical Standards				/HCT-CS-205-40104
DC Current Source		1 mA	63 nA	
		(1 ~ 10) mA	1.7×10^{-5}	
		(10 ~ 20) mA	1.4×10^{-5}	
		(20 ~ 30) mA	7.0×10^{-5}	
DC Voltage Source		(-10 ~ 0) mV	2.8×10^{-5}	
		0 mV	0.13 μV	
		(0 ~ 10) mV	2.8×10^{-5}	
		(10 ~ 100) mV	4.9×10^{-6}	
		(0.1 ~ 1) V	7.3×10^{-6}	
		(1 ~ 30) V	6.6×10^{-6}	
Resistance Source		10 Ω	0.12 mΩ	
		(10 ~ 100) Ω	1.1×10^{-5}	
		100 Ω ~ 1 kΩ	2.3×10^{-5}	
		(1 ~ 100) kΩ	1.1×10^{-5}	
DC Current Meter		1 mA	80 nA	
		(1 ~ 10) mA	4.8×10^{-5}	
		(10 ~ 30) mA	4.4×10^{-5}	
		(20 ~ 30) mA	8.3×10^{-5}	
		(30 ~ 50) mA	7.0×10^{-5}	
		(50 ~ 70) mA	6.5×10^{-5}	
		(70 ~ 100) mA	6.1×10^{-5}	
DC Voltage Meter		(-10 ~ 0) mV	6.0×10^{-5}	
		0 mV	0.50 μV	
		(0 ~ 1) mV	5.2×10^{-4}	
		(1 ~ 10) mV	6.0×10^{-5}	
		(10 ~ 100) mV	1.4×10^{-5}	
		(0.1 ~ 1) V	6.2×10^{-5}	
		(1 ~ 10) V	2.4×10^{-5}	
		(10 ~ 100) V	8.8×10^{-6}	
		(100 ~ 200) V	1.2×10^{-5}	
		(200 ~ 300) V	9.9×10^{-6}	

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Temperature Calibrator via Electrical Standards Resistance Meter	40104	10 Ω (10 ~ 100) Ω (0.1 ~ 10) kΩ (10 ~ 100) kΩ	0.28 mΩ 1.6×10^{-5} 1.2×10^{-5} 1.4×10^{-5}	Digital Multimeter /HCT-CS-205-40104
DC current shunts Resistance	40105	25 μΩ (25 ~ 50) μΩ (50 ~ 100) μΩ (0.1 ~ 8) mΩ (8 ~ 10) mΩ (10 ~ 16) mΩ (16 ~ 80) mΩ (0.08 ~ 0.1) Ω (0.1 ~ 0.16) Ω (0.16 ~ 0.4) Ω (0.4 ~ 0.8) Ω (0.8 ~ 1) Ω (1 ~ 1.6) Ω (1.6 ~ 4) Ω (4 ~ 8) Ω (8 ~ 10) Ω (10 ~ 16) Ω (16 ~ 40) Ω (40 ~ 80) Ω (80 ~ 100) Ω (100 ~ 800) Ω (800 ~ 1 000) Ω	6.1 nΩ 1.7×10^{-4} 1.6×10^{-4} 1.5×10^{-4} 4.0×10^{-4} 1.4×10^{-4} 1.6×10^{-4} 1.1×10^{-4} 2.1×10^{-4} 1.0×10^{-4} 1.1×10^{-4} 6.2×10^{-5} 1.3×10^{-4} 1.8×10^{-4} 6.1×10^{-5} 4.9×10^{-5} 7.5×10^{-5} 9.5×10^{-5} 4.9×10^{-5} 5.3×10^{-5} 5.1×10^{-5} 1.2×10^{-4}	Digital multimeters, Multimeter calibrators, Current calibrators /HCT-CS-054-40105

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Galvanometers/null detectors	40106			Multimeter calibrators,
DC Voltage		3 μV	58 nV	Current shunts
		(3 ~ 10) μV	5.8×10^{-3}	/HCT-CS-247-40106
		(10 ~ 30) μV	9.6×10^{-3}	
		(30 ~ 100) μV	5.8×10^{-3}	
		(100 ~ 300) μV	9.6×10^{-3}	
		(0.3 ~ 1) mV	5.8×10^{-3}	
		(1 ~ 3) mV	9.6×10^{-3}	
		(3 ~ 10) mV	5.8×10^{-3}	
		(10 ~ 30) mV	9.6×10^{-3}	
		(30 ~ 100) mV	5.8×10^{-3}	
		(100 ~ 300) mV	9.6×10^{-3}	
		(0.3 ~ 1) V	5.8×10^{-3}	
		(1 ~ 3) V	9.6×10^{-3}	
		(3 ~ 10) V	5.8×10^{-3}	
		(10 ~ 30) V	9.6×10^{-3}	
		(30 ~ 100) V	5.8×10^{-3}	
		(100 ~ 300) V	9.6×10^{-3}	
		(300 ~ 1 000) V	5.8×10^{-3}	
DC Power Supply	40108			Digital Multimeter,
DC Voltage		0 V	0.63 μV	Current Shunt
		(±)		/HCT-CS-057-40108
		(0 ~ 40) mV	1.8×10^{-5}	
		(40 ~ 80) mV	9.4×10^{-6}	
		(80 ~ 100) mV	7.9×10^{-6}	
		(100 ~ 400) mV	1.7×10^{-5}	
		(400 ~ 800) mV	8.8×10^{-6}	
		(0.8 ~ 1) V	7.3×10^{-6}	
		(1 ~ 4) V	1.6×10^{-5}	
		(4 ~ 8) V	8.6×10^{-6}	
		(8 ~ 10) V	7.2×10^{-6}	
		(10 ~ 40) V	1.7×10^{-5}	
		(40 ~ 80) V	9.4×10^{-6}	
		(80 ~ 100) V	8.1×10^{-6}	
		(100 ~ 400) V	1.7×10^{-5}	
		(400 ~ 800) V	9.6×10^{-6}	
		(800 ~ 1 000) V	8.2×10^{-6}	
		(1 000 ~ 1 500) V	5.7×10^{-4}	
		(1 500 ~ 2 000) V	4.9×10^{-4}	

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
DC Power Supply	40108			Digital Multimeter,
DC Current		0 A	0.65 nA	Current Shunt
		(±)		/HCT-CS-057-40108
		(0 ~ 40) μA	3.3×10^{-5}	
		(40 ~ 80) μA	2.6×10^{-5}	
		(80 ~ 100) μA	2.6×10^{-5}	
		(100 ~ 400) μA	3.0×10^{-5}	
		(0.4 ~ 1) mA	2.6×10^{-5}	
		(1 ~ 4) mA	3.0×10^{-5}	
		(4 ~ 10) mA	2.6×10^{-5}	
		(10 ~ 40) mA	3.3×10^{-5}	
		(40 ~ 100) mA	2.6×10^{-5}	
		(100 ~ 400) mA	3.3×10^{-5}	
		(400 ~ 800) mA	2.9×10^{-5}	
		(0.8 ~ 1) A	2.8×10^{-5}	
		(1 ~ 4) A	3.8×10^{-5}	
		(4 ~ 10) A	3.4×10^{-5}	
		(10 ~ 40) A	4.8×10^{-5}	
		(40 ~ 100) A	4.5×10^{-5}	
		(100 ~ 300) A	2.1×10^{-4}	
		(300 ~ 1 000) A	2.2×10^{-4}	
Ripple		1 mV	0.12 mV	
		(1 ~ 5) mV	2.4×10^{-2}	
		(5 ~ 10) mV	1.6×10^{-2}	
		(10 ~ 20) mV	3.3×10^{-2}	
Load&Line Regulation		1 mV	0.64 μV	
		(1 ~ 5) mV	1.3×10^{-4}	
		(5 ~ 500) mV	1.2×10^{-4}	

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
DC voltage dividers	40110			High voltage deviders
Ratio		1 000 : 1		/HCT-CS-348-40110
		1 kV	4.8×10^{-4}	
		(1 ~ 5) kV	4.8×10^{-4}	
		(5 ~ 100) kV	4.8×10^{-4}	
		10 000 : 1		
		1 kV	4.8×10^{-4}	
		(1 ~ 5) kV	4.8×10^{-4}	
		(5 ~ 100) kV	4.8×10^{-4}	
DC voltage standards	40111			Standard cells,
DC Voltage		1.018 V	1.5×10^{-6}	Digital multimeters
		10 V	2.4×10^{-6}	/HCT-CS-275-40111
DC voltmeters	40112			Current calibrators,
DC Voltage		0 V	0.78 μV	Multimeter calibrators
		(+)		/HCT-CS-197-40112
		(0 ~ 4) mV	2.0×10^{-4}	
		(4 ~ 8) mV	1.0×10^{-4}	
		(8 ~ 10) mV	8.5×10^{-5}	
		(10 ~ 40) mV	2.6×10^{-5}	
		(40 ~ 80) mV	1.7×10^{-5}	
		(80 ~ 100) mV	1.5×10^{-5}	
		(100 ~ 400) mV	1.7×10^{-5}	
		(400 ~ 800) mV	1.0×10^{-5}	
		(0.8 ~ 1) V	9.0×10^{-6}	
		(1 ~ 4) V	1.6×10^{-5}	
		(4 ~ 8) V	8.9×10^{-6}	
		(8 ~ 10) V	7.6×10^{-6}	
		(10 ~ 40) V	1.7×10^{-5}	
		(40 ~ 80) V	1.0×10^{-5}	
		(80 ~ 100) V	8.8×10^{-6}	
		(100 ~ 400) V	2.0×10^{-5}	
		(400 ~ 1 000) V	1.1×10^{-5}	

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
DC voltmeters	40112			Current calibrators,
DC Voltage		(-)		Multimeter calibrators
		(0 ~ -4) mV	2.0×10^{-4}	/HCT-CS-197-40112
		(-4 ~ -8) mV	1.0×10^{-4}	
		(-8 ~ -10) mV	8.5×10^{-5}	
		(-10 ~ -40) mV	2.6×10^{-5}	
		(-40 ~ -80) mV	1.7×10^{-5}	
		(-80 ~ -100) mV	1.5×10^{-5}	
		(-100 ~ -400) mV	1.7×10^{-5}	
		(-400 ~ -800) mV	1.0×10^{-5}	
		(-0.8 ~ -1) V	9.0×10^{-6}	
		(-1 ~ -4) V	1.6×10^{-5}	
		(-4 ~ -8) V	8.9×10^{-6}	
		(-8 ~ -10) V	7.6×10^{-6}	
		(-10 ~ -40) V	1.7×10^{-5}	
		(-40 ~ -80) V	1.0×10^{-5}	
		(-80 ~ -100) V	8.8×10^{-6}	
		(-100 ~ -400) V	2.0×10^{-5}	
		(-400 ~ -1 000) V	1.1×10^{-5}	
Static/Ionic voltmeters	40113			Multimeter calibrators,
Static Voltage (Positive)		(+)		High voltage generators
		10 V	62 mV	/HCT-CS-058-40113
		(10 ~ 100) V	6.2×10^{-4}	
		(100 ~ 500) V	1.3×10^{-4}	
		(0.5 ~ 1) kV	6.2×10^{-4}	
		(1 ~ 10) kV	1.0×10^{-3}	
		(10 ~ 15) kV	1.2×10^{-3}	
		(15 ~ 20) kV	9.0×10^{-4}	
		(20 ~ 25) kV	1.0×10^{-3}	
		(25 ~ 48) kV	9.5×10^{-4}	
Static Voltage (Nagative)		(-)		
		-10 V	62 mV	
		(-10 ~ -100) V	6.2×10^{-4}	
		(-100 ~ -500) V	1.3×10^{-4}	
		(-0.5 ~ -1) kV	6.2×10^{-4}	
		(-1 ~ -10) kV	1.0×10^{-3}	
		(-10 ~ -15) kV	1.2×10^{-3}	
		(-15 ~ -20) kV	9.0×10^{-4}	
		(-20 ~ -25) kV	1.0×10^{-3}	
		(-25 ~ -48) kV	9.5×10^{-4}	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Capacitance bridges/indicators	40201			Counters,
Frequency		10 Hz	5.8 mHz	Standard capacitors,
		(10 ~ 100) Hz	5.8×10^{-5}	Digital Multimeters
		(0.1 ~ 1) kHz	5.8×10^{-6}	/HCT-CS-059-40201
		(1 ~ 10) kHz	5.8×10^{-7}	
		(10 ~ 100)kHz	5.9×10^{-8}	
		(0.1 ~ 1) MHz	8.2×10^{-9}	
		(1 ~ 10) MHz	5.9×10^{-8}	
		(10 ~ 30) MHz	2.0×10^{-8}	
AC Voltage		100 mV		
		20 Hz	20 μV	
		(0.02 ~ 1) kHz	1.8×10^{-4}	
		(1 ~ 10) kHz	2.2×10^{-4}	
		(10 ~ 100) kHz	1.1×10^{-3}	
		100 kHz ~ 1 MHz	2.5×10^{-1}	
		(0.1 ~ 1) V		
		20 Hz	6.4×10^{-4}	
		(0.02 ~ 10) kHz	5.9×10^{-4}	
		(10 ~ 100) kHz	1.1×10^{-3}	
		(0.1 ~ 1) MHz	3.5×10^{-2}	
		(1 ~ 10) V		
		20 Hz	6.4×10^{-4}	
		(0.02 ~ 10) kHz	5.9×10^{-4}	
		(10 ~ 100) kHz	1.0×10^{-3}	
		(0.1 ~ 1) MHz	3.5×10^{-2}	
		(10 ~ 20) V		
		20 Hz	9.0×10^{-4}	
		(0.02 ~ 1) kHz	3.5×10^{-4}	
		(1 ~ 10) kHz	3.7×10^{-4}	
		(10 ~ 100) kHz	1.9×10^{-3}	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Capacitance bridges/indicators	40201			Counters,
Capacitance		1 pF		Standard capacitors,
		60 Hz	0.76 fF	Digital Multimeters
		(60 ~ 400) Hz	0.75 fF	/HCT-CS-059-40201
		(0.4 ~ 1) kHz	0.76 fF	
		(0.001 ~ 1) MHz	0.76 fF	
		(1 ~ 2) MHz	0.78 fF	
		(2 ~ 3) MHz	0.86 fF	
		(3 ~ 4) MHz	0.98 fF	
		(4 ~ 5) MHz	1.2 fF	
		(5 ~ 10) MHz	2.7 fF	
		(10 ~ 13) MHz	3.8 fF	
		(1 ~ 10) pF		
		60 Hz ~ 5 MHz	3.6 fF	
		(5 ~ 10) MHz	3.8 fF	
		(10 ~ 13) MHz	3.9 fF	
		(10 ~ 100) pF		
		(60 ~ 400) Hz	35 fF	
		400 Hz ~ 4 MHz	36 fF	
		(4 ~ 5) MHz	38 fF	
		(5 ~ 10) MHz	48 fF	
		(10 ~ 13) MHz	61 fF	
		(100 ~ 1 000) pF		
		(60 ~ 400) Hz	0.35 pF	
		400 Hz ~ 1 MHz	0.36 pF	
		(1 ~ 2) MHz	0.38 pF	
		(2 ~ 3) MHz	0.45 pF	
		(3 ~ 4) MHz	0.57 pF	
		(4 ~ 5) MHz	0.72 pF	
		(5 ~ 10) MHz	2.0 pF	
		(10 ~ 13) MHz	2.9 pF	
		(1 ~ 10) nF		
		60 Hz	1.4 pF	
		120 Hz ~ 100 kHz	0.82 pF	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Capacitance bridges/indicators	40201			Counters,
Capacitance		(10 ~ 100) nF		Standard capacitors,
		60 Hz	36 pF	Digital Multimeters
		120 Hz ~ 100 kHz	8.2 pF	/HCT-CS-059-40201
		(0.1 ~ 1) µF		
		60 Hz	0.66 nF	
		120 Hz ~ 10 kHz	0.11 nF	
		(10 ~ 100) kHz	0.13 nF	
		(1 ~ 10) µF		
		100 Hz	4.7 nF	
		(0.1 ~ 1) kHz	3.2 nF	
		(10 ~ 100) µF		
		100 Hz	77 nF	
		(0.1 ~ 1) kHz	71 nF	
		(0.1 ~ 1) mF		
		100 Hz	1.2 µF	
		(0.1 ~ 1) kHz	2.3 µF	
Decade capacitors	40202			Capacitance bridges,
		1 kHz		LCR meters
		(1 ~ 10) pF	0.12 fF	/HCT-CS-060-40202
		(10 ~ 100) pF	1.2 fF	
		(100 ~ 1 000) pF	0.012 pF	
		(1 ~ 10) nF	0.21 pF	
		(10 ~ 100) nF	5.1 pF	
		(100 ~ 1 000) nF	0.11 nF	
		(1 ~ 10) µF	11 nF	
		120 Hz		
		10 µF	33 nF	
		(10 ~ 100) µF	3.3×10^{-3}	
		(0.1 ~ 1) mF	4.5×10^{-3}	
		12.5 kHz		
		(1 ~ 10) pF	4.5×10^{-3}	
		10 pF ~ 100 nF	3.8×10^{-3}	
		(100 ~ 1 000) nF	2.5×10^{-3}	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Decade capacitors	40202			Capacitance bridges,
		100 kHz		LCR meters
		1 pF ~ 10 nF	3.9×10^{-3}	/HCT-CS-060-40202
		500 kHz		
		(1 ~ 1 000) pF	4.0×10^{-3}	
		1 MHz		
		(1 ~ 1 000) pF	6.5×10^{-3}	
Standard capacitors	40204	1 kHz		Capacitance bridges,
		1 pF	21 aF	LCR meters
		10 pF	0.12 fF	/HCT-CS-061-40204
		100 pF	1.2 fF	
		1 nF	12 fF	
		10 nF	0.21 pF	
		100 nF	5.1 pF	
		1 μF	0.12 nF	
		10 μF	12 nF	
		120 Hz		
		100 μF	0.12 μF	
		1 mF	1.3 μF	
		12.5 kHz		
		1 pF	15 fF	
		10 pF	0.026 pF	
		100 pF	0.14 pF	
		1 nF	1.2 pF	
		10 nF	0.013 nF	
		100 nF	0.13 nF	
		1 μF	10 nF	
		100 kHz		
		1 pF	2.7 fF	
		10 pF	0.014 pF	
		100 pF	0.13 pF	
		1 nF	1.3 pF	
		10 nF	0.013 nF	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Standard capacitors	40204	1 kHz		Capacitance bridges,
		500 kHz		LCR meters
		1 pF	3.5 fF	/HCT-CS-061-40204
		10 pF	0.017 pF	
		100 pF	1.6 pF	
		1 nF	0.016 nF	
		1 MHz		
		1 pF	3.0 fF	
		10 pF	0.020 pF	
		100 pF	0.19 pF	
Earth testers	40205			Decade resistor,
Earth resistance		0.01 Ω	59 μΩ	Standard resistances
		(0.01 ~ 0.1) Ω	3.0×10^{-3}	/HCT-CS-062-40205
		(0.1 ~ 1) Ω	3.2×10^{-4}	
		(1 ~ 10) Ω	3.0×10^{-4}	
		(10 ~ 100) Ω	2.9×10^{-4}	
		(0.1 ~ 1) kΩ	2.9×10^{-4}	
		(1 ~ 10) kΩ	2.9×10^{-4}	
		(10 ~ 100) kΩ	2.9×10^{-4}	
Voltage		50 Hz ~ 1 kHz		
		1 V	5.8 mV	
		(1 ~ 100) V	5.9×10^{-4}	
		(100 ~ 600) V	4.5×10^{-4}	
		(600 ~ 1 000) V	3.6×10^{-4}	
Current		50 Hz		
		1 A	2.4 mA	
		(1 ~ 10) A	2.4×10^{-3}	
		(10 ~ 50) A	1.5×10^{-3}	
		(50 ~ 100) A	1.5×10^{-3}	
		50 Hz ~ 1 kHz		
		1 A	2.5 mA	
		(1 ~ 10) A	2.4×10^{-3}	
		(10 ~ 50) A	2.4×10^{-3}	
		(50 ~ 100) A	2.3×10^{-3}	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Inductors	40208	1 kHz		LCR meters
		0.1 mH	0.12 μH	/HCT-CS-063-40208
		(0.1 ~ 1) mH	1.2×10^{-3}	
		1 mH ~ 1 H	6.3×10^{-4}	
Insulation testers	40210			High resistance meters,
Insulation Resistance		1 kΩ	0.62 Ω	Multimeter calibrators
		1 kΩ ~ 1 MΩ	6.2×10^{-4}	/HCT-CS-064-40210
		1 MΩ ~ 10 MΩ	3.3×10^{-4}	
		10 MΩ ~ 100 MΩ	6.0×10^{-4}	
		100 MΩ ~ 1 GΩ	1.1×10^{-3}	
		1 GΩ ~ 10 GΩ	2.2×10^{-3}	
		10 GΩ ~ 100 GΩ	3.9×10^{-3}	
		100 GΩ ~ 1 TΩ	7.0×10^{-3}	
Insulation voltage		25 V	5.8 mV	
		(25 ~ 800) V	5.8×10^{-4}	
		(0.8 ~ 1) kV	1.0×10^{-2}	
		(1 ~ 10) kV	7.0×10^{-3}	
AC Voltage		50 Hz ~ 1 kHz		
		10 V	5.9 mV	
		10 V ~ 600 V	5.8×10^{-4}	
Resistance		1 Ω	5.8 mΩ	
		1 Ω ~ 100 Ω	5.9×10^{-4}	
		100 Ω ~ 100 kΩ	5.8×10^{-4}	
DC Voltage		1 V	0.58 mV	
		1 V ~ 1 000 V	5.8×10^{-5}	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Q-meters	40211			Frequency couters,
AC Voltage		1 kHz		Digital multimeters
		10 mV	58 μV	/HCT-CS-065-40211
		100 mV	0.58 mV	
		1 V	0.59 mV	
		10 V	5.9 mV	
Frequency		1 kHz	5.8 mHz	
		(1 ~ 10) kHz	5.8×10^{-7}	
		(10 ~ 100) kHz	5.9×10^{-8}	
		100 kHz ~ 1 MHz	9.0×10^{-9}	
		(1 ~ 10) MHz	5.9×10^{-8}	
		(10 ~ 100) MHz	9.0×10^{-9}	
Resistance bridges & Similar instrument	40213			Standard resistance, Digital multimeters
MEASURING ARM		0.01 Ω	9.6 μΩ	/HCT-CS-066-40213
		(0.01 ~ 0.1) Ω	11 μΩ	
		(0.1 ~ 1) Ω	19 μΩ	
		(1 ~ 10) Ω	0.11 mΩ	
		(10 ~ 100) Ω	0.92 mΩ	
		(0.1 ~ 1) kΩ	9.1 mΩ	
		(1 ~ 10) kΩ	90 mΩ	
		(10 ~ 100) kΩ	1.0 Ω	
		(0.1 ~ 1) MΩ	11 Ω	
		(1 ~ 10) MΩ	0.24 kΩ	
		(10 ~ 100) MΩ	16 kΩ	
RATIO ARM		× 0.001	5.9×10^{-8}	
		× 0.01	5.9×10^{-7}	
		× 0.1	5.9×10^{-6}	
		× 1	5.9×10^{-5}	
		× 10	5.9×10^{-4}	
		× 100	5.9×10^{-3}	
		× 1 000	6.0×10^{-2}	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Resistance meters	40214			Standard resistances,
DC Resistance		25 μΩ	0.17 μΩ	High resistance meters,
		50 μΩ	0.31 μΩ	Digital multimeters,
		100 μΩ	0.082 μΩ	Counters
		500 μΩ	0.081 μΩ	HCT-CS-067-40214
		1 mΩ	0.25 μΩ	
		(1 ~ 10) mΩ	1.2×10^{-4}	
		(10 ~ 100) mΩ	6.8×10^{-6}	
		(100 ~ 1 000) mΩ	3.3×10^{-6}	
		(1 ~ 10) Ω	6.7×10^{-5}	
		(10 ~ 100) Ω	3.7×10^{-5}	
		(0.1 ~ 10) kΩ	3.1×10^{-5}	
		(10 ~ 100) kΩ	3.7×10^{-5}	
		(0.1 ~ 1) MΩ	4.7×10^{-5}	
		(1 ~ 10) MΩ	8.7×10^{-5}	
		(10 ~ 100) MΩ	3.7×10^{-4}	
		(0.1 ~ 1) GΩ	7.3×10^{-4}	
		(1 ~ 10) GΩ	1.8×10^{-3}	
		(10 ~ 100) GΩ	3.1×10^{-3}	
		(0.1 ~ 1) TΩ	8.0×10^{-3}	
		(1 ~ 10) TΩ	1.9×10^{-1}	
Frequency		10 Hz	5.8 mHz	
		(10 ~ 100) Hz	5.8×10^{-5}	
		(0.1 ~ 1) kHz	5.8×10^{-6}	
		(1 ~ 10) kHz	5.8×10^{-7}	
		(10 ~ 100) kHz	5.9×10^{-8}	
		(0.1 ~ 1) MHz	8.2×10^{-9}	
AC Voltage		1 kHz		
		10 mV	6.9 μV	
		(10 ~ 100) mV	1.8×10^{-4}	
		(0.1 ~ 1) V	1.1×10^{-4}	
		(1 ~ 10) V	1.1×10^{-4}	
		(10 ~ 100) V	1.2×10^{-4}	
		(100 ~ 1 000) V	1.4×10^{-4}	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Resistance meters	40214			Standard resistances,
AC Resistance		1 kHz		High resistance meters,
		1 mΩ	1.4 μΩ	Digital multimeters,
		10 mΩ	12 μΩ	Counters
		100 mΩ	0.12 mΩ	HCT-CS-067-40214
		1 Ω	9.1 mΩ	
		10 Ω	3.6 mΩ	
		100 Ω	35 mΩ	
		1 kΩ	0.36 Ω	
		10 kΩ	3.6 Ω	
		100 kΩ	36 Ω	
DC Voltage		100 mV	0.79 μV	
		(0.1 ~ 1) V	7.3×10^{-6}	
		(1 ~ 10) V	7.2×10^{-6}	
		(10 ~ 100) V	8.1×10^{-6}	
		(100 ~ 1 000) V	9.0×10^{-6}	
Resistors	40215			Digital multimeters,
Standard Resistance(DC)		1 mΩ	18 nΩ	LCR meters
		(1 ~ 10) mΩ	1.8×10^{-5}	/HCT-CS-068-40215
		(10 ~ 100) mΩ	1.7×10^{-5}	
		(0.1 ~ 1) Ω	4.9×10^{-6}	
		(1 ~ 10) Ω	1.8×10^{-6}	
		(10 ~ 25) Ω	5.2×10^{-6}	
		(25 ~ 100) Ω	5.9×10^{-6}	
		(0.1 ~ 1) kΩ	5.3×10^{-6}	
		(1 ~ 10) kΩ	2.7×10^{-6}	
		(10 ~ 100) kΩ	7.8×10^{-6}	
		(0.1 ~ 1) MΩ	1.2×10^{-5}	
		(1 ~ 10) MΩ	2.2×10^{-5}	
		(10 ~ 100) MΩ	2.7×10^{-5}	
		(0.1 ~ 1) GΩ	4.1×10^{-5}	
		(1 ~ 10) GΩ	3.5×10^{-4}	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Resistors	40215			Digital multimeters,
Standard Resistance(AC)		1 mΩ		LCR meters
		50 Hz	1.5 μΩ	/HCT-CS-068-40215
		(0.05 ~ 1) kHz	1.5×10^{-3}	
		(1 ~ 10) mΩ		
		50 Hz	1.5×10^{-3}	
		(0.05 ~ 1) kHz	1.5×10^{-3}	
		(10 ~ 100) mΩ		
		50 Hz	8.3×10^{-3}	
		(0.05 ~ 1) kHz	8.3×10^{-3}	
		(0.1 ~ 1) Ω		
		400 Hz	1.2×10^{-3}	
		(0.4 ~ 1) kHz	1.2×10^{-3}	
		(1 ~ 10) Ω		
		400 Hz	3.8×10^{-4}	
		(0.4 ~ 1) kHz	3.8×10^{-4}	
		(0.001 ~ 1) MHz	1.2×10^{-2}	
		(1 ~ 2) MHz	1.2×10^{-2}	
		(2 ~ 3) MHz	1.2×10^{-2}	
		(3 ~ 4) MHz	1.2×10^{-2}	
		(4 ~ 5) MHz	1.2×10^{-2}	
		(5 ~ 10) MHz	1.3×10^{-2}	
		(10 ~ 13) MHz	1.4×10^{-2}	
		(10 ~100) Ω		
		400 Hz	3.6×10^{-4}	
		(0.4 ~ 1) kHz	3.6×10^{-4}	
		(0.001 ~ 1) MHz	1.2×10^{-2}	
		(1 ~ 2) MHz	1.2×10^{-2}	
		(2 ~ 3) MHz	1.2×10^{-2}	
		(3 ~ 4) MHz	1.2×10^{-2}	
		(4 ~ 5) MHz	1.2×10^{-2}	
		(5 ~ 10) MHz	1.2×10^{-2}	
		(10 ~ 13) MHz	1.2×10^{-2}	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Resistors	40215			Digital multimeters,
Decade Resistance(DC)		(0.1 ~ 1) kΩ		LCR meters
		400 Hz	3.6×10^{-4}	/HCT-CS-068-40215
		(0.4 ~ 1) kHz	3.6×10^{-4}	
		(1 ~ 100) kHz	1.2×10^{-2}	
		(0.1 ~ 1) MHz	1.2×10^{-2}	
		(1 ~ 2) MHz	1.2×10^{-2}	
		(2 ~ 3) MHz	1.2×10^{-2}	
		(3 ~ 4) MHz	1.2×10^{-2}	
		(4 ~ 5) MHz	1.2×10^{-2}	
		(5 ~ 10) MHz	1.2×10^{-2}	
		(10 ~ 13) MHz	1.2×10^{-2}	
		(1 ~ 10) kΩ		
		400 Hz	3.6×10^{-4}	
		(0.4 ~ 1) kHz	3.6×10^{-4}	
		(1 ~ 100) kHz	1.2×10^{-2}	
		(0.1 ~ 1) MHz	1.2×10^{-2}	
		(10 ~ 100) kΩ		
		400 Hz	3.8×10^{-4}	
		(0.4 ~ 1) kHz	3.8×10^{-4}	
		(1 ~ 100) kHz	1.2×10^{-2}	
		(0.1 ~ 1) MHz	1.2×10^{-2}	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Resistors	40215			Digital multimeters,
Decade Resistance(AC)		1 mΩ	7.5 uΩ	LCR meters
		1 mΩ ~ 10 mΩ	3.8×10^{-3}	/HCT-CS-068-40215
		10 mΩ ~ 100 mΩ	3.8×10^{-4}	
		100 mΩ ~ 1 Ω	3.8×10^{-4}	
		1 Ω ~ 10 Ω	6.5×10^{-5}	
		10 Ω ~ 100 Ω	2.1×10^{-5}	
		100 Ω ~ 1 kΩ	2.3×10^{-5}	
		1 kΩ ~ 10 kΩ	2.2×10^{-5}	
		10 kΩ ~ 100 kΩ	1.9×10^{-5}	
		100 kΩ ~ 1 MΩ	1.6×10^{-5}	
		1 MΩ ~ 10 MΩ	4.0×10^{-5}	
		10 MΩ ~100 MΩ	1.3×10^{-4}	
		100 MΩ ~ 1 GΩ	7.0×10^{-4}	
		1 GΩ ~ 10 GΩ	1.2×10^{-3}	
		10 GΩ ~ 100 GΩ	1.6×10^{-3}	
		100 GΩ ~ 1 TΩ	3.8×10^{-3}	
Decade Resistance(AC)		1 kHz		
		100 mΩ	0.32 mΩ	
		100 mΩ ~ 10 Ω	1.9×10^{-3}	
		10 Ω ~ 100 kΩ	1.6×10^{-3}	
Electrical conductivity meters	40216	14.36 MS/m	0.13 MS/m	Standard specimens
		22.90 MS/m	0.18 MS/m	/HCT-CS-227-40216
		34.26 MS/m	0.29 MS/m	
		58.38 MS/m	0.50 MS/m	
Impedance bridges/LCR meters	40217			Counters,
Frequency		10 Hz	5.8 mHz	Standard Resistance,
		10 Hz ~ 100 Hz	5.8×10^{-5}	Capacitance,
		100 Hz ~ 1 kHz	5.8×10^{-6}	Inductance,
		(1 ~ 10) kHz	5.8×10^{-7}	Digital multimeters
		(10 ~ 100) kHz	5.9×10^{-8}	/HCT-CS-093-40217
		(0.1 ~ 1) MHz	8.2×10^{-9}	
		(1 ~ 10) MHz	5.8×10^{-9}	
		(10 ~ 30) MHz	2.0×10^{-8}	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Impedance bridges/LCR meters	40217			Counters,
AC Voltage		1 mV		Standard Resistance,
		20 Hz	7 uV	Capacitance,
		(0.02 ~ 1) kHz	6.0×10^{-3}	Inductance,
		(1 ~ 10) kHz	1.1×10^{-2}	Digital multimeters
		(10 ~ 100) kHz	3.0×10^{-2}	/HCT-CS-093-40217
		(1 ~ 10) mV		
		20 Hz	8.0×10^{-4}	
		(0.02 ~ 1) kHz	7.0×10^{-4}	
		(1 ~ 10) kHz	1.2×10^{-3}	
		(10 ~ 100) kHz	4.0×10^{-3}	
		(10 ~ 100) mV		
		20 Hz	2.0×10^{-4}	
		(0.02 ~ 1) kHz	1.8×10^{-4}	
		(1 ~ 10) kHz	2.2×10^{-4}	
		(10 ~ 100) kHz	1.1×10^{-3}	
		(0.1 ~ 1) V		
		20 Hz	6.4×10^{-4}	
		(0.02 ~ 10) kHz	5.9×10^{-4}	
		(10 ~ 100) kHz	1.0×10^{-3}	
		(0.1 ~ 1) MHz	3.5×10^{-2}	
		(1 ~ 10) V		
		20 Hz	6.4×10^{-4}	
		(0.02 ~ 10) kHz	5.9×10^{-4}	
		(10 ~ 100) kHz	1.0×10^{-3}	
		(0.1 ~ 1) MHz	3.5×10^{-2}	
		(10 ~ 20) V		
		20 Hz	8.8×10^{-4}	
		(0.02 ~ 1) kHz	3.4×10^{-4}	
		(1 ~ 10) kHz	3.7×10^{-4}	
		(10 ~ 100) kHz	1.8×10^{-3}	
DC Voltage		100 mV	0.8 uV	
		100 mV ~ 10 V	1.6×10^{-3}	
		(10 ~ 40) V	5.8×10^{-5}	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Impedance bridges/LCR meters	40217			Counters,
DC Current		1 A	0.63 mA	Standard Resistance,
		1 A ~ 10 A	5.0×10^{-4}	Capacitance,
		10 A ~ 20 A	6.5×10^{-4}	Inductance,
		20 A ~ 40 A	6.3×10^{-4}	Digital multimeters
				/HCT-CS-093-40217
Resistance		1 mΩ		
		50 Hz	1.4 uΩ	
		50 Hz ~ 1 kHz	1.4×10^{-3}	
		(1 ~ 10) mΩ		
		50 Hz	1.2×10^{-3}	
		50 Hz ~ 1 kHz	1.2×10^{-3}	
		(10 ~ 100) mΩ		
		50 Hz	1.2×10^{-3}	
		50 Hz ~ 1 kHz	1.2×10^{-3}	
		(0.1 ~ 1) Ω		
		400 Hz	1.2×10^{-3}	
		400 Hz ~ 1 kHz	1.2×10^{-3}	
		(1 ~ 10) Ω		
		400 Hz	6.0×10^{-4}	
		400 Hz ~ 1 kHz	6.0×10^{-4}	
		1 kHz ~ 5 MHz	1.2×10^{-2}	
		(5 ~ 10) MHz	1.3×10^{-2}	
		(10 ~ 13) MHz	1.4×10^{-2}	
		(10 ~ 100) Ω		
		400 Hz	3.6×10^{-4}	
		400 Hz ~ 1 kHz	3.6×10^{-4}	
		1 kHz ~ 13 MHz	1.2×10^{-2}	
		100 Ω ~ 1 kΩ		
		400 Hz	3.6×10^{-4}	
		400 Hz ~ 1 kHz	3.6×10^{-4}	
		1 kHz ~ 13 MHz	1.2×10^{-2}	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Impedance bridges/LCR meters	40217			Counters,
Resistance		(1 ~ 10) kΩ		Standard Resistance,
		400 Hz	3.6×10^{-4}	Capacitance,
		400 Hz ~ 1 kHz	3.6×10^{-4}	Inductance,
		1 kHz ~ 1 MHz	1.2×10^{-2}	Digital multimeters /HCT-CS-093-40217
		(10 ~ 100) kΩ		
		1 kHz	3.7×10^{-4}	
		1 kHz ~ 1 MHz	1.2×10^{-2}	
Capacitance		1 pF		
		60 Hz	0.76 fF	
		(60 ~ 400) Hz	7.5×10^{-4}	
		(0.4 ~ 1) kHz	7.6×10^{-4}	
		(0.001 ~ 1) MHz	7.6×10^{-4}	
		(1 ~ 2) MHz	7.8×10^{-4}	
		(2 ~ 3) MHz	8.6×10^{-4}	
		(3 ~ 4) MHz	9.8×10^{-4}	
		(4 ~ 5) MHz	1.2×10^{-3}	
		(5 ~ 10) MHz	2.6×10^{-3}	
		(10 ~ 13) MHz	3.8×10^{-3}	
		(1 ~ 10) pF		
		60 Hz	3.6×10^{-4}	
		(60 ~ 400) Hz	3.6×10^{-4}	
		(0.4 ~ 1) kHz	3.6×10^{-4}	
		(0.001 ~ 1) MHz	3.6×10^{-4}	
		(1 ~ 2) MHz	3.6×10^{-4}	
		(2 ~ 3) MHz	3.6×10^{-4}	
		(3 ~ 4) MHz	3.6×10^{-4}	
		(4 ~ 5) MHz	3.6×10^{-4}	
		(5 ~ 10) MHz	3.8×10^{-4}	
		(10 ~ 13) MHz	3.9×10^{-4}	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Impedance bridges/LCR meters	40217			Counters,
Capacitance		(10 ~ 100) pF		Standard Resistance,
		60 Hz	3.5×10^{-4}	Capacitance,
		(60 ~ 400) Hz	3.5×10^{-4}	Inductance,
		(0.4 ~ 1) kHz	3.6×10^{-4}	Digital multimeters
		(0.001 ~ 1) MHz	3.6×10^{-4}	/HCT-CS-093-40217
		(1 ~ 2) MHz	3.6×10^{-4}	
		(2 ~ 3) MHz	3.6×10^{-4}	
		(3 ~ 4) MHz	3.6×10^{-4}	
		(4 ~ 5) MHz	3.8×10^{-4}	
		(5 ~ 10) MHz	4.9×10^{-4}	
		(10 ~ 13) MHz	6.1×10^{-4}	
		(100 ~ 1 000) pF		
		60 Hz	3.5×10^{-4}	
		(60 ~ 400) Hz	3.5×10^{-4}	
		(0.4 ~ 1) kHz	3.6×10^{-4}	
		(0.001 ~ 1) MHz	3.6×10^{-4}	
		(1 ~ 2) MHz	3.8×10^{-4}	
		(2 ~ 3) MHz	4.5×10^{-4}	
		(3 ~ 4) MHz	5.7×10^{-4}	
		(4 ~ 5) MHz	7.2×10^{-4}	
		(5 ~ 10) MHz	2.0×10^{-3}	
		(10 ~ 13) MHz	3.0×10^{-3}	
		(1 ~ 10) nF		
		60 Hz	1.4×10^{-4}	
		(60 ~ 120) Hz	8.2×10^{-5}	
		(120 ~ 400) Hz	7.7×10^{-5}	
		(0.4 ~ 1) kHz	8.2×10^{-5}	
		(1 ~ 10) kHz	8.2×10^{-5}	
		(10 ~ 100) kHz	8.2×10^{-5}	
		(10 ~ 100) nF		
		60 Hz	3.6×10^{-4}	
		(60 ~ 120) Hz	8.2×10^{-5}	
		(120 ~ 400) Hz	9.3×10^{-5}	
		(0.4 ~ 1) kHz	8.2×10^{-5}	
		(1 ~ 10) kHz	8.2×10^{-5}	
		(10 ~ 100) kHz	8.2×10^{-5}	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Impedance bridges/LCR meters	40217			Counters,
Capacitance		(0.1 ~ 1) μF		Standard Resistance,
		60 Hz	6.6×10^{-4}	Capacitance,
		(60 ~ 120) Hz	1.1×10^{-4}	Inductance,
		(120 ~ 400) Hz	1.8×10^{-4}	Digital multimeters
		(0.4 ~ 1) kHz	1.1×10^{-4}	/HCT-CS-093-40217
		(1 ~ 10) kHz	1.1×10^{-4}	
		(10 ~ 100) kHz	1.3×10^{-4}	
		(1 ~ 10) μF		
		100 Hz	4.7×10^{-4}	
		(0.1 ~ 1) kHz	3.2×10^{-4}	
		(10 ~ 100) μF		
		100 Hz	7.7×10^{-4}	
		(0.1 ~ 1) kHz	7.1×10^{-4}	
		(0.1 ~ 1) mF		
		100 Hz	1.2×10^{-3}	
		(0.1 ~ 1) kHz	2.3×10^{-3}	
Inductance		1 kHz		
		100 μH	21 nH	
		(0.1 ~ 1) mH	1.5×10^{-4}	
		(1 ~ 10) mH	1.4×10^{-4}	
		(10 ~ 100) mH	1.5×10^{-4}	
		(0.1 ~ 1) H	1.5×10^{-4}	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC ammeters	40301			Multimeter calibrators
AC Current		10 μA		/HCT-CS-070-40301
		50 Hz ~ 1 kHz	12 nA	
		(10 μA ~ 100 μA)		
		40 Hz	3.2×10^{-4}	
		40 Hz ~ 1 kHz	2.3×10^{-4}	
		(1 ~ 10) kHz	2.1×10^{-3}	
		(100 μA ~ 10 mA)		
		40 Hz	2.4×10^{-4}	
		40 Hz ~ 1 kHz	1.8×10^{-4}	
		(1 ~ 10) kHz	2.1×10^{-3}	
		(10 ~ 100) mA		
		40 Hz	2.4×10^{-4}	
		40 Hz ~ 1 kHz	1.8×10^{-4}	
		(1 ~ 10) kHz	2.0×10^{-3}	
		(100 mA ~ 1 A)		
		40 Hz	3.5×10^{-4}	
		40 Hz ~ 1 kHz	3.4×10^{-4}	
		(1 ~ 10) kHz	8.4×10^{-3}	
		(1 ~ 10) A		
		(50 ~ 60) Hz	1.3×10^{-3}	
		60 Hz ~ 1 kHz	2.0×10^{-3}	
		(10 ~ 20) A		
		(50 ~ 60) Hz	7.1×10^{-4}	
		60 Hz ~ 1 kHz	1.5×10^{-3}	
		(20 ~ 50) A		
		(50 ~ 60) Hz	6.2×10^{-4}	
		(50 ~ 100) A		
		(50 ~ 60) Hz	4.1×10^{-4}	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC ammeters	40301			Multimeter calibrators
AC Voltage		1 V		/HCT-CS-070-40301
		40 Hz	0.38 mV	
		40 Hz ~ 10 kHz	3.6×10^{-4}	
		(1 ~ 10) V		
		40 Hz	1.4×10^{-4}	
		40 Hz ~ 10 kHz	6.8×10^{-5}	
		(10 ~ 30) V		
		40 Hz	2.1×10^{-4}	
		40 Hz ~ 1 kHz	1.2×10^{-4}	
		(30 ~ 75) V		
		40 Hz	1.5×10^{-4}	
		40 Hz ~ 1 kHz	9.1×10^{-5}	
		(75 ~ 150) V		
		40 Hz	1.3×10^{-4}	
		40 Hz ~ 1 kHz	7.3×10^{-5}	
		(150 ~ 300) V		
		50 Hz	4.3×10^{-4}	
		50 Hz ~ 1 kHz	1.5×10^{-4}	
		(300 ~ 750) V		
		50 Hz	3.9×10^{-4}	
		50 Hz ~ 1 kHz	1.0×10^{-4}	
Clamp ammeters/voltmeters	40302			Miltimeter calibrators,
DC Voltage		100 mV	6.3 μV	Coil
		(100 mV ~ 1 V)	62 μV	/HCT-CS-071-40302
		(1 V ~ 10 V)	0.62 mV	
		(10 V ~ 100 V)	6.0 mV	
		(100 V ~ 1 000 V)	62 mV	
AC Voltage		100 mV		
		40 Hz	13 μV	
		40 Hz ~ 20 kHz	10 μV	
		(20 ~ 50) kHz	17 μV	
		(50 ~ 100) kHz	38 μV	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Clamp ammeters/voltmeters	40302			Miltimeter calibrators,
AC Voltage		(100 mV ~ 1 V)		Coil
		40 Hz	0.14 mV	/HCT-CS-071-40302
		40 Hz ~ 20 kHz	85 μV	
		(20 ~ 100) kHz	0.15 mV	
		(1 ~ 10) V		
		40 Hz ~ 10 kHz	1.4 mV	
		(10 ~ 20) kHz	0.85 mV	
		(20 ~ 50) kHz	1.2 mV	
		(50 ~ 100) kHz	1.4 mV	
		(10 ~ 100) V		
		40 Hz ~ 10 kHz	15 mV	
		(10 ~ 20) kHz	9.4 mV	
		(20 ~ 50) kHz	13 mV	
		(50 ~ 100) kHz	22 mV	
		(100 ~ 1 000) V		
		50 Hz	0.38 V	
		50 Hz ~ 1 kHz	0.12 V	
DC Current		10 μA	12 nA	
		(10 ~ 100) μA	0.12 μA	
		100 μA ~ 1 mA	1.4 μA	
		(1 ~ 10) mA	14 μA	
		(10 ~ 100) mA	0.14 mA	
		100 mA ~ 1 A	1.4 mA	
		(1 ~ 10) A	14 mA	
		(10 ~ 50) A	85 mA	
		(50 ~ 100) A	0.14 A	
		(100 ~ 200) A	0.25 A	
		(200 ~ 300) A	0.36 A	
		(300 ~ 400) A	0.48 A	
		(400 ~ 500) A	0.59 A	
		(500 ~ 750) A	1.1 A	
		(750 ~ 900) A	1.3 A	
		(900 ~ 1 000) A	1.4 A	
		(1 000 ~ 1 500) A	1.9 A	
		(1 500 ~ 2 000) A	2.5 A	
		(2 000 ~ 2 500) A	3.0 A	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Clamp ammeters/voltmeters	40302			Miltimeter calibrators,
AC Current		10 μA		Coil
		50 Hz ~ 10 kHz	12 nA	/HCT-CS-071-40302
		(10 ~ 100) μA		
		50 Hz ~ 1 kHz	0.12 μA	
		(1 kHz ~ 10 kHz)	0.24 μA	
		100 μA ~ 1 mA		
		40 Hz ~ 1 kHz	1.4 μA	
		(1 kHz ~ 10 kHz)	2.5 μA	
		(1 ~ 10) mA		
		40 Hz ~ 1 kHz	14 μA	
		(1 kHz ~ 10 kHz)	24 μA	
		(10 ~ 100) mA		
		40 Hz ~ 1 kHz	0.14 mA	
		(1 kHz ~ 10 kHz)	0.20 mA	
		100 mA ~ 1 A		
		40 Hz ~ 1 kHz	1.4 mA	
		(1 kHz ~ 10 kHz)	8.5 mA	
		(1 ~ 10) A		
		(40 ~ 60) Hz	19 mA	
		60 Hz ~ 1 kHz	24 mA	
		(10 ~ 100) A		
		(50 ~ 60) Hz	0.32 A	
		(100 ~ 200) A		
		(50 ~ 60) Hz	0.39 A	
		(200 ~ 300) A		
		(50 ~ 60) Hz	0.48 A	
		(300 ~ 400) A		
		(50 ~ 60) Hz	0.58 A	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Clamp ammeters/voltmeters	40302			Miltimeter calibrators,
AC Current		(400 ~ 500) A		Coil
		(50 ~ 60) Hz	0.68 A	/HCT-CS-071-40302
		(500 ~ 750) A		
		(50 ~ 60) Hz	1.3 A	
		(750 ~ 900) A		
		(50 ~ 60) Hz	1.5 A	
		(900 ~ 1 000) A		
		(50 ~ 60) Hz	1.6 A	
		(1 000 ~ 1 500) A		
		(50 ~ 60) Hz	2.1 A	
		(1 500 ~ 2 000) A		
		(50 ~ 60) Hz	2.6 A	
		(2 000 ~ 2 500) A		
		(50 ~ 60) Hz	3.2 A	
		(2 500 ~ 3 000) A		
		(50 ~ 60) Hz	3.7 A	
Resistance		1 Ω	0.88 mΩ	
		(1 Ω ~ 10 Ω)	1.2 mΩ	
		(10 Ω ~ 100 Ω)	7.4 mΩ	
		(100 Ω ~ 1 kΩ)	69 mΩ	
		(1 kΩ ~ 10 kΩ)	0.69 Ω	
		(10 kΩ ~ 100 kΩ)	6.9 Ω	
		(100 kΩ ~ 1 MΩ)	66 Ω	
		(1 MΩ ~ 10 MΩ)	1.4 kΩ	
		(10 MΩ~ 100 MΩ)	17 kΩ	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Clamp ammeters/voltmeters	40302			Miltimeter calibrators,
Frequency		40 Hz	7.7 mHz	Coil
		(40 ~ 50) Hz	8.5 mHz	/HCT-CS-071-40302
		(50 ~ 60) Hz	10 mHz	
		(60 ~ 300) Hz	71 mHz	
		(300 ~ 400) Hz	80 mHz	
		400 Hz ~ 1 kHz	0.14 Hz	
Current Probe		DC		
		10 mA	15 μA	
		(10 ~ 50) mA	59 μA	
		(50 ~ 100) mA	0.12 mA	
		(100 ~ 500) mA	0.59 mA	
		(500 mA ~ 1 A)	1.2 mA	
		(1 ~ 5) A	6.0 mA	
		(5 ~ 10) A	12 mA	
		(10 ~ 20) A	24 mA	
		(20 ~ 40) A	48 mA	
		(40 ~ 60) A	71 mA	
		(60 ~ 80) A	94 mA	
		(80 ~ 100) A	0.12 A	
		(100 ~ 500) A	0.59 A	
		(500 ~ 1 000) A	1.2 A	
		(50 ~ 60) Hz		
		10 mA	79 μA	
		(10 ~ 50) mA	0.10 mA	
		(50 ~ 100) mA	0.15 mA	
		(100 ~ 500) mA	0.63 mA	
		(500 mA ~ 1 A)	1.3 mA	
		(1 ~ 5) A	6.1 mA	
		(5 ~ 10) A	12 mA	
		(10 ~ 20) A	25 mA	
		(20 ~ 40) A	47 mA	
		(40 ~ 60) A	71 mA	
		(60 ~ 80) A	95 mA	
		(80 ~ 100) A	0.12 A	
		(100 ~ 500) A	0.69 A	
		(500 ~ 1 000) A	1.4 A	
		(1 000 ~ 3 000) A	3.7 A	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Clamp ammeters/voltmeters	40302			Miltimeter calibrators,
Current Coil (AC Ratio)		(50 ~ 60) Hz		Coil
		2	0.15 %	/HCT-CS-071-40302
		10	0.06 %	
		25	0.13 %	
		50	0.08 %	
Current Coil (DC Ratio)		2	0.04 %	
		10	0.04 %	
		25	0.13 %	
		50	0.08 %	
AC voltage/current calibrators	40303			Multimeters
AC Voltage		1 mV		/HCT-CS-072-40303
		40 Hz	2.4 μV	
		40 Hz ~ 20 kHz	2.1 μV	
		(20 ~ 50) kHz	3.3 μV	
		(50 ~ 100) kHz	4.3 μV	
		(1 ~ 10) mV		
		40 Hz	3.9 μV	
		40 Hz ~ 20 kHz	2.9 μV	
		(20 ~ 50) kHz	6.0 μV	
		(50 ~ 100) kHz	6.7 μV	
		(10 ~ 100) mV		
		40 Hz	12 μV	
		40 Hz ~ 20 kHz	6.9 μV	
		(20 ~ 50) kHz	12 μV	
		(50 ~ 100) kHz	24 μV	
		(0.1 ~ 0.4) V		
		40 Hz	32 μV	
		40 Hz ~ 20 kHz	15 μV	
		(20 ~ 50) kHz	24 μV	
		(50 ~ 100) kHz	37 μV	
		(0.4 ~ 0.8) V		
		40 Hz	62 μV	
		40 Hz ~ 20 kHz	25 μV	
		(20 ~ 50) kHz	44 μV	
		(50 ~ 100) kHz	68 μV	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC voltage/current calibrators	40303			Multimeters
AC Voltage		(0.8 ~ 1) V		/HCT-CS-072-40303
		40 Hz	77 μV	
		40 Hz ~ 20 kHz	30 μV	
		(20 ~ 50) kHz	55 μV	
		(50 ~ 100) kHz	84 μV	
		(1 ~ 4) V		
		40 Hz	0.32 mV	
		40 Hz ~ 20 kHz	0.14 mV	
		(20 ~ 50) kHz	0.24 mV	
		(50 ~ 100) kHz	0.39 mV	
		(4 ~ 8) V		
		40 Hz	0.64 mV	
		40 Hz ~ 20 kHz	0.30 mV	
		(20 ~ 50) kHz	0.48 mV	
		(50 ~ 100) kHz	0.80 mV	
		(8 ~ 10) V		
		40 Hz	0.79 mV	
		40 Hz ~ 20 kHz	0.36 mV	
		(20 ~ 50) kHz	0.59 mV	
		(50 ~ 100) kHz	0.98 mV	
		(10 ~ 40) V		
		40 Hz	3.4 mV	
		40 Hz ~ 20 kHz	1.9 mV	
		(20 ~ 50) kHz	3.5 mV	
		(50 ~ 100) kHz	5.0 mV	
		(40 ~ 80) V		
		40 Hz	6.4 mV	
		40 Hz ~ 20 kHz	3.1 mV	
		(20 ~ 50) kHz	6.6 mV	
		(50 ~ 100) kHz	9.3 mV	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC voltage/current calibrators	40303			Multimeters
		(80 ~ 100) V		/HCT-CS-072-40303
		40 Hz	8.0 mV	
		40 Hz ~ 20 kHz	3.8 mV	
		(20 ~ 50) kHz	8.1 mV	
		(50 ~ 100) kHz	12 mV	
		(100 ~ 400) V		
		40 Hz	47 mV	
		40 Hz ~ 10 kHz	21 mV	
		(400 ~ 800) V		
		40 Hz	93 mV	
		40 Hz ~ 10 kHz	40 mV	
		(800 ~ 1 000) V		
		40 Hz	0.12 V	
		40 Hz ~ 10 kHz	48 mV	
AC Current		100 µA		
		50 Hz	71 nA	
		50 Hz ~ 1 kHz	70 nA	
		(1 ~ 10) kHz	71 nA	
		(0.1 ~ 0.4) mA		
		50 Hz	93 nA	
		50 Hz ~ 1 kHz	87 nA	
		(1 ~ 10) kHz	96 nA	
		(0.4 ~ 0.8) mA		
		50 Hz	0.14 µA	
		50 Hz ~ 1 kHz	0.12 µA	
		(1 ~ 10) kHz	0.14 µA	
		(0.8 ~ 1) mA		
		50 Hz	0.16 µA	
		50 Hz ~ 1 kHz	0.14 µA	
		(1 ~ 10) kHz	0.17 µA	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC voltage/current calibrators	40303			Multimeters
AC Current		(1 ~ 4) mA		/HCT-CS-072-40303
		50 Hz	0.90 μA	
		50 Hz ~ 1 kHz	0.83 μA	
		(1 ~ 10) kHz	0.90 μA	
		(4 ~ 8) mA		
		50 Hz	1.3 μA	
		50 Hz ~ 1 kHz	1.1 μA	
		(1 ~ 10) kHz	1.3 μA	
		(8 ~ 10) mA		
		50 Hz	1.4 μA	
		50 Hz ~ 1 kHz	1.2 μA	
		(1 ~ 10) kHz	1.4 μA	
		(10 ~ 40) mA		
		50 Hz	8.9 μA	
		50 Hz ~ 1 kHz	8.3 μA	
		(1 ~ 10) kHz	8.9 μA	
		(40 ~ 80) mA		
		50 Hz	12 μA	
		50 Hz ~ 1 kHz	11 μA	
		(1 ~ 10) kHz	12 μA	
		(80 ~ 100) mA		
		50 Hz	14 μA	
		50 Hz ~ 1 kHz	12 μA	
		(1 ~ 10) kHz	14 μA	
		(0.1 ~ 0.4) A		
		50 Hz	90 μA	
		50 Hz ~ 1 kHz	83 μA	
		(1 ~ 10) kHz	90 μA	
		(0.4 ~ 0.8) A		
		50 Hz	0.12 mA	
		50 Hz ~ 1 kHz	0.11 mA	
		(1 ~ 10) kHz	0.12 mA	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC voltage/current calibrators	40303			Multimeters
AC Current		(0.8 ~ 1) A		/HCT-CS-072-40303
		50 Hz	0.14 mA	
		50 Hz ~ 1 kHz	0.12 mA	
		(1 ~ 10) kHz	0.14 mA	
		(1 ~ 4) A		
		50 Hz	0.91 mA	
		50 Hz ~ 1 kHz	0.84 mA	
		(1 ~ 10) kHz	0.93 mA	
		(4 ~ 8) A		
		50 Hz	1.3 mA	
		50 Hz ~ 1 kHz	1.1 mA	
		(1 ~ 10) kHz	1.4 mA	
		(8 ~ 10) A		
		50 Hz	1.5 mA	
		50 Hz ~ 1 kHz	1.3 mA	
		(1 ~ 10) kHz	1.6 mA	
		(10 ~ 30) A		
		50 Hz	5.7 mA	
		50 Hz ~ 1 kHz	5.2 mA	
		(30 ~ 50) A		
		50 Hz	7.8 mA	
		50 Hz ~ 1 kHz	6.9 mA	
		(50 ~ 80) A		
		50 Hz	14 mA	
		50 Hz ~ 1 kHz	13 mA	
		(80 ~ 100) A		
		50 Hz	16 mA	
		50 Hz ~ 1 kHz	15 mA	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC voltage/current calibrators	40303			Multimeters
Clamp meter		(50 ~ 60) Hz		/HCT-CS-072-40303
		1 A	0.19 A	
		(1 ~ 3)A	0.23 A	
		(3 ~ 8) A	0.32 A	
		(8 ~ 10) A	0.35 A	
		(10 ~ 20) A	0.61 A	
		(20 ~ 30) A	0.77 A	
		(30 ~ 50) A	1.5 A	
		(50 ~ 80) A	2.0 A	
		(80 ~ 100) A	2.4 A	
		(100 ~ 200) A	4.2 A	
		(200 ~ 300) A	5.9 A	
		(300 ~ 500) A	15 A	
		(500 ~ 800) A	20 A	
		(800 ~ 1 000) A	24 A	
		(1 000 ~ 1 400) A	31 A	
Wattmeter calibrators	40304			Power calibrators
AC Current		(50 ~ 60) Hz		/HCT-CS-275-40304
		0.12 W	0.35 mW	
		(0.12 ~ 0.24) W	0.37 mW	
		(0.24 ~ 0.6) W	0.74 mW	
		(0.6 ~ 1.2) W	0.89 mW	
		(1.2 ~ 2.4) W	1.8 mW	
		(2.4 ~ 6) W	6.3 mW	
		(6 ~ 12) W	13 mW	
		(12 ~ 24) W	26 mW	
		(24 ~ 60) W	54 mW	
		(60 ~ 120) W	0.11 W	
		(120 ~ 240) W	0.22 W	
		(240 ~ 600) W	0.46 W	
		(600 ~ 1 200) W	0.91 W	
		(1 200 ~ 2 400) W	1.9 W	
		(2 400 ~ 4 800) W	3.7 W	
Power factor		(50 ~ 60) Hz		
		-1 ~ 1	0.000 68	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Wattmeter calibrators	40304			Power calibrators
Harmonic		(50 ~ 60) Hz		/HCT-CS-275-40304
TVD-V		(0.5 ~ 20) %	0.038 %	
TVD-I		(0.5 ~ 20) %	0.038 %	
Frequency		20 Hz	7.0 mHz	
		(20 ~ 50) Hz	6.0 mHz	
		(50 ~ 60) Hz	7.2 mHz	
		(60 ~ 100) Hz	14 mHz	
		(100 ~ 400) Hz	48 mHz	
		(0.4 ~ 1) kHz	0.14 Hz	
AC current shunts	40305			Current Sources
AC Resistance		40 Hz		/HCT-CS-073-40305
		0.001 Ω	0.44 μΩ	
		(0.001 ~ 0.01) Ω	13 μΩ	
		(0.01 ~ 0.1) Ω	40 μΩ	
		(0.1 ~ 1) Ω	0.27 mΩ	
		(1 ~ 10) Ω	3.0 mΩ	
		(10 ~ 100) Ω	30 mΩ	
		(100 ~ 1 000) Ω	0.36 Ω	
		(40 ~ 100) Hz		
		0.001 Ω	0.63 μΩ	
		(0.001 ~ 0.01) Ω	20 μΩ	
		(0.01 ~ 0.1) Ω	38 μΩ	
		(0.1 ~ 1) Ω	0.22 mΩ	
		(1 ~ 10) Ω	2.4 mΩ	
		(10 ~ 100) Ω	24 mΩ	
		(100 ~ 1 000) Ω	0.28 Ω	
		100 Hz ~ 1 kHz		
		0.001 Ω	2.0 μΩ	
		(0.001 ~ 0.01) Ω	20 μΩ	
		(0.01 ~ 0.1) Ω	37 μΩ	
		(0.1 ~ 1) Ω	0.20 mΩ	
		(1 ~ 10) Ω	2.3 mΩ	
		(10 ~ 100) Ω	23 mΩ	
		(100 ~ 1 000) Ω	0.27 Ω	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Power factor meters	40310	(50 ~ 60) Hz		Power calibrators
		-1 ~ 1	0.000 24	/HCT-CS-074-40310
AC power meters	40311			Power calibrators,
AC Power		(50 ~ 60) Hz		Multimeter calibrators
		0.06 W	0.067 mW	/HCT-CS-075-40311
		(0.06 ~ 0.12) W	0.069 mW	
		(0.12 ~ 0.24) W	0.083 mW	
		(0.24 ~ 0.6) W	0.13 mW	
		(0.6 ~ 1.2) W	0.22 mW	
		(1.2 ~ 2.4) W	0.31 mW	
		(2.4 ~ 6) W	0.74 mW	
		(6 ~ 12) W	1.7 mW	
		(12 ~ 24) W	3.1 mW	
		(24 ~ 48) W	6.0 mW	
		(48 ~ 60) W	7.4 mW	
		(60 ~ 120) W	17 mW	
		(120 ~ 240) W	31 mW	
		(240 ~ 480) W	60 mW	
		(480 ~ 600) W	75 mW	
		(600 ~ 1 200) W	0.17 W	
		(1.2 ~ 2.4) kW	0.31 W	
		(2.4 ~ 4.8) kW	0.61 W	
		(4.8 ~ 9.6) kW	1.3 W	
		(9.6 ~ 19.2) kW	2.5 W	
DC Power		0.1 W	67 μW	
		(0.1 ~ 1) W	0.16 mW	
		(1 ~ 1.2) W	0.19 mW	
		(1.2 ~ 2.4) W	0.36 mW	
		(2.4 ~ 3) W	0.55 mW	
		(3 ~ 4.8) W	0.71 mW	
		(4.8 ~ 6) W	1.7 mW	
		(6 ~ 12) W	2.9 mW	
		(12 ~ 24) W	4.4 mW	
		(24 ~ 48) W	9.8 mW	
		(48 ~ 60) W	35 mW	
		(60 ~ 120) W	40 mW	
		(120 ~ 240) W	79 mW	
		(240 ~ 480) W	0.14 W	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC power meters	40311			Power calibrators,
DC Power		(480 ~ 500) W	0.24 W	Multimeter calibrators
		(0.5 ~ 1) kW	0.42 W	/HCT-CS-075-40311
		(1 ~ 1.2) kW	0.84 W	
		(1.2 ~ 3) kW	2.9 W	
		(3 ~ 6) kW	5.8 W	
		(6 ~ 12) kW	6.4 W	
		(12 ~ 50) kW	24 W	
Power factor		(50 ~ 60) Hz		
		-1 ~ 1	0.000 16	
AC Voltage		50 Hz		
		1 V	85 μV	
		(1 ~ 2) V	0.13 mV	
		(2 ~ 5) V	0.37 mV	
		(5 ~ 10) V	0.85 mV	
		(10 ~ 20) V	1.3 mV	
		(20 ~ 50) V	4.5 mV	
		(50 ~ 60) V	5.0 mV	
		(60 ~ 100) V	9.4 mV	
		(100 ~ 150) V	12 mV	
		(150 ~ 200) V	15 mV	
		(200 ~ 300) V	46 mV	
		(300 ~ 500) V	64 mV	
		(500 ~ 600) V	73 mV	
		(600 ~ 750) V	95 mV	
		(750 ~ 1 000) V	0.14 V	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC power meters	40311			Power calibrators,
AC Voltage		60 Hz		Multimeter calibrators
		1 V	85 μV	/HCT-CS-075-40311
		(1 ~ 2) V	0.13 mV	
		(2 ~ 5) V	0.37 mV	
		(5 ~ 10) V	0.85 mV	
		(10 ~ 20) V	1.3 mV	
		(20 ~ 50) V	4.5 mV	
		(50 ~ 60) V	5.0 mV	
		(60 ~ 100) V	9.4 mV	
		(100 ~ 150) V	12 mV	
		(150 ~ 200) V	15 mV	
		(200 ~ 300) V	30 mV	
		(300 ~ 500) V	46 mV	
		(500 ~ 600) V	56 mV	
		(600 ~ 750) V	68 mV	
		(750 ~ 1 000) V	0.11 V	
AC Current		(50 ~ 60) Hz		
		1 mA	0.19 μA	
		(1 ~ 10) mA	1.9 μA	
		(10 ~ 20) mA	3.0 μA	
		(20 ~ 50) mA	11 μA	
		(50 ~ 100) mA	18 μA	
		(100 ~ 200) mA	29 μA	
		(200 ~ 500) mA	0.21 mA	
		(0.5 ~ 1) A	0.35 mA	
		(1 ~ 2) A	0.62 mA	
		(2 ~ 5) A	2.9 mA	
		(5 ~ 10) A	5.6 mA	
		(10 ~ 20) A	15 mA	
		(20 ~ 30) A	29 mA	
		(30 ~ 50) A	31 mA	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC power meters	40311			Power calibrators,
DC Voltage		1 V	62 μV	Multimeter calibrators
		(1 ~ 2) V	63 μV	/HCT-CS-075-40311
		(2 ~ 5) V	67 μV	
		(5 ~ 20) V	0.64 mV	
		(20 ~ 50) V	0.70 mV	
		(50 ~ 60) V	0.73 mV	
		(60 ~ 200) V	6.5 mV	
		(200 ~ 300) V	6.8 mV	
		(300 ~ 500) V	7.5 mV	
		(500 ~ 600) V	8.0 mV	
		(600 ~ 750) V	8.7 mV	
		(750 ~ 1 000) V	62 mV	
DC Current		1 mA	80 nA	
		(1 ~ 10) mA	0.78 μA	
		(10 ~ 20) mA	1.1 μA	
		(20 ~ 50) mA	3.6 μA	
		(50 ~ 100) mA	8.6 μA	
		(100 ~ 200) mA	13 μA	
		(200 ~ 500) mA	62 μA	
		500 mA ~ 1 A	0.13 mA	
		(1 ~ 2) A	0.21 mA	
		(2 ~ 5) A	2.2 mA	
		(5 ~ 10) A	2.6 mA	
		(10 ~ 20) A	4.3 mA	
		(20 ~ 30) A	8.7 mA	
		(30 ~ 50) A	11 mA	
Harmonic Voltage		(50 ~ 60) Hz		
		(0.5 % ~ 20 %)	0.024 %	
Harmonic Current		(50 ~ 60) Hz		
		(0.5 % ~ 20 %)	0.022 %	
Frequency		20 Hz	2.4 mHz	
		(20 Hz ~ 1 kHz)	1.3×10^{-4}	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC power meters	40311			Power calibrators,
Flicker				Multimeter calibrators
P_{st}		(1 ~ 4 000) cpm		/HCT-CS-075-40311
		1	0.39 %	
$P_{inst.max}$				
Sinusoidal		(0.5 ~ 33.333) Hz		
		1	0.38 %	
Square		(0.5 ~ 28) Hz		
		1	0.40 %	
		(28 ~ 30.5) Hz		
		1	1.1 %	
		(30.5 ~ 33.333) Hz		
		1	0.40 %	
P_{st} Range		1 620 cpm		
		(0.25 ~ 5)	0.39 %	
AC power supplies	40312			Multimeters
AC Voltage		100 mV		/HCT-CS-076-40312
		20 Hz	21 μV	
		(0.02 ~ 10) kHz	19 μV	
		(10 ~ 100) kHz	0.11 mV	
		(0.1 ~ 0.4) V		
		20 Hz	0.11 mV	
		(0.02 ~ 10) kHz	0.10 mV	
		(10 ~ 100) kHz	0.48 mV	
		(0.4 ~ 0.8) V		
		20 Hz	0.14 mV	
		(0.02 ~ 10) kHz	0.13 mV	
		(10 ~ 100) kHz	0.70 mV	
		(0.8 ~ 1) V		
		20 Hz	0.16 mV	
		(0.02 ~ 10) kHz	0.14 mV	
		(10 ~ 100) kHz	0.82 mV	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC power supplies	40312			Multimeters
AC Voltage		(1 ~ 4) V		/HCT-CS-076-40312
		20 Hz	1.1 mV	
		(0.02 ~ 10) kHz	1.0 mV	
		(10 ~ 100) kHz	4.8 mV	
		(4 ~ 8) V		
		20 Hz	1.4 mV	
		(0.02 ~ 10) kHz	1.3 mV	
		(10 ~ 100) kHz	7.0 mV	
		(8 ~ 10) V		
		20 Hz	1.6 mV	
		(0.02 ~ 10) kHz	1.4 mV	
		(10 ~ 100) kHz	8.2 mV	
		(10 ~ 50) V		
		20 Hz	15 mV	
		(0.02 ~ 10) kHz	11 mV	
		(10 ~ 100) kHz	54 mV	
		(50 ~ 80) V		
		20 Hz	17 mV	
		(0.02 ~ 10) kHz	13 mV	
		(10 ~ 100) kHz	71 mV	
		(80 ~ 100) V		
		20 Hz	19 mV	
		(0.02 ~ 10) kHz	15 mV	
		(10 ~ 100) kHz	82 mV	
		(100 ~ 150) V		
		(50 ~ 100) Hz	0.12 V	
		(0.1 ~ 1) kHz	80 mV	
		(1 ~ 10) kHz	0.12 V	
		(150 ~ 300) V		
		(50 ~ 100) Hz	0.14 V	
		(0.1 ~ 1) kHz	0.11 V	
		(1 ~ 10) kHz	0.14 V	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC power supplies	40312			Multimeters
AC Voltage		(300 ~ 1 000) V		/HCT-CS-076-40312
		(0.05 ~ 10) kHz	0.63 V	
		(1 ~ 1.5) kV		
		(50 ~ 60) Hz	0.012 kV	
DC Voltage		100 mV	6.2 μV	
		(0.1 ~ 1) V	62 μV	
		(1 ~ 10) V	0.62 mV	
		(10 ~ 100) V	6.2 mV	
		(100 ~ 400) V	62 mV	
		(400 ~ 1 000) V	0.62 V	
AC Current		100 μA		
		50 Hz ~ 10 kHz	71 nA	
		(0.1 ~ 0.4) mA		
		50 Hz ~ 10 kHz	0.12 μA	
		(0.4 ~ 0.8) mA		
		50 Hz ~ 10 kHz	0.15 μA	
		(0.8 ~ 1) mA		
		50 Hz ~ 10 kHz	0.18 μA	
		(1 ~ 4) mA		
		50 Hz ~ 10 kHz	1.1 μA	
		(4 ~ 8) mA		
		50 Hz ~ 10 kHz	1.4 μA	
		(8 ~ 10) mA		
		50 Hz ~ 10 kHz	1.6 μA	
		(10 ~ 40) mA		
		50 Hz ~ 10 kHz	11 μA	
		(40 ~ 80) mA		
		50 Hz ~ 10 kHz	14 μA	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC power supplies	40312			Multimeters
AC Current		(80 ~ 100) mA		/HCT-CS-076-40312
		50 Hz ~ 10 kHz	15 μA	
		(0.1 ~ 0.4) A		
		50 Hz ~ 10 kHz	0.11 mA	
		(0.4 ~ 0.8) A		
		50 Hz ~ 10 kHz	0.14 mA	
		(0.8 ~ 1) A		
		50 Hz ~ 10 kHz	0.16 mA	
		(1 ~ 4) A		
		50 Hz ~ 10 kHz	1.1 mA	
		(4 ~ 8) A		
		50 Hz ~ 10 kHz	1.5 mA	
		(8 ~ 10) A		
		50 Hz ~ 10 kHz	1.7 mA	
DC Current		(10 ~ 20) A		
		50 Hz ~ 10 kHz	7.5 mA	
		(20 ~ 30) A		
		50 Hz ~ 10 kHz	8.1 mA	
		(30 ~ 45) A		
		50 Hz ~ 10 kHz	9.3 mA	
		100 μA	10 nA	
		(0.1 ~ 1) mA	64 nA	
		(1 ~ 10) mA	0.64 μA	
		(10 ~ 100) mA	6.4 μA	
		(0.1 ~ 1) A	64 μA	
		(1 ~ 10) A	0.68 mA	
		(10 ~ 40) A	25 mA	
		(40 ~ 80) A	48 mA	
		(80 ~ 100) A	53 mA	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC power supplies	40312			Multimeters
Frequency		20 Hz	9 μHz	/HCT-CS-076-40312
		(20 ~ 100) Hz	78 μHz	
		(0.1 ~ 1) kHz	0.84 mHz	
		(1 ~ 10) kHz	9.8 mHz	
		(10 ~ 40) kHz	67 mHz	
		(40 ~ 80) kHz	71 mHz	
		(80 ~ 100) kHz	75 mHz	
Puncture/safety testers	40313			High voltage voltmeters
AC Voltage		(50 ~ 60) Hz		Digital multimeter
		0.1 kV	0.62 V	/HCT-CS-077-40313
		(0.1 ~ 1) kV	0.64 V	
		(1 ~ 2) kV	11 V	
		(2 ~ 4) kV	12 V	
		(4 ~ 6) kV	22 V	
		(6 ~ 8) kV	23 V	
		(8 ~ 10) kV	24 V	
		(10 ~ 20) kV	47 V	
		(20 ~ 30) kV	62 V	
		(30 ~ 40) kV	85 V	
		(40 ~ 50) kV	0.10 kV	
		(50 ~ 60) kV	0.13 kV	
		(60 ~ 70) kV	0.14 kV	
		(70 ~ 75) kV	0.15 kV	
DC Voltage		(±)		
		0.1 kV	0.64 V	
		(0.1 ~ 1) kV	0.64 V	
		(1 ~ 2) kV	1.5 V	
		(2 ~ 4) kV	2.6 V	
		(4 ~ 6) kV	3.8 V	
		(6 ~ 8) kV	4.9 V	
		(8 ~ 10) kV	8 V	
		(10 ~ 20) kV	17 V	
		(20 ~ 30) kV	25 V	
		(30 ~ 40) kV	31 V	
		(40 ~ 50) kV	39 V	
		(50 ~ 60) kV	46 V	
		(60 ~ 70) kV	54 V	
		(70 ~ 80) kV	62 V	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Puncture/safety testers	40313			High voltage voltmeters
DC Voltage		(80 ~ 90) kV	69 V	Digital multimeter
		(90 ~ 100) kV	77 V	/HCT-CS-077-40313
AC Cut-off Current		(50 ~ 60) Hz		
		0.1 mA	0.11 μA	
		(0.1 ~ 0.5) mA	0.42 μA	
		(0.5 ~ 1) mA	0.86 μA	
		(1 ~ 2) mA	3.2 μA	
		(2 ~ 5) mA	4.2 μA	
		(5 ~ 10) mA	8.6 μA	
		(10 ~ 50) mA	40 μA	
		(50 ~ 100) mA	83 μA	
DC Cut-off Current		0.1 mA	68 nA	
		(0.1 ~ 0.5) mA	83 nA	
		(0.5 ~ 1) mA	0.64 μA	
		(1 ~ 5) mA	0.83 μA	
		(5 ~ 10) mA	6.4 μA	
		(10 ~ 50) mA	8.3 μA	
		(50 ~ 100) mA	64 μA	
Insulation Voltage		25 V	0.90 mV	
		(25 ~ 50) V	0.94 mV	
		(50 ~ 100) V	1.1 mV	
		(100 ~ 500) V	9.0 mV	
		(500 ~ 800) V	9.6 mV	
		(0.8 ~ 1) kV	0.8 V	
		(1 ~ 2) kV	1.5 V	
		(2 ~ 4) kV	2.6 V	
		(4 ~ 6) kV	3.8 V	
		(6 ~ 8) kV	4.9 V	
		(8 ~ 10) kV	7.9 V	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Puncture/safety testers	40313			High voltage voltmeters
Insulation Resistance		(1 ~ 10) kΩ	0.66 Ω	Digital multimeter
		(10 ~ 100) kΩ	6.7 Ω	/HCT-CS-077-40313
		(100 ~ 200) kΩ	95 Ω	
		(200 ~ 500) kΩ	0.19 kΩ	
		(500 ~ 700) kΩ	0.26 kΩ	
		(700 ~ 1 000) kΩ	0.36 kΩ	
		(1 ~ 100) MΩ	1.3×10^{-3}	
		(100 ~ 1 000) MΩ	2.6×10^{-3}	
		(1 ~ 10) GΩ	6.5×10^{-3}	
		(10 ~ 100) GΩ	1.2×10^{-2}	
Ground Bond AC Current		(50 ~ 60) Hz		
		1 A	1.0 mA	
		(1 ~ 10) A	1.6 mA	
		(10 ~ 20) A	7.5 mA	
		(20 ~ 30) A	8.2 mA	
		(30 ~ 40) A	9.0 mA	
		(40 ~ 50) A	9.9 mA	
		(50 ~ 60) A	14 mA	
Ground Bond Resistance		(50 ~ 60) Hz		
		100 mΩ	1.3 mΩ	
		(100 ~ 500) mΩ	1.2×10^{-2}	
Time		(1 ~ 5) s	2 ms	
		(5 s ~ 30) s	0.04 s	
		(30 s ~ 60) s	0.07 s	
Power recorders	40314			Power calibrators,
AC Power		(50 ~ 60) Hz		Multimeter calibrators
		1.5 W	2.5 mW	/HCT-CS-078-40314
		(1.5 ~ 3) W	2.5 mW	
		(3 ~ 12) W	3.0 mW	
		(12 ~ 15) W	3.6 mW	
		(15 ~ 30) W	4.2 mW	
		(30 ~ 60) W	8.1 mW	
		(60 ~ 120) W	27 mW	
		(120 ~ 300) W	41 mW	
		(300 ~ 600) W	91 mW	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Power recorders	40314			Power calibrators,
AC Power		(600 ~ 1 200) W	0.17 W	Multimeter calibrators
		(1.2 ~ 1.5) kW	0.21 W	/HCT-CS-078-40314
		(1.5 ~ 3) kW	0.41 W	
		(3 ~ 6) kW	0.81 W	
		(6 ~ 12) kW	1.7 W	
		(12 ~ 15) kW	2.2 W	
		(15 ~ 30) kW	4.2 W	
		(30 ~ 60) kW	8.2 W	
		(60 ~ 120) kW	18 W	
		(120 ~ 240) kW	31 W	
DC Power		0.5 W	0.11 mW	
		(0.5 ~ 2.5) W	0.40 mW	
		(2.5 ~ 7.5) W	1.4 mW	
		(7.5 ~ 15) W	2.5 mW	
		(15 ~ 24) W	4.1 mW	
		(24 ~ 30) W	5.6 mW	
		(30 ~ 50) W	8.3 mW	
		(50 ~ 60) W	12 mW	
		(60 ~ 75) W	15 mW	
		(75 ~ 125) W	42 mW	
		(125 ~ 300) W	71 mW	
		(300 ~ 600) W	0.12 W	
		(600 ~ 750) W	0.25 W	
		(0.75 ~ 1.25) kW	0.87 W	
		(1.25 ~ 3) kW	1.6 W	
		(3 ~ 12.5) kW	6.0 W	
		(12.5 ~ 15) kW	11 W	
		(15 ~ 30) kW	36 W	
		(30 ~ 60) kW	72 W	
		(60 ~ 120) kW	0.15 kW	
		(120 ~ 250) kW	0.29 kW	
		(250 ~ 500) kW	0.60 kW	
Power Factor		(50 ~ 60) Hz		
		-1 ~ 1	0.000 16	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Power recorders	40314			Power calibrators,
AC Voltage		50 Hz		Multimeter calibrators
		1 V	85 μV	/HCT-CS-078-40314
		(1 ~ 2) V	0.13 mV	
		(2 ~ 5) V	0.37 mV	
		(5 ~ 10) V	0.85 mV	
		(10 ~ 20) V	1.3 mV	
		(20 ~ 50) V	4.5 mV	
		(50 ~ 60) V	5.0 mV	
		(60 ~ 100) V	9.4 mV	
		(100 ~ 150) V	12 mV	
		(150 ~ 200) V	15 mV	
		(200 ~ 300) V	46 mV	
		(300 ~ 500) V	64 mV	
		(500 ~ 600) V	73 mV	
		(600 ~ 750) V	95 mV	
		(750 ~ 1 000) V	0.14 V	
		60 Hz		
		1 V	85 μV	
		(1 ~ 2) V	0.13 mV	
		(2 ~ 5) V	0.37 mV	
		(5 ~ 10) V	0.85 mV	
		(10 ~ 20) V	1.3 mV	
		(20 ~ 50) V	4.5 mV	
		(50 ~ 60) V	5.0 mV	
		(60 ~ 100) V	9.4 mV	
		(100 ~ 150) V	12 mV	
		(150 ~ 200) V	15 mV	
		(200 ~ 300) V	30 mV	
		(300 ~ 500) V	46 mV	
		(500 ~ 600) V	56 mV	
		(600 ~ 750) V	68 mV	
		(750 ~ 1 000) V	0.11 V	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Power recorders	40314			Power calibrators,
AC Current		(50 ~ 60) Hz		Multimeter calibrators
		100 mA	0.14 mA	/HCT-CS-078-40314
		100 mA ~ 1 A	1.4 mA	
		(1 ~ 10) A	19 mA	
		(10 ~ 100) A	0.32 A	
		(100 ~ 200) A	0.39 A	
		(200 ~ 300) A	0.48 A	
		(300 ~ 400) A	0.58 A	
		(400 ~ 500) A	0.68 A	
		(500 ~ 750) A	1.3 A	
		(750 ~ 900) A	1.5 A	
		(900 ~ 1 000) A	1.6 A	
		(1 000 ~ 1 500) A	2.1 A	
		(1 500 ~ 2 000) A	2.6 A	
		(2 000 ~ 2 500) A	3.2 A	
		(2 500 ~ 3 000) A	3.7 A	
AC voltmeters	40318			Multimeter calibrators,
DC Voltage		(±)		Digitor Multimeters,
		2 mV	0.53 μV	AC voltage standard
		(2 ~ 10) mV	0.59 μV	/HCT-CS-079-40318
		(10 ~ 100) mV	1.4 μV	
		(0.1 ~ 1) V	6.7 μV	
		(1 ~ 10) V	46 μV	
		(10 ~ 100) V	0.63 mV	
		(100 ~ 1 000) V	8.1 mV	
AC Voltage		2 mV		
		40 Hz ~ 50 kHz	3.9 μV	
		(50 ~ 100) kHz	4.6 μV	
		(100 ~ 500) kHz	11 mV	
		500 kHz ~ 1 MHz	12 mV	
		(2 ~ 10) mV		
		40 Hz ~ 20 kHz	3.5 μV	
		(20 ~ 50) kHz	3.7 μV	
		(50 ~ 100) kHz	6.1 μV	
		(100 ~ 500) kHz	15 μV	
		500 kHz ~ 1 MHz	18 μV	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC voltmeters	40318			Multimeter calibrators,
AC Voltage		(10 ~ 100) mV		Digitor Multimeters,
		40 Hz ~ 20 kHz	6.0 μV	AC voltage standard
		(20 ~ 50) kHz	12 μV	/HCT-CS-079-40318
		(50 ~ 100) kHz	18 μV	
		(100 ~ 500) kHz	71 μV	
		500 kHz ~ 1 MHz	72 μV	
		100 mV ~ 1 V		
		10 Hz	0.23 mV	
		(10 ~ 20) Hz	72 μV	
		(20 ~ 40) Hz	38 μV	
		40 Hz ~ 20 kHz	20 μV	
		(20 ~ 50) kHz	48 μV	
		(50 ~ 100) kHz	60 μV	
		(100 ~ 500) kHz	0.50 mV	
		500 kHz ~ 1 MHz	0.53 mV	
AC Voltage		(1 ~ 10) V		
		10 Hz	2.3 mV	
		(10 ~ 20) Hz	0.72 mV	
		(20 ~ 40) Hz	0.37 mV	
		40 Hz ~ 20 kHz	0.25 mV	
		(20 ~ 50) kHz	0.47 mV	
		(50 ~ 100) kHz	0.59 mV	
		(100 ~ 500) kHz	5.0 mV	
		500 kHz ~ 1 MHz	5.6 mV	
		(10 ~ 100) V		
		40 Hz ~ 20 kHz	3.7 mV	
		(20 ~ 50) kHz	7.6 mV	
		(50 ~ 100) kHz	8.3 mV	
		(100 ~ 1 000) V		
		40 Hz ~ 20 kHz	35 mV	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC voltmeters	40318			Multimeter calibrators,
Frequency		10 Hz	5.8 mHz	Digitor Multimeters,
		10 Hz ~ 1 kHz	58 mHz	AC voltage standard
		1 kHz ~ 10 MHz	5.8×10^{-5}	/HCT-CS-079-40318
		(10 ~ 50) MHz	1.2×10^{-4}	
Frequency Response		0 dB (0.774 6 V)		
		20 Hz ~ 100 kHz	0.002 dB	
		(100 ~ 200) kHz	0.006 dB	
Output Voltage		1 V		
		100 Hz	1.1 mV	
		100 Hz ~ 20 kHz	1.0×10^{-3}	
		(20 ~ 50) kHz	2.0×10^{-3}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF amplifiers	40401			Multimeter calibrators,
LF amplifiers				Digital multimeters
Gain		10 Hz		/HCT-CS-181-40401
		10 mV	18 μV	
		(10 ~ 100) mV	1.8×10^{-3}	
		(0.1 ~ 1) V	3.7×10^{-4}	
		(1 ~ 10) V	3.6×10^{-4}	
		(10 ~ 100) V	2.5×10^{-4}	
		(10 ~ 100) Hz		
		10 mV	16 μV	
		(10 ~ 100) mV	1.6×10^{-3}	
		(0.1 ~ 1) V	2.5×10^{-4}	
		(1 ~ 10) V	3.1×10^{-4}	
		(10 ~ 100) V	1.4×10^{-4}	
		(0.1 ~ 1) kHz		
		10 mV	15 μV	
		(10 ~ 100) mV	1.5×10^{-3}	
		(0.1 ~ 1) V	2.5×10^{-4}	
		(1 ~ 10) V	3.6×10^{-4}	
		(10 ~ 100) V	1.3×10^{-4}	
		(1 ~ 10) kHz		
		10 mV	16 μV	
		(10 ~ 100) mV	1.6×10^{-3}	
		(0.1 ~ 1) V	2.6×10^{-4}	
		(1 ~ 10) V	3.2×10^{-4}	
		(10 ~ 100) V	1.4×10^{-4}	
		(10 ~ 100) kHz		
		10 mV	38 μV	
		(10 ~ 100) mV	3.8×10^{-3}	
		(0.1 ~ 1) V	1.2×10^{-3}	
		(1 ~ 10) V	1.8×10^{-3}	
		(10 ~ 100) V	8.2×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF amplifiers	40401			Multimeter calibrators,
LF amplifiers				Digital multimeters
Gain		10 Hz ~ 1 kHz		/HCT-CS-181-40401
		(0 ~ 60) dB	0.007 dB	
		(1 ~ 20) kHz		
		(0 ~ 60) dB	0.007 dB	
		(20 ~ 100) kHz		
		(0 ~ 40) dB	0.013 dB	
Charge type amplifier				
Gain		10 Hz		
		10 mV	61 μV	
		(10 ~ 100) mV	6.0×10^{-3}	
		(0.1 ~ 1) V	6.8×10^{-4}	
		(1 ~ 9) V	4.5×10^{-4}	
		(10 ~ 100) Hz		
		10 mV	60 μV	
		(10 ~ 100) mV	6.0×10^{-3}	
		(0.1 ~ 1) V	6.1×10^{-4}	
		(1 ~ 9) V	4.5×10^{-4}	
		(0.1 ~ 1) kHz		
		10 mV	60 μV	
		(10 ~ 100) mV	6.0×10^{-3}	
		(0.1 ~ 1) V	6.1×10^{-4}	
		(1 ~ 9) V	4.5×10^{-4}	
		(1 ~ 10) kHz		
		10 mV	60 μV	
		(10 ~ 100) mV	6.0×10^{-3}	
		(0.1 ~ 1) V	6.1×10^{-4}	
		(1 ~ 9) V	4.5×10^{-4}	
		(10 ~ 20) kHz		
		10 mV	61 μV	
		(10 ~ 100) mV	6.1×10^{-3}	
		(0.1 ~ 1) V	7.7×10^{-4}	
		(1 ~ 9) V	1.1×10^{-3}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF amplifiers	40401			Multimeter calibrators,
Gain : DC Voltage		10 mV	2.3 μV	Digital multimeters
		(10 ~ 100) mV	1.0×10^{-4}	/HCT-CS-181-40401
		(0.1 ~ 1) V	6.0×10^{-5}	
		(1 ~ 10) V	1.1×10^{-4}	
		(10 ~ 100) V	1.2×10^{-4}	
DC/LF attenuators	40402			Function Generator,
Attenuator		20 Hz ~ 20 kHz		Digital Multimeters
		(0 ~ 50) dB	0.017 dB	/HCT-CS-081-40402
		(50 ~ 60) dB	0.044 dB	
		(20 ~ 50) kHz		
		(0 ~ 50) dB	0.044 dB	
		(50 ~ 60) dB	0.056 dB	
		(50 ~ 100) kHz		
		(0 ~ 50) dB	0.044 dB	
		(50 ~ 60) dB	0.056 dB	
Multimeter calibrators	40403			Standard cell,
DC Voltage		0 mV	0.13 μV	Standard resistance,
		(0 ~ 100) mV	2.3×10^{-6}	Standard divider,
		(-0 ~ -100) mV	2.3×10^{-6}	Digital multimeters,
		(0.1 ~ 1) V	2.3×10^{-6}	AC calibrator
		(-0.1 ~ -1) V	2.3×10^{-6}	/HCT-CS-082-40403
		(1 ~ 10) V	2.3×10^{-6}	
		(-1 ~ -10) V	2.3×10^{-6}	
		(10 ~ 100) V	2.3×10^{-6}	
		(-10 ~ -100) V	2.3×10^{-6}	
		(100 ~ 1 000) V	2.3×10^{-6}	
		(-100 ~ -1 000) V	2.3×10^{-6}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			Standard cell,
AC Voltage		(10 Hz)		Standard resistance,
		100 μV	0.27 μV	Standard divider,
		(0.1 ~ 100) mV	4.0×10^{-5}	Digital multimeters,
		(0.1 ~ 1) V	3.3×10^{-5}	AC calibrator
		(1 ~ 10) V	4.7×10^{-5}	/HCT-CS-082-40403
		(10 ~ 100) V	5.2×10^{-5}	
		(10 ~ 40) Hz		
		100 μV	0.13 μV	
		(0.1 ~ 100) mV	3.3×10^{-5}	
		(0.1 ~ 1) V	2.7×10^{-5}	
		(1 ~ 10) V	1.7×10^{-5}	
		(10 ~ 100) V	3.2×10^{-5}	
		(100 ~ 1 000) V	1.5×10^{-5}	
		(40 ~ 100) Hz		
		100 μV	0.13 μV	
		(0.1 ~ 100) mV	2.0×10^{-5}	
		(0.1 ~ 1) V	2.6×10^{-5}	
		(1 ~ 10) V	2.0×10^{-5}	
		(10 ~ 100) V	3.5×10^{-5}	
		(100 ~ 1 000) V	2.0×10^{-5}	
		(100 ~ 500) Hz		
		100 μV	0.13 μV	
		(0.1 ~ 100) mV	3.1×10^{-5}	
		(0.1 ~ 1) V	1.7×10^{-5}	
		(1 ~ 10) V	2.8×10^{-5}	
		(10 ~ 100) V	2.3×10^{-5}	
		(100 ~ 1 000) V	2.2×10^{-5}	
		500 Hz ~ 1 kHz		
		100 μV	0.13 μV	
		(0.1 ~ 100) mV	3.1×10^{-5}	
		(0.1 ~ 1) V	2.1×10^{-5}	
		(1 ~ 10) V	2.0×10^{-5}	
		(10 ~ 100) V	2.6×10^{-5}	
		(100 ~ 1 000) V	2.7×10^{-5}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			Standard cell,
AC Voltage		(1 ~ 10) kHz		Standard resistance,
		100 μV	0.13 μV	Standard divider,
		(0.1 ~ 100) mV	2.7×10^{-5}	Digital multimeters,
		(0.1 ~ 1) V	1.7×10^{-5}	AC calibrator
		(1 ~ 10) V	1.5×10^{-5}	/HCT-CS-082-40403
		(10 ~ 100) V	2.8×10^{-5}	
		(100 ~ 1 000) V	3.1×10^{-5}	
		(10 ~ 20) kHz		
		100 μV	0.13 μV	
		(0.1 ~ 100) mV	2.9×10^{-5}	
		(0.1 ~ 1) V	2.6×10^{-5}	
		(1 ~ 10) V	1.5×10^{-5}	
		(10 ~ 100) V	4.9×10^{-5}	
		(100 ~ 1 000) V	2.7×10^{-5}	
		(20 ~ 30) kHz		
		100 μV	0.21 μV	
		(0.1 ~ 100) mV	3.0×10^{-5}	
		(0.1 ~ 1) V	2.1×10^{-5}	
		(1 ~ 10) V	2.5×10^{-5}	
		(10 ~ 100) V	4.8×10^{-5}	
		(100 ~ 1 000) V	4.4×10^{-5}	
		(30 ~ 50) kHz		
		100 μV	0.21 μV	
		(0.1 ~ 100) mV	4.3×10^{-5}	
		(0.1 ~ 1) V	2.7×10^{-5}	
		(1 ~ 10) V	3.0×10^{-5}	
		(10 ~ 100) V	4.1×10^{-5}	
		(100 ~ 600) V	1.1×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			Standard cell,
AC Voltage		(50 ~ 100) kHz		Standard resistance,
		100 μV	0.28 μV	Standard divider,
		(0.1 ~ 100) mV	6.7×10^{-5}	Digital multimeters,
		(0.1 ~ 1) V	3.6×10^{-5}	AC calibrator
		(1 ~ 10) V	5.8×10^{-5}	/HCT-CS-082-40403
		(10 ~ 100) V	6.5×10^{-5}	
		(100 ~ 600) V	1.2×10^{-4}	
		(100 ~ 200) kHz		
		100 μV	0.50 μV	
		(0.1 ~ 100) mV	1.1×10^{-4}	
		(0.1 ~ 1) V	5.9×10^{-5}	
		(1 ~ 10) V	5.9×10^{-5}	
		(10 ~ 60) V	1.4×10^{-4}	
		(200 ~ 300) kHz		
		100 μV	0.50 μV	
		(0.1 ~ 100) mV	1.3×10^{-4}	
		(0.1 ~ 1) V	5.9×10^{-5}	
		(1 ~ 10) V	6.3×10^{-5}	
		(10 ~ 60) V	1.8×10^{-4}	
		(300 ~ 500) kHz		
		100 μV	0.74 μV	
		(0.1 ~ 100) mV	1.5×10^{-4}	
		(0.1 ~ 1) V	1.3×10^{-4}	
		(1 ~ 20) V	5.0×10^{-5}	
		(0.5 ~ 1) MHz		
		100 μV	0.88 μV	
		(0.1 ~ 100) mV	4.8×10^{-4}	
		(0.1 ~ 1) V	2.7×10^{-4}	
		(1 ~ 20) V	2.5×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			Standard cell,
AC Voltage		(1 ~ 2) MHz		Standard resistance,
		100 μV	0.20 μV	Standard divider,
		(0.1 ~ 100) mV	4.4×10^{-4}	Digital multimeters,
		(0.1 ~ 1) V	5.5×10^{-4}	AC calibrator
		(1 ~ 3) V	2.4×10^{-4}	/HCT-CS-082-40403
		(2 ~ 5) MHz		
		100 μV	0.31 μV	
		(0.1 ~ 100) mV	9.1×10-4	
		(0.1 ~ 1) V	9.0×10^{-4}	
		(1 ~ 3) V	7.3×10^{-4}	
		(5 ~ 10) MHz		
		100 μV	0.31 μV	
		(0.1 ~ 100) mV	1.1×10^{-3}	
		(0.1 ~ 1) V	8.4×10^{-4}	
		(1 ~ 3) V	9.1×10^{-4}	
		(10 ~ 20) MHz		
		100 μV	0.47 μV	
		(0.1 ~ 100) mV	1.1×10^{-3}	
		(0.1 ~ 1) V	7.8×10^{-4}	
		(1 ~ 3) V	8.3×10^{-4}	
		(20 ~ 30) MHz		
		100 μV	1.4 μV	
		(0.1 ~ 100) mV	2.2×10^{-3}	
		(0.1 ~ 1) V	1.3×10^{-3}	
		(1 ~ 3) V	1.3×10^{-3}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			Standard cell,
DC Current		0 μA	0.80 nA	Standard resistance,
		(0 ~ 100) μA	8.8×10^{-6}	Standard divider,
		(-0 ~ -100) μA	8.8×10^{-6}	Digital multimeters,
		(0.1 ~ 1) mA	9.9×10^{-6}	AC calibrator
		(-0.1 ~ -1) mA	9.9×10^{-6}	/HCT-CS-082-40403
		(1 ~ 10) mA	1.0×10^{-5}	
		(-1 ~ -10) mA	1.0×10^{-5}	
		(10 ~ 100) mA	6.6×10^{-6}	
		(-10 ~ -100) mA	6.6×10^{-6}	
		(0.1 ~ 1) A	6.7×10^{-6}	
		(-0.1 ~ -1) A	6.7×10^{-6}	
		(1 ~ 10) A	1.4×10^{-5}	
		(-1 ~ -10) A	1.4×10^{-5}	
		(10 ~ 20) A	3.6×10^{-5}	
		(-10 ~ -20) A	3.6×10^{-5}	
AC Current		(10 Hz)		
		1 μA	32 nA	
		(1 ~ 100) μA	3.2×10^{-4}	
		(0.1 ~ 1) mA	2.9×10^{-4}	
		(1 ~ 10) mA	2.9×10^{-4}	
		(10 ~ 100) mA	2.9×10^{-4}	
		(0.1 ~ 1) A	2.9×10^{-4}	
		(1 ~ 3) A	9.9×10^{-4}	
		(10 ~ 40) Hz		
		1 μA	6.7 nA	
		(1 ~ 100) μA	7.1×10^{-5}	
		(0.1 ~ 1) mA	3.6×10^{-5}	
		(1 ~ 10) mA	4.5×10^{-5}	
		(10 ~ 100) mA	4.4×10^{-5}	
		(0.1 ~ 1) A	4.5×10^{-5}	
		(1 ~ 3) A	2.5×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			Standard cell,
AC Current		(40 ~ 45) Hz		Standard resistance,
		1 μA	6.6 nA	Standard divider,
		(1 ~ 100) μA	7.3×10^{-5}	Digital multimeters,
		(0.1 ~ 1) mA	3.7×10^{-5}	AC calibrator
		(1 ~ 10) mA	4.3×10^{-5}	/HCT-CS-082-40403
		(10 ~ 100) mA	4.4×10^{-5}	
		(0.1 ~ 1) A	4.5×10^{-5}	
		(1 ~ 10) A	2.9×10^{-4}	
		(10 ~ 20) A	2.9×10^{-4}	
		(45 ~ 100) Hz		
		1 μA	6.6 nA	
		(1 ~ 100) μA	7.3×10^{-5}	
		(0.1 ~ 1) mA	3.7×10^{-5}	
		(1 ~ 10) mA	4.3×10^{-5}	
		(10 ~ 100) mA	4.4×10^{-5}	
		(0.1 ~ 1) A	4.7×10^{-5}	
		(1 ~ 10) A	4.9×10^{-5}	
		(10 ~ 20) A	4.7×10^{-5}	
		(100 ~ 200) Hz		
		1 μA	6.6 nA	
		(1 ~ 100) μA	7.2×10^{-5}	
		(0.1 ~ 1) mA	3.8×10^{-5}	
		(1 ~ 10) mA	4.3×10^{-5}	
		(10 ~ 100) mA	4.5×10^{-5}	
		(0.1 ~ 1) A	4.7×10^{-5}	
		(1 ~ 10) A	4.9×10^{-5}	
		(10 ~ 20) A	4.7×10^{-5}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			Standard cell,
AC Current		(200 ~ 500) Hz		Standard resistance,
		1 μA	6.6 nA	Standard divider,
		(1 ~ 100) μA	7.2×10^{-5}	Digital multimeters,
		(0.1 ~ 1) mA	3.7×10^{-5}	AC calibrator
		(1 ~ 10) mA	4.3×10^{-5}	/HCT-CS-082-40403
		(10 ~ 100) mA	4.4×10^{-5}	
		(0.1 ~ 1) A	4.5×10^{-5}	
		(1 ~ 10) A	6.3×10^{-5}	
		(10 ~ 20) A	4.8×10^{-5}	
		500 Hz ~ 1 kHz		
		1 μA	6.6 nA	
		(1 ~ 100) μA	7.2×10^{-5}	
		(0.1 ~ 1) mA	3.7×10^{-5}	
		(1 ~ 10) mA	4.3×10^{-5}	
		(10 ~ 100) mA	4.5×10^{-5}	
		(0.1 ~ 1) A	4.3×10^{-5}	
		(1 ~ 10) A	4.9×10^{-5}	
		(10 ~ 20) A	4.8×10^{-5}	
		(1 ~ 2) kHz		
		1 μA	6.7 nA	
		(1 ~ 100) μA	7.3×10^{-5}	
		(0.1 ~ 1) mA	3.7×10^{-5}	
		(1 ~ 10) mA	4.3×10^{-5}	
		(10 ~ 100) mA	4.3×10^{-5}	
		(0.1 ~ 1) A	4.4×10^{-5}	
		(1 ~ 10) A	4.9×10^{-5}	
		(10 ~ 20) A	4.8×10^{-5}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			Standard cell,
AC Current		(2 ~ 5) kHz		Standard resistance,
		1 μA	6.7 nA	Standard divider,
		(1 ~ 100) μA	7.3×10^{-5}	Digital multimeters,
		(0.1 ~ 1) mA	3.5×10^{-5}	AC calibrator
		(1 ~ 10) mA	4.2×10^{-5}	/HCT-CS-082-40403
		(10 ~ 100) mA	4.6×10^{-5}	
		(0.1 ~ 1) A	4.5×10^{-5}	
		(1 ~ 10) A	4.9×10^{-5}	
		(10 ~ 20) A	4.9×10^{-5}	
		(5 ~ 10) kHz		
		1 μA	6.7 nA	
		(1 ~ 100) μA	7.4×10^{-5}	
		(0.1 ~ 1) mA	3.7×10^{-5}	
		(1 ~ 10) mA	4.3×10^{-5}	
		(10 ~ 100) mA	4.5×10^{-5}	
		(0.1 ~ 1) A	5.0×10^{-5}	
		(1 ~ 3) A	2.6×10^{-4}	
		(10 ~ 30) kHz		
		1 μA	12 nA	
		(1 ~ 100) μA	1.2×10^{-4}	
		(0.1 ~ 1) mA	6.8×10^{-5}	
		(1 ~ 10) mA	7.2×10^{-5}	
		(10 ~ 100) mA	7.2×10^{-5}	
Resistance		0 Ω	4.6 μΩ	
		(0 ~ 1) Ω	9.9×10^{-6}	
		(1 ~ 10) Ω	2.5×10^{-5}	
		(10 ~ 100) Ω	7.7×10^{-6}	
		(0.1 ~ 1) kΩ	7.3×10^{-6}	
		(1 ~ 10) kΩ	4.9×10^{-6}	
		(10 ~ 100) kΩ	7.3×10^{-6}	
		(0.1 ~ 1) MΩ	9.6×10^{-6}	
		(1 ~ 10) MΩ	1.2×10^{-5}	
		(10 ~ 100) MΩ	2.5×10^{-5}	
		(100 ~ 1 000) MΩ	3.2×10^{-5}	
		(1 ~ 10) GΩ	5.8×10^{-4}	
		(10 ~ 100) GΩ	1.2×10^{-3}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			Standard cell,
Frequency		1 Hz	0.58 μHz	Standard resistance,
		(1 ~ 10) Hz	5.8×10^{-7}	Standard divider,
		(10 ~ 100) Hz	5.8×10^{-7}	Digital multimeters,
		(0.1 ~ 1) kHz	5.8×10^{-7}	AC calibrator
		(1 ~ 10) kHz	5.8×10^{-7}	/HCT-CS-082-40403
		(10 ~ 100) kHz	5.8×10^{-7}	
		(0.1 ~ 1) MHz	5.8×10^{-7}	
		(1 ~ 10) MHz	5.8×10^{-7}	
		(10 ~ 30) MHz	1.9×10^{-7}	
Multi function calibrator				Meter calibrators,
DC Voltage (Meter)		1 mV	0.52 μV	Digital multimeters,
		-1 mV	0.52 μV	Frequency counters,
		(1 ~ 100) mV	1.3×10^{-5}	LCR meters
		(-1 ~ -100) mV	1.3×10^{-5}	/HCT-CS-276-40403
		(0.1 ~ 1) V	6.7×10^{-6}	
		(-0.1 ~ -1) V	6.7×10^{-6}	
		(1 ~ 10) V	4.5×10^{-6}	
		(-1 ~ -10) V	4.5×10^{-6}	
		(10 ~ 100) V	6.3×10^{-6}	
		(-10 ~ -100) V	6.3×10^{-6}	
		(100 ~ 1 000) V	8.0×10^{-6}	
		(-100 ~ -1 000) V	8.0×10^{-6}	
DC Current (Meter)		1 μA	7.0 nA	
		-1 μA	7.0 nA	
		(1 ~ 100) μA	1.2×10^{-4}	
		(-1 ~ -100) μA	1.2×10^{-4}	
		(0.1 ~ 1) mA	5.7×10^{-5}	
		(-0.1 ~ -1) mA	5.7×10^{-5}	
		(1 ~ 10) mA	5.4×10^{-5}	
		(-1 ~ -10) mA	5.4×10^{-5}	
		(10 ~ 100) mA	4.8×10^{-5}	
		(-10 ~ -100) mA	4.8×10^{-5}	
		(0.1 ~ 1) A	1.2×10^{-4}	
		(-0.1 ~ -1) A	1.2×10^{-4}	
		(1 ~ 10) A	9.4×10^{-5}	
		(-1 ~ -10) A	9.4×10^{-5}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			Meter calibrators,
DC Current (Meter)		(10 ~ 20) A	1.6×10^{-4}	Digital multimeters,
		(-10 ~ -20) A	1.6×10^{-4}	Frequency counters,
				LCR meters
Resistance (Meter)		1 Ω	11 μΩ	/HCT-CS-276-40403
		(1 ~ 100) Ω	6.9×10^{-6}	
		(0.1 ~ 1) kΩ	6.9×10^{-6}	
		(1 ~ 10) kΩ	4.6×10^{-6}	
		(10 ~ 100) kΩ	7.0×10^{-6}	
		(0.1 ~ 1) MΩ	9.3×10^{-6}	
		(1 ~ 10) MΩ	1.2×10^{-5}	
		(10 ~ 100) MΩ	2.5×10^{-5}	
		(0.1 ~ 1) GΩ	6.2×10^{-4}	
AC Voltage (Meter)		(10 ~ 40) Hz		
		1 mV	4.8 μV	
		(1 ~ 100) mV	1.8×10^{-4}	
		(0.1 ~ 1) V	1.2×10^{-4}	
		(1 ~ 10) V	1.3×10^{-4}	
		(10 ~ 100) V	1.3×10^{-4}	
		(100 ~ 1 000) V	3.7×10^{-4}	
		(40 ~ 500) Hz		
		1 mV	4.8 μV	
		(1 ~ 100) mV	1.5×10^{-4}	
		(0.1 ~ 1) V	5.9×10^{-5}	
		(1 ~ 10) V	5.8×10^{-5}	
		(10 ~ 100) V	7.1×10^{-5}	
		(100 ~ 1 000) V	8.7×10^{-5}	
		500 Hz ~ 1 kHz		
		1 mV	4.8 μV	
		(1 ~ 100) mV	1.5×10^{-4}	
		(0.1 ~ 1) V	5.9×10^{-5}	
		(1 ~ 10) V	5.8×10^{-5}	
		(10 ~ 100) V	7.1×10^{-5}	
		(100 ~ 1 000) V	8.7×10^{-5}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			Meter calibrators,
AC Voltage (Meter)		(1 ~ 10) kHz		Digital multimeters,
		1 mV	4.8 μV	Frequency counters,
		(1 ~ 100) mV	1.5×10^{-4}	LCR meters
		(0.1 ~ 1) V	6.1×10^{-5}	/HCT-CS-276-40403
		(1 ~ 10) V	5.8×10^{-5}	
		(10 ~ 100) V	7.1×10^{-5}	
		(100 ~ 1 000) V	2.0×10^{-4}	
		(10 ~ 20) kHz		
		1 mV	4.8 μV	
		(1 ~ 100) mV	1.5×10^{-4}	
		(0.1 ~ 1) V	7.7×10^{-5}	
		(1 ~ 10) V	5.8×10^{-5}	
		(10 ~ 100) V	7.1×10^{-5}	
		(100 ~ 1 000) V	2.0×10^{-4}	
		(20 ~ 50) kHz		
		1 mV	4.9 μV	
		(1 ~ 100) mV	2.2×10^{-4}	
		(0.1 ~ 1) V	9.4×10^{-5}	
		(1 ~ 10) V	9.4×10^{-5}	
		(10 ~ 100) V	1.1×10^{-4}	
		(50 ~ 100) kHz		
		1 mV	6.5 μV	
		(1 ~ 100) mV	5.5×10^{-4}	
		(0.1 ~ 1) V	1.4×10^{-4}	
		(1 ~ 10) V	1.3×10^{-4}	
		(10 ~ 100) V	2.1×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			Meter calibrators,
AC Current (Meter)		(10 ~ 40) Hz		Digital multimeters,
		1 μA	14 nA	Frequency counters,
		(1 ~ 100) μA	3.1×10^{-4}	LCR meters
		(0.1 ~ 1) mA	2.3×10^{-4}	/HCT-CS-276-40403
		(1 ~ 10) mA	2.3×10^{-4}	
		(10 ~ 100) mA	2.3×10^{-4}	
		(0.1 ~ 1) A	3.4×10^{-4}	
		(1 ~ 10) A	5.6×10^{-4}	
		(10 ~ 20) A	2.0×10^{-4}	
		(40 ~ 500) Hz		
		1 μA	12 nA	
		(1 ~ 100) μA	2.2×10^{-4}	
		(0.1 ~ 1) mA	1.7×10^{-4}	
		(1 ~ 10) mA	1.7×10^{-4}	
		(10 ~ 100) mA	1.6×10^{-4}	
		(0.1 ~ 1) A	3.4×10^{-4}	
		(1 ~ 10) A	5.6×10^{-4}	
		(10 ~ 20) A	2.1×10^{-4}	
		c		
		500 Hz ~ 1 kHz		
		1 μA	12 nA	
		(1 ~ 100) μA	2.2×10^{-4}	
		(0.1 ~ 1) mA	1.7×10^{-4}	
		(1 ~ 10) mA	1.7×10^{-4}	
		(10 ~ 100) mA	1.6×10^{-4}	
		(0.1 ~ 1) A	3.4×10^{-4}	
		(1 ~ 10) A	5.6×10^{-4}	
		(10 ~ 20) A	5.3×10^{-4}	
		(1 ~ 5) kHz		
		1 μA	21 nA	
		(1 ~ 100) μA	4.9×10^{-4}	
		(0.1 ~ 1) mA	3.8×10^{-4}	
		(1 ~ 10) mA	3.4×10^{-4}	
		(10 ~ 100) mA	3.2×10^{-4}	
		(0.1 ~ 1) A	6.6×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			Meter calibrators,
AC Current (Meter)		(5 ~ 10) kHz		Digital multimeters,
		1 μA	86 nA	Frequency counters,
		(1 ~ 100) μA	2.1×10^{-3}	LCR meters
		(0.1 ~ 1) mA	2.1×10^{-3}	/HCT-CS-276-40403
		(1 ~ 10) mA	1.9×10^{-3}	
		(10 ~ 100) mA	1.5×10^{-3}	
		(0.1 ~ 1) A	8.3×10-3	
Time Mark		1 ns	5.2 ps	
		(1 ~ 10) ns	5.2×10^{-4}	
		(10 ~ 100) ns	5.2×10^{-5}	
		(0.1 ~ 1) μs	5.2×10^{-6}	
		(1 ~ 10) μs	7.8×10^{-7}	
		(10 ~ 100) μs	5.8×10^{-7}	
		(0.1 ~ 1) ms	5.8×10^{-7}	
		(1 ~ 10) ms	5.8×10^{-7}	
		(10 ~ 100) ms	5.8×10^{-7}	
		(0.1 ~ 1) s	5.8×10^{-7}	
Frequency		1 Hz	0.58 μHz	
		(1 ~ 10) Hz	5.8×10^{-7}	
		(10 ~ 100) Hz	5.8×10^{-7}	
		(0.1 ~ 1) kHz	5.8×10^{-7}	
		(1 ~ 10) kHz	5.8×10^{-7}	
		(10 ~ 100) kHz	5.8×10^{-7}	
		(0.1 ~ 1) MHz	5.8×10^{-7}	
		(1 ~ 10) MHz	5.8×10^{-7}	
		(10 ~ 100) MHz	5.8×10^{-7}	
		(0.1 ~ 1) GHz	5.8×10^{-7}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			Meter calibrators,
Capacitance		120 Hz		Digital multimeters,
		100 μF	38 nF	Frequency counters,
				LCR meters
		1 kHz		/HCT-CS-276-40403
		1 pF	1.2 fF	
		(1 ~ 10) pF	4.7×10^{-4}	
		(10 ~ 100) pF	2.3×10^{-4}	
		(0.1 ~ 1) nF	2.3×10^{-4}	
		(1 ~ 10) nF	2.8×10^{-4}	
		(10 ~ 100) nF	2.5×10^{-4}	
		(1 ~ 10) μF	2.2×10^{-4}	
		(0.1 ~ 1) μF	2.2×10^{-4}	
		(1 ~ 10) kHz		
		1 pF	0.37 fF	
		(1 ~ 10) pF	3.7×10^{-4}	
		(10 ~ 100) pF	3.6×10^{-4}	
		(0.1 ~ 1) nF	3.6×10^{-4}	
		(1 ~ 10) nF	3.6×10^{-4}	
		(10 ~ 100) nF	4.0×10^{-4}	
		(0.1 ~ 1) μF	3.6×10^{-4}	
		(10 ~ 100) kHz		
		1 pF	0.37 fF	
		(1 ~ 10) pF	3.6×10^{-4}	
		(10 ~ 100) pF	3.6×10^{-4}	
		(0.1 ~ 1) nF	3.7×10^{-4}	
		(1 ~ 10) nF	3.6×10^{-4}	
		(100 ~ 500) kHz		
		1 pF	0.38 fF	
		(1 ~ 10) pF	3.7×10^{-4}	
		(10 ~ 100) pF	3.6×10^{-4}	
		(0.1 ~ 1) nF	3.7×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			Meter calibrators,
Capacitance		(0.5 ~ 1) MHz		Digital multimeters,
		1 pF	0.62 fF	Frequency counters,
		(1 ~ 10) pF	6.2×10^{-4}	LCR meters
		(10 ~ 100) pF	6.2×10^{-4}	/HCT-CS-276-40403
		(0.1 ~ 1) nF	6.2×10^{-4}	
Inductance(Source)		1 kHz		
		100 μH	90 nH	
		(0.1 ~ 1) mH	4.0×10^{-4}	
		(1 ~ 10) mH	2.4×10^{-4}	
		(10 ~ 100) mH	2.4×10^{-4}	
		(0.1 ~ 1) H	2.4×10^{-4}	
		(1 ~ 10) H	2.5×10^{-4}	
		(1 ~ 10) kHz		
		100 μH	53 nH	
		(0.1 ~ 1) mH	2.4×10^{-4}	
		(1 ~ 10) mH	2.4×10^{-4}	
Oscilloscope calibrators	40404			Digital multimeters, Counters,
DC Voltage		(±)		Power meters, Oscilloscopes,
		0 mV	0.065 μV	Spectrum analyzers
		(0 ~ 2.5) mV	1.1×10^{-4}	AC Calibrators
		(2.5 ~ 5) mV	5.6×10^{-5}	/HCT-CS-083-40404
		(5 ~ 10) mV	6.4×10^{-5}	
		(10 ~ 25) mV	2.6×10^{-5}	
		(25 ~ 50) mV	1.3×10^{-5}	
		(50 ~ 100) mV	5.8×10^{-5}	
		(100 ~ 250) mV	2.4×10^{-5}	
		(250 ~ 500) mV	1.3×10^{-5}	
		(0.5 ~ 1) V	5.8×10^{-5}	
		(1 ~ 2.5) V	2.4×10^{-5}	
		(2.5 ~ 5) V	1.2×10^{-5}	
		(5 ~ 10) V	5.8×10^{-5}	
		(10 ~ 25) V	2.4×10^{-5}	
		(25 ~ 50) V	1.3×10^{-5}	
		(50 ~ 100) V	5.8×10^{-5}	
		(100 ~ 150) V	4.0×10^{-5}	
		(150 ~ 200) V	3.1×10^{-5}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscope calibrators	40404			Digital multimeters, Counters,
Square/Edge Wave Voltage		1 kHz		Power meters, Oscilloscopes,
		5 mV	4.4 μV	Spectrum analyzers
		(5 ~ 10) mV	9.2×10^{-4}	AC Calibrators
		(10 ~ 25) mV	4.1×10^{-4}	/HCT-CS-083-40404
		(25 ~ 50) mV	2.6×10^{-4}	
		(50 ~ 100) mV	1.8×10^{-4}	
		(100 ~ 250) mV	1.7×10^{-4}	
		(250 ~ 500) mV	8.7×10^{-5}	
		(0.5 ~ 1) V	2.6×10^{-2}	
		(1 ~ 2.5) V	1.5×10^{-4}	
		(2.5 ~ 5) V	1.7×10^{-4}	
		(5 ~ 10) V	1.7×10^{-4}	
		(10 ~ 25) V	1.9×10^{-4}	
		(25 ~ 50) V	1.8×10^{-4}	
		(50 ~ 100) V	1.7×10^{-4}	
		(100 ~ 130) V	1.4×10^{-4}	
		(130 ~ 200) V	1.1×10^{-4}	
		100 kHz		
		10 mV	28 μV	
		(10 ~ 25) mV	2.7×10^{-3}	
		(25 ~ 50) mV	1.7×10^{-3}	
		(50 ~ 100) mV	1.3×10^{-3}	
		(100 ~ 250) mV	1.1×10^{-3}	
		(250 ~ 500) mV	1.5×10^{-3}	
		(0.5 ~ 1) V	1.2×10^{-3}	
		(1 ~ 2.5) V	8.2×10^{-4}	
Square/Edge Wave Frequency		10 Hz	5.8 μHz	
		10 Hz ~ 1 kHz	5.8×10^{-8}	
		(1 ~ 10) kHz	5.2×10^{-8}	
		10 kHz ~ 10 MHz	5.8×10^{-8}	
Edge TD Pulse Drive		(10 ~ 100) Hz		
		11 V	5.4 mV	
		(11 ~ 100) V	5.5×10^{-5}	
		(0.1 ~ 1) kHz		
		11 V	5.4 mV	
		(11 ~ 100) V	5.5×10^{-5}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscope calibrators	40404			Digital multimeters, Counters,
Edge Duty Cycle		50 %	0.058 %	Power meters, Oscilloscopes,
				Spectrum analyzers
Edge Rise Time		300 ps	0.64 ps	AC Calibrators
		(300 ~ 500) ps	1.5×10^{-3}	/HCT-CS-083-40404
Leveled Sine Wave (Harmonic)		50 kHz ~ 6 GHz		
		-10 dBc	0.64 dB	
		(-10 ~ -80) dBc	0.64 dB	
RF output levels		50 kHz ~ 600 MHz		
(V : pp)		60 mV	1.0 mV	
		(60 ~ 300) mV	1.6×10^{-2}	
		(300 ~ 600) mV	1.5×10^{-2}	
		600 mV ~ 5.5 V	1.6×10^{-2}	
		600 MHz ~ 1 GHz		
		60 mV	1.0 mV	
		(60 ~ 300) mV	1.6×10^{-2}	
		(300 ~ 600) mV	1.5×10^{-2}	
		600 mV ~ 3.5 V	1.6×10^{-2}	
		(1 ~ 2) GHz		
		60 mV	1.0 mV	
		(60 ~ 300) mV	1.6×10^{-2}	
		(300 ~ 600) mV	1.5×10^{-2}	
		600 mV ~ 3 V	1.6×10^{-2}	
		(2 ~ 6) GHz		
		60 mV	1.0 mV	
		(60 ~ 300) mV	1.6×10^{-2}	
		(300 ~ 600) mV	1.5×10^{-2}	
		600 mV ~ 1.2 V	1.6×10^{-2}	
Leveled Sine Wave (Frequency)		500 MHz	1.4 Hz	
		(0.5 ~ 6) GHz	3.2×10^{-8}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscope calibrators	40404			Digital multimeters, Counters,
Leveled Sine Wave (Amplitude)		10 Hz		Power meters, Oscilloscopes,
		5 mV	4.3 μV	Spectrum analyzers
		(5 ~ 100) mV	5.9×10^{-5}	AC Calibrators
		(0.1 ~ 1) V	6.6×10^{-4}	/HCT-CS-083-40404
		(1 ~ 5.5) V	1.2×10^{-4}	
		(0.01 ~ 50) kHz		
		5 mV	5.1 μV	
		(5 ~ 100) mV	8.1×10^{-5}	
		(0.1 ~ 1) V	6.6×10^{-4}	
		(1 ~ 5.5) V	1.4×10^{-4}	
Wave Generator (Square)		10 Hz		
		10 mV	3.3 μV	
		(10 ~ 900) mV	6.7×10^{-5}	
		(0.9 ~ 2.5) V	3.2×10^{-4}	
		(2.5 ~ 3.75) V	2.1×10^{-4}	
		(3.75 ~ 55) V	4.4×10^{-5}	
		(0.01 ~ 1) kHz		
		10 mV	3.0 μV	
		(10 ~ 900) mV	5.3×10^{-5}	
		(0.9 ~ 2.5) V	5.2×10^{-4}	
		(2.5 ~ 3.75) V	3.5×10^{-4}	
		(3.75 ~ 55) V	4.2×10^{-5}	
		(1 ~ 10) kHz		
		2.5 V	0.73 mV	
		(2.5 ~ 3.75) V	3.8×10^{-5}	
		(3.75 ~ 55) V	8.7×10^{-5}	
Wave Generator (Sine)		10 Hz		
		10 mV	3.1 μV	
		(0.01 ~ 55) V	3.0×10^{-5}	
		(0.01 ~ 1) kHz		
		10 mV	3.0 μV	
		(0.01 ~ 55) V	2.1×10^{-5}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscope calibrators	40404			Digital multimeters, Counters,
Wave Generator (Triangle)		10 Hz		Power meters, Oscilloscopes,
		10 mV	3.0 μV	Spectrum analyzers
		(0.01 ~ 55) V	2.6×10^{-5}	AC Calibrators
				/HCT-CS-083-40404
		(0.01 ~ 1) kHz		
		10 mV	3.0 μV	
		(0.01 ~ 55) V	1.8×10^{-5}	
Pulse Generator (Priod)		10 ns	0.58 ps	
		(0.01 ~ 20) μs	2.9×10^{-5}	
		(20 ~ 100) μs	5.8×10^{-6}	
Pulse Generator (Width)		4 ns	1.2 ps	
		(4 ~ 100) ns	1.0×10^{-3}	
Time mark		1 ns	2.7 ps	
		(1 ~ 2) ns	1.4×10^{-3}	
		(2 ~ 5) ns	5.4×10^{-4}	
		(5 ~ 10) ns	2.7×10^{-4}	
		(10 ~ 20) ns	1.4×10^{-4}	
		(20 ~ 50) ns	5.4×10^{-5}	
		(50 ~ 100) ns	2.7×10^{-5}	
		(100 ~ 200) ns	1.4×10^{-5}	
		(200 ~ 500) ns	5.4×10^{-6}	
		(0.5 ~ 1) μs	2.8×10^{-6}	
		(1 ~ 2) μs	1.4×10^{-6}	
		(2 ~ 5) μs	5.5×10^{-7}	
		(5 ~ 10) μs	6.4×10^{-7}	
		(10 ~ 20) μs	3.2×10^{-7}	
		(20 ~ 50) μs	1.3×10^{-7}	
		(50 ~ 100) μs	5.8×10^{-7}	
		(100 ~ 200) μs	2.9×10^{-7}	
		(200 ~ 500) μs	1.2×10^{-7}	
		(0.5 ~ 1) ms	5.8×10^{-7}	
		(1 ~ 2) ms	2.9×10^{-7}	
		(2 ~ 5) ms	1.2×10^{-7}	
		(5 ~ 10) ms	5.8×10^{-7}	
		(10 ~ 20) ms	2.9×10^{-7}	
		(20 ~ 50) ms	1.2×10^{-7}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscope calibrators	40404			Digital multimeters, Counters,
Time mark		(50 ~ 100) ms	5.8×10^{-7}	Power meters, Oscilloscopes,
		(100 ~ 200) ms	2.9×10^{-7}	Spectrum analyzers
		(200 ~ 500) ms	1.2×10^{-7}	AC Calibrators
		(0.5 ~ 1) s	5.8×10^{-7}	/HCT-CS-083-40404
		(1 ~ 2) s	2.9×10^{-7}	
		(2 ~ 5) s	1.2×10^{-7}	
		(5 ~ 10) s	5.8×10^{-7}	
		(10 ~ 20) s	2.9×10^{-7}	
Frequency		50 mHz	5.8 nHz	
		(50 ~ 100) mHz	5.8×10^{-7}	
		(100 ~ 200) mHz	2.9×10^{-7}	
		(200 ~ 500) mHz	1.2×10^{-7}	
		(0.5 ~ 1) Hz	5.8×10^{-7}	
		(1 ~ 2) Hz	2.9×10^{-7}	
		(2 ~ 5) Hz	1.2×10^{-7}	
		(5 ~ 10) Hz	5.8×10^{-7}	
		(10 ~ 20) Hz	2.9×10^{-7}	
		(20 ~ 50) Hz	1.2×10^{-7}	
		(50 ~ 100) Hz	5.8×10^{-7}	
		(100 ~ 200) Hz	2.9×10^{-7}	
		(200 ~ 500) Hz	1.2×10^{-7}	
		(0.5 ~ 1) kHz	5.8×10^{-7}	
		(1 ~ 2) kHz	2.9×10^{-7}	
		(2 ~ 5) kHz	1.2×10^{-7}	
		(5 ~ 10) kHz	5.8×10^{-7}	
		(10 ~ 20) kHz	2.9×10^{-7}	
		(20 ~ 50) kHz	1.2×10^{-7}	
		(50 ~ 100) kHz	5.8×10^{-7}	
		(100 ~ 200) kHz	2.9×10^{-7}	
		(200 ~ 500) kHz	1.2×10^{-7}	
		(0.5 ~ 1) MHz	5.8×10^{-7}	
		(1 ~ 2) MHz	2.9×10^{-7}	
		(2 ~ 5) MHz	1.2×10^{-7}	
		(5 ~ 10) MHz	5.8×10^{-7}	
		(10 ~ 20) MHz	2.9×10^{-7}	
		(20 ~ 50) MHz	1.2×10^{-7}	
		(50 ~ 100) MHz	5.8×10^{-7}	
		(100 ~ 200) MHz	2.9×10^{-7}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscope calibrators	40404			Digital multimeters, Counters,
Frequency		(200 ~ 500) MHz	1.2×10^{-7}	Power meters, Oscilloscopes,
		(0.5 ~ 1.1) GHz	5.2×10^{-7}	Spectrum analyzers
				AC Calibrators
MeasZ (Resistance)		40 Ω	12 mΩ	/HCT-CS-083-40404
		40 Ω ~ 1.5 MΩ	2.7×10^{-4}	
MeasZ (Capacitance)		50 pF	0.26 pF	
		(50 ~ 100) pF	3.0×10^{-3}	
Video signal generators	40406			Frequency counters,
DOT Frequency		10 kHz ~ 1 000 MHz	5.8×10^{-7}	Video signal analyzers,
				Oscilloscopes
SYNC Frequency		50 Hz ~ 1 MHz	5.8×10^{-7}	/HCT-CS-084-40406
SYNC WIDTH(Time)		1 µs	1.2 ns	
		(1 ~ 100) µs	1.2×10^{-3}	
Analog Video Level		100 mV	1.2 mV	
		(100 ~ 1 000) mV	1.2×10^{-2}	
Analog Sync Level		1 V	20 mV	
		(1 ~ 5) V	1.4×10^{-2}	
Audio Level		100 mV	1.2 mV	
		(100 ~ 1 000) mV	1.2×10^{-2}	
S-Video Level		100 mV	1.2 mV	
		(100 ~ 1 000) mV	1.2×10^{-2}	
Component Level		100 mV	1.2 mV	
		(100 ~ 1 000) mV	1.2×10^{-2}	
Scart Video Level		100 mV	1.2 mV	
		(100 ~ 1 000) mV	1.2×10^{-2}	
Scart Audio Level		100 mV	1.2 mV	
		(100 ~ 1 000) mV	1.2×10^{-2}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Video signal generators	40406			Frequency counters,
NTSC,PAL,SECAM H-Timing Test		100 ns	0.60 ns	Video signal analyzers,
(Time)		(100 ~ 300) ns	3.9×10^{-2}	Oscilloscopes
		300 ns ~ 9 μs	1.4×10^{-3}	/HCT-CS-084-40406
(Level)		50 mV	0.62 mV	
		(50 ~ 900) mV	6.2×10^{-3}	
NTSC,PAL,SECAM COLOR BAR				
(LUMINANCE Level)		50 mV	0.32 mV	
		(50 ~ 900) mV	3.2×10^{-3}	
NTSC,PAL,SECAM COLOR BAR				
(CHROMINANCE Level)		50 mV	0.32 mV	
		(50 ~ 900) mV	3.2×10^{-3}	
NTSC,PAL,SECAM COLOR BAR				
(CHROMINACE Phase)		0 ° ~ 360 °	0.55 °	
RF Frequency		10 kHz ~ 1 000 MHz	5.8×10^{-7}	
Sound Frequency		10 Hz ~ 1 MHz	5.8×10^{-7}	
SUB CARRIER Frequency				
NTSC		3.579 545 MHz	0.58 Hz	
PAL		4.433 619 MHz	0.58 Hz	
Audio distortion annalyzers	40407			Multimeter calibrators,
/meters				Distortion meter calibrators
Distortion meter				/HCT-CS-085-40407
Input frequency		1 Hz ~ 1 MHz	6.2×10^{-5}	
AC input levels		2 mV		
		10 Hz	5.3 μV	
		10 Hz ~ 20 kHz	2.5×10^{-3}	
		(20 ~ 50) kHz	2.6×10^{-3}	
		(50 ~ 100) kHz	3.6×10^{-3}	
		(2 ~ 10) mV		
		10 Hz	9.8 μV	
		10 Hz ~ 20 kHz	1.1×10^{-3}	
		(20 ~ 50) kHz	1.2×10^{-3}	
		(50 ~ 100) kHz	1.8×10^{-3}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Audio distortion annalyzers /meters	40407			Multimeter calibrators, Distortion meter calibrators /HCT-CS-085-40407
AC input levels		(10 ~ 100) mV		
		10 Hz	74 μV	
		10 Hz ~ 20 kHz	6.3×10^{-4}	
		(20 ~ 50) kHz	6.5×10^{-4}	
		(50 ~ 100) kHz	9.4×10^{-4}	
		(0.1 ~ 1) V		
		10 Hz	0.69 mV	
		10 Hz ~ 20 kHz	6.1×10^{-4}	
		(20 ~ 50) kHz	6.2×10^{-4}	
		(50 ~ 100) kHz	6.3×10^{-4}	
		(1 ~ 10) V		
		10 Hz	6.9 mV	
		10 Hz ~ 20 kHz	6.1×10^{-4}	
		(20 ~ 50) kHz	6.2×10^{-4}	
		(50 ~ 100) kHz	6.2×10^{-4}	
		(10 ~ 100) V		
		10 Hz	70 mV	
		10 Hz ~ 20 kHz	6.2×10^{-4}	
		(20 ~ 50) kHz	6.2×10^{-4}	
		(50 ~ 100) kHz	6.5×10^{-4}	
		(100 ~ 300) V		
		50 Hz	0.14 V	
		50 Hz ~ 1 kHz	2.3×10^{-4}	
DC input levels		1 mV	6.2 μV	
		1 mV ~ 100 V	6.1×10^{-4}	
		(100 ~ 300) V	2.1×10^{-4}	
Input distortion		1 kHz ~ 20 kHz		
		(-10 ~ -60) dB	0.31 dB	
		(-60 ~ -70) dB	0.38 dB	
		(-70 ~ -80) dB	0.55 dB	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Audio distortion annalyzers /meters	40407			Multimeter calibrators, Distortion meter calibrators /HCT-CS-085-40407
Input distortion		1 kHz ~ 20 kHz		
		0.01%	0.000 55 %	
		(0.01 ~ 30) %	3.1×10^{-2}	
Distortion meter calibrators				
Output level		100 mV		
		20 Hz	65 μV	
		20 Hz ~ 1 kHz	6.3×10^{-4}	
		(1 ~ 20) kHz	7.4×10^{-4}	
		(20 ~ 100) kHz	1.1×10^{-3}	
		(0.1 ~ 1) V		
		20 Hz	0.63 mV	
		20 Hz ~ 1 kHz	6.2×10^{-4}	
		(1 ~ 20) kHz	6.7×10^{-4}	
		(20 ~ 100) kHz	9.3×10^{-4}	
		(1 ~ 10) V		
		20 Hz	6.3 mV	
		20 Hz ~ 1 kHz	6.2×10^{-4}	
		(1 ~ 20) kHz	6.7×10^{-4}	
		(20 ~ 100) kHz	9.3×10^{-4}	
Output distortion		20 Hz ~ 100 kHz		
		(-10 ~ -20) dB	0.88 dB	
		20 Hz ~ 100 kHz		
		(-20 ~ -50) dB	1.1 dB	
		20 Hz ~ 100 kHz		
		(-50 ~ -80) dB	1.4 dB	
LF filters	40408			Audio analyzers, Function generators /HCT-CS-087-40408
Frequency		30 Hz ~ 30 MHz	5.8×10^{-4}	
Level		(0 ~ 90) dB		
		20 Hz ~ 100 kHz	0.010 dB	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF/audio signal analyzers	40409			Multimeter calibrators,
Output Frequency		1 Hz ~1 MHz	6.2×10^{-5}	Digital multimeters
				/HCT-CS-088-40409
Output level		2 mV		
		20 Hz	7.9 μV	
		20 Hz ~ 1 kHz	3.5×10^{-3}	
		(1 ~ 20) kHz	6.0×10^{-3}	
		(20 ~ 100) kHz	1.3×10^{-2}	
		(2 ~ 100) mV		
		20 Hz	20 μV	
		20 Hz ~ 1 kHz	1.8×10^{-4}	
		(1 ~ 20) kHz	4.5×10^{-4}	
		(20 ~ 100) kHz	1.1×10^{-3}	
		(0.1 ~ 1) V		
		20 Hz	0.16 mV	
		20 Hz ~ 1 kHz	1.2×10^{-4}	
		(1 ~ 20) kHz	2.9×10^{-4}	
		(20 ~ 100) kHz	8.2×10^{-4}	
		(1 ~ 10) V		
		20 Hz	1.6 mV	
		20 Hz ~ 1 kHz	1.2×10^{-4}	
		(1 ~ 20) kHz	2.9×10^{-4}	
		(20 ~ 100) kHz	8.2×10^{-4}	
		(10 ~ 100) V		
		20 Hz	16 mV	
		20 Hz ~ 1 kHz	1.7×10^{-4}	
		(1 ~ 20) kHz	3.5×10^{-4}	
		(20 ~ 100) kHz	8.1×10^{-4}	
		(10 ~ -10) dBm		
		20 Hz	0.006 0 dB	
		20 Hz ~ 20 kHz	0.006 3 dB	
		(20 ~ 50) kHz	0.008 4 dB	
		(50 ~ 100) kHz	0.008 5 dB	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF/audio signal analyzers	40409			Multimeter calibrators,
Output level		(-10 ~ -30) dBm		Digital multimeters
		20 Hz	0.006 0 dB	/HCT-CS-088-40409
		20 Hz ~ 20 kHz	0.008 0 dB	
		(20 ~ 50) kHz	0.010 dB	
		(50 ~ 100) kHz	0.010 dB	
		(-30 ~ -40) dBm		
		20 Hz	0.006 0 dB	
		20 Hz ~ 20 kHz	0.006 8 dB	
		(20 ~ 50) kHz	0.010 dB	
		(50 ~ 100) kHz	0.024 dB	
Output DC Offset		-20 V ~ 0 mV	6.2×10^{-5}	
		0 mV	6.2 μV	
		0 mV ~ 20 V	6.2×10^{-5}	
Output flatness		20 Hz ~ 20 kHz	0.006 3 dB	
		(20 ~ 100) kHz	0.009 2 dB	
Output amplitude		20 Hz ~ 1 kHz		
		(-10 ~ -60) dB	0.061 dB	
		(1 ~ 20) kHz		
		(-10 ~ -60) dB	0.11 dB	
		(20 ~ 50) kHz		
		(-10 ~ -60) dB	0.11 dB	
		(50 ~ 100) kHz		
		(-10 ~ -60) dB	0.11 dB	
Output impedance		50 Ω	6.2 mΩ	
		600 Ω	62 mΩ	
Input frequency		1 Hz ~ 1 MHz	6.2×10^{-5}	
AC input levels		2 mV		
		10 Hz	7.8 μV	
		10 Hz ~ 20 kHz	3.8×10^{-3}	
		(20 ~ 50) kHz	3.9×10^{-3}	
		(50 ~ 100) kHz	4.6×10^{-3}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF/audio signal analyzers	40409			Multimeter calibrators,
AC input levels		(2 ~ 100) mV		Digital multimeters
		10 Hz	43 μV	/HCT-CS-088-40409
		10 Hz ~ 20 kHz	1.6×10^{-4}	
		(20 ~ 50) kHz	2.4×10^{-4}	
		(50 ~ 100) kHz	5.7×10^{-4}	
		(0.1 ~ 1) V		
		10 Hz	0.14 mV	
		10 Hz ~ 20 kHz	9.0×10^{-5}	
		(20 ~ 50) kHz	1.5×10^{-4}	
		(50 ~ 100) kHz	1.5×10^{-4}	
		(1 ~ 10) V		
		10 Hz	3.4 mV	
		10 Hz ~ 20 kHz	9.0×10^{-5}	
		(20 ~ 50) kHz	1.2×10^{-4}	
		(50 ~ 100) kHz	1.4×10^{-4}	
		(10 ~ 100) V		
		10 Hz	10 mV	
		10 Hz ~ 20 kHz	1.0×10^{-4}	
		(20 ~ 50) kHz	1.3×10^{-4}	
		(50 ~ 100) kHz	2.2×10^{-4}	
		(100 ~ 300) V		
		10 Hz	0.13 V	
		10 Hz ~ 10 kHz	2.4×10^{-4}	
DC input levels		1 mV	6.2 μV	
		(1 ~ 100) mV	6.3×10^{-5}	
		(0.1 ~ 100) V	6.2×10^{-5}	
		(100 ~ 300) V	6.2×10^{-5}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF/audio signal analyzers	40409			Multimeter calibrators,
Filter(weight,low,high pass etc.)		400 Hz ~ 80 kHz	1.9×10^{-4}	Digital multimeters
				/HCT-CS-088-40409
Distortion factor		1 kHz ~ 20 kHz		
		(-10 ~ -60) dB	0.31 dB	
		(-60 ~ -70) dB	0.38 dB	
		(-70 ~ -80) dB	0.56 dB	
		1 kHz ~ 20 kHz		
		(0.001 ~ 0.01) %	5.5×10^{-2}	
		(0.01 ~ 30) %	3.1×10^{-2}	
Line frequency meters	40410			Multimeter calibrators
Frequency		40 Hz ~ 1 kHz	5.8×10^{-4}	/HCT-CS-179-40410
Function generators	40411			Frequency counters,
Frequency		1 Hz ~ 3 GHz	5.8×10^{-9}	Digital multimeters,
				Spectrum analyzers,
Output level		10 mV		Oscilloscopes
		20 Hz	7.0 μV	/HCT-CS-089-40411
		20 Hz ~ 20 kHz	1.3×10^{-3}	
		(20 ~ 100) kHz	3.2×10^{-3}	
		100 kHz ~ 1 MHz	1.5×10^{-2}	
		(10 ~ 100) mV		
		20 Hz	20 μV	
		20 Hz ~ 20 kHz	8.1×10^{-4}	
		(20 ~ 100) kHz	2.0×10^{-3}	
		100 kHz ~ 1 MHz	2.6×10^{-2}	
		(0.1 ~ 1) V		
		20 Hz	0.16 mV	
		20 Hz ~ 20 kHz	2.9×10^{-4}	
		(20 ~ 100) kHz	8.2×10^{-4}	
		100 kHz ~ 1 MHz	2.4×10^{-2}	
		(1 ~ 10) V		
		20 Hz	1.6 mV	
		20 Hz ~ 20 kHz	5.5×10^{-4}	
		(20 ~ 100) kHz	1.8×10^{-3}	
		100 kHz ~ 1 MHz	3.0×10^{-2}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Function generators	40411			Frequency counters,
Output level		(10 ~ 100) V		Digital multimeters,
		20 Hz	16 mV	Spectrum analyzers,
		20 Hz ~ 20 kHz	5.5×10^{-4}	Oscilloscopes
		(20 ~ 100) kHz	1.8×10^{-3}	/HCT-CS-089-40411
		(-60 ~ 20) dBm		
		20 Hz ~ 20 kHz	0.007 dB	
		(20 ~ 50) kHz	0.008 dB	
		(50 ~ 100) kHz	0.013 dB	
		100 kHz ~ 100 MHz	0.17 dB	
DC Offset		(-20 V ~ 0 mV)	5.8×10^{-4}	
		0 mV	5.8 μV	
		(0 mV ~ 20 V)	5.8×10^{-4}	
Output flatness		20 Hz ~ 100 kHz	0.016 dB	
		100 kHz ~ 1 GHz	0.018 dB	
Distortion factor		(-80 ~ 0) dB		
		20 Hz ~ 100 MHz	1.4 dB	
Output amplitude		20 Hz ~ 1 kHz		
		(0 ~ -60) dB	0.007 dB	
		1 kHz ~ 20 kHz		
		(0 ~ -60) dB	0.009 dB	
		20 kHz ~ 100 kHz		
		(0 ~ -60) dB	0.015 dB	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Function generators	40411			Frequency counters,
Rise/Fall Time		1 ns	5.9 ps	Digital multimeters,
		(1 ~ 10) ns	1.3×10^{-3}	Spectrum analyzers,
		(10 ~ 100) ns	1.2×10^{-3}	Oscilloscopes
		100 ns ~ 1 s	1.2×10^{-3}	/HCT-CS-089-40411
AM Modulation		5 % ~ 99 %	1.2×10^{-2}	
FM Modulation		9 kHz ~ 400 kHz	1.2×10^{-2}	
Duty Cycle		1 % ~ 99 %	5.8×10^{-3}	
ECG Simulator Frequency		(0.1 ~ 1) Hz	6.0×10^{-3}	
ECG Simulator Amplitudes		0.5 mV		
		0.5 Hz	7 μV	
		(0.5 ~ 10) mV		
		(0.5 ~ 100) Hz	1.4×10^{-2}	
Resistance		10 Ω	5.9 mΩ	
		10 Ω ~ 100 kΩ	5.9×10^{-5}	
Genescopes	40412			Oscilloscope calibrators
Virtical gain		1 kHz		/HCT-CS-110-40412
		100 mV	1.2 mV	
		100 mV ~ 100 V	1.2×10^{-2}	
AC/DC high voltage voltmeters	40413			High voltage generators
DC Voltage		(±)		/HCT-CS-092-40413
		1 V	0.58 mV	
		(1 ~ 100) V	5.8×10^{-4}	
		(0.1 ~ 1) kV	4.0×10^{-5}	
		(1 ~ 2) kV	1.5 V	
		(2 ~ 5) kV	3.1 V	
		(5 ~ 10) kV	5.9 V	
		(10 ~ 20) kV	12 V	
		(20 ~ 50) kV	5.4×10^{-4}	
		(50 ~ 100) kV	7.0×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC/DC high voltage voltmeters	40413			High voltage generators
AC Voltage		(50 ~ 60) Hz		/HCT-CS-092-40413
		1 V	6.1 mV	
		(1 ~ 200) V	6.2×10^{-3}	
		(200 ~ 500) V	8.6×10^{-5}	
		(0.5 ~ 1) kV	1.1×10^{-4}	
		(1 ~ 20) kV	7.0×10^{-3}	
		(20 ~ 30) kV	4.0×10^{-3}	
		(30 ~ 40) kV	7.0×10^{-3}	
		(40 ~ 60) kV	7.0×10^{-3}	
		(60 ~ 70) kV	6.0×10^{-3}	
Leakage current testers	40416			Meter calibrators
AC Current		(10 Hz)		/HCT-CS-208-40416
		100 μA	78 nA	
		(100 ~ 200) μA	5.0×10^{-4}	
		(200 ~ 500) μA	4.6×10^{-4}	
		(0.5 ~ 1) mA	7.1×10^{-4}	
		(1 ~ 2) mA	4.4×10^{-4}	
		(2 ~ 5) mA	4.6×10^{-4}	
		(5 ~ 10) mA	7.1×10^{-4}	
		(10 ~ 20) mA	4.4×10^{-4}	
		(20 ~ 50) mA	4.8×10^{-4}	
		(50 ~ 100) mA	3.7×10^{-4}	
		(10 ~ 40) Hz		
		100 μA	69 nA	
		(100 ~ 200) μA	4.0×10^{-4}	
		(200 ~ 500) μA	3.2×10^{-4}	
		(0.5 ~ 1) mA	6.6×10^{-4}	
		(1 ~ 2) mA	3.7×10^{-4}	
		(2 ~ 5) mA	3.2×10^{-4}	
		(5 ~ 10) mA	6.6×10^{-4}	
		(10 ~ 20) mA	3.7×10^{-4}	
		(20 ~ 50) mA	3.2×10^{-4}	
		(50 ~ 100) mA	2.5×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Leakage current testers	40416			Meter calibrators
AC Current		(0.04 ~ 1) kHz		/HCT-CS-208-40416
		20 μA	14 nA	
		(20 ~ 50) μA	3.6×10^{-4}	
		(50 ~ 100) μA	6.6×10^{-4}	
		(100 ~ 200) μA	3.5×10^{-4}	
		(200 ~ 500) μA	2.8×10^{-4}	
		(0.5 ~ 1) mA	6.4×10^{-4}	
		(1 ~ 2) mA	3.4×10^{-4}	
		(2 ~ 5) mA	2.8×10^{-4}	
		(5 ~ 10) mA	6.4×10^{-4}	
		(10 ~ 20) mA	3.4×10^{-4}	
		(20 ~ 50) mA	2.6×10^{-4}	
		(50 ~ 100) mA	1.8×10^{-4}	
		(1 ~ 10) kHz		
		20 μA	0.11 μA	
		(20 ~ 50) μA	3.0×10^{-3}	
		(50 ~ 100) μA	2.2×10^{-3}	
		(100 ~ 200) μA	1.7×10^{-3}	
		(200 ~ 500) μA	3.0×10^{-3}	
		(0.5 ~ 1) mA	2.2×10^{-3}	
		(1 ~ 2) mA	1.7×10^{-3}	
		(2 ~ 5) mA	2.8×10^{-3}	
		(5 ~ 10) mA	2.1×10^{-3}	
		(10 ~ 20) mA	1.7×10^{-3}	
		(20 ~ 50) mA	1.9×10^{-3}	
		(50 ~ 100) mA	1.6×10^{-3}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Leakage current testers	40416			Meter calibrators
DC Current		1 μA	7.1 nA	/HCT-CS-208-40416
		(1 ~ 2) μA	3.6×10^{-3}	
		(2 ~ 5) μA	1.4×10^{-3}	
		(5 ~ 10) μA	1.0×10^{-3}	
		(10 ~ 20) μA	5.5×10^{-4}	
		(20 ~ 50) μA	2.4×10^{-4}	
		(50 ~ 100) μA	6.3×10^{-4}	
		(100 ~ 200) μA	3.2×10^{-4}	
		(200 ~ 500) μA	1.4×10^{-4}	
		(0.5 ~ 1) mA	6.2×10^{-4}	
		(1 ~ 2) mA	3.1×10^{-4}	
		(2 ~ 5) mA	1.4×10^{-4}	
		(5 ~ 10) mA	6.2×10^{-4}	
		(10 ~ 20) mA	3.1×10^{-4}	
		(20 ~ 50) mA	1.4×10^{-4}	
		(50 ~ 100) mA	8.6×10^{-5}	
AC Voltage		(40 Hz)		
		1 mV	4.8 μV	
		(1 ~ 2) mV	2.5×10^{-3}	
		(2 ~ 5) mV	1.1×10^{-3}	
		(5 ~ 10) mV	5.9×10^{-4}	
		(10 ~ 20) mV	4.6×10^{-4}	
		(20 ~ 50) mV	3.2×10^{-4}	
		(50 ~ 100) mV	2.0×10^{-4}	
		(100 ~ 200) mV	3.4×10^{-4}	
		(200 ~ 500) mV	1.9×10^{-4}	
		(0.5 ~ 1) V	6.3×10^{-4}	
		(1 ~ 2) V	3.3×10^{-4}	
		(2 ~ 5) V	2.0×10^{-4}	
		(5 ~ 10) V	1.4×10^{-4}	
		(10 ~ 20) V	3.3×10^{-4}	
		(20 ~ 50) V	2.2×10^{-4}	
		(50 ~ 100) V	1.5×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Leakage current testers	40416			Meter calibrators
AC Voltage		(0.04 ~ 1) kHz		/HCT-CS-208-40416
		1 mV	4.8 μV	
		(1 ~ 2) mV	2.5×10^{-3}	
		(2 ~ 5) mV	1.1×10^{-3}	
		(5 ~ 10) mV	5.8×10^{-4}	
		(10 ~ 20) mV	4.5×10^{-4}	
		(20 ~ 50) mV	2.8×10^{-4}	
		(50 ~ 100) mV	1.7×10^{-4}	
		(100 ~ 200) mV	3.3×10^{-4}	
		(200 ~ 500) mV	1.4×10^{-4}	
		(0.5 ~ 1) V	6.2×10^{-4}	
		(1 ~ 2) V	3.2×10^{-4}	
		(2 ~ 5) V	1.4×10^{-4}	
		(5 ~ 10) V	8.5×10^{-5}	
		(10 ~ 20) V	3.1×10^{-4}	
		(20 ~ 50) V	1.5×10^{-4}	
		(50 ~ 100) V	9.4×10^{-5}	
		(100 ~ 200) V	7.5×10^{-5}	
		(200 ~ 500) V	9.2×10^{-5}	
		(500 ~ 1 000) V	8.7×10^{-5}	
		(1 ~ 10) kHz		
		1 mV	4.8 μV	
		(1 ~ 2) mV	2.5×10^{-3}	
		(2 ~ 5) mV	1.1×10^{-3}	
		(5 ~ 10) mV	5.8×10^{-4}	
		(10 ~ 20) mV	4.5×10^{-4}	
		(20 ~ 50) mV	2.8×10^{-4}	
		(50 ~ 100) mV	1.7×10^{-4}	
		(100 ~ 200) mV	3.3×10^{-4}	
		(200 ~ 500) mV	1.4×10^{-4}	
		(0.5 ~ 1) V	6.2×10^{-4}	
		(1 ~ 2) V	3.2×10^{-4}	
		(2 ~ 5) V	1.4×10^{-4}	
		(5 ~ 10) V	8.5×10^{-5}	
		(10 ~ 20) V	3.1×10^{-4}	
		(20 ~ 50) V	1.5×10^{-4}	
		(50 ~ 100) V	9.4×10^{-5}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Leakage current testers	40416			Meter calibrators
DC Voltage		1 mV	0.80 μV	/HCT-CS-208-40416
		(1 ~ 2) mV	4.1×10^{-4}	
		(2 ~ 5) mV	1.7×10^{-4}	
		(5 ~ 10) mV	8.5×10^{-5}	
		(10 ~ 20) mV	3.1×10^{-4}	
		(20 ~ 50) mV	1.2×10^{-4}	
		(50 ~ 100) mV	6.3×10^{-5}	
		(100 ~ 200) mV	3.1×10^{-4}	
		(200 ~ 500) mV	1.2×10^{-4}	
		(0.5 ~ 1) V	6.2×10^{-4}	
		(1 ~ 2) V	3.1×10^{-4}	
		(2 ~ 5) V	1.2×10^{-4}	
		(5 ~ 10) V	6.2×10^{-5}	
		(10 ~ 20) V	3.1×10^{-4}	
		(20 ~ 50) V	1.2×10^{-4}	
		(50 ~ 100) V	6.2×10^{-5}	
		(100 ~ 200) V	3.2×10^{-5}	
		(200 ~ 500) V	1.5×10^{-5}	
		(500 ~ 1 000) V	1.1×10^{-5}	
Input voltage to output current ratio		(20 Hz ~ 1 MHz) 1 ~ 1 384	4.2×10^{-3}	
Input voltage to output voltage ratio		(20 Hz ~ 1 MHz) 0.5 ~ 689	4.8×10^{-3}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Leakage current testers	40416			Meter calibrators
Resistance		10 Ω	0.12 mΩ	/HCT-CS-208-40416
		(10 ~ 20) Ω	3.5×10^{-5}	
		(20 ~ 50) Ω	1.6×10^{-5}	
		(50 ~ 100) Ω	1.1×10^{-5}	
		(100 ~ 200) Ω	3.2×10^{-5}	
		(200 ~ 500) Ω	1.5×10^{-5}	
		(0.5 ~ 1) kΩ	1.2×10^{-5}	
		(1 ~ 2) kΩ	3.3×10^{-5}	
		(2 ~ 5) kΩ	1.6×10^{-5}	
		(5 ~ 10) kΩ	1.1×10^{-5}	
		(10 ~ 20) kΩ	3.3×10^{-5}	
		(20 ~ 50) kΩ	1.6×10^{-5}	
		(50 ~ 100) kΩ	1.1×10^{-5}	
		(100 ~ 200) kΩ	3.5×10^{-5}	
		(200 ~ 500) kΩ	1.6×10^{-5}	
		(0.5 ~ 1) MΩ	1.3×10^{-5}	
Capacitance		(1 kHz)		
		100 pF	1.2 fF	
		(100 ~ 200) pF	5.1×10^{-5}	
		(200 ~ 500) pF	2.1×10^{-5}	
		(0.5 ~ 1) nF	1.2×10^{-5}	
		(1 ~ 2) nF	1.1×10^{-4}	
		(2 ~ 5) nF	4.2×10^{-5}	
		(5 ~ 10) nF	2.1×10^{-5}	
		(10 ~ 20) nF	2.6×10^{-4}	
		(20 ~ 50) nF	1.1×10^{-4}	
		(50 ~ 100) nF	5.1×10^{-5}	
		(100 ~ 200) nF	5.1×10^{-4}	
		(200 ~ 500) nF	2.1×10^{-4}	
		(0.5 ~ 1) μF	1.1×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Electronic AC/DC loads	40417			DC power supplies,
DC loads				Current shunts,
CV Mode		100 mV	6.4 μV	Digital multimeters
		(0.1 ~ 1 000) V	1.2×10^{-4}	/HCT-CS-094-40417
CC Mode		100 mA	6.4 μA	
		(0.1 ~ 1) A	6.4×10^{-5}	
		(1 ~ 10) A	1.2×10^{-4}	
		(10 ~ 100) A	1.2×10^{-4}	
		(100 ~ 300) A	2.1×10^{-4}	
		(300 ~ 400) A	2.1×10^{-4}	
CR Mode		0.1 Ω		
		100 A	7.3 mA	
		(0.1 ~ 1) Ω		
		(100 ~ 10) A	6.8×10^{-5}	
		(1 ~ 100) Ω		
		(10 ~ 0.1) A	6.4×10^{-5}	
AC loads				
CV Mode		60 Hz		
		100 mV	16 μV	
		(0.1 ~ 10) V	1.4×10^{-4}	
		(10 ~ 100) V	1.5×10^{-4}	
		(100 ~ 1 000) V	1.5×10^{-4}	
CC Mode		60 Hz		
		100 mA	92 μA	
		(0.1 ~ 1) A	1.2×10^{-3}	
		(1 ~ 10) A	2.3×10^{-3}	
		(10 ~ 20) A	6.4×10^{-4}	
		(20 ~ 40) A	6.7×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Electronic AC/DC loads	40417			DC power supplies,
Charging/Discharging Tester				Current shunts,
Charging Current		100 μA	5.8 nA	Digital multimeters
		(0.000 1 ~ 100) A	1.2×10^{-4}	/HCT-CS-094-40417
		(100 ~ 400) A	2.1×10^{-4}	
		(400 ~ 500) A	2.0×10^{-4}	
		(500 ~ 1 000) A	2.9×10^{-4}	
Discharging Currnet		-100 μA	5.8 nA	
		(-0.000 1 ~ -100) A	1.2×10^{-4}	
		(-100 ~ -400) A	2.1×10^{-4}	
		(-400 ~ -500) A	2.0×10^{-4}	
		(-500 ~ -1 000) A	2.9×10^{-4}	
Charging Voltage		100 mV	6.2 μV	
		(0.1 ~ 1 000) V	1.2×10^{-4}	
		(1 000 ~ 1 500) V	1.1×10^{-3}	
Sense Voltage(Meter)		100 mV	6.4 μV	
		(0.1 ~ 1 000) V	1.2×10^{-4}	
Analogue/digital multumeters	40419			Meter callibraters,
DC Voltage		(±)		Current amplifiers,
		0 mV	0.19 μV	Standard resistance
		(0 ~ 100) mV	3.5×10^{-6}	/HCT-CS-095-40419
		(0.1 ~ 1) V	1.5×10^{-6}	
		(1 ~ 10) V	2.6×10^{-6}	
		(10 ~ 100) V	1.3×10^{-6}	
		(100 ~ 1 000) V	1.4×10^{-6}	
DC Current		(±)		
		100 nA	2.7 pA	
		0 μA	0.35 nA	
		(0 ~ 1) μA	3.7×10^{-4}	
		(1 ~ 10) μA	3.7×10^{-5}	
		(10 ~ 100) μA	9.1×10^{-6}	
		(0.1 ~ 1) mA	1.7×10^{-5}	
		(1 ~ 10) mA	9.2×10^{-5}	
		(10 ~ 100) mA	1.8×10^{-5}	
		(0.1 ~ 1) A	3.3×10^{-5}	
		(1 ~ 10) A	7.7×10^{-5}	
		(10 ~ 20) A	7.6×10^{-5}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Analogue/digital multumeters	40419			Meter callibraters,
Resistance		0 Ω	2.1 μΩ	Current amplifiers,
		(0 ~ 100) Ω	3.5×10^{-6}	Standard resistance
		(0.1 ~ 1) kΩ	9.3×10^{-7}	/HCT-CS-095-40419
		(1 ~ 10) kΩ	8.4×10^{-6}	
		(10 ~ 100) kΩ	1.1×10^{-6}	
		(0.1 ~ 1) MΩ	3.1×10^{-6}	
		(1 ~ 10) MΩ	6.9×10^{-6}	
		(10 ~ 100) MΩ	1.8×10^{-5}	
		(0.1 ~ 1) GΩ	1.6×10^{-5}	
		(1 ~ 10) GΩ	1.9×10^{-4}	
AC Voltage		1 mV		
		10 Hz	0.72 μV	
		(10 ~ 40) Hz	0.70 μV	
		(40 ~ 500) Hz	0.69 μV	
		(0.5 ~ 1) kHz	0.69 μV	
		(1 ~ 10) kHz	0.68 μV	
		(10 ~ 20) kHz	0.68 μV	
		(20 ~ 50) kHz	0.86 μV	
		(50 ~ 100) kHz	1.7 μV	
		(100 ~ 200) kHz	1.4 μV	
		(200 ~ 500) kHz	1.9 μV	
		(0.5 ~ 1) MHz	6.0 μV	
		(1 ~ 100) mV		
		10 Hz	8.9×10^{-5}	
		(10 ~ 40) Hz	4.3×10^{-5}	
		(40 ~ 500) Hz	4.1×10^{-5}	
		(0.5 ~ 1) kHz	4.1×10^{-5}	
		(1 ~ 10) kHz	4.5×10^{-5}	
		(10 ~ 20) kHz	4.5×10^{-5}	
		(20 ~ 50) kHz	6.4×10^{-5}	
		(50 ~ 100) kHz	1.0×10^{-4}	
		(100 ~ 200) kHz	2.0×10^{-4}	
		(200 ~ 500) kHz	3.0×10^{-4}	
		(0.5 ~ 1) MHz	6.4×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Analogue/digital multumeters	40419			Meter callibraters,
AC Voltage		(0.1 ~ 1) V		Current amplifiers,
		10 Hz	7.7×10^{-5}	Standard resistance
		(10 ~ 40) Hz	3.8×10^{-5}	/HCT-CS-095-40419
		(40 ~ 500) Hz	2.1×10^{-5}	
		(0.5 ~ 1) kHz	2.1×10^{-5}	
		(1 ~ 10) kHz	2.2×10^{-5}	
		(10 ~ 20) kHz	2.2×10^{-5}	
		(20 ~ 50) kHz	3.1×10^{-5}	
		(50 ~ 100) kHz	4.4×10^{-5}	
		(100 ~ 200) kHz	1.3×10^{-4}	
		(200 ~ 500) kHz	2.8×10^{-4}	
		(0.5 ~ 1) MHz	1.3×10^{-3}	
		(1 ~ 10) V		
		10 Hz	6.9×10^{-5}	
		(10 ~ 40) Hz	3.5×10^{-5}	
		(40 ~ 500) Hz	2.1×10^{-5}	
		(0.5 ~ 1) kHz	9.4×10^{-5}	
		(1 ~ 10) kHz	2.1×10^{-5}	
		(10 ~ 20) kHz	2.1×10^{-5}	
		(20 ~ 50) kHz	3.1×10^{-5}	
		(50 ~ 100) kHz	4.3×10^{-5}	
		(100 ~ 200) kHz	1.5×10^{-4}	
		(200 ~ 500) kHz	2.9×10^{-4}	
		(0.5 ~ 1) MHz	1.0×10^{-4}	
		(10 ~ 100) V		
		10 Hz	8.7×10^{-5}	
		(10 ~ 40) Hz	4.1×10^{-5}	
		(40 ~ 500) Hz	2.5×10^{-5}	
		(0.5 ~ 1) kHz	2.5×10^{-5}	
		(1 ~ 10) kHz	2.6×10^{-5}	
		(10 ~ 20) kHz	2.6×10^{-5}	
		(20 ~ 50) kHz	3.2×10^{-5}	
		(50 ~ 100) kHz	6.2×10^{-5}	
		30 V		
		300 kHz	6 mV	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Analogue/digital multumeters	40419			Meter callibraters,
AC Voltage		50 V		Current amplifiers,
		150 kHz	16 mV	Standard resistance
				/HCT-CS-095-40419
		(100 ~ 1 000) V		
		40 Hz	2.6×10^{-5}	
		(40 ~ 500) Hz	1.9×10^{-5}	
		(0.5 ~ 1) kHz	1.9×10^{-5}	
		(1 ~ 10) kHz	5.1×10^{-5}	
		(10 ~ 20) kHz	5.1×10^{-4}	
		(20 ~ 30) kHz	1.6×10^{-4}	
AC Current		10 μA		
		10 Hz	10 nA	
		(10 ~ 40) Hz	7.1 nA	
		(40 ~ 500) Hz	1.2 nA	
		(0.5 ~ 1) kHz	3.7 nA	
		(1 ~ 5) kHz	6.6 nA	
		(5 ~ 10) kHz	7.5 nA	
		(10 ~ 100) μA		
		10 Hz	1.0×10^{-4}	
		(10 ~ 40) Hz	7.1×10^{-5}	
		(40 ~ 500) Hz	7.1×10^{-5}	
		(0.5 ~ 1) kHz	7.1×10^{-5}	
		(1 ~ 5) kHz	1.6×10^{-4}	
		(5 ~ 10) kHz	4.0×10^{-4}	
		(0.1 ~ 1) mA		
		10 Hz	1.1×10^{-4}	
		(10 ~ 40) Hz	6.0×10^{-5}	
		(40 ~ 500) Hz	6.1×10^{-5}	
		(0.5 ~ 1) kHz	6.1×10^{-5}	
		(1 ~ 5) kHz	1.2×10^{-4}	
		(5 ~ 10) kHz	4.0×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Analogue/digital multumeters	40419			Meter callibraters,
AC Current		(1 ~ 10) mA		Current amplifiers,
		10 Hz	1.4×10^{-4}	Standard resistance
		(10 ~ 40) Hz	6.5×10^{-5}	/HCT-CS-095-40419
		(40 ~ 500) Hz	6.2×10^{-5}	
		(0.5 ~ 1) kHz	6.2×10^{-5}	
		(1 ~ 5) kHz	1.7×10^{-4}	
		(5 ~ 10) kHz	6.0×10^{-4}	
		(10 ~ 100) mA		
		10 Hz	1.4×10^{-4}	
		(10 ~ 40) Hz	7.6×10^{-5}	
		(40 ~ 500) Hz	6.5×10^{-5}	
		(0.5 ~ 1) kHz	6.5×10^{-5}	
		(1 ~ 5) kHz	1.7×10^{-4}	
		(5 ~ 10) kHz	6.1×10^{-4}	
		(0.1 ~ 1) A		
		10 Hz	1.3×10^{-4}	
		(10 ~ 40) Hz	1.3×10^{-4}	
		(40 ~ 500) Hz	1.0×10^{-4}	
		(0.5 ~ 1) kHz	1.0×10^{-4}	
		(1 ~ 5) kHz	2.7×10^{-4}	
		(5 ~ 10) kHz	1.0×10^{-3}	
		(1 ~ 10) A		
		40 Hz	2.5×10^{-4}	
		(40 ~ 500) Hz	1.1×10^{-4}	
		(0.5 ~ 1) kHz	1.1×10^{-4}	
		(1 ~ 5) kHz	1.5×10^{-4}	
		(5 ~ 10) kHz	1.5×10^{-3}	
		(10 ~ 20) A		
		40 Hz	1.7×10^{-4}	
		(40 ~ 500) Hz	1.6×10^{-4}	
		(0.5 ~ 1) kHz	2.3×10^{-4}	
		(1 ~ 5) kHz	5.0×10^{-4}	
		(5 ~ 10) kHz	1.5×10^{-3}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Analogue/digital multumeters	40419			Meter callibraters,
Frequency		10 Hz	0.24 mHz	Current amplifiers,
		(10 ~ 100) Hz	2.5×10^{-5}	Standard resistance
		(0.1 ~ 1) kHz	2.3×10^{-5}	/HCT-CS-095-40419
		(1 ~ 10) kHz	1.0×10^{-4}	
		(10 ~ 100) kHz	2.5×10^{-5}	
		(0.1 ~ 1) MHz	2.3×10^{-5}	
		(1 ~ 10) MHz	2.3×10^{-5}	
Noise meters	40420			Multimeter calibrators
AC level(rms & Q-peak)		100 mV		/HCT-CS-097-40420
		10 Hz	0.16 mV	
		10 Hz ~ 50 kHz	1.6×10^{-3}	
		(50 ~ 100) kHz	1.8×10^{-3}	
		(100 ~ 300) mV		
		10 Hz	0.63 mV	
		10 Hz ~ 50 kHz	2.1×10^{-3}	
		(50 ~ 100) kHz	2.2×10^{-3}	
		(0.3 ~ 1) V		
		10 Hz	1.6 mV	
		10 Hz ~ 50 kHz	1.7×10^{-3}	
		(50 ~ 100) kHz	1.8×10^{-3}	
		(1 ~ 3) V		
		10 Hz	6.3 mV	
		10 Hz ~ 50 kHz	2.1×10^{-3}	
		(50 ~ 100) kHz	2.1×10^{-3}	
		(3 ~ 10) V		
		10 Hz	16 mV	
		10 Hz ~ 50 kHz	1.5×10^{-3}	
		(50 ~ 100) kHz	1.6×10^{-3}	
		(10 ~ 30) V		
		10 Hz	63 mV	
		10 Hz ~ 50 kHz	2.1×10^{-3}	
		(50 ~ 100) kHz	2.6×10^{-3}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Noise meters	40420			Multimeter calibrators
AC level(rms & Q-peak)		(30 ~ 100) V		/HCT-CS-097-40420
		10 Hz	0.15 V	
		10 Hz ~ 50 kHz	1.5×10^{-3}	
		(50 ~ 100) kHz	2.0×10^{-3}	
		(100 ~ 300) V		
		10 Hz	0.63 V	
		10 Hz ~ 10 kHz	2.1×10^{-3}	
Weighting filter		1 kHz		
Filter(DIN/AUDIO, JIS A CCIR, CCIR/ARM)		1V	1.5 mV	
Frequency Reponse		20 Hz ~ 100 kHz	0.016 dB	
Oscilloscopes	40421			Oscilloscope calibrators,
DC Voltage		(±)		Multimeter calibrators,
		0 V	4.6 μV	RF signal calibrators,
		(0 ~ 1) mV	3.0×10^{-2}	Powermeters
		(1 ~ 2) mV	1.5×10^{-2}	/HCT-CS-080-40421
		(2 ~ 3) mV	1.0×10^{-2}	
		(3 ~ 4) mV	7.6×10^{-3}	
		(4 ~ 5) mV	6.1×10^{-3}	
		(5 ~ 6) mV	5.1×10^{-3}	
		(6 ~ 7) mV	4.9×10^{-3}	
		(7 ~ 8) mV	4.3×10^{-3}	
		(8 ~ 9) mV	3.8×10^{-3}	
		(9 ~ 10) mV	3.4×10^{-3}	
		(10 ~ 15) mV	2.3×10^{-3}	
		(15 ~ 25) mV	1.8×10^{-3}	
		(20 ~ 25) mV	1.8×10^{-3}	
		(25 ~ 30) mV	1.5×10^{-3}	
		(30 ~ 35) mV	1.3×10^{-3}	
		(35 ~ 40) mV	1.1×10^{-3}	
		(40 ~ 45) mV	9.8×10^{-4}	
		(45 ~ 50) mV	8.8×10^{-4}	
		(50 ~ 60) mV	7.8×10^{-4}	
		(60 ~ 70) mV	1.2×10^{-3}	
		(70 ~ 80) mV	1.0×10^{-3}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscopes	40421			Oscilloscope calibrators,
DC Voltage		(80 ~ 90) mV	9.3×10^{-4}	Multimeter calibrators,
		(90 ~ 100) mV	8.4×10^{-4}	RF signal calibrators,
		(100 ~ 150) mV	5.6×10^{-4}	Powermeters
		(150 ~ 200) mV	4.8×10^{-4}	/HCT-CS-080-40421
		(200 ~ 250) mV	6.9×10^{-4}	
		(250 ~ 300) mV	5.8×10^{-4}	
		(300 ~ 350) mV	5.0×10^{-4}	
		(350 ~ 400) mV	4.3×10^{-4}	
		(400 ~ 450) mV	3.9×10^{-4}	
		(450 ~ 500) mV	3.5×10^{-4}	
		(0.5 ~ 0.6) V	3.7×10^{-4}	
		(0.6 ~ 0.7) V	8.3×10^{-4}	
		(0.7 ~ 0.8) V	7.3×10^{-4}	
		(0.8 ~ 0.9) V	6.5×10^{-4}	
		(0.9 ~ 1) V	5.8×10^{-4}	
		(1 ~ 2.5) V	5.9×10^{-4}	
		(2.5 ~ 5) V	2.9×10^{-4}	
		(5 ~ 10) V	6.7×10^{-4}	
		(10 ~ 25) V	5.8×10^{-4}	
		(25 ~ 30) V	4.8×10^{-4}	
		(30 ~ 35) V	4.1×10^{-4}	
		(35 ~ 40) V	3.6×10^{-4}	
		(40 ~ 45) V	3.2×10^{-4}	
		(45 ~ 50) V	2.9×10^{-4}	
		(50 ~ 60) V	3.0×10^{-4}	
		(60 ~ 70) V	4.2×10^{-4}	
		(70 ~ 80) V	3.7×10^{-4}	
		(80 ~ 90) V	3.3×10^{-4}	
		(90 ~ 100) V	3.0×10^{-4}	
		(100 ~ 200) V	2.9×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscopes	40421			Oscilloscope calibrators,
Square wave Voltage		1 kHz		Multimeter calibrators,
		1 mV	19 μV	RF signal calibrators,
		(1 ~ 2) mV	9.3×10^{-3}	Powermeters
		(2 ~ 3) mV	6.2×10^{-3}	/HCT-CS-080-40421
		(3 ~ 4) mV	4.6×10^{-3}	
		(4 ~ 5) mV	3.7×10^{-3}	
		(5 ~ 6) mV	3.1×10^{-3}	
		(6 ~ 7) mV	1.2×10^{-2}	
		(7 ~ 8) mV	1.0×10^{-2}	
		(8 ~ 9) mV	9.0×10^{-3}	
		(9 ~ 10) mV	8.1×10^{-3}	
		(10 ~ 15) mV	5.4×10^{-3}	
		(15 ~ 20) mV	4.1×10^{-3}	
		(20 ~ 25) mV	3.2×10^{-3}	
		(25 ~ 30) mV	2.7×10^{-3}	
		(30 ~ 35) mV	2.3×10^{-3}	
		(35 ~ 40) mV	2.0×10^{-3}	
		(40 ~ 45) mV	1.8×10^{-3}	
		(45 ~ 50) mV	1.6×10^{-3}	
		(50 ~ 100) mV	7.1×10^{-3}	
		(100 ~ 250) mV	2.8×10^{-3}	
		(250 ~ 500) mV	1.4×10^{-3}	
		(0.5 ~ 1) V	7.0×10^{-3}	
		(1 ~ 2.5) V	2.8×10^{-3}	
		(2.5 ~ 5) V	1.4×10^{-3}	
		(5 ~ 10) V	7.0×10^{-3}	
		(10 ~ 25) V	2.8×10^{-3}	
		(25 ~ 50) V	1.4×10^{-3}	
		(50 ~ 60) V	1.2×10^{-3}	
		(60 ~ 70) V	1.7×10^{-3}	
		(70 ~ 80) V	1.5×10^{-3}	
		(80 ~ 90) V	1.3×10^{-3}	
		(90 ~ 100) V	1.2×10^{-3}	
		(100 ~ 150) V	1.6×10^{-3}	
		(150 ~ 200) V	1.2×10^{-3}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscopes	40421			Oscilloscope calibrators,
Bandwidth level		50 kHz ~ 1 MHz		Multimeter calibrators,
		60 mV	37 μV	RF signal calibrators,
		(0.06 ~ 3) V	2.2×10^{-2}	Powermeters
				/HCT-CS-080-40421
		(1 ~ 550) MHz		
		60 mV	2.7 mV	
		(0.06 ~ 3) V	2.7×10^{-2}	
		550 MHz ~ 40 GHz		
		60 mV	1.4 mV	
		(60 ~ 600) mV	1.9×10^{-2}	
		(0.6 ~ 3) V	2.5×10^{-2}	
Time mark		1 ns	8.4 fs	
		(1 ~ 2) ns	4.2×10^{-6}	
		(2 ~ 5) ns	1.7×10^{-6}	
		(5 ~ 10) ns	5.8×10^{-6}	
		(10 ~ 20) ns	2.9×10^{-6}	
		(20 ~ 50) ns	1.2×10^{-6}	
		(50 ~ 100) ns	5.8×10^{-6}	
		(100 ~ 200) ns	2.9×10^{-6}	
		(200 ~ 500) ns	1.2×10^{-6}	
		(0.5 ~ 1) μs	5.8×10^{-6}	
		(1 ~ 2) μs	2.9×10^{-6}	
		(2 ~ 5) μs	1.2×10^{-6}	
		(5 ~ 10) μs	5.8×10^{-6}	
		(10 ~ 20) μs	2.9×10^{-6}	
		(20 ~ 50) μs	1.2×10^{-6}	
		(50 ~ 100) μs	5.8×10^{-6}	
		(100 ~ 200) μs	2.9×10^{-6}	
		(200 ~ 500) μs	1.2×10^{-6}	
		(0.5 ~ 1) ms	5.8×10^{-6}	
		(1 ~ 2) ms	2.9×10^{-6}	
		(2 ~ 5) ms	1.2×10^{-6}	
		(5 ~ 10) ms	5.8×10^{-6}	
		(10 ~ 20) ms	2.9×10^{-6}	
		(20 ~ 50) ms	1.2×10^{-6}	
		(50 ~ 100) ms	5.8×10^{-6}	
		(100 ~ 200) ms	2.9×10^{-6}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscopes	40421			Oscilloscope calibrators,
Time mark		(200 ~ 500) ms	1.2×10^{-6}	Multimeter calibrators,
		(0.5 ~ 1) s	5.8×10^{-6}	RF signal calibrators,
		(1 ~ 2) s	2.9×10^{-6}	Powermeters
		(2 ~ 5) s	1.2×10^{-6}	/HCT-CS-080-40421
		(5 ~ 10) s	5.8×10^{-6}	
		(10 ~ 20) s	2.9×10^{-6}	
Frequency		100 mHz	0.84 μHz	
		(100 ~ 200) mHz	4.2×10^{-6}	
		(200 ~ 500) mHz	1.7×10^{-6}	
		(0.5 ~ 1) Hz	5.8×10^{-6}	
		(1 ~ 2) Hz	2.9×10^{-6}	
		(2 ~ 5) Hz	1.2×10^{-6}	
		(5 ~ 10) Hz	5.8×10^{-6}	
		(10 ~ 20) Hz	2.9×10^{-6}	
		(20 ~ 50) Hz	1.2×10^{-6}	
		(50 ~ 100) Hz	5.8×10^{-6}	
		(100 ~ 200) Hz	2.9×10^{-6}	
		(200 ~ 500) Hz	1.2×10^{-6}	
		(0.5 ~ 1) kHz	5.8×10^{-6}	
		(1 ~ 2) kHz	2.9×10^{-6}	
		(2 ~ 5) kHz	1.2×10^{-6}	
		(5 ~ 10) kHz	5.8×10^{-6}	
		(10 ~ 20) kHz	2.9×10^{-6}	
		(20 ~ 50) kHz	1.2×10^{-6}	
		(50 ~ 100) kHz	5.8×10^{-6}	
		(100 ~ 200) kHz	2.9×10^{-6}	
		(200 ~ 500) kHz	1.2×10^{-6}	
		(0.5 ~ 1) MHz	5.8×10^{-6}	
		(1 ~ 2) MHz	2.9×10^{-6}	
		(2 ~ 5) MHz	1.2×10^{-6}	
		(5 ~ 10) MHz	5.8×10^{-6}	
		(10 ~ 20) MHz	2.9×10^{-6}	
		(20 ~ 50) MHz	1.2×10^{-6}	
		(50 ~ 100) MHz	5.8×10^{-6}	
		(100 ~ 200) MHz	2.9×10^{-6}	
		(200 ~ 500) MHz	1.2×10^{-6}	
		(0.5 ~ 1) GHz	5.8×10^{-6}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscopes	40421			Oscilloscope calibrators,
AC Voltage		50 Hz ~ 10 kHz		Multimeter calibrators,
		10 mV	5.8 μV	RF signal calibrators,
		(10 ~ 15) mV	4.1×10^{-4}	Powermeters
		(15 ~ 20) mV	3.3×10^{-4}	/HCT-CS-080-40421
		(20 ~ 25) mV	4.4×10^{-4}	
		(25 ~ 30) mV	3.7×10^{-4}	
		(30 ~ 35) mV	3.4×10^{-4}	
		(35 ~ 40) mV	3.0×10^{-4}	
		(40 ~ 45) mV	2.7×10^{-4}	
		(45 ~ 50) mV	2.4×10^{-4}	
		(50 ~ 60) mV	2.4×10^{-4}	
		(60 ~ 70) mV	2.1×10^{-4}	
		(70 ~ 80) mV	2.0×10^{-4}	
		(80 ~ 90) mV	1.8×10^{-4}	
		(90 ~ 100) mV	1.6×10^{-4}	
		(100 ~ 150) mV	1.3×10^{-4}	
		(150 ~ 200) mV	1.1×10^{-4}	
		(200 ~ 250) mV	1.9×10^{-4}	
		(250 ~ 300) mV	1.8×10^{-4}	
		(300 ~ 350) mV	1.6×10^{-4}	
		(350 ~ 400) mV	1.6×10^{-4}	
		(400 ~ 450) mV	1.5×10^{-4}	
		(450 ~ 500) mV	1.4×10^{-4}	
		(500 ~ 600) mV	1.7×10^{-4}	
		(600 ~ 700) mV	1.6×10^{-4}	
		(700 ~ 800) mV	1.5×10^{-4}	
		(800 ~ 900) mV	1.4×10^{-4}	
		(0.9 ~ 1) V	1.4×10^{-4}	
		(1 ~ 1.5) V	1.2×10^{-4}	
		(1.5 ~ 2) V	1.2×10^{-4}	
		(2 ~ 2.5) V	1.1×10^{-4}	
		(2.5 ~ 3) V	9.7×10^{-5}	
		(3 ~ 3.5) V	8.9×10^{-5}	
		(3.5 ~ 4) V	8.2×10^{-5}	
		(4 ~ 4.5) V	7.7×10^{-5}	
		(4.5 ~ 5) V	7.3×10^{-5}	
		(5 ~ 6) V	1.2×10^{-4}	
		(6 ~ 7) V	1.0×10^{-4}	
		(7 ~ 8) V	9.5×10^{-5}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscopes	40421			Oscilloscope calibrators,
AC Voltage		(8 ~ 9) V	9.3×10^{-5}	Multimeter calibrators,
		(9 ~ 10) V	8.2×10^{-5}	RF signal calibrators,
		(10 ~ 15) V	6.9×10^{-5}	Powermeters
		(15 ~ 20) V	6.2×10^{-5}	/HCT-CS-080-40421
		(20 ~ 25) V	1.3×10^{-4}	
		(25 ~ 30) V	1.2×10^{-4}	
		(30 ~ 35) V	1.1×10^{-4}	
		(35 ~ 40) V	9.9×10^{-5}	
		(40 ~ 45) V	9.3×10^{-5}	
		(45 ~ 50) V	8.9×10^{-5}	
		(50 ~ 60) V	1.3×10^{-4}	
		(60 ~ 70) V	1.2×10^{-4}	
		(70 ~ 80) V	1.1×10^{-4}	
		(80 ~ 90) V	1.0×10^{-4}	
		(90 ~ 100) V	9.2×10^{-5}	
Input Resistance		50 Ω	5.8 mΩ	
		75 Ω	5.9 mΩ	
		1 MΩ	0.34 kΩ	
10 MHz Reference out		10 MHz	5.8×10^{-8}	
Output Voltage		DC		
		100 mV	61 μV	
		(0.1 ~ 1) V	6.1×10^{-5}	
		(1 ~ 2) V	3.6×10^{-5}	
		(2 ~ 3) V	2.4×10^{-5}	
		(3 ~ 4) V	1.8×10^{-5}	
		(4 ~ 5) V	1.4×10^{-5}	
		(5 ~ 6) V	1.2×10^{-5}	
		(6 ~ 7) V	1.0×10^{-5}	
		(7 ~ 8) V	8.9×10^{-6}	
		(8 ~ 9) V	7.9×10^{-6}	
		(9 ~ 10) V	7.1×10^{-6}	
		(10 ~ 11) V	4.8×10^{-5}	
		(11 ~ 12) V	4.4×10^{-5}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscopes	40421			Oscilloscope calibrators,
Output Voltage		1 kHz		Multimeter calibrators,
		100 mV	63 μV	RF signal calibrators,
		(0.1 ~ 1) V	1.1×10^{-4}	Powermeters
		(1 ~ 2) V	4.6×10^{-4}	/HCT-CS-080-40421
		(2 ~ 3) V	3.1×10^{-4}	
		(3 ~ 4) V	2.3×10^{-4}	
		(4 ~ 5) V	1.9×10^{-4}	
		(5 ~ 6) V	1.5×10^{-4}	
		(6 ~ 7) V	1.3×10^{-4}	
		(7 ~ 8) V	1.2×10^{-4}	
		(8 ~ 9) V	1.0×10^{-4}	
		(9 ~ 10) V	9.3×10^{-5}	
		(10 ~ 11) V	8.6×10^{-4}	
		(11 ~ 12) V	7.9×10^{-4}	
LF phase meters	40422			RESOLVER/SYNCHRO SIMULATOR
Synchro/Resolver		0 °	0.002 °	/HCT-CS-217-40422
		(0 ~ 360) °	0.002 °	
Random wave generators	40423			Frequency counters
Frequency		1 Hz ~ 350 MHz	5.8×10^{-9}	Digital multimeters,
				Spectrum analyzers,
Output level		10 mV		Oscillpscopes
		20 Hz	7.0 μV	/HCT-CS-098-40423
		20 Hz ~ 20 kHz	1.3×10^{-3}	
		(20 ~ 100) kHz	3.2×10^{-3}	
		100 kHz ~ 1 MHz	1.5×10^{-2}	
		(10 ~ 100) mV		
		20 Hz	20 μV	
		20 Hz ~ 20 kHz	8.1×10^{-4}	
		(20 ~ 100) kHz	2.0×10^{-3}	
		100 kHz ~ 1 MHz	2.6×10^{-2}	
		(0.1 ~ 1) V		
		20 Hz	0.16 mV	
		20 Hz ~ 20 kHz	2.9×10^{-4}	
		(20 ~ 100) kHz	8.2×10^{-4}	
		100 kHz ~ 1 MHz	2.4×10^{-2}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Random wave generators	40423			Frequency counters
Output level		(1 ~ 10) V		Digital multimeters,
		20 Hz	1.6 mV	Spectrum analyzers,
		20 Hz ~ 20 kHz	5.5×10^{-4}	Oscillpscopes
		(20 ~ 100) kHz	1.8×10^{-3}	/HCT-CS-098-40423
		100 kHz ~ 1 MHz	3.0×10^{-2}	
		(10 ~ 100) V		
		20 Hz	16 mV	
		20 Hz ~ 20 kHz	5.5×10^{-4}	
		(20 ~ 100) kHz	1.8×10^{-3}	
		(-60 ~ 20) dBm		
		100 kHz ~ 100 MHz	0.16 dB	
DC Offset		-20 V ~ 0 mV	5.8×10^{-4}	
		0 mV	5.8 μV	
		0 mV ~ 20 V	5.8×10^{-4}	
Output flatness		(-10 ~ 10) dB		
		20 Hz ~ 100 kHz	0.016 dB	
		100 kHz ~ 350 MHz	0.018 dB	
Distortion factor		(-80 ~ 0) dB		
		20 Hz ~ 80 MHz	1.4 dB	
Output amplitude		20 Hz ~ 1 kHz		
		(0 ~ -60) dB	0.007 dB	
		(1 ~ 20) kHz		
		(0 ~ -60) dB	0.009 dB	
		(20 ~ 100) kHz		
		(0 ~ -60) dB	0.015 dB	
Rise/Fall Time		1 ns	5.9 ps	
		(1 ~ 10) ns	1.3×10^{-3}	
		(10 ~ 100) ns	1.2×10^{-3}	
		100 ns ~ 1 s	1.2×10^{-3}	
AM modulation		(5 ~ 99) %	1.2×10^{-2}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Random wave generators	40423			Frequency counters
FM modulation		(9 ~ 400) kHz	1.2×10^{-2}	Digital multimeters,
				Spectrum analyzers,
				Oscillpscopes
Duty Cycle		(1 ~ 99) %	5.8×10^{-3}	/HCT-CS-098-40423
Volt/Current recoders	40424			Multimeter calibrators
DC Voltage		0 mV	0.5 μV	/HCT-CS-100-40424
		(0 ~ 1) mV	5.2×10^{-4}	
		(1 ~ 2) mV	2.7×10^{-4}	
		(2 ~ 5) mV	1.7×10^{-4}	
		(5 ~ 10) mV	8.5×10^{-5}	
		(10 ~ 20) mV	4.6×10^{-5}	
		(20 ~ 50) mV	1.3×10^{-4}	
		(50 ~ 100) mV	6.3×10^{-5}	
		(100 ~ 200) mV	3.3×10^{-5}	
		(200 ~ 500) mV	1.3×10^{-4}	
		500 mV ~ 1 V	6.2×10^{-5}	
		(1 ~ 2) V	3.2×10^{-5}	
		(2 ~ 5) V	1.3×10^{-4}	
		(5 ~ 10) V	6.2×10^{-5}	
		(10 ~ 20) V	3.1×10^{-5}	
		(20 ~ 50) V	1.3×10^{-4}	
		(50 ~ 100) V	6.2×10^{-5}	
		(100 ~ 200) V	3.2×10^{-5}	
		(200 ~ 500) V	1.3×10^{-4}	
		(500 ~ 1 000) V	6.2×10^{-5}	
		0 mV	0.5 μV	
		(0 ~ -1) mV	5.2×10^{-4}	
		(-1 ~ -2) mV	2.7×10^{-4}	
		(-2 ~ -5) mV	1.7×10^{-4}	
		(-5 ~ -10) mV	8.5×10^{-5}	
		(-10 ~ -20) mV	4.6×10^{-5}	
		(-20 ~ -50) mV	1.3×10^{-4}	
		(-50 ~ -100) mV	6.3×10^{-5}	
		(-100 ~ -200) mV	3.3×10^{-5}	
		(-200 ~ -500) mV	1.3×10^{-4}	
		-500 mV ~ -1 V	6.2×10^{-5}	
		(-1 ~ -2) V	3.2×10^{-5}	
		(-2 ~ -5) V	1.3×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Volt/Current recoders	40424			Multimeter calibrators
DC Voltage		(-5 ~ -10) V	6.2×10^{-5}	/HCT-CS-100-40424
		(-10 ~ -20) V	3.1×10^{-5}	
		(-20 ~ -50) V	1.3×10^{-4}	
		(-50 ~ -100) V	6.2×10^{-5}	
		(-100 ~ -200) V	3.2×10^{-5}	
		(-200 ~ -500) V	1.3×10^{-4}	
		(-500 ~ -1 000) V	6.2×10^{-5}	
DC Current		(+)		
		0 mA	0.07 μA	
		(0 ~ 1) mA	8.0×10^{-5}	
		(1 ~ 10) mA	7.8×10^{-5}	
		(10 ~ 100) mA	8.7×10^{-5}	
		100 mA ~ 1 A	1.3×10^{-4}	
		(-)		
		0 mA	0.07 μA	
		(0 ~ -1) mA	8.0×10^{-5}	
		(-1 ~ -10) mA	7.8×10^{-5}	
		(-10 ~ -100) mA	8.7×10^{-5}	
		-100 mA ~ -1 A	1.3×10^{-4}	
Relpay test sets	40425			Multimeters,
AC Voltage		(20 ~ 55) Hz		Current shunts
		100 mV	20 μV	/HCT-CS-218-40425
		100 mV ~ 1 V	0.16 mV	
		(1 ~ 1 000) V	1.6×10^{-4}	
		(55 ~ 300) Hz		
		100 mV	16 μV	
		100 mV ~ 1 V	0.14 mV	
		(1 ~ 1 000) V	1.4×10^{-4}	
		300 Hz ~ 1 kHz		
		100 mV	16 μV	
		100 mV ~ 1 V	0.12 mV	
		(1 ~ 1 000) V	1.4×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Relpay test sets	40425			Multimeters,
AC Current		20 Hz ~ 1 kHz		Current shunts
		10 mA	9.4 μA	/HCT-CS-218-40425
		(10 ~ 100) mA	9.4×10^{-4}	
		100 mA ~ 1 A	1.2×10^{-3}	
		(1 ~ 10) A	1.7×10^{-4}	
		(10 ~ 50) A	3.3×10^{-4}	
		(50 ~ 100) A	4.2×10^{-4}	
DC Voltage		100 mV	21 μV	
		(0.1 ~ 1 000) V	6.1×10^{-5}	
DC Current		10 mA	0.63 μA	
		(10 ~ 100) mA	7.8×10^{-5}	
		100 mA ~ 1 A	2.3×10^{-4}	
		(1 ~ 10) A	5.0×10^{-4}	
		(10 ~ 100) A	7.0×10^{-4}	
Frequency		50 Hz	6 mHz	
		(50 ~ 60) Hz	1.2×10^{-4}	
		60 Hz ~ 1 kHz	2.9×10^{-4}	
Time interval		1 ms	3 μs	
		(0.001 ~ 60) s	1.2×10^{-3}	
LF signal generators	40426			Frequency counters,
Frequency		1 Hz ~ 2 MHz	5.8×10^{-9}	Digital multimeters,
				Spectrum analyzers,
Output level		10 mV		Oscilloscopes
		20 Hz	7.0 μV	/HCT-CS-101-40426
		20 Hz ~ 20 kHz	1.3×10^{-3}	
		(20 ~ 100) kHz	3.2×10^{-3}	
		100 kHz ~ 1 MHz	1.5×10^{-2}	
		(10 ~ 100) mV		
		20 Hz	20 μV	
		20 Hz ~ 20 kHz	8.1×10^{-4}	
		(20 ~ 100) kHz	2.0×10^{-3}	
		100 kHz ~ 1 MHz	2.6×10^{-2}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF signal generators	40426			Frequency counters,
Output level		(0.1 ~ 1) V		Digital multimeters,
		20 Hz	0.16 mV	Spectrum analyzers,
		20 Hz ~ 20 kHz	2.9×10^{-4}	Oscilloscopes
		(20 ~ 100) kHz	8.2×10^{-4}	/HCT-CS-101-40426
		100 kHz ~ 1 MHz	2.4×10^{-2}	
		(1 ~ 10) V		
		20 Hz	1.6 mV	
		20 Hz ~ 20 kHz	5.5×10^{-4}	
		(20 ~ 100) kHz	1.8×10^{-3}	
		100 kHz ~ 1 MHz	3.0×10^{-2}	
		(10 ~ 100) V		
		20 Hz	16 mV	
		20 Hz ~ 20 kHz	5.5×10^{-4}	
		(20 ~ 100) kHz	1.8×10^{-3}	
		(-60 ~ 20) dBm		
		20 Hz ~ 20 kHz	0.007 dB	
		(20 ~ 50) kHz	0.008 dB	
		(50 ~ 100) kHz	0.013 dB	
		100 kHz ~ 1 MHz	0.16 dB	
DC Offset		-20 V ~ 0 mV	5.8×10^{-4}	
		0 mV	5.8 μV	
		0 mV ~ 20 V	5.8×10^{-4}	
Output flatness		20 Hz ~ 100 kHz	0.016 dB	
		100 kHz ~ 1 MHz	0.018 dB	
Distortion factor		(-80 ~ 0) dB		
		20 Hz ~ 1 MHz	1.4 dB	
Output amplitude		20 Hz ~ 1 kHz		
		(0 ~ -60) dB	0.007 dB	
		(1 ~ 20) kHz		
		(0 ~ -60) dB	0.009 dB	
		(20 ~ 100) kHz		
		(0 ~ -60) dB	0.015 dB	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF signal generators	40426			Frequency counters,
Rise/Fall time		1 ns	5.9 ps	Digital multimeters,
		(1 ~ 10) ns	1.3×10^{-3}	Spectrum analyzers,
		(10 ~ 100) ns	1.2×10^{-3}	Oscilloscopes
		100 ns ~ 1 s	1.2×10^{-3}	/HCT-CS-101-40426
AM modulation		(5 ~ 99) %	1.2×10^{-2}	
FM modulation		(9 ~ 400) kHz	1.2×10^{-2}	
Duty Cycle		(1 ~ 99) %	5.8×10^{-3}	
LF spectrum analyzer	40427			Function generators
Input level		27 dBm		/HCT-CS-180-40427
		10 Hz	0.008 dB	
		10 Hz ~ 20 kHz	0.007 dB	
		(20 ~ 100) kHz	0.008 dB	
		(27 ~ 10) dBm		
		10 Hz	0.008 dB	
		10 Hz ~ 20 kHz	0.007 dB	
		20 kHz ~ 100 kHz	0.007 dB	
		(100 ~ 200) kHz	0.009 dB	
		(10 ~ -10) dBm		
		10 Hz	0.008 dB	
		10 Hz ~ 20 kHz	0.007 dB	
		(20 ~ 100) kHz	0.007 dB	
		(100 ~ 200) kHz	0.009 dB	
		(-10 ~ -40) dBm		
		10 Hz	0.008 dB	
		10 Hz ~ 20 kHz	0.008 dB	
		(20 ~ 100) kHz	0.013 dB	
		(100 ~ 200) kHz	0.022 dB	
		(-40 ~ -50) dBm		
		10 Hz	0.017 dB	
		10 Hz ~ 20 kHz	0.016 dB	
		(20 ~ 100) kHz	0.024 dB	
		(100 ~ 200) kHz	0.045 dB	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF spectrum analyzer	40427			Function generators
Input level		10 mV		/HCT-CS-180-40427
		10 Hz	22 μV	
		10 Hz ~ 10 kHz	2.2×10^{-3}	
		(10 ~ 100) kHz	2.3×10^{-3}	
		(100 ~ 200) kHz	2.3×10^{-3}	
		(10 ~ 100) mV		
		10 Hz	88 μV	
		10 Hz ~ 10 kHz	6.3×10^{-4}	
		(10 ~ 100) kHz	8.3×10^{-4}	
		(100 ~ 200) kHz	1.2×10^{-3}	
		(0.1 ~ 1) V		
		10 Hz	0.69 mV	
		10 Hz ~ 10 kHz	6.2×10^{-4}	
		(10 ~ 100) kHz	6.3×10^{-4}	
		(100 ~ 200) kHz	7.8×10^{-4}	
		(1 ~ 10) V		
		10 Hz	6.9 mV	
		10 Hz ~ 10 kHz	6.2×10^{-4}	
		(10 ~ 100) kHz	6.3×10^{-4}	
		(100 ~ 200) kHz	7.3×10^{-4}	
		(10 ~ 30) V		
		10 Hz	16 mV	
		10 Hz ~ 10 kHz	2.4×10^{-4}	
		(10 ~ 100) kHz	3.9×10^{-4}	
Input frequency		10 Hz ~ 200 kHz	6.2×10^{-5}	
Input impedance		1 MΩ	0.62 kΩ	
Output level(AC)		10 mV		
		20 Hz	8.6 μV	
		20 Hz ~ 1 kHz	7.1×10^{-4}	
		(1 ~ 10) kHz	1.5×10^{-3}	
		(10 ~ 100) kHz	3.2×10^{-3}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF spectrum analyzer	40427			Function generators
Output level(AC)		(10 ~ 100) mV		/HCT-CS-180-40427
		20 Hz	64 μV	
		20 Hz ~ 1 kHz	6.3×10^{-4}	
		(1 ~ 10) kHz	7.6×10^{-3}	
		(10 ~ 100) kHz	1.3×10^{-3}	
		(0.1 ~ 1) V		
		20 Hz	0.63 mV	
		20 Hz ~ 1 kHz	6.2×10^{-4}	
		(1 ~ 10) kHz	6.8×10^{-4}	
		(10 ~ 100) kHz	1.0×10^{-3}	
		(1 ~ 10) V		
		20 Hz	6.3 mV	
		20 Hz ~ 1 kHz	6.2×10^{-4}	
		(1 ~ 10) kHz	6.7×10^{-3}	
		(10 ~ 100) kHz	1.0×10^{-3}	
Output level(AC)		10 mV	6.3 μV	
		10 mV ~ 10 V	6.2×10^{-5}	
Sweep generators	40429			Frequency counters,
Frequency		1 Hz ~ 21 MHz	5.8×10^{-9}	Digital multimeters,
				Spectrum analyzers,
Output level		10 mV		Oscilloscopes
		20 Hz	7.0 μV	/HCT-CS-102-40429
		20 Hz ~ 20 kHz	1.3×10^{-3}	
		(20 ~ 100) kHz	3.2×10^{-3}	
		100 kHz ~ 1 MHz	1.5×10^{-2}	
		(10 ~ 100) mV		
		20 Hz	20 μV	
		20 Hz ~ 20 kHz	8.1×10^{-4}	
		(20 ~ 100) kHz	2.0×10^{-3}	
		100 kHz ~ 1 MHz	2.6×10^{-2}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Sweep generators	40429			Frequency counters,
Output level		(0.1 ~ 1) V		Digital multimeters,
		20 Hz	0.16 mV	Spectrum analyzers,
		20 Hz ~ 20 kHz	2.9×10^{-4}	Oscilloscopes
		(20 ~ 100) kHz	8.2×10^{-4}	/HCT-CS-102-40429
		100 kHz ~ 1 MHz	2.4×10^{-2}	
		(1 ~ 10) V		
		20 Hz	1.6 mV	
		20 Hz ~ 20 kHz	5.5×10^{-4}	
		(20 ~ 100) kHz	1.8×10^{-3}	
		100 kHz ~ 1 MHz	3.0×10^{-2}	
		(10 ~ 100) V		
		20 Hz	16 mV	
		20 Hz ~ 20 kHz	5.5×10^{-4}	
		(20 ~ 100) kHz	1.8×10^{-3}	
		-60 dBm ~ 20 dBm		
		100 kHz ~ 21 MHz	0.16 dB	
DC Offset		-20 V ~ 0 mV	5.8×10^{-4}	
		0 mV	5.8 μV	
		0 mV ~ 20 V	5.8×10^{-4}	
Output flatness		20 Hz ~ 100 kHz	0.016 dB	
		100 kHz ~ 21 MHz	0.018 dB	
Distortion factor		(-80 ~ 0) dB		
		20 Hz ~ 21 MHz	1.4 dB	
Output amplitude		20 Hz ~ 1 kHz		
		(0 ~ -60) dB	0.007 dB	
		(1 ~ 20) kHz		
		(0 ~ -60) dB	0.009 dB	
		(20 ~ 100) kHz		
		(0 ~ -60) dB	0.015 dB	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Sweep generators	40429			Frequency counters,
Rise/Fall Time		1 ns	5.9 ps	Digital multimeters,
		(1 ~ 10) ns	5.9×10^{-3}	Spectrum analyzers,
		(10 ~ 100) ns	1.3×10^{-3}	Oscilloscopes
		100 ns ~ 1 s	1.2×10^{-3}	/HCT-CS-102-40429
AM moduation		(5 ~ 99) %	1.2×10^{-2}	
FM modulation		(9 ~ 400) kHz	1.2×10^{-2}	
Duty Cycle		(1 ~ 99) %	5.8×10^{-3}	
Transistor curve tracers	40432			Multimeter calibrators,
DC Voltage		(-1 000 ~ -200) V	5.5×10^{-6}	Digital multimeters,
(SMU, Base/Emitter/Collector)		(-200 ~ -100) V	1.1×10^{-5}	Electrometers,
		(-100 ~ -10) V	5.2×10^{-6}	High resistance meters
		(-10 ~ -1) V	3.8×10^{-6}	/HCT-CS-103-40432
		(-1 ~ -0.1) V	7.0×10^{-6}	
		(-0.1 ~ 0) V	4.9×10^{-6}	
		0 V	0.13 μV	
		(0 ~ 0.1) V	4.9×10^{-6}	
		(0.1 ~ 1) V	7.0×10^{-6}	
		(1 ~ 10) V	3.8×10^{-6}	
		(10 ~ 100) V	5.2×10^{-6}	
		(100 ~ 200) V	1.1×10^{-5}	
		(200 ~ 1 000) V	5.5×10^{-6}	
DC Voltage		(-1 000 ~ -200) V	5.5×10^{-6}	
(VSU, Base/Emitter/Collector)		(-200 ~ -100) V	1.1×10^{-5}	
		(-100 ~ -10) V	5.2×10^{-6}	
		(-10 ~ -1) V	3.8×10^{-6}	
		(-1 ~ -0.1) V	7.0×10^{-6}	
		(-0.1 ~ 0) V	4.9×10^{-6}	
		0 V	0.13 μV	
		(0 ~ 0.1) V	4.9×10^{-6}	
		(0.1 ~ 1) V	7.0×10^{-6}	
		(1 ~ 10) V	3.8×10^{-6}	
		(10 ~ 100) V	5.2×10^{-6}	
		(100 ~ 200) V	1.1×10^{-5}	
		(200 ~ 1 000) V	5.5×10^{-6}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Transistor curve tracers	40432			Multimeter calibrators,
DC Voltage		(-1 000 ~ -200) V	5.5×10^{-6}	Digital multimeters,
(VSU, Base/Emitter/Collector)		(-200 ~ -100) V	1.1×10^{-5}	Electrometers,
		(-100 ~ -10) V	5.2×10^{-6}	High resistance meters
		(-10 ~ -1) V	3.8×10^{-6}	/HCT-CS-103-40432
		(-1 ~ -0.1) V	7.0×10^{-6}	
		-(0.1 ~ 0) V	4.9×10^{-6}	
		0 V	0.13 μV	
		(0 ~ 0.1) V	4.9×10^{-6}	
		(0.1 ~ 1) V	7.0×10^{-6}	
		(1 ~ 10) V	3.8×10^{-6}	
		(10 ~ 100) V	5.2×10^{-6}	
		(100 ~ 200) V	1.1×10^{-5}	
		(200 ~ 1 000) V	5.5×10^{-6}	
DC Current		(-50 ~ -20) A	1.3×10^{-5}	
(SMU, Base/Emitter/Collector)		(-20 ~ -10) A	8.3×10^{-6}	
		(-10 ~ -2) A	4.9×10^{-4}	
		(-2 ~ -1) A	7.0×10^{-4}	
		(-1 ~ -0.1) A	2.2×10^{-4}	
		(-100 ~ -10) mA	4.8×10^{-5}	
		(-10 ~ -1) mA	1.5×10^{-5}	
		(-1 ~ -0.1) mA	1.3×10^{-5}	
		(-100 ~ -10) μA	1.4×10^{-5}	
		(-10 ~ -1) μA	8.1×10^{-5}	
		(-1 ~ -0.1) μA	7.6×10^{-4}	
		(-100 ~ -10) nA	2.4×10^{-3}	
		(-10 ~ -1) nA	2.4×10^{-3}	
		(-1 ~ -0.1) nA	5.8×10^{-3}	
		(-100 ~ -10) pA	1.2×10^{-2}	
		(-10 ~ 0) pA	1.2×10^{-2}	
		0 A	8.1 nA	
		(0 ~ 10) pA	1.2×10^{-2}	
		(10 ~ 100) pA	1.2×10^{-2}	
		(0.1 ~ 1) nA	5.8×10^{-3}	
		(1 ~ 10) nA	2.4×10^{-3}	
		(10 ~ 100) nA	2.4×10^{-3}	
		(0.1 ~ 1) μA	7.6×10^{-4}	
		(1 ~ 10) μA	8.1×10^{-5}	
		(10 ~ 100) μA	1.4×10^{-5}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Transistor curve tracers	40432			Multimeter calibrators,
DC Current		(0.1 ~ 1) mA	1.3×10^{-5}	Digital multimeters,
(SMU, Base/Emitter/Collector)		(1 ~ 10) mA	1.5×10^{-5}	Electrometers,
		(10 ~ 100) mA	4.8×10^{-5}	High resistance meters
		(0.1 ~ 1) A	2.2×10^{-4}	/HCT-CS-103-40432
		(1 ~ 2) A	7.0×10^{-4}	
		(2 ~ 10) A	4.9×10^{-4}	
		(10 ~ 20) A	8.3×10^{-6}	
		(20 ~ 50) A	1.3×10^{-5}	
Time interval		(0.001 ~ 1) s	3.0×10^{-3}	
		(1 ~ 60) s	1.0×10^{-3}	
Waveform analyzers	40433			Multimeter calibrators,
				Digital multimeters
Output frequency		1 Hz ~ 1 MHz	6.2×10^{-5}	/HCT-CS-104-40433
Outout level		2 mV		
		20 Hz	7.9 μV	
		20 Hz ~ 1 kHz	3.5×10^{-3}	
		(1 ~ 20) kHz	6.0×10^{-3}	
		(20 ~ 100) kHz	1.3×10^{-2}	
		(2 ~ 100) mV		
		20 Hz	20 μV	
		20 Hz ~ 1 kHz	1.8×10^{-4}	
		(1 ~ 20) kHz	4.5×10^{-4}	
		(20 ~ 100) kHz	1.1×10^{-3}	
		(0.1 ~ 1) V		
		20 Hz	0.16 mV	
		20 Hz ~ 1 kHz	1.2×10^{-4}	
		(1 ~ 20) kHz	2.9×10^{-4}	
		(20 ~ 100) kHz	8.2×10^{-4}	
		(1 ~ 10) V		
		20 Hz	1.6 mV	
		20 Hz ~ 1 kHz	1.2×10^{-4}	
		(1 ~ 20) kHz	2.9×10^{-4}	
		(20 ~ 100) kHz	8.5×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Waveform analyzers	40433			Multimeter calibrators,
Outout level		(10 ~ 100) V		Digital multimeters
		20 Hz	16 mV	/HCT-CS-104-40433
		20 Hz ~ 1 kHz	1.7×10^{-4}	
		(1 ~ 20) kHz	3.5×10^{-4}	
		(20 ~ 100) kHz	8.2×10^{-4}	
Output DC Offset		-20 V ~ 0 mV	6.2×10^{-5}	
		0 mV	6.2 μV	
		0 mV ~ 20 V	6.2×10^{-5}	
Output flatness		20 Hz ~ 20 kHz	0.006 3 dB	
		(20 ~ 100) kHz	0.009 2 dB	
Output amplitude		20 Hz ~ 1 kHz		
		(-10 ~ -60) dB	0.061 dB	
		(1 ~ 20) kHz		
		(-10 ~ -60) dB	0.11 dB	
		(20 ~ 50) kHz		
		(-10 ~ -60) dB	0.11 dB	
		(50 ~ 100) kHz		
		(-10 ~ -60) dB	0.11 dB	
Output impedance		50 Ω	6.2 mΩ	
		600 Ω	62 mΩ	
Input frequency		1 Hz ~ 1 MHz	6.2×10^{-5}	
AC Input level		2 mV		
		10 Hz	7.9 μV	
		10 Hz ~ 20 kHz	3.9×10^{-3}	
		(20 ~ 50) kHz	4.0×10^{-3}	
		(50 ~ 100) kHz	4.7×10^{-3}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Waveform analyzers	40433			Multimeter calibrators,
AC Input level		(2 ~ 100) mV		Digital multimeters
		10 Hz	43 μV	/HCT-CS-104-40433
		10 Hz ~ 20 kHz	1.6×10^{-4}	
		(20 ~ 50) kHz	2.4×10^{-4}	
		(50 ~ 100) kHz	5.7×10^{-4}	
		(0.1 ~ 1) V		
		10 Hz	0.14 mV	
		10 Hz ~ 20 kHz	9.0×10^{-5}	
		(20 ~ 50) kHz	1.5×10^{-4}	
		(50 ~ 100) kHz	1.5×10^{-4}	
		(1 ~ 10) V		
		10 Hz	3.4 mV	
		10 Hz ~ 20 kHz	9.0×10^{-5}	
		(20 ~ 50) kHz	1.2×10^{-4}	
		(50 ~ 100) kHz	1.4×10^{-4}	
		(10 ~ 100) V		
		10 Hz	10 mV	
		10 Hz ~ 20 kHz	1.0×10^{-4}	
		(20 ~ 50) kHz	1.3×10^{-4}	
		(50 ~ 100) kHz	2.2×10^{-4}	
		(100 ~ 300) V		
		10 Hz	0.13 V	
		10 Hz ~ 10 kHz	2.4×10^{-4}	
DC Input level		1 mV	6.2 μV	
		(1 ~ 100) mV	6.3×10^{-5}	
		(0.1 ~ 100) V	6.2×10^{-5}	
		(100 ~ 300) V	6.2×10^{-5}	
Filter (weight,low,high pass, etc.)		400 Hz ~ 80 kHz	2.1×10^{-4}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Waveform analyzers	40433			Multimeter calibrators,
Distortion factor		1 kHz ~ 20 kHz		Digital multimeters
		(-10 ~ -60) dB	0.31 dB	/HCT-CS-104-40433
		(-60 ~ -70) dB	0.38 dB	
		(-70 ~ -80) dB	0.56 dB	
		1 kHz ~ 20 kHz		
		(0.001 ~ 0.01) %	5.5×10^{-2}	
		(0.01 ~ 30) %	3.1×10^{-2}	
AC/DC high generator	40434			High voltage voltmeters
DC Voltage		(+)		/HCT-CS-055-40434
		1 V	1 mV	
		1 ~ 100 V	6.1×10^{-4}	
		(0.1 ~ 1) kV	1.1×10^{-5}	
		(1 ~ 2) kV	1.0×10^{-3}	
		(2 ~ 10) kV	6.1×10^{-4}	
		(10 ~ 20) kV	4.1×10^{-4}	
		(20 ~ 50) kV	4.4×10^{-4}	
		(50 ~ 100) kV	4.1×10^{-4}	
		(-)		
		-1 V	1 mV	
		1 ~ 100 V	6.1×10^{-4}	
		(0.1 ~ 1) kV	1.1×10^{-5}	
		(1 ~ 2) kV	1.0×10^{-3}	
		(2 ~ 10) kV	6.1×10^{-4}	
		(10 ~ 20) kV	4.1×10^{-4}	
		(20 ~ 50) kV	4.4×10^{-4}	
		(50 ~ 100) kV	4.1×10^{-4}	
AC Voltage		(50 ~ 60) Hz		
		100 V	13 mV	
		(0.1 ~ 1) kV	1.6×10^{-7}	
		(1 ~ 10) kV	2.4×10^{-3}	
		(10 ~ 20) kV	2.3×10^{-3}	
		(20 ~ 40) kV	2.1×10^{-3}	
		(40 ~ 60) kV	2.0×10^{-3}	
		(60 ~ 75) kV	4.3×10^{-3}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC/DC high voltage probes	40435	(±)		High voltage sources
DC Voltage Ratio		1 kV less than		/HCT-CS-056-40435
		(1 : 1)		
		10 mV ~ 1 000 V	3.9×10^{-5}	
		(1 ~ 5 : 1)		
		100 mV ~ 1 000 V	2.2×10^{-4}	
		(5 ~ 10 : 1)		
		100 mV ~ 1 000 V	1.8×10^{-4}	
		(10 ~ 50 : 1)		
		(1 ~ 1 000) V	1.7×10^{-3}	
		(50 ~ 100 : 1)		
		(10 ~ 1 000) V	2.2×10^{-3}	
		(100 ~ 500 : 1)		
		(10 ~ 1 000) V	5.3×10^{-2}	
		(500 ~ 1 000 : 1)		
		(100 ~ 1 000) V	0.20 %	
		1 kV 이상		
		(100 : 1)		
		(1 ~ 5) kV	0.053 %	
		(100 ~ 1 000 : 1)		
		(1 ~ 100) kV	0.53 %	
		(1 000 ~ 10 000 : 1)		
		(1 ~ 100) kV	5.4 %	
DC Voltage(SCOPE PROBE)		(±)		
		1 V	0.1 mV	
		1 V ~ 1 kV	1.0×10^{-4}	
		1 kV ~ 20 kV	1.4×10^{-3}	
		20 kV ~ 40 kV	1.3×10^{-3}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC/DC high voltage probes	40435	(±)		High voltage sources
AC Voltage		50 Hz ~ 1 kHz		/HCT-CS-056-40435
		1 V	0.09 mV	
		(1 ~ 10) V	1.3×10^{-4}	
		(10 ~ 100) V	1.5×10^{-4}	
		100 V ~ 1 kV	6.2×10^{-4}	
		(50 ~ 60) Hz		
		1 kV	0.07 kV	
		(1 ~ 10) kV	1.5×10^{-2}	
		(10 ~ 20) kV	1.4×10^{-2}	
		(20 ~ 60) kV	1.3×10^{-2}	
		(60 ~ 70) kV	1.4×10^{-2}	
Resistance		1 Ω	0.58 mΩ	
		(1 ~ 10) Ω	5.8×10^{-4}	
		(0.01 ~ 10) kΩ	5.8×10^{-4}	
		(10 ~ 100) kΩ	5.9×10^{-5}	
		(0.1 ~ 10) MΩ	5.8×10^{-4}	
		(10 ~ 100) MΩ	1.7×10^{-4}	
		(0.1 ~ 1) GΩ	1.9×10^{-3}	
Capacitance		(1 kHz)		
		1 pF	5.9 fF	
		(1 ~ 10) pF	9.3×10^{-4}	
		(10 ~ 100) pF	6.2×10^{-4}	
		(0.1 ~ 1) nF	5.9×10^{-3}	
		(1 ~ 10) nF	8.5×10^{-4}	
Logic analyzers	40436			Multimeter calibrators
Input voltage		100 mV	6.3 μV	/HCT-CS-201-40436
		(0.1 ~ 1) V	1.3×10^{-4}	
		(1 ~ 2) V	6.2×10^{-5}	
		(2 ~ 3) V	3.2×10^{-5}	
		(3 ~ 10) V	8.8×10^{-5}	
		-100 mV	6.3 μV	
		(-0.1 ~ -1) V	1.3×10^{-4}	
		(-1 ~ -2) V	6.2×10^{-5}	
		(-2 ~ -3) V	3.2×10^{-5}	
		(-3 ~ -10) V	8.8×10^{-5}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Telephone testers	40437			Frequency couters,
Frequency		1 Hz ~ 1 MHz	6.2×10^{-7}	Digital multimeters
				/HCT-CS-127-40437
AC Amplitude		10 mV		
		20 Hz	10 μV	
		20 Hz ~ 1 kHz	9.1×10^{-4}	
		(1 ~ 20) kHz	1.5×10^{-3}	
		(20 ~ 100) kHz	3.3×10^{-3}	
		(10 ~ 100) mV		
		20 Hz	20 μV	
		20 Hz ~ 1 kHz	1.8×10^{-4}	
		(1 ~ 20) kHz	4.5×10^{-4}	
		(20 ~ 100) kHz	1.1×10^{-3}	
		(0.1 ~ 1) V		
		20 Hz	0.16 mV	
		20 Hz ~ 1 kHz	1.4×10^{-4}	
		(1 ~ 20) kHz	2.9×10^{-4}	
		(20 ~ 100) kHz	8.5×10^{-4}	
		(1 ~ 10) V		
		20 Hz	1.6 mV	
		20 Hz ~ 1 kHz	1.4×10^{-4}	
		(1 ~ 20) kHz	2.9×10^{-4}	
		(20 ~ 100) kHz	8.2×10^{-4}	
	`			
		(10 ~ 100) V		
		20 Hz	1.6 mV	
		20 Hz ~ 1 kHz	1.4×10^{-4}	
		(1 ~ 20) kHz	2.9×10^{-4}	
		(20 ~ 100) kHz	8.2×10^{-4}	
		(100 ~ 500) V		
		20 Hz	91 mV	
		20 Hz ~ 1 kHz	1.9×10^{-4}	
		(20 ~ -10) dBm		
		20 Hz	0.006 2 dB	
		20 Hz ~ 20 kHz	0.006 3 dB	
		(20 ~ 100) kHz	0.010 dB	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Telephone testers	40437			Frequency couters,
AC Amplitude		(-10 ~ -40) dBm		Digital multimeters
		20 Hz	0.006 1 dB	/HCT-CS-127-40437
		20 Hz ~ 20 kHz	0.007 0 dB	
		(20 ~ 100) kHz	0.011 dB	
Loop Current		1 mA	0.62 μA	
		(1 ~ 100) mA	6.2×10^{-4}	
		(0.1 ~ 1) A	6.2×10^{-4}	
DC Voltage		10 mV	6.2 μV	
		10 mV ~ 100 V	6.2×10^{-4}	
		(100 ~ 500) V	1.3×10^{-4}	
Dial Level		(-39 ~ 10) dBm	0.58 dB	
Resistance		50 Ω	6.2 mΩ	
		(50 ~ 1 000) Ω	6.2×10^{-4}	
Video signal analyzers	40438			Video signal generators
SQUARE WAVE level		50 mV	0.11 mV	/HCT-CS-130-40438
		(50 ~ 100) mV	1.5×10^{-3}	
		(100 ~ 200) mV	1.4×10^{-3}	
		(200 ~ 300) mV	1.3×10^{-3}	
		(300 ~ 400) mV	1.9×10^{-3}	
		(400 ~ 500) mV	1.7×10^{-3}	
		(500 ~ 600) mV	1.5×10^{-3}	
		(600 ~ 1 000) mV	1.5×10^{-3}	
		50 mV	1.4 mV	
		(50 ~ 100) mV	2.1×10^{-2}	
		(100 ~ 200) mV	2.7×10^{-2}	
		(200 ~ 300) mV	2.2×10^{-2}	
		(300 ~ 400) mV	2.5×10^{-2}	
		(400 ~ 500) mV	2.2×10^{-2}	
		(500 ~ 600) mV	2.1×10^{-2}	
		(600 ~ 700) mV	3.4×10^{-2}	
		(700 ~ 1 000) mV	3.1×10^{-2}	
BURST Frequency		(3 ~ 5) MHz	4.8×10^{-7}	

404. Other DC & LF measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Video signal analyzers	40438			Video signal generators
Vector scopes,		50 mV	3.4 mV	/HCT-CS-130-40438
Video signal monitors				
Color Bar Level(chrominance)		(50 ~ 100) mV	3.4×10^{-2}	
		(100 ~ 200) mV	2.4×10^{-2}	
		(200 ~ 300) mV	1.6×10^{-2}	
		(300 ~ 400) mV	1.3×10^{-2}	
		(400 ~ 800) mV	1.2×10^{-2}	
		(800 ~ 1 000) mV	9.8×10^{-3}	
Color Bar phase		0 ° ~ 360 °	0.7 °	
Frequency		50 Hz ~ 10 MHz	5.8×10^{-5}	
Vertical Level		50 mV	2.1 mV	
		(50 ~ 100) mV	2.1×10^{-2}	
		(100 ~ 200) mV	1.4×10^{-2}	
		(200 ~ 300) mV	8.4×10^{-3}	
		(300 ~ 400) mV	6.2×10^{-3}	
		(400 ~ 500) mV	4.9×10^{-3}	
		(500 ~ 600) mV	4.1×10^{-3}	
		(600 ~ 700) mV	3.3×10^{-3}	
		(700 ~ 800) mV	3.1×10^{-3}	
		(800 ~ 900) mV	2.8×10^{-3}	
		(900 ~ 1 000) mV	3.2×10^{-3}	
Vertical Level(Response)		(50 kHz ~ 10 MHz)		
		50 mV	2.5 mV	
		(0 ~ 100) mV	2.9×10^{-2}	
		(100 ~ 200) mV	3.0×10^{-2}	
		(200 ~ 300) mV	2.3×10^{-2}	
		(300 ~ 400) mV	2.6×10^{-2}	
		(400 ~ 500) mV	2.3×10^{-2}	
		(500 ~ 600) mV	2.1×10^{-2}	
		(600 ~ 700) mV	3.5×10^{-2}	
		(700 ~ 800) mV	3.1×10^{-2}	
		(800 ~ 900) mV	2.9×10^{-2}	
		(900 ~ 1 000) mV	2.7×10^{-2}	

405. Low frequency electric & magnetic field

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Flux meters	40503	0.1 mWb (0.1 ~ 1) mWb 1 mWb ~ 10 Wb	0.59 μWb 8.2×10^{-4} 8.0×10^{-4}	Volt-second generator /HCT-CS-257-40503
Flux sources	40504	0.1 mWb (0.1 ~ 1) mWb (1 ~ 10) mWb (10 ~ 100) mWb (0.1 ~ 10) Wb	6.7 nWb 6.6×10^{-5} 1.2×10^{-5} 2.0×10^{-6} 1.1×10^{-5}	DMM, Counter, Scope /HCT-CS-258-40504
Magnetometers	40508	0 mT (0 ~ 1) mT (1 ~ 25) mT (40 ~ 150) mT (150 ~ 1 000) mT (1 ~ 1.9) T	2.2 μT 6.5×10^{-3} 3.3×10^{-3} 7.3×10^{-4} 7.2×10^{-4} 7.9×10^{-4}	Helmholtz coil, Electro magnet, NMR teslameter /HCT-CS-259-40508
Reference/standard magnets	40510	5 mT (5 ~ 20) mT (0.05 ~ 1) T (1 ~ 2) T	14 μT 2.8×10^{-3} 1.6×10^{-3} 1.3×10^{-3}	Helmholtz coil, Electro magnet, Gauss meter /HCT-CS-260-40510

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF amplifiers	40601			RF spectrum analyzers,
Gain		(0 ~ 80 dB)		Network analyzers
		5 Hz ~ 10 Hz	0.16 dB	/HCT-CS-105-40601
		10 Hz ~ 100 kHz	0.08 dB	
		100 kHz ~ 10 GHz	0.21 dB	
		10 GHz ~ 18 GHz	0.32 dB	
		(0 ~ 60 dB)		
		18 GHz ~ 26.5 GHz	0.30 dB	
		26.5 GHz ~ 40 GHz	0.42 dB	
		40 GHz ~ 110 GHz	0.43 dB	
Harmonics		(9 kHz ~ 18 GHz)		
		-100 dBc ~ 0 dBc	1.5 dB	
Reflection coefficient		(0 ~ 1)		
		5 Hz ~ 100 MHz	3.8×10^{-3}	
		100 MHz ~ 3 GHz	5.3×10^{-3}	
		(3 ~ 18) GHz	2.4×10^{-2}	
		(18 ~ 50) GHz	5.9×10^{-2}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Coaxial attenuators	40602			Attenuator calibrators,
Attenuation		(5 Hz ~ 9 kHz)		Network analyzers,
		0 dB ~ 10 dB	0.11 dB	Calibration kits
		10 dB ~ 20 dB	0.13 dB	/HCT-CS-108-40602
		20 dB ~ 30 dB	0.15 dB	
		30 dB ~ 40 dB	0.17 dB	
		40 dB ~ 50 dB	0.21 dB	
		50 dB ~ 60 dB	0.30 dB	
		(9 kHz ~ 26.5 GHz)		
		0 dB ~ 10 dB	0.04 dB	
		10 dB ~ 20 dB	0.04 dB	
		20 dB ~ 30 dB	0.05 dB	
		30 dB ~ 40 dB	0.05 dB	
		40 dB ~ 50 dB	0.06 dB	
		50 dB ~ 60 dB	0.06 dB	
		60 dB ~ 70 dB	0.07 dB	
		70 dB ~ 80 dB	0.08 dB	
		80 dB ~ 90 dB	0.08 dB	
		90 dB ~ 100 dB	0.09 dB	
		100 dB ~ 110 dB	0.09 dB	
		110 dB ~ 120 dB	0.10 dB	
		(26.5 GHz ~ 50 GHz)		
		0 dB ~ 10 dB	0.21 dB	
		10 dB ~ 20 dB	0.23 dB	
		20 dB ~ 30 dB	0.29 dB	
		30 dB ~ 40 dB	0.30 dB	
		40 dB ~ 50 dB	0.47 dB	
		50 dB ~ 60 dB	1.2 dB	
Reflection coefficient		(0 ~ 1)		
		5 Hz ~ 100 MHz	3.8×10^{-3}	
		100 MHz ~ 3 GHz	5.3×10^{-3}	
		(3 ~ 18) GHz	2.4×10^{-2}	
		(18 ~ 50) GHz	5.9×10^{-2}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Waveguide attenuators	40603			Network analyzers,
Attenuation		(40 GHz ~ 75 GHz)		Calibration kits
		0 dB ~ 10 dB	0.34 dB	/HCT-CS-343-40603
		10 dB ~ 20 dB	0.34 dB	
		20 dB ~ 30 dB	0.34 dB	
		30 dB ~ 40 dB	0.34 dB	
		40 dB ~ 50 dB	0.34 dB	
		50 dB ~ 60 dB	0.36 dB	
		(75 GHz ~ 110 GHz)		
		0 dB ~ 10 dB	0.34 dB	
		10 dB ~ 20 dB	0.34 dB	
		20 dB ~ 30 dB	0.34 dB	
		30 dB ~ 40 dB	0.34 dB	
		40 dB ~ 50 dB	0.34 dB	
		50 dB ~ 60 dB	0.36 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Burst pulse generators	40605	50 Ω		Attenuators, Oscilloscopes
Output Voltage		(±)		/HCT-CS-109-40605
		10 V	0.39 V	
		(10 ~ 20) V	3.8×10^{-2}	
		(20 ~ 50) V	3.3×10^{-2}	
		(50 ~ 200) V	3.8×10^{-2}	
		(200 ~ 500) V	3.3×10^{-2}	
		(0.5 ~ 1) kV	3.8×10^{-2}	
		(1 ~ 2) kV	3.1×10^{-2}	
		(2 ~ 2.5) kV	2.9×10^{-2}	
		(2.5 ~ 3) kV	2.7×10^{-2}	
		(3 ~ 4) kV	3.8×10^{-2}	
		1 kΩ		
		(±)		
		10 V	0.37 V	
		(10 ~ 40) V	4.3×10^{-2}	
		(40 ~ 100) V	3.8×10^{-2}	
		(100 ~ 400) V	4.3×10^{-2}	
		(0.4 ~ 1) kV	3.8×10^{-2}	
		(1 ~ 2) kV	4.3×10^{-2}	
		(2 ~ 4) kV	3.7×10^{-2}	
		(4 ~ 5) kV	3.4×10^{-2}	
		(5 ~ 6) kV	3.3×10^{-2}	
		(6 ~ 8) kV	3.1×10^{-2}	
Delta time measurement		1.0 ns	0.014 ns	
(rise/fall/duration/period/		(1.0 ~ 2.0) ns	7.0×10^{-3}	
repetition rate/burst		(2.0 ~ 5.0) ns	2.8×10^{-3}	
duration)		(5.0 ~ 10.0) ns	1.5×10^{-3}	
		(10 ~ 20) ns	7.5×10^{-4}	
		(20 ~ 50) ns	3.1×10^{-4}	
		(50 ~ 100) ns	6.0×10^{-4}	
		(100 ~ 200) ns	6.7×10^{-4}	
		(200 ~ 500) ns	2.7×10^{-4}	
		(0.5 ~ 1.0) μs	1.2×10^{-3}	
		(1.0 ~ 2.0) μs	5.8×10^{-4}	
		(2.0 ~ 5.0) μs	2.3×10^{-4}	
		(5.0 ~ 10.0) μs	5.9×10^{-4}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Burst pulse generators	40605			Attenuators, Oscilloscopes
Delta time measurement		(10 ~ 20) μs	3.1×10^{-4}	/HCT-CS-109-40605
(rise/fall/duration/period/		(20 ~ 50) μs	1.3×10^{-4}	
repetition rate/burst		(50 ~ 100) μs	8.3×10^{-4}	
duration)		(100 ~ 200) μs	4.2×10^{-4}	
		(200 ~ 500) μs	6.1×10^{-4}	
		(0.5 ~ 1) ms	2.8×10^{-2}	
		(1 ~ 2) ms	3.5×10^{-2}	
		(2 ~ 5) ms	2.3×10^{-4}	
		(5 ~ 10) ms	5.9×10^{-4}	
		(10 ~ 20) ms	3.0×10^{-4}	
		(20 ~ 50) ms	1.6×10^{-4}	
		(50 ~ 100) ms	5.8×10^{-4}	
		(100 ~ 200) ms	6.7×10^{-4}	
		(200 ~ 500) ms	2.7×10^{-4}	
		(0.5 ~ 1.0) s	2.1×10^{-3}	
		(1.0 ~ 2.0) s	1.0×10^{-3}	
		(2.0 ~ 5.0) s	4.2×10^{-4}	
Frequency measurement		2.5 kHz	1.6 Hz	
		(2.5 ~ 5) kHz	3.3×10^{-4}	
		(5 ~ 10) kHz	8.8×10^{-4}	
		(10 ~ 100) kHz	6.6×10^{-4}	
		(0.1 ~ 1) MHz	1.2×10^{-3}	
		(1 ~ 3) MHz	3.2×10^{-4}	
		(3 ~ 10) MHz	6.6×10^{-4}	
		(10 ~ 30) MHz	3.6×10^{-4}	
		(30 ~ 100) MHz	1.5×10^{-3}	
Attenuator calibrators	40606			Standard attenuators
Attenuation measurement accuracy		0 dB ~ 10 dB	0.027 dB	/HCT-CS-175-40606
		10 dB ~ 20 dB	0.029 dB	
		20 dB ~ 30 dB	0.032 dB	
		30 dB ~ 40 dB	0.038 dB	
		40 dB ~ 50 dB	0.043 dB	
		50 dB ~ 60 dB	0.043 dB	
		60 dB ~ 70 dB	0.048 dB	
		70 dB ~ 80 dB	0.054 dB	
		80 dB ~ 90 dB	0.060 dB	
		90 dB ~ 100 dB	0.066 dB	
		100 dB ~ 110 dB	0.069 dB	
		110 dB ~ 120 dB	0.074 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF power meter calibrators	40607			Digital multimeter
Power range		3 μW	0.27 nW	/HCT-CS-166-40607
		10 μW	0.44 nW	
		30 μW	1.8 nW	
		100 μW	2.9 nW	
		300 μW	15 nW	
		1 mW	0.02 μW	
		3 mW	0.10 μW	
		10 mW	0.18 μW	
		30 mW	0.45 μW	
		100 mW	2.5 μW	
EMC tranducers; current probes, absorbing clamps etc.	40608			Network analyzers, Calibration kits /HCT-CS-167-40608
EMC tranducers				
Transfer impedance		5 Hz ~ 400 MHz	0.54 dB	
		400 MHz ~ 3 GHz	1.1 dB	
Reflection coefficient		5 Hz ~ 3 GHz	5.9×10^{-3}	
Absorbing clamps				
Insertion loss		30 MHz ~ 1 GHz	1.8 dB	
Coaxial directional couplers /splitters	40610			Network analyzers, Calibration kits
Coupling factor		(5 Hz ~ 9 kHz)		/HCT-CS-110-40610
		0 dB ~ 10 dB	0.11 dB	
		10 dB ~ 20 dB	0.13 dB	
		20 dB ~ 30 dB	0.15 dB	
		30 dB ~ 40 dB	0.17 dB	
		40 dB ~ 50 dB	0.21 dB	
		50 dB ~ 60 dB	0.30 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Coaxial directional couplers /splitters	40610			Network analyzers, Calibration kits
Coupling factor		(9 kHz ~ 26.5 GHz)		/HCT-CS-110-40610
		0 dB ~ 10 dB	0.04 dB	
		10 dB ~ 20 dB	0.04 dB	
		20 dB ~ 30 dB	0.05 dB	
		30 dB ~ 40 dB	0.05 dB	
		40 dB ~ 50 dB	0.06 dB	
		50 dB ~ 60 dB	0.06 dB	
		60 dB ~ 70 dB	0.07 dB	
		70 dB ~ 80 dB	0.08 dB	
		80 dB ~ 90 dB	0.08 dB	
		90 dB ~ 100 dB	0.09 dB	
		100 dB ~ 110 dB	0.09 dB	
		110 dB ~ 120 dB	0.10 dB	
		(26.5 GHz ~ 50 GHz)		
		0 dB ~ 10 dB	0.21 dB	
		10 dB ~ 20 dB	0.23 dB	
		20 dB ~ 30 dB	0.29 dB	
		30 dB ~ 40 dB	0.30 dB	
		40 dB ~ 50 dB	0.47 dB	
		50 dB ~ 60 dB	1.2 dB	
Reflection coefficient		(0 ~ 1)		
		5 Hz ~ 9 kHz	4.4×10^{-3}	
		9 kHz ~ 1 GHz	4.8×10^{-3}	
		1 GHz ~ 18 GHz	1.0×10^{-2}	
		18 GHz ~ 40 GHz	1.3×10^{-2}	
		40 GHz ~ 50 GHz	1.4×10^{-2}	
Insertion loss		5 Hz ~ 50 GHz	0.12 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Waveguide standard mismaches	40611			Network analyzers,
Coupling factor		(40 GHz ~ 75 GHz)		Calibration kits
		0 dB ~ 10 dB	0.34 dB	/HCT-CS-349-40611
		10 dB ~ 20 dB	0.34 dB	
		20 dB ~ 30 dB	0.34 dB	
		30 dB ~ 40 dB	0.34 dB	
		40 dB ~ 50 dB	0.34 dB	
		50 dB ~ 60 dB	0.36 dB	
		(75 GHz ~ 110 GHz)		
		0 dB ~ 10 dB	0.34 dB	
		10 dB ~ 20 dB	0.34 dB	
		20 dB ~ 30 dB	0.34 dB	
		30 dB ~ 40 dB	0.34 dB	
		40 dB ~ 50 dB	0.34 dB	
		50 dB ~ 60 dB	0.36 dB	
Electrostatic discharge generators	40613			Electrostatic discharge measurement system,
ESD Discharge Current		(±)		Oscilloscope calibrators
(Ip, Ip2, 30 ns, 60 ns,)		0.10 A	2.5 mA	/HCT-CS-111-40613
(130 ns, 180 ns, 360 ns,)		(0.10 ~ 0.30) A	2.1×10^{-2}	
(400 ns, 800 ns)		(0.30 ~ 0.50) A	2.1×10^{-2}	
		(0.50 ~ 1.0) A	2.1×10^{-2}	
		(1.0 ~ 10.0) A	2.1×10^{-2}	
		(10.0 ~ 30.0) A	3.1×10^{-2}	
		(30.0 ~ 100.0) A	4.0×10^{-2}	
		(100.0 ~ 125.0) A	3.4×10^{-2}	
		(125.0 ~ 150.0) A	3.1×10^{-2}	
Rise/Fall Time		(0.5 ~ 1) ns	3.7×10^{-2}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Electrostatic discharge generators	40613			Electrostatic discharge measurement system,
Voltage		(±)		Oscilloscope calibrators
		(0.1 ~ 0.5) kV	6.8 V	/HCT-CS-111-40613
		(0.5 ~ 1) kV	7.0×10^{-3}	
		(1 ~ 2) kV	1.4×10^{-2}	
		(2 ~ 4) kV	7.5×10^{-3}	
		(4 ~ 6) kV	6.1×10^{-3}	
		(6 ~ 8) kV	4.8×10^{-3}	
		(8 ~ 10) kV	4.0×10^{-3}	
		(10 ~ 12) kV	4.0×10^{-3}	
		(12 ~ 14) kV	6.0×10^{-3}	
		(14 ~ 16) kV	3.2×10^{-3}	
		(16 ~ 18) kV	3.0×10^{-3}	
		(18 ~ 20) kV	2.8×10^{-3}	
		(20 ~ 25) kV	2.9×10^{-3}	
		(25 ~ 30) kV	2.6×10^{-3}	
Semiconductor ESD Peak Current		(±)		
(HBM)		(0.15 to 0.17) A	14 mA	
		(0.17 to 0.33) A	8.2×10^{-2}	
		(0.33 to 0.67) A	8.2×10^{-2}	
		(0.67 to 1.33) A	8.2×10^{-2}	
		(1.33 to 2.67) A	9.0×10^{-2}	
		(2.67 to 5.23) A	7.2×10^{-2}	
Semiconductor ESD Peak Current		(±)		
(MM)		(1.5 ~ 1.75) A	8.6×10^{-2}	
		(1.75 ~ 3.5) A	9.3×10^{-2}	
		(3.5 ~ 7.0) A	8.8×10^{-2}	
		(7 ~ 16) A	8.1×10^{-2}	
Semiconductor ESD Risee /Fall Tim		(1 ~ 11) ns	0.037 ns	
Semiconductor ESD Decay Time		(100 ~ 200) ns	0.58 ns	
Semiconductor ESD Peak Voltage		(±)		
		100 V	3.5 V	
		(0.1 ~ 8) kV	3.8×10^{-2}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
EMC receivers	40614			Calibration pulse generators,
Reference frequency		80 kHz ~ 100 MHz	5.8×10^{-11}	Frequency standards,
				Power sensors,
Input impedance		9 kHz ~ 1 GHz	3.8×10^{-3}	Standard attenuators,
(Reflection cofefficient)		1 GHz ~ 3 GHz	5.3×10^{-3}	RF signal generators,
		3 GHz ~ 20 GHz	9.3×10^{-3}	Network analyzers
		20 GHz ~ 40 GHz	1.2×10^{-2}	/HCT-CS-112-40614
		40 GHz ~ 50 GHz	5.9×10^{-2}	
Sinewave voltage accuracy		10 Hz ~ 2 GHz	0.04 dB	
		2 GHz ~ 12 GHz	0.06 dB	
		12 GHz ~ 40 GHz	0.08 dB	
		40 GHz ~ 50 GHz	0.25 dB	
Pulse response		9 kHz ~ 40 GHz	0.25 dB	
Repetition frequency response		9 kHz ~ 1 GHz	0.10 dB	
Overall selectivity		9 kHz ~ 40 GHz	0.08 dB	
IF rejection ratio		9 kHz ~ 40 GHz	0.31 dB	
Image frequency response		9 kHz ~ 40 GHz	0.31 dB	
Other spurious response		9 kHz ~ 40 GHz	0.31 dB	
Random noise		9 kHz ~ 40 GHz	0.07 dB	
Resolution bandwidth		10 Hz ~ 20 MHz	7.4×10^{-4}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF filters	40615			Network analyzers,
Cutoff frequency		9 kHz ~ 26.5 GHz	6.4×10^{-7}	Calibration kits
				/HCT-CS-113-40615
Insert loss		(9 kHz ~ 1 GHz)		
		0 dB ~ 10 dB	0.11 dB	
		10 dB ~ 20 dB	0.12 dB	
		20 dB ~ 30 dB	0.14 dB	
		30 dB ~ 40 dB	0.17 dB	
		40 dB ~ 50 dB	0.21 dB	
		50 dB ~ 60 dB	0.30 dB	
		60 dB ~ 70 dB	0.54 dB	
		70 dB ~ 80 dB	1.3 dB	
		80 dB ~ 100 dB	3.3 dB	
		(1 GHz ~ 18 GHz)		
		0 dB ~ 10 dB	0.11 dB	
		10 dB ~ 20 dB	0.12 dB	
		20 dB ~ 30 dB	0.13 dB	
		30 dB ~ 40 dB	0.15 dB	
		40 dB ~ 50 dB	0.20 dB	
		50 dB ~ 60 dB	0.34 dB	
		60 dB ~ 70 dB	0.72 dB	
		70 dB ~ 80 dB	1.9 dB	
		80 dB ~ 100 dB	4.7 dB	
		(18 GHz ~ 26.5 GHz)		
		0 dB ~ 10 dB	0.21 dB	
		10 dB ~ 20 dB	0.23 dB	
		20 dB ~ 30 dB	0.24 dB	
		30 dB ~ 40 dB	0.27 dB	
		40 dB ~ 50 dB	0.35 dB	
		50 dB ~ 60 dB	0.59 dB	
		60 dB ~ 70 dB	1.3 dB	
		70 dB ~ 80 dB	3.2 dB	
		80 dB ~ 100 dB	7.6 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF filters	40615			Network analyzers,
Insert loss		(26.5 GHz ~ 40 GHz)		Calibration kits
		0 dB ~ 10 dB	0.21 dB	/HCT-CS-113-40615
		10 dB ~ 20 dB	0.23 dB	
		20 dB ~ 30 dB	0.24 dB	
		30 dB ~ 40 dB	0.29 dB	
		40 dB ~ 50 dB	0.47 dB	
		50 dB ~ 60 dB	1.2 dB	
		60 dB ~ 70 dB	3.1 dB	
		(40 GHz ~ 110 GHz)		
		0 dB ~ 10 dB	0.34 dB	
		10 dB ~ 20 dB	0.34 dB	
		20 dB ~ 30 dB	0.34 dB	
		30 dB ~ 40 dB	0.34 dB	
		40 dB ~ 50 dB	0.34 dB	
		50 dB ~ 60 dB	0.36 dB	
RF filters	40616			Frequency standards,
Output frequency		1 mHz ~ 18 GHz	5.8×10^{-11}	Measuring recievers
				/HCT-CS-176-40616
Output level		(9 kHz ~ 18 GHz)		
		0 dBm ~ 20 dBm	0.19 dB	
		-10 dBm ~ 0 dBm	0.18 dB	
		-30 dBm ~ -10 dBm	0.19 dB	
		-50 dBm ~ -30 dBm	0.20 dB	
		-70 dBm ~ -50 dBm	0.21 dB	
		-90 dBm ~ -70 dBm	0.22 dB	
		-110 dBm ~ -90 dBm	0.23 dB	
		-120 dBm ~ -110 dBm	0.24 dB	
RF impulse generators	40617			RF spectrum analyzers
Impulse level		9 kHz ~ 1 GHz	0.28 dB	/HCT-CS-248-40617

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Line impedance stabilization networks	40618			Network analyzers, Calibration kits /HCT-CS-114-40618
LISN				
Impedance		5 Hz ~ 1 GHz	2.0×10^{-2}	
Phase angle		5 Hz ~ 1 GHz	0.02 °	
Voltage division factor		5 Hz ~ 1 GHz	0.12 dB	
Isolation		(9 kHz ~ 200 MHz)		
		(0 ~ 50) dB	0.2 dB	
		(50 ~ 60) dB	0.3 dB	
		(60 ~ 70) dB	0.5 dB	
		(70 ~ 80) dB	1.2 dB	
		(80 ~ 90) dB	3.1 dB	
Reflection coefficient		(0 ~ 1)		
		9 kHz ~ 200 MHz	5.4×10^{-3}	
CDN				
Impedance		5 Hz ~ 1 GHz	2.0×10^{-2}	
Phase angle		5 Hz ~ 1 GHz	0.02 °	
Voltage division factor		5 Hz ~ 1 GHz	0.12 dB	
ISN				
Impedance		9 kHz ~ 1 GHz	2.0×10^{-2}	
Phase angle		9 kHz ~ 1 GHz	0.02 °	
Voltage diivision factor		9 kHz ~ 1 GHz	0.12 dB	
Longitudinal Conversion Loss		9 kHz ~ 1 GHz	0.27 dB	
EM clamps				
Coupling factor		9 kHz ~ 1 GHz	0.30 dB	
Decoupling factor		9 kHz ~ 1 GHz	0.30 dB	
Impedance		9 kHz ~ 1 GHz	1.8×10^{-2}	
Impedance converters				
Impedance		5 Hz ~ 3 GHz	6.0×10^{-3}	
Phase angle		5 Hz ~ 3 GHz	0.011 °	
Attenuator		5 Hz ~ 3 GHz	0.13 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Coaxial standard mismatches	40619			Network analyzers,
Reflection coefficients				Calibration kits
Reflection coefficient		(0 ~ 1)		/HCT-CS-174-40619
		9 kHz ~ 1 GHz	4.8×10^{-3}	
		1 GHz ~ 18 GHz	1.0×10^{-2}	
Calibration KIT				
Magnitude of				
reflection coefficient				
(Termination)		9 kHz ~ 3 GHz	0.011 7	
		(3 ~ 20) GHz	0.018 1	
		(20 ~ 40) GHz	0.028 2	
		(40 ~ 50) GHz	0.035 0	
(Short circuit, Open circuit)		9 kHz ~ 3 GHz	0.018 4	
		(3 ~ 20) GHz	0.025 8	
		(20 ~ 40) GHz	0.035 9	
		(40 ~ 50) GHz	0.043 5	
Phase of reflection coefficient		(± 180 °)		
		9 kHz ~ 3 GHz	1.1 °	
		(3 ~ 20) GHz	1.6 °	
		(20 ~ 40) GHz	2.1 °	
		(40 ~ 50) GHz	2.5 °	
Mobile communication test sets	40621			Frequency standards,
				Power sensors,
Output frequency		1 mHz ~ 46 GHz	5.8×10^{-11}	Measuring receivers,
				RF spentrumm analyzers
Output level		(-30 dBm ~ 20 dBm)		/HCT-CS-115-40621
		9 kHz ~ 100 MHz	0.05 dB	
		100 MHz ~ 1 GHz	0.07 dB	
		1 GHz ~ 8 GHz	0.08 dB	
		8 GHz ~ 12 GHz	0.09 dB	
		12 GHz ~ 26 GHz	0.12 dB	
		26 GHz ~ 40 GHz	0.15 dB	
		40 GHz ~ 50 GHz	0.21 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Mobile communication test sets	40621			Frequency standards, Power sensors, Measuring receivers, RF spentrumm analyzers /HCT-CS-115-40621
Absolute TRFL accuracy		(9 kHz ~ 8 GHz)		
		0 dBm ~ 30 dBm	0.15 dB	
		-40 dBm ~ 0 dBm	0.16 dB	
		-80 dBm ~ -40 dBm	0.18 dB	
		-120 dBm ~ -80 dBm	0.20 dB	
		-140 dBm ~ -120 dBm	0.21 dB	
		(8 GHz ~ 18 GHz)		
		0 dBm ~ 30 dBm	0.20 dB	
		-40 dBm ~ 0 dBm	0.20 dB	
		-80 dBm ~ -40 dBm	0.22 dB	
		-120 dBm ~ -80 dBm	0.24 dB	
		-140 dBm ~ -120 dBm	0.25 dB	
		(18 GHz ~ 26.5 GHz)		
		0 dBm ~ 30 dBm	0.27 dB	
		-40 dBm ~ 0 dBm	0.27 dB	
		-80 dBm ~ -40 dBm	0.29 dB	
		-120 dBm ~ -80 dBm	0.31 dB	
		-140 dBm ~ -120 dBm	0.32 dB	
Relative TRFL accuracy		(9 kHz ~ 18 GHz)		
		0 dBm ~ 30 dBm	0.05 dB	
		-40 dBm ~ 0 dBm	0.05 dB	
		-80 dBm ~ -40 dBm	0.08 dB	
		-120 dBm ~ -80 dBm	0.09 dB	
		-140 dBm ~ -120 dBm	0.10 dB	
		(18 GHz ~ 26.5 GHz)		
		0 dBm ~ 30 dBm	0.05 dB	
		-40 dBm ~ 0 dBm	0.05 dB	
		-80 dBm ~ -40 dBm	0.08 dB	
		-120 dBm ~ -80 dBm	0.09 dB	
		-140 dBm ~ -120 dBm	0.11 dB	
Output amplitude modulation		(CW 100 kHz ~ 26.5 GHz, Rate 10 Hz ~ 100 kHz) (1 ~ 100) %	1.2×10^{-2}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Mobile communication test sets	40621			Frequency standards, Power sensors,
Output frequency modulation		(CW 100 kHz ~ 26.5 GHz, Rate 10 Hz ~ 100 kHz)		Measuring receivers, RF spentrumm analyzers
		0.1 Hz ~ 5 MHz	1.2×10^{-2}	/HCT-CS-115-40621
Output phase modulation		(CW 100 kHz ~ 26.5 GHz, Rate 10 Hz ~ 100 kHz)		
		(0.1 ~ 10) krad	1.2×10^{-2}	
Output phase distortion		100 kHz ~ 26.5 GHz	3.0×10^{-2}	
Output harmonics		9 kHz ~ 10 GHz	1.4 dB	
		10 GHz ~ 26.5 GHz	1.7 dB	
Output AC Voltage		(10 Hz ~ 25 kHz)		
		10 mV ~ 100 V	7.4×10^{-4}	
Output DC voltage		10 mV ~ 100 V	5.8×10^{-5}	
Input frequency		1 mHz ~ 18 GHz	5.8×10^{-11}	
Input voltage		(-120 dBm ~ 20 dBm)		
		9 kHz ~ 100 MHz	0.05 dB	
		100 MHz ~ 1 GHz	0.07 dB	
		1 GHz ~ 8 GHz	0.08 dB	
		8 GHz ~ 12 GHz	0.09 dB	
		12 GHz ~ 18 GHz	0.12 dB	
		18 GHz ~ 50 GHz	0.12 dB	
Input level linearity		(9 kHz ~ 26.5 GHz)		
		-10 dBm ~ 30 dBm	0.034 dB	
		-20 dBm ~ -10 dBm	0.040 dB	
		-30 dBm ~ -20 dBm	0.046 dB	
		-40 dBm ~ -30 dBm	0.052 dB	
		-50 dBm ~ -40 dBm	0.058 dB	
		-60 dBm ~ -50 dBm	0.064 dB	
		-70 dBm ~ -60 dBm	0.070 dB	
		-80 dBm ~ -70 dBm	0.076 dB	
		-90 dBm ~ -80 dBm	0.080 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Mobile communication test sets	40621			Frequency standards, Power sensors, Measuring receivers, RF spentrumm analyzers /HCT-CS-115-40621
Input level linearity		-100 dBm ~ -90 dBm	0.086 dB	
		-110 dBm ~ -100 dBm	0.092 dB	
		-140 dBm ~ -110 dBm	0.098 dB	
Input amplitude modulation		100 kHz ~ 26.5 GHz	1.2×10^{-2}	
Input frequency modulation		100 kHz ~ 26.5 GHz	1.2×10^{-2}	
Input phase modulation		100 kHz ~ 26.5 GHz	1.2×10^{-2}	
Input modulation distortion		100 kHz ~ 26.5 GHz	3.0×10^{-2}	
Input harmonics		9 kHz ~ 10 GHz	1.4 dB	
		10 GHz ~ 18 GHz	1.7 dB	
Input AC voltage		(10 Hz ~ 25 kHz)		
		10 mV ~ 100 V	7.4×10^{-4}	
Input DC voltage		10 mV ~ 100 V	7.3×10^{-5}	
Reflection coefficient		(0 ~ 1)		
		9 kHz ~ 1 GHz	3.8×10^{-3}	
		1 GHz ~ 3 GHz	5.3×10^{-3}	
		3 GHz ~ 20 GHz	2.4×10^{-2}	
		20 GHz ~ 50 GHz	5.9×10^{-2}	
Modulation meters	40622			Measuring receivers, AM/FM test source /HCT-CS-116-40622
Frequency		1 mHz ~ 26.5 GHz	5.8×10^{-11}	
Amplitude Modulation		(CW 100 kHz ~ 26.5 GHz, Rate 10 Hz ~ 100 kHz)		
		(1 ~ 100) %	1.2×10^{-2}	
Frequency Modulation		(CW 100 kHz ~ 26.5 GHz, Rate 10 Hz ~ 100 kHz)		
		0.1 Hz ~ 5 MHz	1.2×10^{-2}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Modulation meters	40622			Measuring receivers,
Phase Modulation		(CW 100 kHz ~ 26.5 GHz,		AM/FM test source
		Rate 10 Hz ~ 100 kHz)		/HCT-CS-116-40622
		(0.1 ~ 10) krad	1.2×10^{-2}	
Audio RMS Accuracy		(20 Hz ~ 50 kHz)		
		100 mV ~ 5 V	1.2×10^{-3}	
Reference Power		(50 MHz)		
		1 mW	8.0×10^{-3}	
Zero Set		0.000 µW	0.001 µW	
		0.00 µW	0.01 µW	
		0.0 µW	0.1 µW	
		0.000 mW	0.001 mW	
		0.00 mW	0.01 mW	
Range-to-Range Error		10 µW ~ 100 mW	1.3×10^{-3}	
Tuned RF Level		(0 ~ 10) dB	0.027 dB	
		(10 ~ 20) dB	0.029 dB	
		(20 ~ 30) dB	0.032 dB	
		(30 ~ 40) dB	0.038 dB	
		(40 ~ 50) dB	0.043 dB	
		(50 ~ 60) dB	0.043 dB	
		(60 ~ 70) dB	0.048 dB	
		(70 ~ 80) dB	0.054 dB	
		(80 ~ 90) dB	0.060 dB	
		(90 ~ 100) dB	0.066 dB	
		(100 ~ 110) dB	0.069 dB	
		(110 ~ 120) dB	0.074 dB	
Network analyzers	40623			Calibration kit
Output frequency		1 mHz ~ 46 GHz	5.8×10^{-11}	Frequency standards,
				Standard attenuators,
Output level accuracy		(-30 dBm ~ 20 dBm)		Power sensors,
		5 Hz ~ 100 MHz	0.06 dB	Standard mismatches
		100 MHz ~ 1 GHz	0.07 dB	/HCT-CS-117-40623
		1 GHz ~ 8 GHz	0.08 dB	
		8 GHz ~ 12 GHz	0.09 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Network analyzers	40623			Calibration kit
Output level accuracy		12 GHz ~ 18 GHz	0.12 dB	Frequency standards,
		18 GHz ~ 26 GHz	0.12 dB	Standard attenuators,
		26 GHz ~ 33 GHz	0.14 dB	Power sensors,
		33 GHz ~ 40 GHz	0.15 dB	Standard mismatches
		40 GHz ~ 50 GHz	0.15 dB	/HCT-CS-117-40623
		50 GHz ~ 75 GHz	0.24 dB	
		75 GHz ~ 110 GHz	0.28 dB	
Absolute TRFL accuracy		(9 kHz ~ 8 GHz)		
		0 dBm ~ 30 dBm	0.15 dB	
		-40 dBm ~ 0 dBm	0.16 dB	
		-80 dBm ~ -40 dBm	0.18 dB	
		-120 dBm ~ -80 dBm	0.20 dB	
		-140 dBm ~ -120 dBm	0.21 dB	
		(8 GHz ~ 18 GHz)		
		0 dBm ~ 30 dBm	0.20 dB	
		-40 dBm ~ 0 dBm	0.20 dB	
		-80 dBm ~ -40 dBm	0.22 dB	
		-120 dBm ~ -80 dBm	0.24 dB	
		-140 dBm ~ -120 dBm	0.25 dB	
		(18 GHz ~ 26.5 GHz)		
		0 dBm ~ 30 dBm	0.27 dB	
		-40 dBm ~ 0 dBm	0.27 dB	
		-80 dBm ~ -40 dBm	0.29 dB	
		-120 dBm ~ -80 dBm	0.31 dB	
		-140 dBm ~ -120 dBm	0.32 dB	
		(26.5 GHz ~ 40 GHz)		
		-30 dBm ~ 20 dBm	0.27 dB	
		(40 GHz ~ 50 GHz)		
		-30 dBm ~ 20 dBm	0.31 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Network analyzers	40623			Calibration kit
Output level linearity		(9 kHz ~ 26.5 GHz)		Frequency standards,
		0 dBm ~ 10 dBm	0.034 dB	Standard attenuators,
		-10 dBm ~ 0 dBm	0.034 dB	Power sensors,
		-20 dBm ~ -10 dBm	0.040 dB	Standard mismatches
		-30 dBm ~ -20 dBm	0.046 dB	/HCT-CS-117-40623
		-40 dBm ~ -30 dBm	0.052 dB	
		-50 dBm ~ -40 dBm	0.058 dB	
		-60 dBm ~ -50 dBm	0.064 dB	
		-70 dBm ~ -60 dBm	0.070 dB	
		-80 dBm ~ -70 dBm	0.076 dB	
		-90 dBm ~ -80 dBm	0.080 dB	
		-100 dBm ~ -90 dBm	0.086 dB	
		-110 dBm ~ -100 dBm	0.092 dB	
		-120 dBm ~ -110 dBm	0.098 dB	
		(26.5 GHz ~ 40 GHz)		
		-30 dBm ~ 20 dBm	0.024 dB	
		(40 GHz ~ 50 GHz)		
		-30 dBm ~ 20 dBm	0.050 dB	
Harmonics		20 Hz ~ 20 GHz	1.4 dB	
		20 GHz ~ 40 GHz	1.7 dB	
Magnitude dynamic accuracy		0 dB ~ 120 dB	0.029 dB	
Mismatch measurement accuracy		9 kHz ~ 1 GHz	4.8×10^{-3}	
		1 GHz ~ 18 GHz	1.0×10^{-2}	
Input impedance		9 kHz ~ 1 GHz	4.8×10^{-3}	
		1 GHz ~ 18 GHz	1.0×10^{-2}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Noise figure meters	40624			Noise standards
Output frequency		1 mHz ~ 18 GHz	5.8×10^{-11}	RF signal generators,
				Noise sources
Input impedance		9 kHz ~ 1 GHz	0.9×10^{-2}	/HCT-CS-118-40624
		1 GHz ~ 3 GHz	1.2×10^{-2}	
		3 GHz ~ 18 GHz	1.9×10^{-2}	
Output DC voltage		0 V	10 μV	
		0.1 V ~ 30 V	1.1×10^{-6}	
Noise figure		10 MHz ~ 18 GHz	0.35 dB	
Noise generators	40625			RF spectrum generators
Output frequency		1 mHz ~ 18 GHz	5.8×10^{-11}	/HCT-CS-177-40625
Output level		(-120 dBm ~ 30 dBm)		
		9 kHz ~ 3 GHz	0.51 dB	
		3 GHz ~ 6.6 GHz	1.8 dB	
		6.6 GHz ~ 18 GHz	2.4 dB	
Noise impulse simulators	40626			High voltage probes,
Output Voltage		(±)		Oscilloscopes
		10 V	0.39 V	/HCT-CS-119-40626
		(10 ~ 20) V	3.8×10^{-2}	
		(20 ~ 50) V	3.3×10^{-2}	
		(50 ~ 200) V	3.8×10^{-2}	
		(200 ~ 250) V	3.4×10^{-2}	
		(250 ~ 500) V	3.3×10^{-2}	
		(0.5 ~ 1) kV	3.8×10^{-2}	
		(1 ~ 2) kV	3.1×10^{-2}	
		(2 ~ 2.5) kV	2.9×10^{-2}	
		(2.5 ~ 3) kV	3.0×10^{-2}	
		(3 ~ 4) kV	3.8×10^{-2}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Noise impulse simulators	40626			High voltage probes,
Delta time measurement		0.1 ns	0.014 ns	Oscilloscopes
(rise/fall/duration/period		(0.1 ~ 1.0) ns	1.4×10^{-2}	/HCT-CS-119-40626
/repetition rate		(1.0 ~ 2.0) ns	7.0×10^{-3}	
/burst duration)		(2.0 ~ 5.0) ns	2.8×10^{-3}	
		(5.0 ~ 10.0) ns	1.6×10^{-3}	
		(10 ~ 20) ns	8.0×10^{-4}	
		(20 ~ 50) ns	3.2×10^{-4}	
		(50 ~ 100) ns	6.0×10^{-4}	
		(100 ~ 200) ns	7.0×10^{-4}	
		(200 ~ 500) ns	2.8×10^{-4}	
		(0.5 ~ 1.0) µs	1.2×10^{-3}	
		(1.0 ~ 2.0) µs	5.8×10^{-4}	
		(2.0 ~ 5.0) µs	2.3×10^{-4}	
		(5.0 ~ 10.0) µs	5.9×10^{-4}	
		(10 ~ 20) µs	3.1×10^{-4}	
		(20 ~ 50) µs	1.3×10^{-4}	
		(50 ~ 100) µs	8.4×10^{-4}	
		(100 ~ 200) µs	4.2×10^{-4}	
		(200 ~ 500) µs	6.1×10^{-4}	
		(0.5 ~ 1) ms	2.8×10^{-2}	
		(1 ~ 2) ms	3.5×10^{-2}	
		(2 ~ 5) ms	2.3×10^{-4}	
		(5 ~ 10) ms	5.9×10^{-4}	
		(10 ~ 20) ms	3.0×10^{-4}	
		(20 ~ 50) ms	1.6×10^{-4}	
		(50 ~ 100) ms	5.8×10^{-4}	
		(100 ~ 200) ms	2.9×10^{-4}	
		(200 ~ 500) ms	1.2×10^{-4}	
		(0.5 ~ 1.0) s	2.1×10^{-3}	
		(1.0 ~ 2.0) s	1.0×10^{-3}	
		(2.0 ~ 5.0) s	4.2×10^{-4}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF power meters	40635			
RF power meters				Range calibrators,
Output frequency		1 mHz ~ 18 GHz	5.8×10^{-11}	Power sensors
				/HCT-CS-120-40635
Output levels		(10 MHz ~ 300 MHz)		
		1 μW ~ 100 mW	5.1×10^{-3}	
Instrument accuracy		3 μW ~ 100 mW	4.4×10^{-3}	
Input level accuracy		(9 kHz ~ 18 GHz)		
		-80 dBm ~ 20 dBm	0.15 dB	
Input voltage		(DC)		
		0 V ~ 400 V	5.8×10^{-5}	
RF high power meters				RF calorimeters
Calibration facor		(10 kHz ~ 220 MHz)		/HCT-CS-162-40635
		0.01 W ~ 2.5 kW	1.5×10^{-2}	
		(200 MHz ~ 1 GHz)		
		0.01 W ~ 100 W	2.9×10^{-2}	
		(1 GHz ~ 4.2 GHz)		
		0.01 W ~ 10 W	3.5×10^{-2}	
Diode power sensors	40636			Coaxial thermistor mounts
Calibration factor		(1 μW ~ 100 mW)		Power sensors
		9 kHz ~ 1 GHz	1.5×10^{-2}	/HCT-CS-121-40636
		1 GHz ~ 10 GHz	1.6×10^{-2}	
		10 GHz ~ 18 GHz	2.1×10^{-2}	
		18 GHz ~ 26 GHz	2.1×10^{-2}	
		26 GHz ~ 34 GHz	2.5×10^{-2}	
		34 GHz ~ 38 GHz	3.0×10^{-2}	
		38 GHz ~ 43 GHz	3.3×10^{-2}	
		43 GHz ~ 50 GHz	3.6×10^{-2}	
		(0 ~ 1)		
		9 kHz ~ 1 GHz	3.8×10^{-3}	
		1 GHz ~ 3 GHz	5.3×10^{-3}	
		3 GHz ~ 20 GHz	9.3×10^{-3}	
		20 GHz ~ 40 GHz	1.2×10^{-2}	
		40 GHz ~ 50 GHz	5.9×10^{-2}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Thermocouple power sensors	40637			Coaxial thermistor mounts
Calibration factor		(1 μW ~ 100 mW)		Power sensors
		9 kHz ~ 1 GHz	1.5×10^{-2}	/HCT-CS-122-40637
		1 GHz ~ 10 GHz	1.6×10^{-2}	
		10 GHz ~ 18 GHz	2.1×10^{-2}	
		18 GHz ~ 26 GHz	2.1×10^{-2}	
		26 GHz ~ 34 GHz	2.5×10^{-2}	
		34 GHz ~ 38 GHz	3.0×10^{-2}	
		38 GHz ~ 43 GHz	3.3×10^{-2}	
		43 GHz ~ 50 GHz	3.6×10^{-2}	
Reflection coefficient		(0 ~ 1)		
		9 kHz ~ 1 GHz	3.8×10^{-3}	
		1 GHz ~ 3 GHz	5.3×10^{-3}	
		3 GHz ~ 20 GHz	9.3×10^{-3}	
		20 GHz ~ 40 GHz	1.2×10^{-2}	
		40 GHz ~ 50 GHz	5.9×10^{-2}	
Pulse generators	40638			Frequency couters,
Frequency		1 Hz ~ 10 GHz	6.1×10^{-9}	Oscilloscopes
				/HCT-CS-123-40638
Period		300 ps ~ 1 s	6.1×10^{-9}	
Delay		1 s ~ 100 ns	1.2×10^{-3}	
		(100 ~ 10) ns	1.3×10^{-3}	
		(10 ~ 1) ns	5.9×10^{-3}	
Double Pulse		1 s ~ 100 ns	1.2×10^{-3}	
		(100 ~ 10) ns	1.3×10^{-3}	
		(10 ~ 1) ns	5.9×10^{-3}	
Width		1 s ~ 100 ns	1.2×10^{-3}	
		(100 ~ 10) ns	1.3×10^{-3}	
		(10 ~ 1) ns	5.9×10^{-3}	
Transition Time		1 s ~ 100 ns	1.2×10^{-3}	
		(100 ~ 10) ns	1.3×10^{-3}	
		(10 ~ 1) ns	5.9×10^{-3}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Pulse generators	40638			Frequency couters,
DC Level		10 mV	6.2 μV	Oscilloscopes
		10 mV ~ 100 V	6.2×10^{-4}	/HCT-CS-123-40638
Output Level		10 mV		
		20 Hz ~ 1 kHz	9.4 μV	
		(1 ~ 20) kHz	14 μV	
		(20 ~ 100) kHz	16 μV	
		(10 ~ 100) mV		
		20 Hz ~ 1 kHz	6.4×10^{-4}	
		(1 ~ 20) kHz	7.6×10^{-4}	
		(20 ~ 100) kHz	1.1×10^{-3}	
		(100 mV ~ 1 V)		
		20 Hz ~ 20 kHz	6.4×10^{-4}	
		(20 ~ 50) kHz	6.7×10^{-4}	
		(50 ~ 100) kHz	6.7×10^{-4}	
		(1 ~ 10) V		
		20 Hz ~ 20 kHz	6.4×10^{-4}	
		(20 ~ 50) kHz	6.7×10^{-4}	
		(50 ~ 100) kHz	6.7×10^{-4}	
		(10 ~ 100) V		
		20 Hz ~ 20 kHz	6.4×10^{-4}	
		(20 ~ 50) kHz	6.7×10^{-4}	
		(50 ~ 100) kHz	6.7×10^{-4}	
		(100 ~ 300) V		
		20 Hz ~ 1 kHz	3.1×10^{-4}	
Radar test sets	40639			VOR/ILS signal calibrators,
Output frequency		1 mHz ~ 18 GHz	5.8×10^{-11}	Frequency standards,
				Power sensors
Output level		(9 kHz ~ 18 GHz)		/HCT-CS-168-40639(RADAR)
		10 dBm ~ 30 dBm	0.12 dB	/HCT-CS-204-40639(SART)
		-30 dBm ~ 10 dBm	0.12 dB	/HCT-CS-207-40639(AIS)
		-60 dBm ~ -30 dBm	0.13 dB	/HCT-CS-209-40639(GMDSS)
		-100 dBm ~ -60 dBm	0.15 dB	/HCT-CS-214-40639(EPIRB)
		-120 dBm ~ -100 dBm	0.30 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Radar test sets	40639			VOR/ILS signal calibrators,
Harmonics		(9 kHz ~ 5 GHz)		Frequency standards,
		-100 dBc ~ 0 dBc	1.2 dB	Power sensors
		(5 GHz ~ 18 GHz)		/HCT-CS-168-40639(RADAR)
		-100 dBc ~ 0 dBc	1.5 dB	/HCT-CS-204-40639(SART)
				/HCT-CS-207-40639(AIS)
Output modulation signal level		(9 kHz ~ 18 GHz)		/HCT-CS-209-40639(GMDSS)
		-100 dBc ~ 0 dBc	1.3 dB	/HCT-CS-214-40639(EPIRB)
Output amplitude modulatiion		(CW 9 kHz ~ 18 GHz,		
		Rate 10 Hz ~ 100 kHz)		
		0 % ~ 100 %	1.7×10^{-2}	
Output frequency modulation		(CW 9 kHz ~ 18 GHz,		
		Rate 10 Hz ~ 100 kHz)		
		0 kHz ~ 800 kHz	1.2×10^{-2}	
Output modulation distortion		(9 kHz ~ 18 GHz)		
		0 % ~ 100 %	1.2×10^{-2}	
Phase		(9 kHz ~ 18 GHz)		
		0 ° ~ 360 °	1.2×10^{-2}	
DDM		100 kHz ~ 1.36 GHz	3.0×10^{-2}	
SDM		100 kHz ~ 1.36 GHz	3.0×10^{-2}	
VOR		100 kHz ~ 1.36 GHz	3.0×10^{-2}	
Purse width		1 ns ~ 10 ms	2.3×10^{-2}	
Input frequency		9 kHz ~ 18 GHz	5.8×10^{-10}	
Input level		(100 kHz ~ 1.36 GHz)		
		1 mW ~ 100 W	1.9×10^{-2}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF signal generators	40640			Measuting recievers,
Output frequency		1 mHz ~ 46 GHz	5.8×10^{-11}	Power sensors,
				Frequency standards,
Absolute output level		(-30 dBm ~ 20 dBm)		RF spectrum analyzers
		5 Hz ~ 100 MHz	0.05 dB	/HCT-CS-124-40640
		100 MHz ~ 1 GHz	0.07 dB	
		1 GHz ~ 8 GHz	0.08 dB	
		8 GHz ~ 12 GHz	0.09 dB	
		12 GHz ~ 18 GHz	0.12 dB	
		18 GHz ~ 26 GHz	0.11 dB	
		26 GHz ~ 33 GHz	0.13 dB	
		33 GHz ~ 40 GHz	0.14 dB	
		40 GHz ~ 50 GHz	0.16 dB	
		50 GHz ~ 75 GHz	0.21 dB	
		75 GHz ~ 110 GHz	0.28 dB	
Absolute TRFL accuracy		(9 kHz ~ 8 GHz)		
		0 dBm ~ 30 dBm	0.15 dB	
		-40 dBm ~ 0 dBm	0.16 dB	
		-80 dBm ~ -40 dBm	0.18 dB	
		-120 dBm ~ -80 dBm	0.20 dB	
		-140 dBm ~ -120 dBm	0.21 dB	
		(8 GHz ~ 18 GHz)		
		0 dBm ~ 30 dBm	0.20 dB	
		-40 dBm ~ 0 dBm	0.20 dB	
		-80 dBm ~ -40 dBm	0.22 dB	
		-120 dBm ~ -80 dBm	0.24 dB	
		-140 dBm ~ -120 dBm	0.25 dB	
		(18 GHz ~ 26.5 GHz)		
		0 dBm ~ 30 dBm	0.27 dB	
		-40 dBm ~ 0 dBm	0.27 dB	
		-80 dBm ~ -40 dBm	0.29 dB	
		-120 dBm ~ -80 dBm	0.31 dB	
		-140 dBm ~ -120 dBm	0.32 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF signal generators	40640			Measuting recievers,
Relative TRFL accuracy		(9 kHz ~ 26.5 GHz)		Power sensors,
		0 dBm ~ 30 dBm	0.05 dB	Frequency standards,
		-40 dBm ~ 0 dBm	0.05 dB	RF spectrum analyzers
		-80 dBm ~ -40 dBm	0.08 dB	/HCT-CS-124-40640
		-120 dBm ~ -80 dBm	0.09 dB	
		-140 dBm ~ -120 dBm	0.11 dB	
Output amplitude modulation		(CW 100 kHz ~ 26.5 GHz, Rate 10 Hz ~ 100 kHz)		
		(1 ~ 100) %	1.2×10^{-2}	
Output frequency modulation		(CW 100 kHz ~ 26.5 GHz, Rate 10 Hz ~ 100 kHz)		
		0.1 Hz ~ 5 MHz	1.2×10^{-2}	
Output phase modulation		(CW 100 kHz ~ 26.5 GHz, Rate 10 Hz ~ 100 kHz)		
		(0.1 ~ 10) krad	1.2×10^{-2}	
Output modulation distortion		100 kHz ~ 26.5 GHz	3.0×10^{-2}	
Harmonics		20 Hz ~ 20 GHz	1.4 dB	
		20 GHz ~ 40 GHz	1.7 dB	
Pulse modulation		1 μs ~ 1 s	1.2×10^{-3}	
RF spectrum analyzers	40641			Power sensors,
Reference frequency		10 MHz ~ 1 GHz	5.8×10^{-11}	Frequency standards,
				RF signal generators,
Reference level		(10 MHz ~ 1 GHz)		Standard attenuators
		-30 dBm ~ 10 dBm	0.07 dB	/HCT-CS-125-40641
Frequency readout		5 Hz ~ 110 GHz	9.6×10^{-4} · SPAN	
Frequency counter		5 Hz ~ 110 GHz	0.1 Hz	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF spectrum analyzers	40641			Power sensors,
Frequency span		5 Hz ~ 110 GHz	1.4×10^{-3} · SPAN	Frequency standards,
				RF signal generators,
Resolution bandwidth		1 Hz ~ 100 MHz	2.2×10^{-3} · RBW	Standard attenuators
				/HCT-CS-125-40641
Resolution bandwidth selectivity		1 Hz ~ 100 MHz	4.0×10^{-3} · RBW	
Resolution bandwidth switching error		1 Hz ~ 100 MHz	0.004 dB	
Input attenuator accuracy		0 dB ~ 100 dB	0.08 dB	
Scale fidelity		0 dB ~ 100 dB	0.08 dB	
Reference level accuracy		0 dB ~ 100 dB	0.06 dB	
Frequency responese		5 Hz ~ 4 GHz	0.09 dB	
		4 GHz ~ 18 GHz	0.15 dB	
		18 GHz ~ 26.5 GHz	0.19 dB	
		26.5 GHz ~ 40 GHz	0.21 dB	
		40 GHz ~ 110 GHz	0.35 dB	
Average noise level		5 Hz ~ 3 GHz	0.58 dB	
		3 GHz ~ 12 GHz	1.0 dB	
		12 GHz ~ 18 GHz	1.4 dB	
		18 GHz ~ 40 GHz	1.7 dB	
		40 GHz ~ 50 GHz	2.0 dB	
Sideband noise level		-30 kHz ~ 30 kHz	1.7 dB	
Input level		(1 kHz ~ 100 kHz)		
		-60 dBV ~ 30 dBV	0.18 dB	
Conversion factor		18 GHz ~ 110 GHz	0.82 dB	
RF speed guns	40642			Frequency standards
Speed		(5 ~ 2 000) m/s	0.03 m/s	/HCT-CS-278-40642

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Surge generators	40643			High voltage probes
Voltage output		(±)		/HCT-CS-126-40643
		2 V	0.11 V	
		(2 ~ 10) V	1.1×10^{-2}	
		(10 ~ 20) V	7.6×10^{-3}	
		(20 ~ 50) V	4.4×10^{-3}	
		(50 ~ 100) V	4.2×10^{-3}	
		(100 ~ 200) V	4.7×10^{-3}	
		(200 ~ 500) V	1.7×10^{-3}	
		(500 ~ 1 000) V	4.2×10^{-3}	
		(1 ~ 2) kV	1.6×10^{-2}	
		(2 ~ 4) kV	8.8×10^{-3}	
		(4 ~ 6) kV	8.9×10^{-3}	
		(6 ~ 8) kV	7.7×10^{-3}	
		(8 ~ 10) kV	7.9×10^{-3}	
		(10 ~ 12) kV	6.6×10^{-3}	
		(12 ~ 15) kV	7.7×10^{-3}	
		(15 ~ 18) kV	6.8×10^{-3}	
		(18 ~ 20) kV	6.1×10^{-3}	
Current output		(±)		
		1 A	28 mA	
		(1 ~ 2) A	1.4×10^{-2}	
		(2 ~ 5) A	7.3×10^{-3}	
		(5 ~ 10) A	6.2×10^{-3}	
		(10 ~ 20) A	6.1×10^{-3}	
		(20 ~ 50) A	5.6×10^{-3}	
		(50 ~ 100) A	4.2×10^{-3}	
		(100 ~ 200) A	6.1×10^{-3}	
		(200 ~ 500) A	5.6×10^{-3}	
		(500 ~ 1 000) A	4.1×10^{-4}	
		(1 000 ~ 2 000) A	6.1×10^{-3}	
		(2 000 ~ 3 000) A	9.3×10^{-3}	
		(3 000 ~ 5 000) A	5.6×10^{-3}	
		(5 000 ~ 7 000) A	6.1×10^{-3}	
		(7 000 ~ 10 000) A	4.3×10^{-3}	
		(10 000 ~ 20 000) A	5.9×10^{-3}	
		(20 000 ~ 50 000) A	2.4×10^{-3}	
		(50 000 ~ 100 000) A	1.3×10^{-3}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Surge generators	40643			High voltage probes
(rise/fall/duration/period				/HCT-CS-126-40643
/repetition rate		0.2 ns	0.015 ns	
/burst duration)		(0.2 ~ 1) ns	1.5×10^{-2}	
		(1 ~ 2) ns	7.5×10^{-3}	
		(2 ~ 5) ns	3.0×10^{-3}	
		(5 ~ 10) ns	6.0×10^{-3}	
		(10 ~ 20) ns	3.0×10^{-3}	
		(20 ~ 50) ns	1.2×10^{-3}	
		(50 ~ 100) ns	5.9×10^{-3}	
		(100 ~ 200) ns	2.9×10^{-3}	
		(200 ~ 500) ns	1.2×10^{-3}	
		(0.5 ~ 1) µs	5.9×10^{-3}	
		(1 ~ 2) µs	2.9×10^{-3}	
		(2 ~ 5) µs	1.2×10^{-3}	
		(5 ~ 10) µs	5.9×10^{-3}	
		(1 ~ 20) µs	2.9×10^{-3}	
		(20 ~ 50) µs	1.2×10^{-3}	
		(50 ~ 100) µs	5.9×10^{-3}	
		(100 ~ 200) µs	2.9×10^{-2}	
		(200 ~ 500) µs	1.2×10^{-2}	
		(0.5 ~ 1) ms	1.2×10^{-3}	
		(1 ~ 2) ms	5.9×10^{-3}	
		(2 ~ 5) ms	2.9×10^{-3}	
		(5 ~ 10) ms	1.2×10^{-3}	
		(10 ~ 20) ms	5.9×10^{-3}	
		(20 ~ 50) ms	2.9×10^{-3}	
		(50 ~ 100) ms	1.2×10^{-3}	
		(100 ~ 200) ms	5.9×10^{-3}	
		(200 ~ 500) ms	2.9×10^{-3}	
		(0.5 ~ 1) s	1.2×10^{-3}	
		(1 ~ 2) s	5.9×10^{-3}	
		(2 ~ 5) s	2.9×10^{-3}	
		(5 ~ 10) s	5.9×10^{-3}	
Frequency		0.1 Hz	5.8 mHz	
		(0.1 ~ 1) Hz	5.9×10^{-6}	
		1 Hz ~ 10 MHz	1.2×10^{-6}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF terminations	40645			Network analyzers,
Reflection coefficients		(0 ~ 1)		Calibration kits
		5 Hz ~ 9 kHz	4.4×10^{-3}	/HCT-CS-128-40645
		9 kHz ~ 1 GHz	4.8×10^{-3}	
		1 GHz ~ 18 GHz	1.0×10^{-2}	
		18 GHz ~ 40 GHz	1.3×10^{-2}	
		40 GHz ~ 50 GHz	1.4×10^{-2}	
		50 GHz ~ 75 GHz	2.1×10^{-2}	
		75 GHz ~ 110 GHz	2.4×10^{-2}	
Coaxial thermistor mounts	40646			Coaxial thermistor mounts
Calibration facttor		(1 μW ~ 100 mW)		/HCT-CS-129-40646
		10 MHz ~ 1 GHz	1.4×10^{-2}	
		1 GHz ~ 10 GHz	1.6×10^{-2}	
		10 GHz ~ 18 GHz	2.1×10^{-2}	
Reflection coefficient		(0 ~ 1)		
		10 MHz ~ 1 GHz	3.8×10^{-3}	
		1 GHz ~ 3 GHz	5.3×10^{-3}	
		3 GHz ~ 18 GHz	9.3×10^{-3}	
Transmission ttrouble testers	40648			Frequency counters,
Pulse width		1 ns ~ 100 μs	1.4×10^{-2}	Oscilloscopes,
				Artifacts
Pulse amplitude		1 mV ~ 20 V	6.3×10^{-2}	/HCT-CS-261-40648
Pulse rate		1 ns ~ 100 μs	5.8×10^{-11}	
Pulse reflection delay time		1 ns ~ 200 μs	1.5×10^{-2}	
Impedance		0 Ω	1.2 mΩ	
		0.1 Ω ~ 500 Ω	1.0×10^{-4}	
Insertion loss		1 MHz ~ 2.5 GHz	0.32 dB	
Return loss		1 MHz ~ 2.5 GHz	0.51 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF voltmeters	40650			Meter calibrators,
Voltage		(DC)		Power sensors
		0 V ~ 400 V	5.8×10^{-5}	/HCT-CS-133-40650
		(DC ~ 100 kHz)		
		0.1 mV ~ 10 V	1.6×10^{-4}	
		(100 kHz ~ 1 GHz)		
		-120 dBm ~ 20 dBm	0.15 dB	
Vector voltmeters	40651			Meter calibrators,
Voltage		(DC)		Power sensors
		0 V ~ 400 V	5.8×10^{-5}	/HCT-CS-173-40651
		(DC ~ 100 kHz)		
		0.1 mV ~ 10 V	1.6×10^{-4}	
		(100 kHz ~ 1 GHz)		
		-120 dBm ~ 20 dBm	0.15 dB	
Field strengh meters	40652			Power sensors,
Frequency		9 kHz ~ 18 GHz	5.8×10^{-11}	Frequency standards
				/HCT-CS-200-40652
Frequency response		9 kHz ~ 4 GHz	0.09 dB	
		4 GHz ~ 18 GHz	0.15 dB	
Amplitude modulation		100 kHz ~ 18 GHz	1.2×10^{-2}	
Frequency modulation		100 kHz ~ 18 GHz	1.2×10^{-2}	
AM/FM test sources	40653			Measuring recivers
Output frequency		1 MHz ~ 1 GHz	6.4×10^{-11}	/HCT-CS-250-40653
Vestigual FM		50 Hz ~ 3 kHz	2.0×10^{-2}	
Vestigal AM		50 Hz ~ 3 kHz	2.0×10^{-2}	
Distortion factor		12.5 kHz ~ 400 kHz	4.0×10^{-4}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Dip simulators	40654			Digital multimeters,
DC Output voltage		(±)		Oscilloscopes,
		1 V	0.65 mV	High voltage probes
		(1 ~ 10) V	6.5×10^{-4}	/HCT-CS-202-40654
		(10 ~ 50) V	7.9×10^{-5}	
		(50 ~ 100) V	1.5×10^{-4}	
		(100 ~ 150) V	8.8×10^{-5}	
		(150 ~ 200) V	1.5×10^{-2}	
		(200 ~ 250) V	1.3×10^{-2}	
		(250 ~ 300) V	1.1×10^{-2}	
		(300 ~ 400) V	1.0×10^{-2}	
AC Output voltage		(50 ~ 60) Hz		
		50 V	0.30 V	
		(50 ~ 100) V	3.4×10^{-3}	
		(100 ~ 150) V	3.1×10^{-3}	
		(150 ~ 200) V	2.4×10^{-3}	
		(200 ~ 250) V	2.1×10^{-3}	
		(250 ~ 300) V	1.8×10^{-3}	
		(300 ~ 400) V	1.5×10^{-3}	
Line frequency		(50 ~ 60) Hz	3.5×10^{-4}	
Dip & Up Voltage		(0 ~ 12) V		
DC Voltage		0 %		
		0 V	0.22 V	
		(0 ~ 40) %		
		(0 ~ 4.8) V	5.3×10^{-2}	
		(40 ~ 70) %		
		(4.8 ~ 8.4) V	3.6×10^{-2}	
		(70 ~ 80) %		
		(8.4 ~ 9.6) V	3.3×10^{-2}	
		(80 ~ 120) %		
		(9.6 ~ 14.4) V	2.8×10^{-2}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Dip simulators	40654			Digital multimeters,
Dip & Up Voltage		(12 ~ 25) V		Oscilloscopes,
DC Voltage		0 %		High voltage probes
		0 V	0.22 V	/HCT-CS-202-40654
		(0 ~ 40) %		
		(0 ~ 10) V	3.2×10^{-2}	
		(40 ~ 70) %		
		(10 ~ 17.5) V	2.6×10^{-2}	
		(70 ~ 80) %		
		(17.5 ~ 20) V	2.6×10^{-2}	
		(80 ~ 120) %		
		(20 ~ 30) V	2.4×10^{-2}	
		(25 ~ 50) V		
		0 %		
		0 V	0.22 V	
		(0 ~ 40) %		
		(0 ~ 20) V	2.6×10^{-2}	
		(40 ~ 70) %		
		(20 ~ 35) V	2.4×10^{-2}	
		(70 ~ 80) %		
		(35 ~ 40) V	2.4×10^{-2}	
		(80 ~ 120) %		
		(40 ~ 60) V	2.3×10^{-2}	
		(50 ~ 100) V		
		0 %		
		0 V	0.24 V	
		(0 ~ 40) %		
		(0 ~ 40) V	2.5×10^{-2}	
		(40 ~ 70) %		
		(40 ~ 70) V	2.4×10^{-2}	
		(70 ~ 80) %		
		(70 ~ 80) V	2.4×10^{-2}	
		(80 ~ 120) %		
		(80 ~ 120) V	2.3×10^{-2}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Dip simulators	40654			Digital multimeters,
Dip & Up Voltage		(100 ~ 200) V		Oscilloscopes,
DC Voltage		0 %		High voltage probes
		0 V	0.23 V	/HCT-CS-202-40654
		(0 ~ 40) %		
		(0 ~ 80) V	2.6×10^{-2}	
		(40 ~ 70) %		
		(80 ~ 140) V	2.4×10^{-2}	
		(70 ~ 80) %		
		(140 ~ 160) V	2.4×10^{-2}	
		(80 ~ 120) %		
		(160 ~ 240) V	2.3×10^{-2}	
		(200 ~ 300) V		
		0 %		
		0 V	0.24 V	
		(0 ~ 40) %		
		(0 ~ 120) V	2.8×10^{-2}	
		(40 ~ 70) %		
		(120 ~ 210) V	2.5×10^{-2}	
		(70 ~ 80) %		
		(210 ~ 240) V	2.4×10^{-2}	
		(80 ~ 120) %		
		(240 ~ 360) V	2.4×10^{-2}	
		(300 ~ 400) V		
		0 %		
		0 V	0.24 V	
		(0 ~ 40) %		
		(0 ~ 160) V	2.6×10^{-2}	
		(40 ~ 70) %		
		(160 ~ 280) V	2.4×10^{-2}	
		(70 ~ 80) %		
		(280 ~ 320) V	2.4×10^{-2}	
		(80 ~ 120) %		
		(320 ~ 480) V	2.3×10^{-2}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Dip simulators	40654			Digital multimeters,
Dip & Up Voltage		(100 ~ 110) V, (50 ~ 60) Hz		Oscilloscopes,
AC Voltage		0 %		High voltage probes
		0 V	0.24 V	/HCT-CS-202-40654
		(0 ~ 40) %		
		(0 ~ 44) V	3.1×10^{-2}	
		(40 ~ 70) %		
		(44 ~ 77) V	2.6×10^{-2}	
		(70 ~ 80) %		
		(77 ~ 88) V	2.5×10^{-2}	
		(80 ~ 120) %		
		(88 ~ 132) V	2.4×10^{-2}	
		(110 ~ 120) V, (50 ~ 60) Hz		
		0 %		
		0 V	0.24 V	
		(0 ~ 40) %		
		(0 ~ 48) V	3.0×10^{-2}	
		(40 ~ 70) %		
		(48 ~ 84) V	2.6×10^{-2}	
		(70 ~ 80) %		
		(84 ~ 96) V	2.5×10^{-2}	
		(80 ~ 120) %		
		(96 ~ 144) V	2.4×10^{-2}	
		(120 ~ 220) V, (50 ~ 60) Hz		
		0 %		
		0 V	0.25 V	
		(0 ~ 40) %		
		(0 ~ 88) V	3.1×10^{-2}	
		(40 ~ 70) %		
		(88 ~ 154) V	2.6×10^{-2}	
		(70 ~ 80) %		
		(154 ~ 176) V	2.6×10^{-2}	
		(80 ~ 120) %		
		(176 ~ 264) V	2.4×10^{-2}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Dip simulators	40654			Digital multimeters,
AC Voltage		(220 ~ 230) V, (50 ~ 60) Hz		Oscilloscopes,
		0 %		High voltage probes
		0 V	0.25 V	/HCT-CS-202-40654
		(0 ~ 40) %		
		(0 ~ 92) V	3.1×10^{-2}	
		(40 ~ 70) %		
		(92 ~ 161) V	2.6×10^{-2}	
		(70 ~ 80) %		
		(161 ~ 184) V	2.5×10^{-2}	
		(80 ~ 120) %		
		(184 ~ 276) V	2.4×10^{-2}	
		(230 ~ 380) V, (50 ~ 60) Hz		
		0 %		
		0 V	0.27 V	
		(0 ~ 40) %		
		(0 ~ 152) V	3.3×10^{-2}	
		(40 ~ 70) %		
		(152 ~ 266) V	2.7×10^{-2}	
		(70 ~ 80) %		
		(266 ~ 304) V	2.6×10^{-2}	
		(80 ~ 120) %		
		(304 ~ 456) V	2.4×10^{-2}	
		(380 ~ 400) V, (50 ~ 60) Hz		
		0 %		
		0 V	0.27 V	
		(0 ~ 40) %		
		(0 ~ 160) V	3.2×10^{-2}	
		(40 ~ 70) %		
		(160 ~ 280) V	2.6×10^{-2}	
		(70 ~ 80) %		
		(280 ~ 320) V	2.6×10^{-2}	
		(80 ~ 120) %		
		(320 ~ 480) V	2.4×10^{-2}	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Dip simulators	40654			Digital multimeters,
Delta Time		0.2 ns	0.015 ns	Oscilloscopes,
		(0.2 ~ 1) ns	1.5×10^{-2}	High voltage probes
		(1 ~ 2) ns	7.5×10^{-3}	/HCT-CS-202-40654
		(2 ~ 5) ns	3.0×10^{-3}	
		(5 ~ 10) ns	6.0×10^{-3}	
		(10 ~ 20) ns	3.0×10^{-3}	
		(20 ~ 50) ns	1.2×10^{-3}	
		(50 ~ 100) ns	5.9×10^{-3}	
		(100 ~ 200) ns	2.9×10^{-3}	
		(200 ~ 500) ns	1.2×10^{-3}	
		(0.5 ~ 1) µs	5.9×10^{-3}	
		(1 ~ 2) µs	2.9×10^{-3}	
		(2 ~ 5) µs	1.2×10^{-3}	
		(5 ~ 10) µs	5.9×10^{-3}	
		(10 ~ 20) µs	2.9×10^{-3}	
		(20 ~ 50) µs	1.2×10^{-3}	
		(50 ~ 100) µs	5.9×10^{-3}	
		(100 ~ 200) µs	2.9×10^{-2}	
		(200 ~ 500) µs	1.2×10^{-2}	
		(0.5 ~ 1) ms	5.9×10^{-3}	
		(1 ~ 2) ms	2.9×10^{-3}	
		(2 ~ 5) ms	1.2×10^{-3}	
		(5 ~ 10) ms	5.9×10^{-3}	
		(10 ~ 20) ms	2.9×10^{-3}	
		(20 ~ 50) ms	1.2×10^{-3}	
		(50 ~ 100) ms	5.9×10^{-3}	
		(100 ~ 200) ms	2.9×10^{-3}	
		(200 ~ 500) ms	1.2×10^{-3}	
		(0.5 ~ 1) s	5.9×10^{-3}	
		(1 ~ 2) s	2.9×10^{-3}	
		(2 ~ 5) s	1.2×10^{-3}	
		(5 ~ 10) s	5.9×10^{-3}	
Inrush current		50 A	0.26 A	
		(50 ~ 100) A	4.2×10^{-3}	
		(100 ~ 500) A	4.4×10^{-3}	
		(500 ~ 1 000) A	3.9×10^{-3}	
Frequency		10 Hz ~ 1 kHz	1.2×10^{-3}	

407. Field strength & antenna

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Microwave leakage monitors	40701			Transfer standard probes
Power Density		2.45 GHz		/HCT-CS-310-40701
		(0.01 ~ 3) mW/cm^2	0.16	
Probes	40702			
E-field probes				Transfer probes
		5 kHz ~ 200 MHz		/HCT-CS-262-40702
		(1 ~ 800) V/m	0.13	
		200 MHz ~ 1 GHz		
		(1 ~ 300) V/m	0.13	
		(1 ~ 18) GHz		
		(1 ~ 200) V/m	0.13	
		(18 ~ 40) GHz		
		(1 ~ 200) V/m	0.14	
H-field probes				H-field probes
Frequency response		10 Hz ~ 400 kHz		/HCT-CS-311-40702
		(0.16 ~ 40) A/m	0.06	
		400 kHz ~ 220 MHz		
		(0.02 ~ 2.97) A/m	0.14	
		220 MHz ~ 1 GHz		
		(0.02 ~ 1.48) A/m	0.16	
Linearity		(50 ~ 60) Hz		
		(0.16 ~ 400) A/m	0.04	
Dipole antennas	40703			
SAR E-field probe				SAR calibration system
Conversion factor		800 MHz ~ 6 GHz	1.3×10^{-1}	/HCT-CS-106-40703
Diple antenna				Network analyzers
Antenna factor		20 MHz ~ 18 GHz	1.1 dB	/HCT-CS-263-40703
VSWR		20 MHz ~ 18 GHz	0.02	
Radiation pattern		700 MHz ~ 18 GHz	1.4 dB	

407. Field strength & antenna

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Dipole antennas	40703			
Bioconacal pattern				Network analyzers
Antenna factor		20 MHz ~ 18 GHz	1.2 dB	/HCT-CS-272-40703
		(18 GHz ~ 40 GHz)	1.5 dB	
VSWR		20 MHz ~ 18 GHz	0.02	
		(18 ~ 40) GHz	0.24	
Log periodic antenna				Network analyzers
Antenna factor		20 MHz ~ 18 GHz	1.2 dB	/HCT-CS-273-40703
		(18 ~ 40) GHz	1.4 dB	
VSWR		20 MHz ~ 6 GHz	0.02	
		(6 ~ 40) GHz	0.24	
Loop antennas	40704			Standard loop antennas
Antenna factor		10 Hz ~ 30 MHz	1.3 dB	/HCT-CS-237-40704
		30 MHz ~ 400 MHz	1.5 dB	
Monopole antennas	40705			Network analyzers
Antenna factor		1 kHz ~ 30 MHz	1.4 dB	/HCT-CS-238-40705
Horn antennas	40707			Network analyzers
Antenna factor		200 MHz ~ 18 GHz	0.9 dB	/HCT-CS-264-40707
		(18 ~ 40) GHz	1.4 dB	
		(40 ~ 110) GHz	1.2 dB	
VSWR		200 MHz ~ 40 GHz	0.02	
		(40 ~ 110) GHz	0.03	
Radiation pattern		700 MHz ~ 18 GHz	1.4 dB	
		(18 ~ 40 GHz)	1.4 dB	

501. Contact thermometry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Temperature generators: ovensm furnaces, isothermal liquid baths, ice-point baths, dry-block calibrators	50101			Standard thermometers
Dry-block calibrators		(-80 ~ 500) ℃	0.05 ℃	/HCT-CS-203-50101
Ice-point baths		0 ℃	0.02 ℃	/HCT-CS-210-50101
Isothermal liquid baths		(-196 ~ 500) ℃	0.03 ℃	/HCT-CS-211-50101
Furnaces		(250 ~ 1 100) ℃	0.9 ℃	/HCT-CS-212-50101
		(1 100 ~ 1 600) ℃	2.6 ℃	
Temperature controlled chambers/ovens		(-80 ~ 250) ℃	0.5 ℃	/HCT-CS-134-50101
		(250 ~ 400) ℃	1.0 ℃	
Temperature inducators /recoders/controllers, temperature calibrators	50102			Standard thermometers
Temperature indicators /recorders/controllers (With Sensor)				
Thermoeletric Type		(-196 ~ -80) ℃	0.4 ℃	/HCT-CS-135-50102
		(-80 ~ 500) ℃	0.7 ℃	
		(500 ~ 1 100) ℃	1.7 ℃	
		(1 100 ~ 1 600) ℃	2.7 ℃	
Resistance Type		(-196 ~ 250) ℃	0.03 ℃	/HCT-CS-274-50102
		(250 ~ 500) ℃	0.06 ℃	
(Without Sensor)				
Thermoelectric Type		(-196 ~ 500) ℃	0.05 ℃	/HCT-CS-137-50102
		(500 ~ 1 600) ℃	0.09 ℃	
Resistance Type		(-196 ~ 500) ℃	0.03 ℃	/HCT-CS-139-50102
Glass thermometers; liquid-in-glass, Beckmann	50103			Standard thermometers /HCT-CS-147-50103
liquid-in-glass		(-80 ~ 250) ℃	0.04 ℃	
Resistance thermometers; SPRT, IPRT, thermistors, etc.	50104			Standard thermometers /HCT-CS-148-50104
IPRT		(-196 ~ 500) ℃	0.04 ℃	

501. Contact thermometry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Thermal expansion thermometers; bimetal, gas or liquid type	50105			Standard thermometers, /HCT-CS-149-50105
bimetal		(-80 ~ 250) ℃	0.6 ℃	
		(250 ~ 500) ℃	1.4 ℃	
Thermomecoules: noble metal, base metal, pure metal, special type, etc.	50106			Standard thermometers, Standard thermocouples
Jewelry thermocouple		(0 ~ 250) ℃	0.5 ℃	/HCT-CS-152-50106
		(250 ~ 500) ℃	0.4 ℃	
		(500 ~ 1 100) ℃	1.0 ℃	
		(1 100 ~ 1 600) ℃	2.8 ℃	
Nonmmetal thermocouple		(-196 ~ -80) ℃	0.6 ℃	/HCT-CS-151-50106
		(-80 ~ 250) ℃	0.4 ℃	
		(250 ~ 500) ℃	0.7 ℃	
		(500 ~ 1 100) ℃	1.3 ℃	
		(1 100 ~ 1 200) ℃	3.2 ℃	
Temperature transducers	50107	(-80 ~ 250) ℃	0.11 ℃	Standard thermometers /HCT-CS-170-50107

502. Non contact thermometry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Standard radiation thermometers	50204	(-20 ~ 0) ℃ (0 ~ 200) ℃ (200 ~ 500) ℃ (500 ~ 800) ℃ (800 ~ 1 000) ℃	0.9 ℃ 0.7 ℃ 1.0 ℃ 1.5 ℃ 1.8 ℃	Standard radiation thermometers, Blackbody sources /HCT-CS-222-50204
Thermal image apparatus	50205	(-20 ~ 0) ℃ (0 ~ 200) ℃ (200 ~ 500) ℃ (500 ~ 800) ℃ (800 ~ 1 000) ℃	0.8 ℃ 0.7 ℃ 0.9 ℃ 1.5 ℃ 1.8 ℃	Standard radiation thermometers, Blackbody sources /HCT-CS-286-50205
Blackbody furnaces	50206	(-20 ~ 0) ℃ (0 ~ 200) ℃ (200 ~ 500) ℃ (500 ~ 800) ℃ (800 ~ 1 000) ℃	0.8 ℃ 0.5 ℃ 1.0 ℃ 1.5 ℃ 1.7 ℃	Standard radiation thermometers /HCT-CS-333-50206

503. Humidity

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Dew-point hygrometers; chilled mirror, alumina thin film, etc.	50301			Automatic dewpoint hygrometers
Alumina thinfilm		(-20 ~ 47) ℃ D.P.	0.7 ℃ D.P.	/HCT-CS-154-50301
Relative humidity hygrometers; polimer thinfilm, etc.	50302			Audomatic dewpoint hygrometers, Standard thermometers
Polimer thinfilm				
(Humidity)		(5 ~ 98) % R.H.	2.1 % R.H.	/HCT-CS-153-50302
(Termometry)		(-40 ~ 85) ℃	0.4 ℃	
Hair				
(Humidity)		(20 ~ 90) % R.H.	2.3 % R.H.	/HCT-CS-156-50302
(Termometry)		(-20 ~ 50) ℃	0.5 ℃	
Temperature humidity recoders; Hygrothermograph, etc.	50304			Audomatic dewpoint hygrometers
(Humidity)		(20 ~ 90) % R.H.	2.3 % R.H.	/HCT-CS-157-50304
(Termometry)		(-20 ~ 50) ℃	0.7 ℃	
Transducers; dew-point/ relative humidity	50305			Audomatic dewpoint hygrometers
Relative humidity		(5 ~ 98) % R.H.	2.6 % R.H.	/HCT-CS-171-50305
Humidity generators; two-pressure, two-temperature, flow mixing humidity generator, contstant temperature and humidity chamber, etc.	50306			
Flow mixing humidity generator		(5 ~ 98) % R.H.	2.0 % R.H.	Audomatic dewpoint hygrometers /HCT-CS-213-50306
Constant temperature and humidity chamber				Audomatic dewpoint
Humidity		(5 ~ 98) % R.H.	2.7 % R.H.	hygrometers, Temperature indicators
Thermometry		(-80 ~ 250) ℃	0.6 ℃	/HCT-CS-182-50306

601. Sound in air

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Sound calibrators;	60102			Autostic calibrators
Multifunction calibrator		31.5 Hz	0.12 dB	/HCT-CS-196-60102
		(31.5 ~ 8 000) Hz	0.09 dB	
		(8 000 ~ 12 500) Hz	0.10 dB	
Pistonphone, Sound caliberaor		250 Hz	0.08 dB	/HCT-CS-196-60102
		1 000 Hz	0.09 dB	
Microphones	60104			
Pistonphone		250 Hz	0.14 dB	Pistonphone /HCT-CS-194-60104
3-port coupler		20 Hz	0.15 dB	3-port Coupler, Microphone
		(20 ~ 25) Hz	0.13 dB	/HCT-CS-293-60104
		(25 ~ 31.5) Hz	0.12 dB	
		(31.5 ~ 40) Hz	0.11 dB	
		(40 ~ 50) Hz	0.10 dB	
		(50 ~ 63) Hz	0.09 dB	
		(63 ~ 4 000) Hz	0.08 dB	
		(4 000 ~ 6 300) Hz	0.09 dB	
		(6 300 ~ 8 000) Hz	0.11 dB	
		(8 000 ~ 10 000) Hz	0.12 dB	
		(10 000 ~ 12 500) Hz	0.13 dB	
		(12 500 ~ 16 000) Hz	0.24 dB	
		(16 000 ~ 20 000) Hz	0.35 dB	
Sound level meters	60106			
Multifunction calibrator		(63 ~ 125) Hz	0.3 dB	ACOUSTIC CALIBRATOR
		(125 ~ 2 000) Hz	0.2 dB	/HCT-CS-158-60106
		(2 000 ~ 4 000) Hz	0.3 dB	
		(4 000 ~ 8 000) Hz	0.4 dB	
3-port coupler		20 Hz	0.5 dB	3-port Coupler
		(20 ~ 50) Hz	0.4 dB	/HCT-CS-172-60106
		(50 ~ 125) Hz	0.3 dB	
		(125 ~ 3 150) Hz	0.2 dB	
		(3 150 ~ 8 000) Hz	0.3 dB	
		(8 000 ~ 12 500) Hz	0.4 dB	
		(12 500 ~ 20 000) Hz	0.5 dB	

603. Vibration

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Vibration calibrators	60301			Standard accelerometer
Vibration calibrator		(20 ~ 5 000) Hz	1.9×10^{-2}	/HCT-CS-219-60301
Vibration transducers	60302			Standard accelerometers
Vibration transducer		(1 ~ 5) Hz	2.0×10^{-2}	/HCT-CS-220-60302
		(5 ~ 8) Hz	1.9×10^{-2}	
		(8 ~ 20) Hz	1.2×10^{-2}	
		(20 ~ 630) Hz	1.1×10^{-2}	
		(630 ~ 1 250) Hz	1.2×10^{-2}	
		(1 250 ~ 2 500) Hz	1.6×10^{-2}	
		(2 500 ~ 5 000) Hz	2.1×10^{-2}	
		(5 000 ~ 10 000) Hz	2.8×10^{-2}	
		(10 000 ~ 15 000) Hz	3.7×10^{-2}	
		(15 000 ~ 20 000) Hz	4.5×10^{-2}	
Vibration transducer(Shock)		(0.1 ~ 11) ms		/HCT-CS-291-60302
		200 m/s^2	3.1×10^{-2}	
		(200 ~ 500) m/s^2	2.6×10^{-2}	
		(500 ~ 1 000) m/s^2	2.5×10^{-2}	
		(1 000 ~ 20 000) m/s^2	3.1×10^{-2}	
		(20 000 ~ 100 000) m/s^2	3.8×10^{-2}	

Accreditation No. : KC00-011

603. Vibration

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Vibration measuring instrument	60303			Standard accelerometers
Vibration measuring instrument				
Acceleration		10 Hz	1.7×10^{-2}	
		(10 ~ 40) Hz	1.8×10^{-2}	/HCT-CS-221-60303
		(40 ~ 160) Hz	1.7×10^{-2}	
		(160 ~ 630) Hz	1.8×10^{-2}	
		(630 ~ 1 250) Hz	1.9×10^{-2}	
		(1 250 ~ 2 500) Hz	2.1×10^{-2}	
Velocity		(10 ~ 20) Hz	1.8×10^{-2}	
		(20 ~ 160) Hz	1.7×10^{-2}	
		(160 ~ 630) Hz	1.8×10^{-2}	
		(630 ~ 1 250) Hz	2.1×10^{-2}	
		(1 250 ~ 2 500) Hz	2.7×10^{-2}	
Displacement		(10 ~ 160) Hz	1.6×10^{-2}	
		(160 ~ 315) Hz	2.2×10^{-2}	
n measurring instrument(Shock)		200 m/s^2	4.6×10^{-2}	/HCT-CS-292-60303
		(200 ~ 500) m/s^2	3.0×10^{-2}	
		(500 ~ 1 000) m/s^2	2.7×10^{-2}	
		(1 000 ~ 1 500) m/s^2	2.6×10^{-2}	
		(1 500 ~ 2 000) m/s^2	3.2×10^{-2}	

Accreditation No. : KC00-011

701. Photometry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Illuminance meters	70101			Reference Illummunance meters
		0.5 lx	3.4×10^{-2}	/HCT-CS-159-70101
		(0.5 ~ 10) lx	2.9×10^{-2}	
		(10 ~ 2 000) lx	2.8×10^{-2}	
		(2 000 ~ 11 000) lx	2.9×10^{-2}	
Luminance meters	70102			Luminance standard sources
Luminance		(2 ~ 10) cd/㎡	2.4×10^{-2}	/HCT-CS-316-70102
		(10 ~ 100) cd/㎡	1.7×10^{-2}	
		(100 ~ 1 000) cd/㎡	1.6×10^{-2}	
		(1 000 ~ 13 000) cd/㎡	1.8×10^{-2}	
Total luminous flux meters	70103			Total luminous flux
Total luminous flux		(70 ~ 20 000) lm	2.3×10^{-2}	standard lamp
				/HCT-CS-296-70103
Luminous intensity meters	70104			Luminous intensity
Luminous intensity		(8.22 ~ 2 950) cd	3.3×10^{-2}	standard lamp
				/HCT-CS-297-70104

702. Property of detectors & sources

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Color Temperature Meters	70202			Color Temperature Standard lamps /HCT-CS-298-70202
Color Temperature		(2 715 ~ 3 058) K	22 K	
Color temperature standard lamps	70203			Color temperature standard lamps, Spectral irradiancee meters /HCT-CS-299-70203
Color temperature		2 856 K	22 K	
Calorimeters; source color	70204			Luminance standard sources, Color temperature standard lamps, Color filters /HCT-CS-317-70204
Chromaticity coordinates (CIE 1931)		x,y : (0.01 ~ 0.9)		
		Tungsten light sources 2 856 K		
		x	0.003	
		y	0.003	
		Red		
		x	0.004	
		y	0.004	
		Green		
		x	0.004	
		y	0.004	
		Blue		
		x	0.004	
		y	0.004	
		White		
		x	0.004	
		y	0.004	
Luminance		(2 ~ 10) cd/㎡	2.4×10^{-2}	
		(10 ~ 100) cd/㎡	1.7×10^{-2}	
		(100 ~ 1 000) cd/㎡	1.6×10^{-2}	
		(1 000 ~ 13 000) cd/㎡	1.8×10^{-2}	
Iluminance		1 lx	3.0×10^{-2}	
		(1 ~ 2 000) lx	2.8×10^{-2}	
Total luminance flux standard lamps	70209			Total luminous flux standard lamps, Total luminous flux meters /HCT-CS-300-70209
Total luminance flux		(70 ~ 20 000) lm	3.6×10^{-2}	

702. Property of detectors & sources

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Display color analyzers; luminance, chromaticity, white balance, etc.	70213			Luminance standard sources, Color filters /HCT-CS-318-70213
Chromaticity		x,y : (0.01 ~ 0.9)		
Chromaticity coordinates		tungsten source 2 856 K		
(CIE 1931)		x	0.003	
		y	0.003	
		Red		
		x	0.004	
		y	0.004	
		Green		
		x	0.004	
		y	0.004	
		Blue		
		x	0.004	
		y	0.004	
		White		
		x	0.004	
		y	0.004	
Luminance		(2 ~ 10) cd/㎡	2.4×10^{-2}	
		(10 ~ 100) cd/㎡	1.7×10^{-2}	
		(100 ~ 1 000) cd/㎡	1.6×10^{-2}	
		(1 000 ~ 13 000) cd/㎡	1.8×10^{-2}	
Luminous intensity standard lamps	70214			Luminous intensity standard lamps,
Luminous intensity		(8.22 ~ 2 950) cd	3.3×10^{-2}	Luminous instensity meters /HCT-CS-301-70214

702. Property of detectors & sources

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Spectal irraduance standard lamps	70215			Spectral irradiance standard lamps,
Spectral irradiance		250 nm	7.6×10^{-2}	Spectral irradiance meters
		(250 ~ 255) nm	6.6×10^{-2}	/HCT-CS-302-70215
		(255 ~ 265) nm	6.2×10^{-2}	
		(265 ~ 275) nm	5.7×10^{-2}	
		(275 ~ 285) nm	5.3×10^{-2}	
		(285 ~ 295) nm	5.0×10^{-2}	
		(295 ~ 305) nm	4.4×10^{-2}	
		(305 ~ 340) nm	4.0×10^{-2}	
		(340 ~ 370) nm	3.5×10^{-2}	
		(370 ~ 400) nm	2.9×10^{-2}	
		(400 ~ 475) nm	2.6×10^{-2}	
		(475 ~ 1 020) nm	2.2×10^{-2}	
Iluminance		(6 833 ~ 7 224) lx	2.8×10^{-2}	
Color tempature		(3 014 ~ 3 061) K	22 K	
Chromaticity coordinates		x (0.431 ~ 0.437)	0.003	
(CIE 1931)		y (0.401 ~ 0.407)	0.003	
Total spectral radiant flux standard lamps	70216			Total spectral radiant flux standard lamps,
Total spectral radiant		350 nm	6.2×10^{-2}	Total spectral radiant flux
		(350 ~ 365) nm	5.1×10^{-2}	meters
		(365 ~ 380) nm	4.3×10^{-2}	/HCT-CS-303-70216
		(380 ~ 410) nm	3.6×10^{-2}	
		(410 ~ 480) nm	2.9×10^{-2}	
		(480 ~ 850) nm	2.6×10^{-2}	
Total luminous flux		(2 130 ~ 2 208) nm	2.6×10^{-2}	
Color tempature		(2 715 ~ 2 758) K	22 K	
Chromaticity coordinates		x (0.454 ~ 0.460)	0.003	
(CIE 1931)		y (0.407 ~ 0.413)	0.003	

702. Property of detectors & sources

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Luminance standard sources	70217			Spectral radiance meters,
Luminance		(2 ~ 13 000) cd/㎡	2.4×10^{-2}	Colorimeters; source color
				/HCT-CS-319-70217
Chromaticity coordinates		x,y : (0.01 ~ 0.9)		
(CIE 1931)		tungsten source 2 856 K		
		x	0.003	
		y	0.003	
		Red		
		x	0.005	
		y	0.004	
		Green		
		x	0.006	
		y	0.005	
		Blue		
		x	0.004	
		y	0.004	
		White		
		x	0.004	
		y	0.004	
Spectral radiance standard sources	70218			Spectral radiance standard
Spectral radiance		380 nm	4.3×10^{-2}	sources,
		(380 ~ 395) nm	4.0×10^{-2}	Spectral radiance meters
		(395 ~ 410) nm	3.5×10^{-2}	/HCT-CS-320-70218
		(410 ~ 425) nm	3.1×10^{-2}	
		(425 ~ 450) nm	2.9×10^{-2}	
		(450 ~ 475) nm	2.5×10^{-2}	
		(475 ~ 1 030) nm	2.4×10^{-2}	
		(1 030 ~ 1 035) nm	2.6×10^{-2}	
UV irradiance meters	70219			UV Sensor
		365 nm		/HCT-CS-159-70219
		60 μW/cm^2 ~ 200 mW/cm^2	4.8×10^{-2}	
		405 nm		
		60 μW/cm^2 ~ 70 mW/cm^2	4.8×10^{-2}	

702. Property of detectors & sources

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Spectral irradiance meters	70220			Spectral irradiance standard lamps /HCT-CS-304-70220
Wavelength		(350 ~ 850) nm	0.51 nm	
Spectral irradiance		250 nm	7.1×10^{-2}	
		(250 ~ 255) nm	6.6×10^{-2}	
		(255 ~ 275) nm	5.7×10^{-2}	
		(275 ~ 295) nm	4.8×10^{-2}	
		(295 ~ 320) nm	4.0×10^{-2}	
		(320 ~ 350) nm	3.6×10^{-2}	
		(350 ~ 425) nm	2.9×10^{-2}	
		(425 ~ 475) nm	2.4×10^{-2}	
		(475 ~ 590) nm	2.2×10^{-2}	
		(590 ~ 1 020) nm	2.0×10^{-2}	
Iluminance		(6 822 ~ 7 152) lx	2.9×10^{-2}	
Color temperature		(3 011 ~ 3 058) K	22 K	
Chromaticity coordinates (CIE 1931)		x (0.431 ~ 0.437)	0.003	
		y (0.401 ~ 0.407)	0.003	
Total spectral radiant flux meters	70221			Total spectral radiant flux standard lamps /HCT-CS-305-70221
Wavelength		(350 ~ 850) nm	0.51 nm	
Total spectral radiant flux		350 nm	4.4×10^{-2}	
		(350 ~ 355) nm	4.1×10^{-2}	
		(355 ~ 370) nm	3.8×10^{-2}	
		(370 ~ 390) nm	3.1×10^{-2}	
		(390 ~ 425) nm	2.5×10^{-2}	
		(425 ~ 480) nm	2.1×10^{-2}	
		(480 ~ 850) nm	1.9×10^{-2}	
Total luminous flux meters		(2 127 ~ 2 198) lm	2.3×10^{-2}	
Color temperature		(2 752 ~ 2 876) K	22 K	
Chromaticity coordinates (CIE 1931)		x (0.451 ~ 0.457)	0.004	
		y (0.407 ~ 0.413)	0.004	

702. Property of detectors & sources

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Spectral radiance meters	70222			Spectral rediance meters,
Wavelength		(400 ~ 765) nm	0.51 nm	Luminance standard sources
				/HCT-CS-321-70222
Spectral radiance		(380) nm	4.1×10^{-2}	
		(380 ~ 395) nm	3.8×10^{-2}	
		(395 ~ 410) nm	3.3×10^{-2}	
		(410 ~ 420) nm	2.9×10^{-2}	
		(420 ~ 445) nm	2.7×10^{-2}	
		(445 ~ 465) nm	2.4×10^{-2}	
		(465 ~ 500) nm	2.2×10^{-2}	
		(500 ~ 925) nm	1.9×10^{-2}	
		(925 ~ 1 030) nm	2.1×10^{-2}	
		(1 030 ~ 1 035) nm	2.4×10^{-2}	
Luminance		(2 ~ 10) cd/㎡	2.4×10^{-2}	
		(10 ~ 100) cd/㎡	1.7×10^{-2}	
		(100 ~ 1 000) cd/㎡	1.6×10^{-2}	
		(1 000 ~ 13 000) cd/㎡	1.8×10^{-2}	
Color temperature		(2 841 ~ 2 881) K	22 K	
Chromaticity coordinates		x : (0.447 ~ 0.451)	0.003	
(CIE 1931)		y : (0.409 ~ 0.413)	0.003	
Spectral radiant intensity meters	70223			Luminous intensity standard lamps
Wavelength		(350 ~ 850) nm	0.51 nm	/HCT-CS-306-70223
Spectral radiant intensity		250 nm	6.7×10^{-2}	
		(250 ~ 255) nm	6.1×10^{-2}	
		(255 ~ 275) nm	5.2×10^{-2}	
		(275 ~ 300) nm	4.4×10^{-2}	
		(300 ~ 340) nm	3.7×10^{-2}	
		(340 ~ 455) nm	2.9×10^{-2}	
		(455 ~ 565) nm	2.2×10^{-2}	
		(565 ~ 1 020) nm	2.0×10^{-2}	

Accreditation No. : KC00-011

703. Property of materials

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Colorimeters;object color (Including Specular Component Standard Illuminant:A, C, D65 Standard Observe : 2° , 10°)	70301			Color standard tiles /HCT-CS-354-70301
White		X	0.82	
		Y	0.74	
		Z	0.86	
M. Grey		X	0.25	
		Y	0.23	
		Z	0.27	
D. Grey		X	0.10	
		Y	0.09	
		Z	0.10	
Red		X	0.32	
		Y	0.18	
		Z	0.09	
Orange		X	0.57	
		Y	0.41	
		Z	0.11	
Yellow		X	0.69	
		Y	0.60	
		Z	0.13	
Green		X	0.16	
		Y	0.20	
		Z	0.17	
D. Blue		X	0.07	
		Y	0.06	
		Z	0.13	

Accreditation No. : KC00-011

703. Property of materials

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Colorimeters;object color (Excluding Specular Component Standard Illuminant A, C, D65 Standard Observe : 2° , 10°)	70301			Color standard tiles /HCT-CS-354-70301
White		X	0.79	
		Y	0.71	
		Z	0.82	
M. Grey		X	0.22	
		Y	0.20	
		Z	0.23	
D. Grey		X	0.06	
		Y	0.06	
		Z	0.06	
Red		X	0.29	
		Y	0.16	
		Z	0.05	
Orange		X	0.54	
		Y	0.38	
		Z	0.07	
Yellow		X	0.65	
		Y	0.57	
		Z	0.11	
Green		X	0.13	
		Y	0.17	
		Z	0.14	
D. Blue		X	0.04	
		Y	0.03	
		Z	0.10	

703. Property of materials

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Colorimeters;object color	70301			Color standard tiles
(Including Specular Component				/HCT-CS-354-70301
Standard Illuminant:A, C, D65				
Standard Observe : 2° , 10°)				
White		x	0.000 5	
		y	0.000 5	
M. Grey		x	0.000 5	
		y	0.000 5	
D. Grey		x	0.000 5	
		y	0.000 5	
Red		x	0.000 8	
		y	0.000 5	
Orange		x	0.000 5	
		y	0.000 5	
Yellow		x	0.000 5	
		y	0.000 5	
Green		x	0.000 5	
		y	0.000 5	
D. Blue		x	0.000 5	
		y	0.000 6	
(Excluding Specular Component				
Standard Illuminant A, C, D65				
Standard Observe : 2° , 10°)				
White		x	0.000 5	
		y	0.000 5	
M. Grey		x	0.000 5	
		y	0.000 5	
D. Grey		x	0.000 5	
		y	0.000 5	
Red		x	0.000 7	
		y	0.000 5	
Orange		x	0.000 5	
		y	0.000 5	
Yellow		x	0.000 6	
		y	0.000 5	
Green		x	0.000 5	
		y	0.000 5	
D. Blue		x	0.000 8	
		y	0.000 8	

Accreditation No. : KC00-011

703. Property of materials

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Colorimeters;object color (Including Specular Component Standard Illuminant:A, C, D65 Standard Observe : 2° , 10°)	70301			Color standard tiles /HCT-CS-354-70301
White		*L**	0.31	
		*a**	0.09	
		*b**	0.08	
M. Grey		*L**	0.21	
		*a**	0.06	
		*b**	0.06	
D. Grey		*L**	0.15	
		*a**	0.04	
		*b**	0.04	
Red		*L**	0.22	
		*a**	0.21	
		*b**	0.20	
Orange		*L**	0.27	
		*a**	0.19	
		*b**	0.24	
Yellow		*L**	0.29	
		*a**	0.18	
		*b**	0.25	
Green		*L**	0.21	
		*a**	0.12	
		*b**	0.13	
D. Blue		*L**	0.13	
		*a**	0.10	
		*b**	0.13	

703. Property of materials

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Colorimeters;object color	70301			Color standard tiles
(Excluding Specular Component				/HCT-CS-354-70301
Standard Illuminant A, C, D65				
Standard Observe : 2° , 10°)				
White		L^*	0.31	
		a^*	0.09	
		b^*	0.07	
M. Grey		L^*	0.20	
		a^*	0.06	
		b^*	0.06	
D. Grey		L^*	0.13	
		a^*	0.04	
		b^*	0.04	
Red		L^*	0.21	
		a^*	0.21	
		b^*	0.24	
Orange		L^*	0.26	
		a^*	0.19	
		b^*	0.26	
Yellow		L^*	0.29	
		a^*	0.19	
		b^*	0.29	
Green		L^*	0.20	
		a^*	0.12	
		b^*	0.14	
D. Blue		L^*	0.10	
		a^*	0.16	
		b^*	0.18	
Gloss meters	70306			Gloss Standard
Gloss		20 °	9.8×10^{-3}	/HCT-CS-366-70306
		60 °	7.5×10^{-3}	
		85 °	6.5×10^{-3}	
Optical densitometers	70315			X-ray film step tablet
Density		1 Step ~ 11 Step	0.05	/HCT-CS-369-70315
		12 Step ~ 14 Step	0.11	
Reflectance meters	70319			Absolute Spectral Reflectance,
Reflectance		(380 ~ 780) nm	1.4×10^{-2}	White Standard Plates
				/HCT-CS-370-70319

703. Property of materials

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Refractometers	70321	(1.332 97 ~ 1.490 78)nD	0.000 06 nD	Refractometers /HCT-CS-355-70321
Transmittance meters	70323			Transmittance Filter
Transmittance		(0.08 ~ 0.2)		/HCT-CS-367-70323
		(250 ~ 750) nm	9.7×10^{-3}	
		(0.3 ~ 0.5)		
		(250 ~ 750) nm	8.4×10^{-3}	
		(0.9 ~ 0.95)		
		(250 ~ 750) nm	8.6×10^{-3}	
Spectrophotometers	70325			Wavelength Filters,
Wavenumber		(241.3 ~ 879.7) nm	0.4 nm	Transmittance Filters,
				Absolute Spectral Reflectance,
Transmittance		(0.08 ~ 0.2)		White Standard Plates
		250 nm	9.7×10^{-3}	/HCT-CS-368-70325
		300 nm	9.5×10^{-3}	
		350 nm	9.1×10^{-3}	
		400 nm	6.9×10^{-3}	
		450 nm	7.4×10^{-3}	
		500 nm	7.4×10^{-3}	
		550 nm	7.3×10^{-3}	
		600 nm	7.9×10^{-3}	
		650 nm	7.7×10^{-3}	
		700 nm	7.1×10^{-3}	
		750 nm	7.4×10^{-3}	
		(0.3 ~ 0.5)		
		250 nm	8.4×10^{-3}	
		300 nm	8.4×10^{-3}	
		350 nm	8.1×10^{-3}	
		400 nm	5.7×10^{-3}	
		450 nm	5.6×10^{-3}	
		500 nm	5.8×10^{-3}	
		550 nm	5.9×10^{-3}	
		600 nm	5.8×10^{-3}	
		650 nm	5.8×10^{-3}	
		700 nm	5.8×10^{-3}	
		750 nm	5.9×10^{-3}	

703. Property of materials

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Spectrophotometers	70325			Wavelength Filters,
Transmittance		(0.9 ~ 0.95)		Transmittance Filters,
		250 nm	8.6×10^{-3}	Absolute Spectral Reflectance,
		300 nm	8.6×10^{-3}	White Standard Plates
		350 nm	8.2×10^{-3}	/HCT-CS-368-70325
		400 nm	5.9×10^{-3}	
		450 nm	5.7×10^{-3}	
		500 nm	5.8×10^{-3}	
		550 nm	5.8×10^{-3}	
		600 nm	5.7×10^{-3}	
		650 nm	5.7×10^{-3}	
		700 nm	5.8×10^{-3}	
		750 nm	5.9×10^{-3}	
Absorbance		(0.9 ~ 1.1)		
		250 nm	0.003 6	
		300 nm	0.003 6	
		350 nm	0.003 5	
		400 nm	0.002 3	
		450 nm	0.002 3	
		500 nm	0.002 4	
		550 nm	0.002 4	
		600 nm	0.002 4	
		650 nm	0.002 4	
		700 nm	0.002 5	
		750 nm	0.002 5	
		(0.3 ~ 0.5)		
		250 nm	0.003 7	
		300 nm	0.003 7	
		350 nm	0.003 5	
		400 nm	0.002 4	
		450 nm	0.002 5	
		500 nm	0.002 4	
		550 nm	0.002 5	
		600 nm	0.002 5	
		650 nm	0.002 6	
		700 nm	0.002 5	
		750 nm	0.002 6	

703. Property of materials

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Spectrophotometers	70325			Wavelength Filters,
Absorbance		(0.02 ~ 0.1)		Transmittance Filters,
		250 nm	0.003 7	Absolute Spectral Reflectance,
		300 nm	0.003 8	White Standard Plates
		350 nm	0.003 6	/HCT-CS-368-70325
		400 nm	0.002 6	
		450 nm	0.002 7	
		500 nm	0.002 6	
		550 nm	0.002 6	
		600 nm	0.002 7	
		650 nm	0.002 6	
		700 nm	0.002 6	
		750 nm	0.002 6	
Spectral Reflectance (Including Specular Component Standard Illuminant, Excluding Specular Component Standard Illuminant)		(250 ~ 2 500) nm	1.9×10^{-2}	

704. Fiber optics

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Broadband light sources	70402			Wavelength meters,
Wavelength output		1 310 nm	8.5×10^{-7}	Optical power meters
		1 550 nm	8.2×10^{-7}	/HCT-CS-266-70402
Optical power output		1 310 nm (-60 ~ 0) dBm	0.07 dB	
		1 550 nm (-60 ~ 0) dBm	0.07 dB	
Optical attenuators	70410			Optical power meters
Optical attenuation		1 310 nm, 1 550 nm (-60 ~ 0) dB	0.07 dB	/HCT-CS-267-70410
Optical loss testers	70413			Wavelength meters,
Wavelength output		1 310 nm	8.5×10^{-7}	Optical power meters
		1 550 nm	8.2×10^{-7}	/HCT-CS-280-70413
Optical power input				
		1 310 nm (-60 ~ 0) dBm	0.07 dB	
		1 550 nm (-60 ~ 0) dBm	0.07 dB	
Linearity measure		1 310 nm, 1 550 nm (-60 ~ 0) dB	0.07 dB	
Optical mmultimeters	70415			Optical power meters
Optical power input		1 310 nm (-60 ~ 0) dBm	0.07 dB	/HCT-CS-268-70415
		1 550 nm (-60 ~ 0) dBm	0.07 dB	
Linearity measure		1 310 nm, 1 550 nm (-60 ~ 0) dB	0.07 dB	

704. Fiber optics

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Optical spectrum analyzers	70417			Wavelength meters,
Wavelength output		1 310 nm, 1 550 nm	0.084 nm	Optical power meters
				/HCT-CS-269-70417
Resolution measure		1 310 nm, 1 550 nm	0.084 nm	
		RBW (0.1 ~ 1) nm		
Optical power output		1 310 nm		
		(-60 ~ 0) dBm	0.07 dB	
		1 550 nm		
		(-60 ~ 0) dBm	0.07 dB	
Linearity measure		1 310 nm, 1 550 nm		
		(-60 ~ 0) dB	0.07 dB	
Optical time domain reflectometers; OTDR	70418			Optical spectrum analyzers, Standard CRM
Wavelength		1 310 nm	0.36 nm	/HCT-CS-270-70418
		1 550 nm	0.36 nm	
Length		(1 310 nm)		
		3 km	0.1 m	
		13 km	0.34 m	
		(1 550 nm)		
		3 km	0.1 m	
		13 km	0.34 m	
Return loss		(1 310 nm)		
		3 km	0.10 dB	
		13 km	0.21 dB	
		(1 550 nm)		
		3 km	0.08 dB	
		13 km	0.10 dB	

Accreditation No. : KC00-011

704. Fiber optics

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
ASE light sources	70430			Wavelength meters,
Wavelength output		1 310 nm	8.5×10^{-7}	Optical power meters
		1 550 nm	8.2×10^{-7}	/HCT-CS-281-70430
Optical power output		1 310 nm (-60 ~ 0) dBm	0.07 dB	
		1 550 nm (-60 ~ 0) dBm	0.07 dB 0.08 dB	
Optical power stabilized lasers and LDs	70433			Wavelength meters, Optical power meters
Wavelength output		1 310 nm	8.5×10^{-7}	/HCT-CS-271-70433
		1 550 nm	8.2×10^{-7}	
Optical power output		1 310 nm (-60 ~ 0) dBm	0.07 dB	
		1 550 nm (-60 ~ 0) dBm	0.07 dB	

Accreditation No. : KC00-011

901. Chemical analsis

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Breath Alcohol Anayzer	90101			CRM
Dry process		(0.000 ~ 0.030) % BAC	3.2×10^{-2}	/HCT-CS-358-90101
		(0.030 ~ 0.080) % BAC	2.1×10^{-2}	
		(0.080 ~ 0.450) % BAC	1.0×10^{-2}	
Wet process		(0.000 ~ 0.030) % BAC	2.5×10^{-2}	
		(0.030 ~ 0.080) % BAC	1.5×10^{-2}	
Environmental air quality monitoring instruments	90102			CRM /HCT-CS-346-90102
Oxygen(O_2)		(0 ~ 22.0) cmol/mol	2.2×10^{-2}	
Carbon monoxide(CO)		(0 ~ 105) μmol/mol	2.2×10^{-2}	
Sulfer dioxide(SO_2)		(0 ~ 110) μmol/mol	2.1×10^{-2}	
Nitrogen monoxide(NO)		(0 ~ 110) μmol/mol	2.0×10^{-2}	
Gas analyzers	90103			CRM
Oxygen(O_2)		(0 ~ 22.0) cmol/mol	2.2×10^{-2}	/HCT-CS-164-90103
Carbon monoxide(CO)		(0 ~ 105) μmol/mol	2.2×10^{-2}	
Methane(CH_4)		(0 ~ 2.2) cmol/mol	4.1×10^{-2}	
Carbon dioxide(CO_2)		(0 ~ 10.5) cmol/mol	2.2×10^{-2}	
Hydrogen sulfide(H_2S)		(0 ~ 53) μmol/mol	5.0×10^{-2}	
Sulfer dioxide(SO_2)		(0 ~ 110) μmol/mol	2.1×10^{-2}	
Hydrogen chloride(HCl)		(0 ~ 53) μmol/mol	5.1×10^{-2}	
Nitrogen monoxide(NO)		(0 ~ 110) μmol/mol	2.0×10^{-2}	
Hydrogen(H_2)		(0 ~ 2.2) cmol/mol	2.0×10^{-2}	

Accreditation No. : KC00-011

901. Chemical analsis

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Exhaust gas test instruments	90104			CRM
Oxygen(O_2)		(0.3 ~ 1.0) cmol/mol	2.2×10^{-2}	/HCT-CS-347-90104
Carbon monoxide(CO)		(0.3 ~ 5.0) cmol/mol	2.2×10^{-2}	
Carbon dioxide(CO_2)		(5.0 ~ 10.5) cmol/mol	2.2×10^{-2}	
Nitrogen monoxide(NO)		(500 ~ 1 000) μmol/mol	2.2×10^{-2}	

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017 & KS Q ISO/IEC 17025:2017

HCT Co., Ltd.
46-17, Seongseogongdan-ro, Dalseo-gu, Daegu, Republic of Korea
Phone : 82-53-582-8525, Fax : 82-53-582-8526, e-mail : hct.qm@hct.co.kr

CALIBRATION

Valid To : Jan. 07, 2026.

Accreditation No : KC00-011

In recognition of the successful completion of the KOLAS evaluation process,
accreditation is granted to this laboratory to perform the following calibrations

Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site
501. Contact thermometry								
50101	Temperature generators; ovens, furnaces, isothermal liquid baths, ice-point baths, dry-block calibrators	Y						
50102	Temperature indicators /recorders/controllers, temperature calibrators	Y						
50104	Resistance thermometers; SPRT, IPRT, thermistors, etc.	Y						
50107	Temperature transducers	N						

Note

1. This laboratory provides calibration services in permanent standard laboratory and at on-site.
2. Laboratory conducts on-site calibration should meet requirements of KOLAS-SR-007.
3. On-site calibration is allowed to items with marking 'Y', not allowed to items with marking 'N'.
4. Measurement uncertainty normally is quoted as an expanded uncertainty at a coverage probability of 95 %, which usually requires the use of a coverage factor of k=2. It expresses the lowest uncertainty of measurement that can be provided by accredited calbration laboratories in normal conditions.
5. Due to the calibration environment such as reference standards or customers' facilities, it is note that uncertainty of measurement on a calibration certificate may be expressed larger than measurement uncertainty on scope of accreditation in general.

Accreditation No. : KC00-011

501. Contact thermometry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Temperature generators: ovensm furnaces, isothermal liquid baths, ice-point baths, dry-block calibrators	50101			Standard thermometers
Temperature controlled chambers/ovens		(-40 ~ 250) ℃	0.9 ℃	/HCT-CS-134-50101
Temperature inducators /recoders/controllers, temperature calibrators	50102			Standard thermometers
Temperature indicators /recorders/controllers (With Seneor)				
Thermoelectric type		(-40 ~ 250) ℃	0.4 ℃	/HCT-CS-135-50102
Resistance type		(-40 ~ 250) ℃	0.07 ℃	/HCT-CS-274-50102
(Without Sensor)				
Thermoelectric type		(-40 ~ 250) ℃	0.08 ℃	/HCT-CS-137-50102
Resistance type		(-40 ~ 250) ℃	0.03 ℃	/HCT-CS-139-50102
Resistance thermometers; SPRT, IPRT, thermistors, etc.	50104			Standard thermometers / HCT-CS-148-50104
IPRT		(-40 ~ 250) ℃	0.08 ℃	
Temperature transducers	50107	(-40 ~ 250) ℃	0.16 ℃	Standard thermometers / HCT-CS-170-50107