Accreditation No. : KC00-011

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

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CALIBRATION

Valid To : Jan. 07, 2026. Accreditation No : KC00-000

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
102. Linear dimension		
10201	Balls	N
10203	Electrical/machanical comperators	Y
10206	Dial/cylinder gauge testers	N
10207	Doctor blades	N
10209	End bars	N
10210	Extensometers, linear displacement transducers	Y
10211	Filler gauges	N
10212	Film applicators	N
10213	Gap gauges	N
10214	Gauge blocks, by comparison	N
10216	Height gauges/ measuring machines	Y
10219	Linear scales	N
10220	Standard measuring machines	Y
10223	Electronic micrometers	N
10224	Height micrometers, Riser blocks	N
10225	Laser scan micrometers	Y
10227	Standard tape rules, peripheral gauges	N
10228	Cylindrical plug/pin gauges, thread measuring wire gauges	N
10229	Radius gauges	N
10230	Cylindrical ring gauges	N
10231	Step blocks	N
10232	Step gauges	N
10233	Taper thickness gauges	N
10234	Ultrasonic thickness gauges	Y
10235	Ultrasonic/coating thickness specimens	N
10236	Coating thickness testers	Y
10237	Torque arms	N
10238	Width measuring specimens	N
103. Angle		
10304	Bevel protractors	N
10311	Plate/square/electric levels	N
10317	Sine bars, plates, tables, centers	N
10318	Squareness testers, right angle testers	N
10319	Cylindrical squares	N
10320	Precision squares	N
104. Form		
10401	Form testers	Y
10404	Optical flats	N
10405	Optical parallels	N
10406	Parallel blocks	N
10407	Precision surface plates	Y
10409	Roundness measurement instruments	Y
10412	Straight edges	N
10413	Straight rules	N
10415	Test bars	N
10416	Spherometers	N
105. Complex geometry		
10503	Contact coordinate measuring machines	Y
10504	Non-contact coordinate measuring machines	Y
10505	Gauge block accessories	N
10511	Measuring microscopes, profile projectors	Y
10512	Micro measuring	Y
10517	Stylus type roughness	Y
10525	Thread plug gauges	N
10529	V-blocks, box blocks	N
106. Various dimensional		
10601	Inside/outside/gear tooth calipers, caliper gauges	Y
10603	Cylinder/bore gauges	Y
10604	Depth gauges, depth micrometers	Y
10605	Dial/digital gauges	Y
10609	Micro indicators, Test indicators	Y
10610	Micrometer heads	N
10611	3-point micrometers	Y
10612	Inside micrometers	Y
10613	Outside micrometers	Y
10615	Particle counters	Y
10617	Standard sieves	N
10620	Welding gauges	N
10622	Particle dilution Systems	Y
201. Mass		
20105	Counter beam balances	Y
20106	Dial platform scale	Y
20108	Direct reading balances	Y
20109	Electric balances	Y
20112	Platform scale balances	Y
20113	Spring scale balances	Y
20114	Trip balances	N
20116	Weights	Y
202. Force		
20202	Force measuring devices	N
20203	Tension/compression testing machines	Y
20204	Push-pull gauges	N
203. Torque		
20302	Torque measuring devices	N
20303	Torque wrenches/drivers	N
204. Pressure		
20401	Altimeters	Y
20402	Manometers	Y
20406	Absolute pressure gauges	Y
20408	Compound pressure gauges	Y
20409	Differential pressure	Y
20411	Gauge pressure gauges	Y
20412	Pressure transducers /transmitters	Y
20413	Dial type vacuum gauges	Y
20414	Water Depth meters	Y
206. Volume		
20601	Volumetric glasswares	N
20602	Pycnometers	N
20605	Concrete air content	N
20606	Piston type volume meters	N
207. Density		
20702	Liquid density meters	N
20704	Salinity meters	N
20705	Sucrise meters	N
20707	Chloride meters	N
208. Viscosity		
20802	Dynamic viscometers; rotational, etc.	N
209. Fluid flow		
20901	Anemometers; hot-wire	N
20902	Anemometers; pitot tube,	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

Field Code	Item of Calibration	on-site
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;	N
20920	Gas flowmeters; variable area	Y
20921	Liquid flowmeters; variable	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	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	Y
40416	Leakage current testers	Y
40417	Electronic AC/DC loads	Y
40419	Analogue/digital	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	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 coupler /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 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 tester	Y
40650	RF voltmeters	Y
40651	Vector voltmeters	Y
40652	Field strength meters	Y
40653	AM/FM test sources	Y
40654	Dip simulators	Y
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,	Y
50102	dry-block calibrators Temperature indicators /recorders/controllers, temperature calibrators	Y

Accreditation No. : KC00-011

Field Code	Item of Calibration	on-site
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, two-temperature, flow mixing 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

Field Code	Item of Calibration	on-site
701. Photometry		
70101	Iluminance 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;object color	Y
70321	Reflectance meters	N
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

Field Code	Item of Calibration	on-site
901. Chemical analysis		
90101	Breath Alcohol Anayzer	N
90102	Environmental air quality monitoring instruments	N
90103	Gas analyzers	N
90104	Exhaust gas test instrument	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	CMC (The Confidence Level is about 95 %)	Comments
Balls	10201	(0 ~ 100) mm	$\sqrt{0.27^2+(0.010\times 10)^2}$ μm (unit of l_0 : mm)	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	2.3 μm	Precision surface plates, Precision surface plates, Electronic micrometers /HCT-CS-335-10207
End bars	10209	(0 ~ 500) mm (500 ~ 1 000) mm	$\sqrt{0.13^2+(0.002\times l_0)^2}$ μm $\sqrt{0.16^2+(0.002\times l_0)^2}$ μm (unit of l_0 : mm)	Gauge blocks, Electronic micrometers /HCT-CS-183-10209
Extensometers, linear displacement transducers	10210	(0 ~ 50) mm (50 ~ 100) mm (100 ~ 1 000) mm	$\sqrt{0.14^2+(0.002\times l_0)^2}$ μm $\sqrt{0.78^2+(0.002\times l_0)^2}$ μm $\sqrt{7.8^2+(0.002\times l_0)^2}$ μm (unit of l_0 : mm)	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	2.3 μm	Height micrometers Precision surface plates Electronic micrometers /HCT-CS-336-10212
Gap gauges	10213	(1 ~ 300) mm	$\sqrt{3.1^2+(0.005\times l_0)^2}$ μm (unit of l_0 : mm)	Height micrometers, Electronic micrometers /HCT-CS-003-10213
Gap gauges/measuring machines	10214	(0.5 ~ 100) mm	$\sqrt{71^2+(1.3\times l_0)^2}$ nm (unit of l_0 : mm)	Gauge block comparators, Gauge blocks /HCT-CS-254-10214
Height gauges/measuring machines	10216	(0 ~ 1 000) mm	$\sqrt{1.2^2+(0.003\times l_0)^2}$ μm (unit of l_0 : mm)	Gauge blocks /HCT-CS-005-10216
Linear scales	10219	(0 ~ 2 000) mm	$\sqrt{1.5^2+(0.001\ 4\times l_0)^2}$ μm (unit of l_0 : mm)	Lasor interferometers /HCT-CS-325-10219
Standard measuring machines	10220	(0 ~ 500) mm	$\sqrt{0.25^2+(0.002\ 1\times l_0)^2}$ μm (unit of l_0 : mm)	Gauge blocks, Long gauge blocks /HCT-CS-224-10220
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	 $\sqrt{1.2^2+(0.003\times l_0)^2}$ μm (unit of l0 : mm) $\sqrt{1.3^2+(0.003\times l_0)^2}$ μm (unit of l0 : mm) $\sqrt{1.2^2+(0.003\times l_0)^2}$ μm (unit of l_0 : mm)	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

102. Linear dimension

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Standard tape rules, periphral gauges	10227	(0 ~ 13) m (13 ~ 26) m (26 ~ 39) m (39 ~ 50) m	$\sqrt{0.26^2+(0.002\times l_0)^2}$ mm $\sqrt{0.46^2+(0.002\times l_0)^2}$ mm $\sqrt{0.67^2+(0.002\times l_0)^2}$ mm $\sqrt{0.88^2+(0.002\times l_0)^2}$ mm (unit of l_0 : mm)	Lasor interferometers, Tape measure calibration system /HCT-CS-241-10227
Cyclindrical plug/pin gauges, thread measuring wire gauges	10228	(0.1 ~ 100) mm	$\sqrt{0.29^2+(0.003\times l_0)^2}$ µm (unit of l_0 : mm)	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	$\sqrt{0.59^2+(0.003\times l_0)^2}$ µm (unit of l_0 : mm)	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	$\sqrt{1.4^2+(0.005\times l_0)^2}$ µm (unit of l_0 : mm)	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	3.6 µm	Ultrasonic thickness specimens /HCT-CS-243-10234
Ultrasonic/coating thickness specimmens coating Ultrasonic	10235	(0 ~ 8) mm (0 ~ 100) mm	1.4 µm $\sqrt{1.4^2+(0.002\times l_0)^2}$ µm (unit of l_0 : mm)	Gauge blocks Standard measuring machines Electronic micrometers /HCT-CS-227-10235
Coating thickness testers	10236	(0 ~ 0.25) mm (0.25 ~ 1.05) mm (1.05 ~ 3.7) mm (3.7 ~ 7.9) mm	1.5 µm 2.0 µm 6.9 µm 6.9 µm	Coating thickness specimens /HCT-CS-228-10236
Torque arms Touque Arm Wire	10237	(0 ~ 500) mm (0 ~ 5) mm	$\sqrt{3.1^2+(0.009\times l_0)^2}$ µm (unit of l0 : mm) 0.7 µm	Contact coordinate measuring machines, Standard measuring machine /HCT-CS-287-10237
Width measuring specimens	10238	(0 ~ 1 000) mm	$\sqrt{1.7^2+(0.007\ 2\times l_0)^2}$ µm (unit of l_0 : mm)	Contact coordinate measuring machines /HCT-CS-338-10238

103. Angle

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
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,
Center distance of both rollers		(50 ~ 200) mm	0.82 μm	Angle gauge blocks,
Flatness		(50 ~ 200) mm	0.24 μm	Gauge blocks,
Parallelism between rollers		(50 ~ 200) mm	1.0 μm	Optical flats,
Parallelism between the measuring plane and the roller		(50 ~ 200) mm	0.27 μm	Electronic micrometers, Precision surface plates /HCT-CS-326-10317
Squareness testers, right angle testers	10318			Cylindrical squares,
Squareness		(0 ~ 400) mm	1.6 μm	Precision surface plates, Electronic micrometers /HCT-CS-327-10318
Cylindrical squares	10319			Squareness testers, right
Squareness		(0 ~ 400) mm	$\sqrt{2.0^2+(0.001\ 2\times l_0)^2}$ μm (unit of l_0 : mm)	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	$\sqrt{2.0^2+0.003^2\times l_0^2}$ μm (l_0 :height, unit : mm)	Squareness testers, right angle testers,
Parallelism		(0 ~ 450) mm	1.2 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	CMC (The Confidence Level is about 95 %)	Comments
Form testers	10401			Form standard specimens,
Z-axis		(0 ~ 60) mm	0.16 μm	Angle gauge blocks,
X-axis		(0 ~ 200) mm	$\sqrt{0.57^2+(0.002\times l_0)^2}$ μm (unit of l_0 : mm)	Standard scales.
				Gauge blocks,
Angle		(0 ~ 180) °	1.3 ´	/HCT-CS-284-10401
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	0.061 μm	Monochromatic light sources,
Parallelism		Ø (10 ~ 30) mm	0.080 μm	Gauge block comparators /HCT-CS-230-10405
Parallel blocks	10406			Electronic micrometers,
Parallelism		(0 ~ 1 000) mm	1.2 μm	Precision surface plates,
Flatness		(0 ~ 1 000) mm	1.2 μm	Test bars
Difference of both blocks		(0 ~ 1 000) mm	1.8 μm	/HCT-CS-285-10406
Precision surface plates	10407			Electric levels
Area		(0 ~ 2 500) ㎠	1.8 μm	/HCT-CS-010-10407
		(2 500 ~ 5 000) ㎠	2.2 μm	
		(5 000 ~ 10 000) ㎠	2.6 μm	
		(10 000 ~ 15 000) ㎠	2.8 μm	
		(15 000 ~ 30 000) ㎠	3.9 μm	
		(30 000 ~ 60 000) ㎠	4.7 μm	
Roundness measurement instruments	10409			Roundness magnification
Accuracy of detector		(0 ~ 1 000) μm	0.23 μm	specimens,
Rotation accuracy of		(0 ~ 360) °	16 nm	Cylinderical squares
circumference direction		(0 ~ 360) °	16 nm	Standard hemispgheres,
Rotation accuracy of shaftt direction		(0 ~ 300) mm	1.3 μm	Optical flats,
Straightness				/HCT-CS-279-10409
Straight edges	10412			Electronic micrometers,
Straightness		(0 ~ 2 000) mm	6.0 μm	Precision surface plates
Parallelism		(0 ~ 2 000) mm	5.9 μm	/HCT-CS-329-10412
Straight rules	10413	(0 ~ 3 000) mm	$\sqrt{0.3^2+(0.002\times l_0)^2}$ mm (unit of l_0 : m)	Laser interfarometer, Tape measure calibration system /HCT-CS-244-10413
Test bars	10415			Roundness measurement
Roundness		(0 ~ 100) mm	0.062 μm	instruments,
Cylindericity		(0 ~ 100) mm	0.26 μm	Precision surface plates
Essentric		(0 ~ 100) mm	0.51 μm	Electronic micrometers
				/HCT-CS-330-10415
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.
Contact coordinate measuring machines	10503			Step gauges,
Accuracy		(0 ~ 600) mm	$\sqrt{0.53^2+(0.002\times l_0)^2}$ μm (unit of l_0 : mm)	Precision squares,
				Straight edges
Straightness		(0 ~ 600) mm	2.1 μm	/HCT-CS-011-10503
Squareness		(0 ~ 600) mm	0.8″	
Non-contact coordinate measuring machines	10504			Standard scales
				/HCT-CS-012-10504
Accuracy		(0 ~ 1 000) mm	$\sqrt{0.43^2+(0.003\times l_0)^2}$ μm (unit of l_0 : mm)	
Gauge block accessories	10505			Angle gauge blocks,
Flatness(close-contact plane)		(0 ~ 50) mm	0.03 μm	Precision surface plates,
Parallelism (Parallel jaw)		(0 ~ 150) mm	1.2 μm	Profile prrojectors
Round type jaw		(0 ~ 50) mm	$\sqrt{0.26^2+(0.004\times l_0)^2}$ μm	/HCT-CS-308-10505
A type Parallel jaw		(0 ~ 50) mm	$\sqrt{0.35^2+(0.004\times l_0)^2}$ μm	
Base block		(0 ~ 50) mm	$\sqrt{0.65^2+(0.004\times l_0)^2}$ μm (unit of l_0 : mm)	
Center point		(0 ~ 20) mm	0.28 μm	
Measuring microscopes, profile projectors	10511			Standard scales,
				Precision squares
Length accuracy		(0 ~ 300) mm	$\sqrt{0.45^2+(0.003\times l_0)^2}$ μm (unit of l_0 : mm)	/HCT-CS-013-10511
Right angle accuracy		(0 ~ 360)°	1.7′	
Magnification accuracy		×2 ~ ×100	3.2×10^{-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
Stylus type roughness testers	10517			Roughness standard/
Rsm		(0 ~ 120) μm	1.4 μm	comparison specimens
Pt		(0 ~ 10) μm	0.070 μm	/HCT-CS-295-10517
Ra		(0 ~ 1) μm	0.015 μm	
		(1 ~ 3) μm	0.045 μm	
Rz		(0 ~ 3) μm	0.052 μm	
		(3 ~ 12) μm	0.15 μm	
Thread plug gauges	10525			Standard measuring
External diammeter		(1 ~ 100) mm	0.48 μm	machines, Thread measuring wire gauges,
Effective diameter		(1 ~ 100) mm	1.6 μm	Projectors
				/HCT-CS-016-10525
Pitch		(0.2 ~ 6) mm	1.2 μm	
Half angle		(0 ~ 45)°	1.8′	
V-blocks, box blocks	10529			Pin gauges,
Flatness		(0 ~ 150) mm	1.0 μm	Electronic micrometers,
Parallelism		(0 ~ 150) mm	1.2 μm	Precision surface plates,
Gradient		(0 ~ 150) mm	0.6 μm	Test bars
Difference of both part		(0 ~ 150) mm	1.1 μm	/HCT-CS-283-10529
Squareness		(0 ~ 150) mm	$\sqrt{2.0^2+0.003^2\times l_0^2}$ μm (l_0 :height, unit : mm)	

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	$\sqrt{3.8^2+(0.007\times l_0)^2}$ µm $\sqrt{7.6^2+(0.007\times l_0)^2}$ µm (unit of l_0 : mm)	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	$\sqrt{0.9^2+(0.004\times l_0)^2}$ µm $\sqrt{7.2^2+(0.004\times l_0)^2}$ µm (unit of l_0 : mm)	Gauge blocks /HCT-CS-020-10604
Dial/digital gauges	10605	(0 ~ 50) mm (50 ~ 150) mm	$\sqrt{0.16+(0.002\times l_0)^2}$ µm $\sqrt{0.93+(0.002\times l_0)^2}$ µm (unit of l_0 : mm)	Gauge blocks /HCT-CS-021-10605
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	1.9 µm	Standard ring gauges /HCT-CS-231-10611
Inside micrometers	10612	(5 ~ 300) mm (300 ~ 1 500) mm	$\sqrt{1.6^2+(0.005\times l_0)^2}$ µm $\sqrt{2.3^2+(0.005\times l_0)^2}$ µm (unit of l_0 : mm)	Gauge blocks / HCT-CS-026-10612
Outside micrometers	10613	(0 ~ 25) mm (25 ~ 100) mm (100 ~ 1 500) mm	$\sqrt{0.36^2+(0.004\times l_0)^2}$ µm $\sqrt{1.4^2+(0.004\times l_0)^2}$ µm $\sqrt{2.5^2+(0.004\times l_0)^2}$ µm (unit of l_0 : mm)	Gauge blocks / HCT-CS-027-10613
Particle Counters Airbone particle counter Laser reference voltage Flow rate Threshold voltage Counting efficiency CPC OPC Liquid particle counter Laser reference voltage Flow rate Threshold voltage	10615	 (0 ~ 10) V (0 ~ 100) L/min (0 ~ 10) V (0 ~ 1.0) µm (0.1 ~ 1.0) µm (0 ~ 10) V (0 ~ 25) mL/min (25 ~ 300) mL/min (0 ~ 10) V	 5.4×10^{-4} 2.3×10^{-2} 5.4×10^{-4} 3.0 % 4.7 % 5.4×10^{-4} 8.1×10^{-2} 5.0×10^{-2} 5.4×10^{-4}	Certified reference material (CRM), Particle counters, Flowmeters / HCT-CS-028-10615 / HCT-CS-029-10615
Standard sieves Sieve opening Wire rod diameter	10617	 (0.01 ~ 8) mm (0.01 ~ 125) mm	 1.7 µm 2.6 µm	Profile projectors /HCT-CS-232-10617

106. Various dimensional

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
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	
Particle dilution Systems PCRF	10622	(30 ~ 100) nm	8.2×10^{-2}	ELECTRICAL PARTICLE SIZER, CPC/HCT-CS-256-10622

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
Weights F1 class	20116	 1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 500 mg 1 g 2 g 5 g 10 g 20 g 50 g 100 g 200 g 500 g 1 kg	 4.6 µg 4.6 µg 4.6 µg 5.1 µg 5.1 µg 5.8 µg 6.6 µg 7.4 µg 9.1 µg 11 µg 14 µg 17 µg 21 µg 27 µg 36 µg 55 µg 0.11 mg 0.29 mg 0.55 mg	Standard weights, Mass comparators /HCT-CS-033-20116

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.
F1 class	20116	2 kg 5 kg 10 kg 20 kg	1.1 mg 2.9 mg 5.5 mg 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 calibration machines, Deadweight force calibration machines / HCT-CS-253-20202
Force		(0.5 ~ 5) kN	3.1×10^{-5}	
		(5 ~ 10) kN	2.8×10^{-4}	
		(10 ~ 20) kN	4.6×10^{-4}	
		(20 ~ 50) kN	3.9×10^{-4}	
		(50 ~ 100) kN	3.4×10^{-4}	
Tension/compression testing machines	20203			Electric force measuring devices /HCT-CS-236-20203
Compression		(0 ~ 10) N	1.5×10^{-3}	
		(10 ~ 20) N	1.6×10^{-3}	
		(20 ~ 50) N	1.5×10^{-3}	
		(50 ~ 100) N	1.4×10^{-3}	
		(100 ~ 200) N	1.5×10^{-3}	
		(200 ~ 500) N	1.5×10^{-3}	
		(500 ~ 1 000) N	1.4×10^{-3}	
		(1 ~ 2) kN	1.4×10^{-3}	
		(2 ~ 5) kN	1.5×10^{-3}	
		(5 ~ 10) kN	1.9×10^{-3}	
		(10 ~ 20) kN	1.5×10^{-3}	
		(20 ~ 50) kN	1.4×10^{-3}	
		(50 ~ 100) kN	1.7×10^{-3}	
		(100 ~ 200) kN	1.5×10^{-3}	
		(200 ~ 500) kN	1.5×10^{-3}	
		(500 ~ 1 000) kN	1.6×10^{-3}	
Tension		(0 ~ 50) N	2.5×10^{-3}	
		(50 ~ 100) N	1.3×10^{-3}	
		(100 ~ 200) N	1.4×10^{-3}	
		(200 ~ 500) N	1.3×10^{-3}	
		(500 ~ 1 000) N	1.6×10^{-3}	
		(1 ~ 2) kN	1.4×10^{-3}	
		(2 ~ 5) kN	1.3×10^{-3}	
		(5 ~ 10) kN	2.9×10^{-3}	
		(10 ~ 20) kN	2.5×10^{-3}	
		(20 ~ 50) kN	1.4×10^{-3}	
		(50 ~ 100) kN	1.7×10^{-3}	
		(100 ~ 200) kN	1.8×10^{-3}	
Push-pull gauges	20204	(0.2 ~ 50) N	1.5×10^{-3}	Deadweight force calibration machines, Weights /HCT-CS-034-20204
		(50 ~ 1 000) N	1.3×10^{-3}	
		(1 000 ~ 2 000) N	1.6×10^{-3}	
		(2 000 ~ 5 000) N	1.5×10^{-3}	

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 /HCT-CS-037-20303
Clockwise		(0.06 ~ 0.6) N·m	1.0×10^{-2}	
		(0.6 ~ 1) N·m	1.1×10^{-2}	
		(1 ~ 2.5) N·m	8.7×10^{-3}	
		(2.5 ~ 5) N·m	4.2×10^{-3}	
		(5 ~ 10) N·m	5.2×10^{-3}	
		(10 ~ 25) N·m	4.9×10^{-3}	
		(25 ~ 50) N·m	2.8×10^{-3}	
		(50 ~ 100) N·m	7.9×10^{-3}	
		(100 ~ 250) N·m	3.3×10^{-3}	
		(250 ~ 500) N·m	2.4×10^{-3}	
		(500 ~ 1 000) N·m	5.9×10^{-3}	
		(1 000 ~ 2 000) N·m	9.8×10^{-3}	
Counterclockwise		(0.06 ~ 0.6) N·m	1.0×10^{-2}	
		(0.6 ~ 1) N·m	7.3×10^{-3}	
		(1 ~ 2.5) N·m	9.4×10^{-3}	
		(2.5 ~ 5) N·m	4.7×10^{-3}	
		(5 ~ 10) N·m	6.0×10^{-3}	
		(10 ~ 25) N·m	5.6×10^{-3}	
		(25 ~ 50) N·m	4.0×10^{-3}	
		(50 ~ 100) N·m	8.0×10^{-3}	
		(100 ~ 250) N·m	3.5×10^{-3}	
		(250 ~ 500) N·m	2.4×10^{-3}	
		(500 ~ 1 000) N·m	4.4×10^{-3}	
		(1 000 ~ 2 000) N·m	1.0×10^{-2}	

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	2.9×10^{-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	(0.1 ~ 2) ml (2 ~ 10) ml (10 ~ 25) ml (25 ~ 100) ml (100 ~ 250) ml (250 ~ 500) ml (500 ~ 1 000) ml (1 000 ~ 2 000) ml (2 000 ~ 5 000) ml	2.4 µl 4.9 µl 13 µl 26 µl 47 µl 70 µl 0.14 ml 0.22 ml 0.43 ml	Electric balances, Weights, Pure water /HCT-CS313-20601
Pycnometers	20602	(0 ~ 50) ml (50 ~ 100) ml (100 ~ 500) ml	3.2 µl 7.0 µl 30 µl	Electric balances, Weights, Pure water /HCT-CS313-20601
Concrete air content meters	20605	(0 ~ 10) %	0.01 %	Electric balances, Weights, Pure water /HCT-CS-314-20605
Piston type volume meters	20606	(0.1 ~ 5) µl (5 ~ 10) µl (10 ~ 20) µl (20 ~ 50) µl (50 ~ 100) µl (0.1 ~ 0.2) ml (0.2 ~ 0.5) ml (0.5 ~ 1) ml (1 ~ 2) ml (2 ~ 5) ml (5 ~ 10) ml (10 ~ 20) ml	18 nl 26 nl 36 nl 73 nl 0.12 µl 0.23 µl 0.53 µl 1.2 µl 2.3 µl 5.3 µl 12 µl 23 µl	Electric balances, Weights, Pure water /HCT-CS-315-20606

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) %	0.032 %	Sucrose /HCT-CS-294-20705
Chloride meters	20707	(0 ~ 1.5) %	0.002 4 %	Chloride ion standard solution /HCT-CS-353-20707

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

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 Timebase Frequency	30102	100 kHz ~ 10 MHz	2.4×10^{-12}	Atomic clock /HCT-CS-040-30102
General frequency sources Output frequency	30103	100 kHz ~ 100 MHz	2.7×10^{-12}	Atomic clock /HCT-CS-041-30103
Frequency meters/countters Input Frequency Timebase Frequency	30104	0.1 Hz 0.1 Hz ~ 3 GHz (3 ~ 40) GHz 100 kHz ~ 10 MHz	6.2×10^{-11} 6.2×10^{-12} 0.58 Hz 2.7×10^{-12}	Standard frequency, General frequency sources HCT-CS-042-30104
Time interval sources Time interval Frequency 	30105	(1 ~ 10) ns (10 ~ 100) ns 100 ns ~ 1 μs (1 ~ 10) μs (10 ~ 100) μs 100 μs ~ 1 ms (1 ~ 10) ms (10 ~ 100) ms 100 ms ~ 1 s (1 ~ 10) Hz (10 ~ 100) Hz 100 Hz ~ 1 kHz (1 ~ 10) kHz (10 ~ 100) kHz 100 kHz ~ 1 MHz (1 ~ 10) MHz (10 ~ 100) MHz 100 MHz ~ 1 GHz	6.2×10^{-7} 6.2×10^{-7} 6.2×10^{-7} 6.2×10^{-7} 6.2×10^{-7} 6.2×10^{-7} 6.2×10^{-7} 6.2×10^{-7} 6.2×10^{-7} 6.2×10^{-7} 6.2×10^{-7} 6.2×10^{-7} 6.2×10^{-7} 6.2×10^{-7} 6.2×10^{-7} 6.2×10^{-7} 6.2×10^{-7} 6.2×10^{-7}	Frequency counters /HCT-CS-043-30105
Time interval meters/Stop watches /Timers Relative time difference Timer	30106	day month (1 ~ 60) s (60 ~ 6 000) s (6 000 ~ 86 400) s	2.8×10^{-7} 1.3×10^{-8} 6.2×10^{-6} 6.2×10^{-5} 6.2×10^{-5}	Atomic clock /HCT-CS-044-30106

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}	
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	7.8×10^{-5}	
		(40 ~ 80) mA	6.4×10^{-5}	
		(80 ~ 100) mA	8.6×10^{-5}	
		(100 ~ 400) mA	3.8×10^{-5}	
		(400 ~ 800) mA	1.9×10^{-5}	
		(0.8 ~ 1) A	1.3×10^{-4}	
		(1 ~ 4) A	2.1×10^{-4}	
		(4 ~ 8) A	1.4×10^{-4}	
		(8 ~ 10) A	1.2×10^{-4}	
		(10 ~ 40) A	8.9×10^{-4}	
		(40 ~ 80) A	4.5×10^{-4}	
		(80 ~ 100) A	3.7×10^{-4}	
		(-)		
		-10 pA	7.1 fA	
		(-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	2.7×10^{-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	7.8×10^{-5}	
		(-40 ~ -80) mA	6.4×10^{-5}	
		(-80 ~ -100) mA	8.6×10^{-5}	
		(-100 ~ -400) mA	3.8×10^{-5}	
		(-400 ~ -800) mA	1.9×10^{-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 Current	40101	(-0.8 ~ -1) A	1.3×10^{-4}	
		(-1 ~ -4) A	2.1×10^{-4}	
		(-4 ~ -8) A	1.4×10^{-4}	
		(-8 ~ -10) A	1.2×10^{-4}	
		(-10 ~ -40) A	8.9×10^{-4}	
		(-40 ~ -80) A	4.5×10^{-4}	
		(-80 ~ -100) A	3.7×10^{-4}	
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}	
		(50 ~ 100) Hz		
		100 μA	20 nA	
		(100 ~ 400) μA	1.8×10^{-4}	
		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}	

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.
AC Current	40102	(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}	
		(1 ~ 10) kHz		
		100 μA	21 nA	
		(100 ~ 400) μA	1.9×10^{-4}	
		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}	
DC Voltage/Current Calibrator	40103			Digital Multimeter,
DC Currnet		0 pA	26 fA	Current Shunt
		(±)		/HCT-CS-053-40103
		(0 ~ 1) pA	1.6×10^{-2}	
		(1 ~ 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	5.3×10^{-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 Currnet	40103	0 mV (±) (0 ~ 10) mV (10 ~ 100) mV (0.1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V	0.24 μV 1.7×10^{-5} 7.9×10^{-6} 7.2×10^{-6} 8.0×10^{-6} 8.2×10^{-6}	
Temperature Calibrator via Electrical Standards	40104			Digital Multimeter /HCT-CS-205-40104
DC Current Source		1 mA (1 ~ 10) mA (10 ~ 20) mA (20 ~ 30) mA	63 nA 1.7×10^{-5} 1.4×10^{-5} 7.0×10^{-5}	
DC Voltage Source		(-10 ~ 0) mV 0 mV (0 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 30) V	2.8×10^{-5} 0.13 μV 2.8×10^{-5} 4.9×10^{-6} 7.3×10^{-6} 6.6×10^{-6}	
Resistance Source		10 Ω (10 ~ 100) Ω 100 Ω ~ 1 kΩ (1 ~ 100) kΩ	0.12 mΩ 1.1×10^{-5} 2.3×10^{-5} 1.1×10^{-5}	
DC Current Meter		1 mA (1 ~ 10) mA (10 ~ 30) mA (20 ~ 30) mA (30 ~ 50) mA (50 ~ 70) mA (70 ~ 100) mA	80 nA 4.8×10^{-5} 4.4×10^{-5} 8.3×10^{-5} 7.0×10^{-5} 6.5×10^{-5} 6.1×10^{-5}	
DC Voltage Meter		(-10 ~ 0) mV 0 mV (0 ~ 1) mV (1 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 200) V (200 ~ 300) V	6.0×10^{-5} 0.50 μV 5.2×10^{-4} 6.0×10^{-5} 1.4×10^{-5} 6.2×10^{-5} 2.4×10^{-5} 8.8×10^{-6} 1.2×10^{-5} 9.9×10^{-6}	
Resistance Meter		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}	
DC current shunts	40105			Digital multimeters, Multimeter calibrators, Current calibrators /HCT-CS-054-40105
Resistance		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	6.1 nΩ 1.8×10^{-4} 1.7×10^{-4} 1.6×10^{-4} 4.0×10^{-4} 1.5×10^{-4} 1.7×10^{-4} 1.2×10^{-4} 2.1×10^{-4} 1.1×10^{-4} 1.1×10^{-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.
Resistance	40105	(0.8 ~ 1) Ω	6.2×10^{-5}	
		(1 ~ 1.6) Ω	1.3×10^{-4}	
		(1.6 ~ 4) Ω	1.8×10^{-4}	
		(4 ~ 8) Ω	6.2×10^{-5}	
		(8 ~ 10) Ω	5.0×10^{-5}	
		(10 ~ 16) Ω	7.6×10^{-5}	
		(16 ~ 40) Ω	9.6×10^{-5}	
		(40 ~ 80) Ω	4.9×10^{-5}	
		(80 ~ 100) Ω	5.3×10^{-5}	
		(100 ~ 800) Ω	5.2×10^{-5}	
		(800 ~ 1 000) Ω	1.2×10^{-4}	
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	1.0×10^{-5}	
		(80 ~ 100) mV	8.0×10^{-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	1.8×10^{-5}	
		(400 ~ 800) V	1.0×10^{-5}	
		(800 ~ 1 000) V	9.0×10^{-6}	
		(1 000 ~ 1 500) V	6.7×10^{-4}	
		(1 500 ~ 2 000) V	5.0×10^{-4}	
DC Current		0 A	0.65 nA	
		(±)		
		(0 ~ 40) μA	3.2×10^{-5}	
		(40 ~ 80) μA	2.6×10^{-5}	
		(80 ~ 100) μA	2.5×10^{-5}	
		(100 ~ 400) μA	3.0×10^{-5}	
		(0.4 ~ 1) mA	2.5×10^{-5}	
		(1 ~ 4) mA	3.0×10^{-5}	
		(4 ~ 10) mA	2.5×10^{-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 Current	40108	(10 ~ 40) mA	3.3×10^{-5}	
		(40 ~ 100) mA	2.6×10^{-5}	
		(100 ~ 400) mA	3.2×10^{-5}	
		(400 ~ 800) mA	2.8×10^{-5}	
		(0.8 ~ 1) A	2.7×10^{-5}	
		(1 ~ 4) A	3.7×10^{-5}	
		(4 ~ 10) A	3.3×10^{-5}	
		(10 ~ 40) A	4.8×10^{-5}	
		(40 ~ 100) A	4.5×10^{-5}	
		(100 ~ 300) A	2.0×10^{-4}	
		(300 ~ 1 000) A	2.2×10^{-4}	
Ripple		1 mV	98 μV	
		(1 ~ 5) mV	2.2×10^{-2}	
		(5 ~ 10) mV	1.9×10^{-2}	
		(10 ~ 20) mV	4.3×10^{-2}	
Load&Line Regulation		1 mV	0.7 μV	
		(1 ~ 5) mV	1.4×10^{-4}	
		(5 ~ 500) mV	1.2×10^{-4}	
DC voltage dividers	40110			High voltage deviders /HCT-CS-348-40110
Ratio		1 000 : 1		
		1 kV	4.2×10^{-4}	
		(1 ~ 5) kV	3.9×10^{-4}	
		(5 ~ 100) kV	3.8×10^{-4}	
		10 000 : 1		
		1 kV	4.2×10^{-4}	
		(1 ~ 5) kV	3.9×10^{-4}	
		(5 ~ 100) kV	3.8×10^{-4}	
DC voltage standards	40111			Standard cells, Digital multimeters /HCT-CS-275-40111
DC Voltage		1.018 V	4.8×10^{-7}	
		10 V	3.2×10^{-7}	
DC voltmeters	40112			Current calibrators, Multimeter calibrators /HCT-CS-197-40112
DC Voltage		0 V	0.78 μV	
		(+)		
		(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}	
		(-)		
		(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}	

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	40112	(-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	1.2×10^{-4}	
		(0.5 ~ 1) kV	6.2×10^{-4}	
		(1 ~ 10) kV	1.4×10^{-3}	
		(10 ~ 15) kV	1.6×10^{-3}	
		(15 ~ 20) kV	1.2×10^{-3}	
		(20 ~ 25) kV	1.4×10^{-3}	
		(25 ~ 48) kV	1.3×10^{-3}	
Static Voltage (Nagative)		(-)		
		-10 V	62 mV	
		(-10 ~ -100) V	6.2×10^{-4}	
		(-100 ~ -500) V	1.2×10^{-4}	
		(-0.5 ~ -1) kV	6.2×10^{-4}	
		(-1 ~ -10) kV	1.3×10^{-3}	
		(-10 ~ -15) kV	1.5×10^{-3}	
		(-15 ~ -20) kV	1.2×10^{-3}	
		(-20 ~ -25) kV	1.4×10^{-3}	
		(-25 ~ -48) kV	1.3×10^{-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.
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	21 μV	
		(0.02 ~ 1) kHz	1.9×10^{-4}	
		(1 ~ 10) kHz	2.3×10^{-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	6.0×10^{-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	9.9×10^{-4}	
		(0.02 ~ 1) kHz	3.4×10^{-4}	
		(1 ~ 10) kHz	4.4×10^{-4}	
		(10 ~ 100) kHz	1.8×10^{-3}	
Capacitance		1 pF		
		60 Hz	0.76 fF	
		(60 ~ 400) Hz	0.75 fF	
		(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	

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	40201	(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	
		(10 ~ 100) nF		
		60 Hz	36 pF	
		120 Hz ~ 100 kHz	8.2 pF	
		(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	1 kHz		Capacitance bridges LCR meters / HCT-CS-060-40202
		1 pF	0.062 fF	
		(1 ~ 1 000) pF	6.0×10^{-5}	
		(1 ~ 10) nF	1.1×10^{-4}	
		(10 ~ 100) nF	2.6×10^{-4}	
		(100 ~ 1 000) nF	5.1×10^{-4}	
		(1 ~ 10) µF	1.7×10^{-3}	
		120 Hz		
		10 µF	14 nF	
		(10 ~ 100) µF	2.0×10^{-3}	
		(0.1 ~ 1) mF	2.2×10^{-3}	
Standard capacitors	40204	1 kHz		Capacitance bridges LCR meters / HCT-CS-061-40204
		1 pF	12 aF	
		10 pF	0.12 fF	
		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	

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.
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	2.3×10^{-3}	
		(50 ~ 100) A	2.3×10^{-3}	
		50 Hz ~ 1 kHz		
		1 A	2.5 mA	
		(1 ~ 10) A	2.4×10^{-3}	
		(10 ~ 50) A	1.8×10^{-3}	
		(50 ~ 100) A	1.8×10^{-3}	
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	1.2×10^{-2}	
		(1 ~ 10) kV	7.3×10^{-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	1.1×10^{-8}	
		(1 ~ 10) MHz	5.9×10^{-8}	
		(10 ~ 100) MHz	1.1×10^{-8}	
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}	
Resistance meters	40214			Standard resistances,
DC Resistance		25 μΩ	0.2 μΩ	High resistance meters,
		50 μΩ	0.4 μΩ	Digital multimeters,
		100 μΩ	0.7 μΩ	Counters
		1 mΩ	0.25 μΩ	HCT-CS-067-40214
		(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	7.0×10^{-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}	

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.
AC Voltage	40214	1 kHz		
		10 mV	7.2 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}	
AC Resistance		1 kHz		
		1 mΩ	1.4 μΩ	
		10 mΩ	12 μΩ	
		100 mΩ	0.12 mΩ	
		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, LCR meters / HCT-CS-068-40215
Standard Resistance(DC)		1 mΩ	18 nΩ	
		(1 ~ 10) mΩ	1.8×10^{-5}	
		(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}	
Standard Resistance(AC)		1 mΩ		
		50 Hz	1.5 μΩ	
		(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}	

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 Resistance(AC)	40215	(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}	
		(0.1 ~ 1) 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}	
		(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	3.7×10^{-4}	
		(0.4 ~ 1) kHz	3.7×10^{-4}	
		(1 ~ 100) kHz	1.2×10^{-2}	
		(0.1 ~ 1) MHz	1.2×10^{-2}	
Decade Resistance(DC)		1 mΩ	7.5 uΩ	
		1 mΩ ~ 10 mΩ	3.8×10^{-3}	
		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	3.1×10^{-3}	
		100 GΩ ~ 1 TΩ	4.7×10^{-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 Resistance(AC)	40215	1 kHz		
		100 mΩ	0.32 mΩ	
		100 mΩ ~ 10 Ω	1.2×10^{-3}	
		10 Ω ~ 100 kΩ	6.5×10^{-4}	
Electrical conductivity meters	40216	14.36 MS/m	0.081 MS/m	Standard specimens /HCT-CS-227-40216
		22.90 MS/m	0.16 MS/m	
		34.26 MS/m	0.21 MS/m	
		58.38 MS/m	0.32 MS/m	
Impedance bridges/LCR meters	40217			Counters, Standard Resistance, Capacitance, Inductance, Digital multimeters /HCT-CS-093-40217
Frequency		10 Hz	5.8 mHz	
		10 Hz ~ 100 Hz	5.8×10^{-5}	
		100 Hz ~ 1 kHz	5.8×10^{-6}	
		(1 ~ 10) kHz	5.8×10^{-7}	
		(10 ~ 100) kHz	5.9×10^{-8}	
		(0.1 ~ 1) MHz	8.7×10^{-9}	
		(1 ~ 10) MHz	5.8×10^{-9}	
		(10 ~ 30) MHz	2.0×10^{-8}	
AC Voltage		1 mV		
		20 Hz	7 uV	
		(0.02 ~ 1) kHz	6.0×10^{-3}	
		(1 ~ 10) kHz	1.1×10^{-2}	
		(10 ~ 100) kHz	3.0×10^{-2}	
		(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.
DC Current	40217	1 A	0.63 mA	
		1 A ~ 10 A	5.0×10^{-4}	
		10 A ~ 20 A	1.0×10^{-3}	
		20 A ~ 40 A	1.0×10^{-3}	
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	3.5×10^{-4}	
		400 Hz ~ 1 kHz	3.5×10^{-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}	
		(1 ~ 10) kΩ		
		400 Hz	3.6×10^{-4}	
		400 Hz ~ 1 kHz	3.6×10^{-4}	
		1 kHz ~ 1 MHz	1.2×10^{-2}	
		(10 ~ 100) kΩ		
		400 Hz	3.6×10^{-4}	
		400 Hz ~ 1 kHz	3.6×10^{-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}	

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	40217	(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}	
		(10 ~ 100) 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	3.6×10^{-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}	
		(0.1 ~ 1) µF		
		60 Hz	6.6×10^{-4}	
		(60 ~ 120) Hz	1.1×10^{-4}	
		(120 ~ 400) Hz	1.8×10^{-4}	
		(0.4 ~ 1) kHz	1.1×10^{-4}	
		(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}	

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	40217	(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	6.4×10^{-4}	
		(1 ~ 10) mH	5.9×10^{-4}	
		(10 ~ 100) mH	1.0×10^{-3}	
		(0.1 ~ 1) H	3.5×10^{-2}	

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}	
AC Voltage		1 V		
		40 Hz	0.38 μV	
		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}	

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	40301	(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	
		(100 mV ~ 1 V)		
		40 Hz	0.14 mV	
		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	0.11 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	

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.
DC Current	40302	(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	
AC Current		10 μA		
		50 Hz ~ 10 kHz	12 nA	
		(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	
		(400 ~ 500) A		
		(50 ~ 60) Hz	0.68 A	
		(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	

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 Current	40302	(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)	8.5 mΩ	
		(100 Ω ~ 1 kΩ)	83 mΩ	
		(1 kΩ ~ 10 kΩ)	1.1 Ω	
		(10 kΩ ~ 100 kΩ)	6.9 Ω	
		(100 kΩ ~ 1 MΩ)	0.19 kΩ	
		(1 MΩ ~ 10 MΩ)	1.4 kΩ	
		(10 MΩ~ 100 MΩ)	17 kΩ	
Frequency		40 Hz	7.8 mHz	
		(40 ~ 50) Hz	8.6 mHz	
		(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.
Current Coil (AC Ratio)	40302	(50 ~ 60) Hz		
		2	0.15 %	
		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		0.1 V		/ HCT-CS-072-40303
		50 Hz	18 μV	
		50 Hz ~ 1 kHz	1.6×10^{-4}	
		(1 ~ 10) kHz	1.8×10^{-4}	
		(10 ~ 30) kHz	4.6×10^{-4}	
		(30 ~ 100) kHz	1.1×10^{-3}	
		(0.1 ~ 0.4) V		
		50 Hz	0.077 mV	
		50 Hz ~ 1 kHz	1.8×10^{-4}	
		(1 ~ 10) kHz	1.9×10^{-4}	
		(10 ~ 30) kHz	4.0×10^{-4}	
		(30 ~ 100) kHz	1.2×10^{-3}	
		(0.4 ~ 0.8) V		
		50 Hz	0.11 mV	
		50 Hz ~ 1 kHz	1.3×10^{-4}	
		(1 ~ 10) kHz	1.4×10^{-4}	
		(10 ~ 30) kHz	3.1×10^{-4}	
		(30 ~ 100) kHz	8.8×10^{-4}	
		(0.8 ~ 1) V		
		50 Hz	0.13 mV	
		50 Hz ~ 1 kHz	1.1×10^{-4}	
		(1 ~ 10) kHz	1.3×10^{-4}	
		(10 ~ 30) kHz	2.9×10^{-4}	
		(30 ~ 100) kHz	8.2×10^{-4}	
		(1 ~ 4) V		
		50 Hz	0.77 mV	
		(50 ~ 300) Hz	1.8×10^{-4}	
		300 Hz ~ 10 kHz	2.0×10^{-4}	
		(10 ~ 30) kHz	4.0×10^{-4}	
		(30 ~ 100) kHz	1.2×10^{-3}	
		(4 ~ 8) V		
		50 Hz	1.1 mV	
		50 Hz ~ 1 kHz	1.3×10^{-4}	
		(1 ~ 10) kHz	1.4×10^{-4}	
		(10 ~ 30) kHz	3.1×10^{-4}	
		(30 ~ 100) kHz	8.8×10^{-4}	
		(8 ~ 10) V		
		50 Hz	1.3 mV	
		50 Hz ~ 1 kHz	1.2×10^{-4}	
		(1 ~ 10) kHz	1.3×10^{-4}	
		(10 ~ 30) kHz	2.9×10^{-4}	
		(30 ~ 100) kHz	8.2×10^{-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 Voltage	40303	(10 ~ 40) V		
		50 Hz	8.1 mV	
		50 Hz ~ 1 kHz	1.9×10^{-4}	
		(1 ~ 10) kHz	2.0×10^{-4}	
		(10 ~ 30) kHz	4.3×10^{-4}	
		(30 ~ 100) kHz	1.2×10^{-3}	
		(40 ~ 80) V		
		50 Hz	12 mV	
		50 Hz ~ 1 kHz	1.3×10^{-4}	
		(1 ~ 10) kHz	1.5×10^{-4}	
		(10 ~ 30) kHz	3.1×10^{-4}	
		(30 ~ 100) kHz	8.8×10^{-4}	
		(80 ~ 100) V		
		50 Hz	13 mV	
		50 Hz ~ 1 kHz	1.1×10^{-4}	
		(1 ~ 10) kHz	1.3×10^{-4}	
		(10 ~ 30) kHz	3.0×10^{-4}	
		(30 ~ 100) kHz	8.2×10^{-4}	
		(100 ~ 400) V		
		50 Hz	0.082 V	
		(50 ~ 300) Hz	2.1×10^{-4}	
		300 Hz ~ 1 kHz	2.1×10^{-4}	
		(1 ~ 10) kHz	2.2×10^{-4}	
		(400 ~ 800) V		
		50 Hz	0.15 V	
		(50 ~ 300) Hz	1.9×10^{-4}	
		300 Hz ~ 1 kHz	1.5×10^{-4}	
		(1 ~ 10) kHz	1.9×10^{-4}	
		(800 ~ 1 000) V		
		50 Hz	0.16 V	
		(50 ~ 300) Hz	1.6×10^{-4}	
		300 Hz ~ 1 kHz	1.4×10^{-4}	
		(1 ~ 10) kHz	1.6×10^{-4}	
AC Current		100 μA		
		50 Hz	71 nA	
		50 Hz ~ 1 kHz	7.0×10^{-4}	
		(1 ~ 10) kHz	7.1×10^{-4}	
		(0.1 ~ 0.4) mA		
		50 Hz	0.10 μA	
		50 Hz ~ 1 kHz	2.3×10^{-4}	
		(1 ~ 10) kHz	2.5×10^{-4}	
		(0.4 ~ 0.8) mA		
		50 Hz	0.14 μA	
		50 Hz ~ 1 kHz	1.5×10^{-4}	
		(1 ~ 10) kHz	1.8×10^{-4}	
		(0.8 ~ 1) mA		
		50 Hz	0.16 μA	
		50 Hz ~ 1 kHz	1.4×10^{-4}	
		(1 ~ 10) kHz	1.7×10^{-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 Current	40303	(1 ~ 4) mA		
		50 Hz	0.90 μA	
		50 Hz ~ 1 kHz	2.1×10^{-4}	
		(1 ~ 10) kHz	2.3×10^{-4}	
		(4 ~ 8) mA		
		50 Hz	1.3 μA	
		50 Hz ~ 1 kHz	1.4×10^{-4}	
		(1 ~ 10) kHz	1.6×10^{-4}	
		(8 ~ 10) mA		
		50 Hz	1.4 μA	
		50 Hz ~ 1 kHz	1.2×10^{-4}	
		(1 ~ 10) kHz	1.4×10^{-4}	
		(10 ~ 40) mA		
		50 Hz	8.9 μA	
		50 Hz ~ 1 kHz	2.1×10^{-4}	
		(1 ~ 10) kHz	2.2×10^{-4}	
		(40 ~ 80) mA		
		50 Hz	12 μA	
		50 Hz ~ 1 kHz	1.3×10^{-4}	
		(1 ~ 10) kHz	1.5×10^{-4}	
		(80 ~ 100) mA		
		50 Hz	14 μA	
		50 Hz ~ 1 kHz	1.2×10^{-4}	
		(1 ~ 10) kHz	1.4×10^{-4}	
		(0.1 ~ 0.4) A		
		50 Hz	90 μA	
		50 Hz ~ 1 kHz	2.1×10^{-4}	
		(1 ~ 10) kHz	2.3×10^{-4}	
		(0.4 ~ 0.8) A		
		50 Hz	0.12 mA	
		50 Hz ~ 1 kHz	1.4×10^{-4}	
		(1 ~ 10) kHz	1.5×10^{-4}	
		(0.8 ~ 1) A		
		50 Hz	0.14 mA	
		50 Hz ~ 1 kHz	1.2×10^{-4}	
		(1 ~ 10) kHz	1.4×10^{-4}	
		(1 ~ 4) A		
		50 Hz	0.91 mA	
		50 Hz ~ 1 kHz	2.1×10^{-4}	
		(1 ~ 10) kHz	2.3×10^{-4}	
		(4 ~ 8) A		
		50 Hz	1.3 mA	
		50 Hz ~ 1 kHz	1.4×10^{-4}	
		(1 ~ 10) kHz	1.8×10^{-4}	
		(8 ~ 10) A		
		50 Hz	1.5 mA	
		50 Hz ~ 1 kHz	1.3×10^{-4}	
		(1 ~ 10) kHz	1.6×10^{-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 Current	40303	(10 ~ 30) A		
		50 Hz	5.7 mA	
		50 Hz ~ 1 kHz	1.7×10^{-4}	
		(30 ~ 50) A		
		50 Hz	7.8 mA	
		50 Hz ~ 1 kHz	1.4×10^{-4}	
		(50 ~ 80) A		
		50 Hz	14 mA	
		50 Hz ~ 1 kHz	1.6×10^{-4}	
		(80 ~ 100) A		
		50 Hz	16 mA	
		50 Hz ~ 1 kHz	1.5×10^{-4}	
Clamp meter		(50 ~ 60) Hz		
		1 A	0.21 A	
		(1 ~ 3) A	0.25 A	
		(3 ~ 8) A	0.33 A	
		(8 ~ 10) A	0.37 A	
		(10 ~ 20) A	0.53 A	
		(20 ~ 30) A	0.71 A	
		(30 ~ 50) A	1.6 A	
		(50 ~ 80) A	2.0 A	
		(80 ~ 100) A	2.4 A	
		(100 ~ 200) A	4.1 A	
		(200 ~ 300) A	5.8 A	
		(300 ~ 500) A	16 A	
		(500 ~ 800) A	21 A	
		(800 ~ 1 000) A	24 A	
Wattmeter calibrators	40304			Power calibrators / HCT-CS-275-40304
AC Current		(50 ~ 60) Hz		
		0.12 W	0.35 mW	
		(0.12 ~ 0.48) W	1.6×10^{-3}	
		(0.48 ~ 0.6) W	7.5×10^{-4}	
		(0.6 ~ 2.4) W	7.3×10^{-4}	
		(2.4 ~ 24) W	1.1×10^{-3}	
		(24 ~ 240) W	9.2×10^{-4}	
		(240 ~ 600) W	7.7×10^{-4}	
		(600 ~ 1 200) W	7.6×10^{-4}	
		(1 200 ~ 2 400) W	8.0×10^{-4}	
		(2 400 ~ 4 800) W	7.8×10^{-4}	
Power factor		(50 ~ 60) Hz		
		-1 ~ 1	0.000 68	
Harmonic		(50 ~ 60) Hz		
TVD-V		(0.5 ~ 20) %	0.046 %	
TVD-I		(0.5 ~ 20) %	0.046 %	
Frequency		20 Hz	3.5×10^{-4}	
		(20 ~ 60) Hz	1.2×10^{-4}	
		(60 ~ 100) Hz	1.4×10^{-4}	
		(100 ~ 400) Hz	1.2×10^{-4}	
		400 Hz ~ 1 kHz	1.4×10^{-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 current shunts AC Resistance	40305	40 Hz 0.001 Ω (0.001 ~ 0.01) Ω (0.01 ~ 0.1) Ω (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω (100 ~ 1 000) Ω (40 ~ 100) Hz 0.001 Ω (0.001 ~ 0.01) Ω (0.01 ~ 0.1) Ω (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω (100 ~ 1 000) Ω 100 Hz ~ 1 kHz 0.001 Ω (0.001 ~ 0.01) Ω (0.01 ~ 0.1) Ω (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω (100 ~ 1 000) Ω	 0.44 μΩ 13 μΩ 40 μΩ 0.27 mΩ 3.0 mΩ 30 mΩ 0.36 Ω 0.63 μΩ 20 μΩ 38 μΩ 0.22 mΩ 2.4 mΩ 24 mΩ 0.28 Ω 2.0 μΩ 20 μΩ 37 μΩ 0.20 mΩ 2.3 mΩ 23 mΩ 0.27 Ω	Current Sources / HCT-CS-073-40305
역률계, 무효율계 등	40310	(50 ~ 60) Hz -1 ~ 1	 0.000 24	Power calibrators / HCT-CS-074-40310
AC power meters AC Power	40311	(50 ~ 60) Hz 0.06 W (0.06 ~ 0.12) W (0.12 ~ 0.48) W (0.48 ~ 0.6) W (0.6 ~ 1.2) W (1.2 ~ 2.4) W (2.4 ~ 6) W (6 ~ 12) W (12 ~ 24) W (24 ~ 48) W (48 ~ 60) W (60 ~ 120) W (120 ~ 240) W (240 ~ 480) W (480 ~ 600) W (600 ~ 1 200) W (1.2 ~ 2.4) kW (2.4 ~ 4.8) kW (4.8 ~ 9.6) kW (9.6 ~ 19.2) kW	 0.12 mW 0.12 mW 0.13 mW 0.15 mW 0.17 mW 0.31 mW 1.1 mW 1.7 mW 3.1 mW 6.0 mW 7.4 mW 17 mW 31 mW 60 mW 75 mW 0.17 W 0.55 W 1.1 W 2.2 W 4.5 W	Power calibrators, Multimeter calibrators / HCT-CS-075-40311

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.
DC Power	40311	0.10 W	0.16 mW	
		(0.1 ~ 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 mW	
		(480 ~ 500) W	0.24 mW	
		500 W ~ 1 kW	0.42 W	
		(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 ~ 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	46 mV	
		(300 ~ 500) V	64 mV	
		(500 ~ 600) V	73 mV	
		(600 ~ 750) V	95 mV	
		(750 ~ 1 000) V	0.14 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	
DC Voltage		1 V	62 µV	
		(1 ~ 2) V	63 µV	
		(2 ~ 5) V	67 µV	
		(5 ~ 20) V	0.64 mV	
		(20 ~ 50) V	0.70 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.
DC Voltage	40311	(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 %)	0.036 %	
Harmonic Current		(50 ~ 60) Hz		
		(0.5 % ~ 20 %)	0.034 %	
Frequency	40311	20 Hz	2.8 mHz	
		(20 Hz ~ 1 kHz)	1.3×10^{-4}	
Flicker				
P_{st}		(1 ~ 4 000) cpm		
		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	0.39 %	
		(0.25 ~ 5)	0.42 %	

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		100 mV		/ HCT-CS-076-40312
		20 Hz	21 μV	
		(20 ~ 50) Hz	1.9×10^{-4}	
		50 Hz ~ 1 kHz	1.7×10^{-4}	
		(1 ~ 10) kHz	1.9×10^{-4}	
		(10 ~ 100) kHz	1.1×10^{-3}	
		(0.1 ~ 0.4) V		
		20 Hz	0.11 mV	
		20 Hz ~ 10 kHz	2.5×10^{-4}	
		(10 ~ 100) kHz	1.2×10^{-3}	
		(0.4 ~ 0.8) V		
		20 Hz	0.14 mV	
		(20 ~ 50) Hz	1.7×10^{-4}	
		50 Hz ~ 1 kHz	1.4×10^{-4}	
		(1 ~ 10) kHz	1.7×10^{-4}	
		(10 ~ 100) kHz	8.8×10^{-4}	
		(0.8 ~ 1) V		
		20 Hz	0.16 mV	
		(20 ~ 50) Hz	1.4×10^{-4}	
		50 Hz ~ 1 kHz	1.2×10^{-4}	
		(1 ~ 10) kHz	1.4×10^{-4}	
		(10 ~ 100) kHz	8.2×10^{-4}	
		(1 ~ 4) V		
		20 Hz	1.1 mV	
		20 Hz ~ 10 kHz	2.5×10^{-4}	
		(10 ~ 100) kHz	1.2×10^{-3}	
		(4 ~ 8) V		
		20 Hz	1.4 mV	
		(20 ~ 50) Hz	1.7×10^{-4}	
		50 Hz ~ 1 kHz	1.5×10^{-4}	
		(1 ~ 10) kHz	1.7×10^{-4}	
		(10 ~ 100) kHz	8.8×10^{-4}	
		(8 ~ 10) V		
		20 Hz	1.6 mV	
		(20 ~ 50) Hz	1.4×10^{-4}	
		50 Hz ~ 1 kHz	1.3×10^{-4}	
		(1 ~ 10) kHz	1.4×10^{-4}	
		(10 ~ 100) kHz	8.2×10^{-4}	
		(10 ~ 50) V		
		20 Hz	15 mV	
		(20 ~ 50) Hz	2.2×10^{-4}	
		50 Hz ~ 1 kHz	2.0×10^{-4}	
		(1 ~ 10) kHz	2.2×10^{-4}	
		(10 ~ 100) kHz	1.1×10^{-3}	
		(50 ~ 80) V		
		20 Hz	17 mV	
		(20 ~ 50) Hz	1.7×10^{-4}	
		50 Hz ~ 1 kHz	1.5×10^{-4}	
		(1 ~ 10) kHz	1.7×10^{-4}	
		(10 ~ 100) kHz	8.9×10^{-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 Voltage	40312	(80 ~ 100) V		
		20 Hz	19 mV	
		(20 ~ 50) Hz	1.5×10^{-4}	
		50 Hz ~ 1 kHz	1.3×10^{-4}	
		(1 ~ 10) kHz	1.5×10^{-4}	
		(10 ~ 100) kHz	8.2×10^{-4}	
		(100 ~ 150) V		
		50 Hz	0.12 V	
		(50 ~ 100) Hz	8.0×10^{-4}	
		100 Hz ~ 1 kHz	5.4×10^{-4}	
		(1 ~ 10) kHz	8.0×10^{-4}	
		(150 ~ 200) V		
		50 Hz	0.14 V	
		(50 ~ 100) Hz	7.0×10^{-4}	
		100 Hz ~ 1 kHz	5.0×10^{-4}	
		(1 ~ 10) kHz	7.0×10^{-4}	
		(200 ~ 300) V		
		50 Hz	0.14 V	
		(50 ~ 100) Hz	4.7×10^{-4}	
		100 Hz ~ 1 kHz	3.7×10^{-4}	
		(1 ~ 10) kHz	4.7×10^{-4}	
		(300 ~ 500) V		
		50 Hz	0.63 V	
		50 Hz ~ 10 kHz	1.3×10^{-3}	
		(500 ~ 800) V		
		50 Hz	0.63 V	
		50 Hz ~ 10 kHz	7.9×10^{-4}	
		(800 ~ 1 000) V		
		50 Hz	0.63 V	
		50 Hz ~ 10 kHz	6.4×10^{-4}	
		(1 ~ 1.5) kV		
		60 Hz	0.012 kV	
DC Voltage		100 mV	6.2 μV	
		(0.1 ~ 1) V	59 μV	
		(1 ~ 10) V	0.58 mV	
		(10 ~ 100) V	2.2 mV	
		(100 ~ 400) V	0.062 V	
		(400 ~ 1 000) V	0.62 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.
AC Current	40312	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	
		(80 ~ 100) mA 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	
		(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	
DC Current		100 μA (0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A	10 nA 64 nA 0.64 μA 6.4 μA 64 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.
DC Current	40312	(1 ~ 10) A	0.68 mA	
		(10 ~ 40) A	25 mA	
		(40 ~ 80) A	48 mA	
		(80 ~ 100) A	53 mA	
Frequency	40312	20 Hz	9 μHz	
		(20 ~ 100) Hz	7.8×10^{-7}	
		100 Hz ~ 1 kHz	8.4×10^{-7}	
		(1 ~ 10) kHz	9.8×10^{-7}	
		(10 ~ 40) kHz	1.7×10^{-6}	
		(40 ~ 80) kHz	8.9×10^{-7}	
		(80 ~ 100) kHz	7.5×10^{-7}	
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	5.1 V	
		(2 ~ 4) kV	9.1 V	
		(4 ~ 6) kV	14 V	
		(6 ~ 8) kV	18 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	1.4 V	
		(2 ~ 4) kV	2.6 V	
		(4 ~ 6) kV	3.8 V	
		(6 ~ 8) kV	5.0 V	
		(8 ~ 10) kV	11 V	
		(10 ~ 20) kV	17 V	
		(20 ~ 30) kV	28 V	
		(30 ~ 40) kV	32 V	
		(40 ~ 50) kV	43 V	
		(50 ~ 60) kV	47 V	
		(60 ~ 70) kV	58 V	
		(70 ~ 80) kV	62 V	
		(80 ~ 90) kV	73 V	
		(90 ~ 100) kV	77 V	
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	

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.
DC Cut-off Current	40313	(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	10 mV	
		(0.8 ~ 4) kV	2.6 V	
		(4 ~ 6) kV	3.8 V	
		(6 ~ 8) kV	5.0 V	
		(8 ~ 10) kV	11 V	
Insulation Resistance		(1 ~ 7) kΩ	0.65 Ω	
		(7 ~ 10) kΩ	0.99 Ω	
		(10 ~ 100) kΩ	6.6 Ω	
		(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 ~ 200) mΩ	2.4 mΩ	
		(200 ~ 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 AC Power	40314	(50 ~ 60) Hz		Power calibrators Multimeter calibrators / HCT-CS-078-40314
		1.5 W	2.5 mW	
		(1.5 ~ 3) W	2.5 mW	
		(3 ~ 12) W	2.9 mW	
		(12 ~ 15) W	3.6 mW	
		(15 ~ 30) W	4.6 mW	
		(30 ~ 60) W	9.1 mW	
		(60 ~ 120) W	27 mW	
		(120 ~ 300) W	46 mW	
		(300 ~ 600) W	91 mW	
		(600 ~ 1 200) W	0.17 W	
		(1.2 ~ 1.5) kW	0.24 W	
		(1.5 ~ 3) kW	0.46 W	
		(3 ~ 6) kW	0.91 W	
		(6 ~ 12) kW	1.7 W	
		(12 ~ 15) kW	2.4 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	40314	(15 ~ 30) kW	4.6 W	
		(30 ~ 60) kW	9.1 W	
		(60 ~ 120) kW	20 W	
		(120 ~ 240) kW	31 W	
DC Power		0.5 W	3.7 mW	
		(0.5 ~ 2.5) W	4.4 mW	
		(2.5 ~ 7.5) W	5.3 mW	
		(7.5 ~ 15) W	5.9 mW	
		(15 ~ 24) W	6.6 mW	
		(24 ~ 30) W	7.2 mW	
		(30 ~ 50) W	9.5 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	
		(12.5 ~ 15) kW	2.3 W	
		(15 ~ 25) kW	2.9 W	
		(25 ~ 30) kW	4.6 W	
		(30 ~ 60) kW	7.8 W	
		(60 ~ 125) kW	17 W	
		(125 ~ 250) kW	32 W	
		(250 ~ 500) kW	60 W	
Power Factor		(50 ~ 60) Hz		
		-1 ~ 1	0.000 16	
AC Voltage		(50 ~ 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	46 mV	
		(300 ~ 500) V	64 mV	
		(500 ~ 600) V	73 mV	
		(600 ~ 750) V	95 mV	
		(750 ~ 1 000) V	0.14 V	
AC Current		(50 ~ 60) Hz		
		100 mA	0.24 mA	
		100 mA ~ 1 A	2.5 mA	
		(1 ~ 10) A	27 mA	
		(10 ~ 100) A	0.38 A	
		(100 ~ 200) A	0.56 A	
		(200 ~ 300) A	0.77 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.
AC Current	40314	(300 ~ 400) A	0.99 A	
		(400 ~ 500) A	1.3 A	
		(500 ~ 750) A	2.0 A	
		(750 ~ 900) A	2.3 A	
		(900 ~ 1 000) A	2.6 A	
		(1 000 ~ 1 500) A	3.7 A	
		(1 500 ~ 2 000) A	4.8 A	
		(2 000 ~ 2 500) A	5.9 A	
		(2 500 ~ 3 000) A	7.1 A	
AC voltmeters	40318			Multimeter calibrators, Digitor Multimeters
DC Voltage		2 mV	53 μV	AC voltage standard /HCT-CS-079-40318
		(2 ~ 10) mV	5.9×10^{-5}	
		(10 ~ 100) mV	1.4×10^{-5}	
		(0.1 ~ 1) V	6.7×10^{-6}	
		(1 ~ 10) V	4.6×10^{-6}	
		(10 ~ 100) V	6.3×10^{-6}	
		(100 ~ 1 000) V	8.1×10^{-6}	
		-2 mV	53 μV	
		(-2 ~ -10) mV	5.9×10^{-5}	
		(-10 ~ -100) mV	1.4×10^{-5}	
		(-0.1 ~ -1) V	6.7×10^{-6}	
		(-1 ~ -10) V	4.6×10^{-6}	
		(-10 ~ -100) V	6.3×10^{-6}	
		(-100 ~ -1 000) V	8.1×10^{-6}	
AC Voltage		2 mV		
		40 Hz	3.9 μV	
		40 Hz ~ 50 kHz	2.0×10^{-3}	
		(50 ~ 100) kHz	2.3×10^{-3}	
		(100 ~ 500) kHz	5.5×10^{-3}	
		500 kHz ~ 1 MHz	6.0×10^{-3}	
		(2 ~ 10) mV		
		40 Hz	3.5 μV	
		40 Hz ~ 20 kHz	3.5×10^{-4}	
		(20 ~ 50) kHz	3.7×10^{-4}	
		(50 ~ 100) kHz	6.1×10^{-4}	
		(100 ~ 500) kHz	1.5×10^{-3}	
		500 kHz ~ 1 MHz	1.8×10^{-3}	
		(10 ~ 100) mV		
		40 Hz	6.0 μV	
		40 Hz ~ 20 kHz	6.0×10^{-5}	
		(20 ~ 50) kHz	1.2×10^{-4}	
		(50 ~ 100) kHz	1.8×10^{-4}	
		100 kHz ~ 1 MHz	7.0×10^{-4}	
		100 mV ~ 1 V		
		10 Hz	0.23 mV	
		(10~ 20) Hz	7.2×10^{-5}	
		(20 ~ 40) Hz	3.8×10^{-5}	
		40 Hz ~ 1 kHz	2.0×10^{-5}	
		(1 ~ 10) kHz	2.6×10^{-5}	
		(10 ~ 20) kHz	2.0×10^{-5}	
		(20 ~ 50) kHz	4.8×10^{-5}	

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	40318	(50 ~ 100) kHz	6.0×10^{-5}	
		(100 ~ 500) kHz	5.0×10^{-4}	
		500 kHz ~ 1 MHz	5.3×10^{-4}	
		(1 ~ 10) V		
		10 Hz	2.3 mV	
		(10~ 20) Hz	7.2×10^{-5}	
		(20 ~ 40) Hz	3.7×10^{-5}	
		40 Hz ~ 20 kHz	2.5×10^{-5}	
		(20 ~ 50) kHz	4.7×10^{-5}	
		(50 ~ 100) kHz	5.9×10^{-5}	
		(100 ~ 500) kHz	5.0×10^{-4}	
		500 kHz ~ 1 MHz	5.6×10^{-4}	
		(10 ~ 100) V		
		40 Hz	3.7 mV	
		40 Hz ~ 20 kHz	3.7×10^{-5}	
		(20 ~ 50) kHz	7.6×10^{-5}	
		(50 ~ 100) kHz	8.3×10^{-5}	
		(100 ~ 1 000) V		
		40 Hz	35 mV	
		40 Hz ~ 20 kHz	3.5×10^{-5}	
Frequency		10 Hz	5.8 mHz	
		10 Hz ~ 10 MHz	5.8×10^{-5}	
		(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	0.005 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
Gain		10 Hz		Digital multimeters
		100 mV	33 μV	/HCT-CS-181-40401
		(0.1 ~ 1) V	3.3×10^{-4}	
		(1 ~ 10) V	3.6×10^{-4}	
		(10 ~ 100) V	1.9×10^{-4}	
		(10 ~ 100) Hz		
		100 mV	25 μV	
		(0.1 ~ 1) V	2.5×10^{-4}	
		(1 ~ 10) V	3.1×10^{-4}	
		(10 ~ 100) V	1.3×10^{-4}	
		(0.1 ~ 1) kHz		
		100 mV	25 μV	
		(0.1 ~ 1) V	2.5×10^{-4}	
		(1 ~ 10) V	1.7×10^{-4}	
		(10 ~ 100) V	1.3×10^{-4}	
		(1 ~ 10) kHz		
		100 mV	26 μV	
		(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		
		100 mV	0.12 mV	
		(0.1 ~ 1) V	1.2×10^{-3}	
		(1 ~ 10) V	1.8×10^{-3}	
		(10 ~ 100) V	8.2×10^{-4}	
		10 Hz ~ 1 kHz		
		(0 ~ 60) dB	0.006 dB	
		(1 ~ 20) kHz		
		(0 ~ 60) dB	0.007 dB	
		(20 ~ 100) kHz		
		(0 ~ 40) dB	0.010 dB	
Charge type amplifier		10 Hz		
Gain		10 mV	60 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}	

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.
Charge type amplifier	40401	(10 ~ 20) kHz		
Gain		10 mV	60 μV	
		(10 ~ 100) mV	6.1×10^{-3}	
		(0.1 ~ 1) V	7.6×10^{-4}	
		(1 ~ 9) V	1.1×10^{-3}	
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}	
AC Voltage		(10 Hz)		
		100 μV	0.27 μV	
		(0.1 ~ 100) mV	4.0×10^{-5}	
		(0.1 ~ 1) V	3.3×10^{-5}	
		(1 ~ 10) V	4.7×10^{-5}	
		(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}	

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 Voltage	40403	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}	
		(1 ~ 10) kHz		
		100 μV	0.13 μV	
		(0.1 ~ 100) mV	2.7×10^{-5}	
		(0.1 ~ 1) V	1.7×10^{-5}	
		(1 ~ 10) V	1.5×10^{-5}	
		(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	3.5 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}	
		(50 ~ 100) kHz		
		100 μV	0.28 μV	
		(0.1 ~ 100) mV	6.7×10^{-5}	
		(0.1 ~ 1) V	3.6×10^{-5}	
		(1 ~ 10) V	5.8×10^{-5}	
		(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}	

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 Voltage	40403	(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}	
		(1 ~ 2) MHz		
		100 μV	0.20 μV	
		(0.1 ~ 100) mV	4.4×10^{-4}	
		(0.1 ~ 1) V	5.5×10^{-4}	
		(1 ~ 3) V	2.4×10^{-4}	
		(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}	
DC Current		0 μA	0.81 nA	
		(0 ~ 100) μA	1.0×10^{-5}	
		(-0 ~ -100) μA	1.0×10^{-5}	
		(0.1 ~ 1) mA	1.1×10^{-5}	
		(-0.1 ~ -1) mA	1.1×10^{-5}	
		(1 ~ 10) mA	1.2×10^{-5}	
		(-1 ~ -10) mA	1.2×10^{-5}	
		(10 ~ 100) mA	8.7×10^{-6}	
		(-10 ~ -100) mA	8.7×10^{-6}	
		(0.1 ~ 1) A	8.8×10^{-6}	
		(-0.1 ~ -1) A	8.8×10^{-6}	
		(1 ~ 10) A	1.6×10^{-5}	
		(-1 ~ -10) A	1.6×10^{-5}	
		(10 ~ 20) A	5.4×10^{-5}	
		(-10 ~ -20) A	5.4×10^{-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.
AC Current	40403	(10 Hz)		
		1 μA	0.81 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	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}	
		(40 ~ 45) 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	4.5×10^{-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	4.8×10^{-5}	
		(10 ~ 20) A	4.7×10^{-5}	
		(200 ~ 500) Hz		
		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	4.4×10^{-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}	

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 Current	40403	(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}	
		(2 ~ 5) kHz		
		1 μA	6.7 nA	
		(1 ~ 100) μA	7.3×10^{-5}	
		(0.1 ~ 1) mA	3.5×10^{-5}	
		(1 ~ 10) mA	4.2×10^{-5}	
		(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	7.3×10^{-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}	
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}	

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.
Frequency	40403	(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	0.59 μV	Digital multimeters,
		-1 mV	0.59 μV	Frequency counters,
		(1 ~ 100) mV	1.6×10^{-5}	LCR meters
		(-1 ~ -100) mV	1.6×10^{-5}	/HCT-CS-276-40403
		(0.1 ~ 1) V	8.0×10^{-6}	
		(-0.1 ~ -1) V	8.0×10^{-6}	
		(1 ~ 10) V	5.5×10^{-6}	
		(-1 ~ -10) V	5.5×10^{-6}	
		(10 ~ 100) V	8.5×10^{-6}	
		(-10 ~ -100) V	8.5×10^{-6}	
		(100 ~ 1 000) V	1.0×10^{-5}	
		(-100 ~ -1 000) V	1.0×10^{-5}	
DC Current (Meter)		1 μA	2.4 nA	
		-1 μA	2.4 nA	
		(1 ~ 100) μA	1.4×10^{-4}	
		(-1 ~ -100) μA	1.4×10^{-4}	
		(0.1 ~ 1) mA	5.6×10^{-5}	
		(-0.1 ~ -1) mA	5.6×10^{-5}	
		(1 ~ 10) mA	5.2×10^{-5}	
		(-1 ~ -10) mA	5.2×10^{-5}	
		(10 ~ 100) mA	5.7×10^{-5}	
		(-10 ~ -100) mA	5.7×10^{-5}	
		(0.1 ~ 1) A	1.2×10^{-4}	
		(-0.1 ~ -1) A	1.2×10^{-4}	
		(1 ~ 10) A	1.0×10^{-4}	
		(-1 ~ -10) A	9.9×10^{-5}	
		(10 ~ 20) A	1.0×10^{-4}	
		(-10 ~ -20) A	9.9×10^{-5}	
Resistance (Meter)		1 Ω	11 μΩ	
		(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}	

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 Voltage (Meter)	40403	(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	4.7 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	4.7 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}	
		(1 ~ 10) kHz		
		1 mV	4.7 μV	
		(1 ~ 100) mV	1.5×10^{-4}	
		(0.1 ~ 1) V	6.1×10^{-5}	
		(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	4.7 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}	

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 Voltage (Meter)	40403	(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	6.4 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}	
AC Current (Meter)		(10 ~ 40) Hz		
		1 μA	12 nA	
		(1 ~ 100) μA	3.1×10^{-4}	
		(0.1 ~ 1) mA	2.3×10^{-4}	
		(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	1.5×10^{-4}	
		(10 ~ 20) A	1.5×10^{-4}	
		(40 ~ 500) Hz		
		1 μA	9.4 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	5.5×10^{-4}	
		(10 ~ 20) A	4.7×10^{-4}	
		500 Hz ~ 1 kHz		
		1 μA	9.4 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	5.5×10^{-4}	
		(10 ~ 20) A	4.7×10^{-4}	
		(1 ~ 5) kHz		
		1 μA	14 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}	
		(5 ~ 10) kHz		
		1 μA	76 nA	
		(1 ~ 100) μA	2.1×10^{-3}	
		(0.1 ~ 1) mA	2.1×10^{-3}	
		(1 ~ 10) mA	1.9×10^{-3}	
		(10 ~ 100) mA	1.5×10^{-3}	
		(0.1 ~ 1) A	8.3×10^{-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.
DC Voltage (Source)	40403	1 mV	0.12 μV	
		-1 mV	0.12 μV	
		(1 ~ 100) mV	4.9×10^{-6}	
		(-1 ~ -100) mV	4.9×10^{-6}	
		(0.1 ~ 1) V	3.9×10^{-6}	
		(-0.1 ~ -1) V	3.9×10^{-6}	
		(1 ~ 10) V	3.7×10^{-6}	
		(-1 ~ -10) V	3.7×10^{-6}	
		(10 ~ 100) V	5.2×10^{-6}	
		(-10 ~ -100) V	5.2×10^{-6}	
		(100 ~ 1 000) V	5.5×10^{-6}	
		(-100 ~ -1 000) V	5.5×10^{-6}	
DC Current (Source)		1 μA	0.48 nA	
		-1 μA	0.48 nA	
		(1 ~ 100) μA	6.1×10^{-5}	
		(-1 ~ -100) μA	6.1×10^{-5}	
		(0.1 ~ 1) mA	1.1×10^{-5}	
		(-0.1 ~ -1) mA	1.1×10^{-5}	
		(1 ~ 10) mA	1.1×10^{-5}	
		(-1 ~ -10) mA	1.1×10^{-5}	
		(10 ~ 100) mA	2.3×10^{-5}	
		(-10 ~ -100) mA	2.3×10^{-5}	
		(0.1 ~ 1) A	3.8×10^{-5}	
		(-0.1 ~ -1) A	3.8×10^{-5}	
		(1 ~ 10) A	1.6×10^{-4}	
		(-1 ~ -10) A	1.6×10^{-4}	
Resistance (Source)		1 Ω	18 μΩ	
		(1 ~ 100) Ω	9.1×10^{-6}	
		(0.1 ~ 1) kΩ	9.0×10^{-6}	
		(1 ~ 10) kΩ	9.0×10^{-6}	
		(10 ~ 100) kΩ	9.1×10^{-6}	
		(0.1 ~ 1) MΩ	1.0×10^{-5}	
		(1 ~ 10) MΩ	1.1×10^{-5}	
		(10 ~ 100) MΩ	3.2×10^{-5}	
AC Current (Source)		(10 ~ 40) Hz		
		1 μA	0.42 nA	
		(1 ~ 100) μA	4.2×10^{-4}	
		(0.1 ~ 1) mA	4.1×10^{-4}	
		(1 ~ 10) mA	4.1×10^{-4}	
		(10 ~ 100) mA	4.1×10^{-4}	
		(0.1 ~ 1) A	8.1×10^{-4}	
		(1 ~ 10) A	1.0×10^{-3}	
		(40 ~ 500) Hz		
		1 μA	0.42 nA	
		(1 ~ 100) μA	4.2×10^{-4}	
		(0.1 ~ 1) mA	4.1×10^{-4}	
		(1 ~ 10) mA	4.1×10^{-4}	
		(10 ~ 100) mA	4.1×10^{-4}	
		(0.1 ~ 1) A	8.1×10^{-4}	
		(1 ~ 10) A	1.0×10^{-3}	
		500 Hz ~ 1 kHz		
		1 μA	0.42 nA	
		(1 ~ 100) μA	4.2×10^{-4}	
		(0.1 ~ 1) mA	4.1×10^{-4}	
		(1 ~ 10) mA	4.1×10^{-4}	
		(10 ~ 100) mA	4.1×10^{-4}	
		(0.1 ~ 1) A	8.1×10^{-4}	
		(1 ~ 10) A	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.
AC Current (Source)	40403	(1 ~ 5) kHz		
		1 μA	0.46 nA	
		(1 ~ 100) μA	4.6×10^{-4}	
		(0.1 ~ 1) mA	4.1×10^{-4}	
		(1 ~ 10) mA	4.2×10^{-4}	
		(10 ~ 100) mA	4.1×10^{-4}	
		(0.1 ~ 1) A	9.4×10^{-4}	
		(1 ~ 10) A	3.1×10^{-3}	
		(5 ~ 10) kHz		
		1 μA	0.45 nA	
		(1 ~ 100) μA	4.6×10^{-4}	
		(0.1 ~ 1) mA	4.1×10^{-4}	
		(1 ~ 10) mA	4.2×10^{-4}	
		(10 ~ 100) mA	4.1×10^{-4}	
		(0.1 ~ 1) A	1.0×10^{-3}	
		(1 ~ 10) A	3.0×10^{-3}	
DC Voltage (Elecrtical temperature)		0 mV	0.49 μV	
		(-10 ~ 0) mV	4.9×10^{-5}	
		(0 ~ 1) mV	4.9×10^{-4}	
		(1 ~ 10) mV	4.9×10^{-5}	
		(10 ~ 100) mV	4.9×10^{-6}	
		(0.1 ~ 1) V	5.8×10^{-5}	
Time Mark		1 ns	2.7 ps	
		(1 ~ 10) ns	2.7×10^{-4}	
		(10 ~ 100) ns	2.7×10^{-5}	
		(0.1 ~ 1) μs	2.8×10^{-6}	
		(1 ~ 10) μs	6.4×10^{-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}	
Capacitance		DC		
		1 mF	0.60 μF	
		(1 ~ 10) mF	1.1×10^{-4}	
		(10 ~ 110) mF	4.8×10^{-5}	
		50 Hz		
		100 μF	32 nF	
		100 Hz		
		1 μF	0.39 nF	
		(1 ~ 10) μF	2.5×10^{-4}	
		(10 ~ 100) μF	3.2×10^{-4}	
		120 Hz		
		100 μF	32 nF	

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.
Capacitance	40403	1 kHz		
		1 pF	0.39 fF	
		(1 ~ 10) pF	3.8×10^{-4}	
		(10 ~ 100) pF	2.6×10^{-4}	
		(0.1 ~ 1) nF	2.6×10^{-4}	
		(1 ~ 10) nF	2.5×10^{-4}	
		(10 ~ 100) nF	2.5×10^{-4}	
		(1 ~ 10) µF	2.5×10^{-4}	
		(0.1 ~ 1) µF	2.5×10^{-4}	
		(1 ~ 10) kHz		
		1 pF	0.39 fF	
		(1 ~ 10) pF	3.8×10^{-4}	
		(10 ~ 100) pF	3.8×10^{-4}	
		(0.1 ~ 1) nF	3.8×10^{-4}	
		(1 ~ 10) nF	3.8×10^{-4}	
		(10 ~ 100) nF	3.8×10^{-4}	
		(0.1 ~ 1) µF	3.8×10^{-4}	
		(10 ~ 100) kHz		
		1 pF	0.39 fF	
		(1 ~ 10) pF	3.8×10^{-4}	
		(10 ~ 100) pF	3.8×10^{-4}	
		(0.1 ~ 1) nF	3.8×10^{-4}	
		(1 ~ 10) nF	3.8×10^{-4}	
		(100 ~ 500) kHz		
		1 pF	0.39 fF	
		(1 ~ 10) pF	3.8×10^{-4}	
		(10 ~ 100) pF	3.8×10^{-4}	
		(0.1 ~ 1) nF	3.8×10^{-4}	
		(0.5 ~ 1) MHz		
		1 pF	0.63 fF	
		(1 ~ 10) pF	6.3×10^{-4}	
		(10 ~ 100) pF	6.3×10^{-4}	
		(0.1 ~ 1) nF	6.3×10^{-4}	
Inductance(Source)		1 kHz		
		100 µH	28 nH	
		(0.1 ~ 1) mH	2.7×10^{-4}	
		(1 ~ 10) mH	2.7×10^{-4}	
		(10 ~ 100) mH	2.7×10^{-4}	
		(0.1 ~ 1) H	2.7×10^{-4}	
		(1 ~ 10) H	2.8×10^{-4}	
		(1 ~ 10) kHz		
		100 µH	28 nH	
		(0.1 ~ 1) mH	2.7×10^{-4}	
		(1 ~ 10) mH	2.7×10^{-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.
Oscilloscope calibrators	40404			Digital multimeters, Counters,
DC Voltage		(±)		Power meters, Oscilloscopes,
		0 mV	0.060 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}	
Square/Edge Wave Voltage		1 kHz		
		5 mV	3.2 μV	
		(5 ~ 10) mV	7.0×10^{-4}	
		(10 ~ 25) mV	3.4×10^{-4}	
		(25 ~ 50) mV	2.2×10^{-4}	
		(50 ~ 100) mV	1.7×10^{-4}	
		(100 ~ 250) mV	1.4×10^{-4}	
		(250 ~ 500) mV	7.4×10^{-5}	
		(0.5 ~ 1) V	1.3×10^{-2}	
		(1 ~ 2.5) V	1.2×10^{-4}	
		(2.5 ~ 5) V	1.7×10^{-4}	
		(5 ~ 10) V	1.6×10^{-4}	
		(10 ~ 25) V	1.3×10^{-4}	
		(25 ~ 50) V	1.0×10^{-4}	
		(50 ~ 100) V	1.4×10^{-4}	
		(100 ~ 130) V	1.1×10^{-4}	
		(130 ~ 200) V	8.0×10^{-5}	
		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	2.8×10^{-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}	
Edge Duty Cycle		50 %	0.058 %	

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.
Edge Rise Time	40404	300 ps	0.64 ps	
		(300 ~ 500) ps	1.5×10^{-3}	
Leveled Sine Wave (Harmonic)		50 kHz ~ 6 GHz		
		-10 dBc	0.64 dB	
		(-10 ~ -80) dBc	0.64 dB	
RF output levels (V : pp)		50 kHz ~ 600 MHz		
		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}	
Leveled Sine Wave (Amplitude)		10 Hz		
		5 mV	4.3 μV	
		(5 ~ 100) mV	5.9×10^{-5}	
		(0.1 ~ 1) V	6.6×10^{-4}	
		(1 ~ 5.5) V	1.2×10^{-4}	
		(0.01 ~ 50) kHz		
		5 mV	5.1 μV	
		(5 ~ 100) mV	1.1×10^{-4}	
		(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	2.6×10^{-5}	
		(0.9 ~ 2.5) V	2.6×10^{-4}	
		(2.5 ~ 3.75) V	1.9×10^{-4}	
		(3.75 ~ 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.
Wave Generator (Square)	40404	(1 ~ 10) kHz		
		2.5 V	0.73 mV	
		(2.5 ~ 3.75) V	1.3×10^{-5}	
		(3.75 ~ 55) V	4.3×10^{-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}	
Wave Generator (Triangle)		10 Hz		
		10 mV	3.0 μV	
		(0.01 ~ 55) V	2.6×10^{-5}	
		(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}	
		(50 ~ 100) ms	5.8×10^{-7}	
		(100 ~ 200) ms	2.9×10^{-7}	
		(200 ~ 500) ms	1.2×10^{-7}	
		(0.5 ~ 1) s	5.8×10^{-7}	
		(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}	

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.
Frequency	40404	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}	
		(200 ~ 500) MHz	1.2×10^{-7}	
		(0.5 ~ 1.1) GHz	5.2×10^{-7}	
MeasZ (Resistance)		40 Ω	12 mΩ	
		40 Ω ~ 1.5 MΩ	2.8×10^{-4}	
MeasZ (Capacitance)		50 pF	0.10 pF	
		(50 ~ 100) pF	1.8×10^{-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}	

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.
Scart Video Level	40406	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}	
NTSC,PAL,SECAM H-Timing Test		100 ns	0.60 ns	
(Time)		(100 ~ 300) ns	3.9×10^{-2}	
		300 ns ~ 9 μs	1.4×10^{-3}	
(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/meters	40407			Multimeter calibrators,
Distortion meter				Distortion meter calibrators
Input frequency		1 Hz ~ 1 MHz	6.2×10^{-5}	/HCT-CS-085-40407
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}	
		(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}	

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 input levels	40407	(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		(20 Hz ~ 20 kHz)		
		(-10 ~ -60) dB	0.31 dB	
		(-60 ~ -70) dB	0.38 dB	
		(-70 ~ -80) dB	0.55 dB	
		20 Hz ~ 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}	
Output level		(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	
LF/audio signal analyzers	40409			Multimeter calibrators, Digital multimeters /HCT-CS-088-40409
Output Frequency		1 Hz ~1 MHz	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.
Output level	40409	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	
		(-10 ~ -30) dBm		
		20 Hz	0.006 0 dB	
		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	

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.
Output amplitude	40409	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}	
		(2 ~ 100) mV		
		10 Hz	43 μV	
		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	2.2×10^{-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}	
Filter(weight,low,high pass etc.)		400 Hz ~ 80 kHz	1.9×10^{-4}	
Distortion factor		20 Hz ~ 20 kHz		
		(-10 ~ -60) dB	0.31 dB	
		(-60 ~ -70) dB	0.38 dB	
		(-70 ~ -80) dB	0.56 dB	
		20 Hz ~ 20 kHz		
		(0.001 ~ 0.01) %	5.5×10^{-2}	
		(0.01 ~ 30) %	3.1×10^{-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.
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}	
		(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 ~ 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 ~ 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.
Rise/Fall Time	40411	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}	
FM Modulation		9 kHz ~ 400 kHz	1.2×10^{-2}	
Duty Cycle		1 % ~ 99 %	5.8×10^{-3}	
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	1 mV	
		(1 ~ 100) V	5.8×10^{-4}	
		(0.1 ~ 1) kV	4.0×10^{-5}	
		(1 ~ 2) kV	1.4×10^{-3}	
		(2 ~ 5) kV	7.9×10^{-4}	
		(5 ~ 10) kV	4.8×10^{-4}	
		(10 ~ 20) kV	4.2×10^{-4}	
		(20 ~ 50) kV	4.4×10^{-4}	
		(50 ~ 100) kV	4.1×10^{-4}	
		(-)		
		-1 V	1 mV	
		-(1 ~ 100) V	5.8×10^{-4}	
		-(0.1 ~ 1) kV	4.0×10^{-5}	
		-(1 ~ 2) kV	1.4×10^{-3}	
		-(2 ~ 5) kV	7.9×10^{-4}	
		-(5 ~ 10) kV	4.8×10^{-4}	
		-(10 ~ 20) kV	4.2×10^{-4}	
		-(20 ~ 50) kV	4.4×10^{-4}	
		-(50 ~ 100) kV	4.1×10^{-4}	
AC Voltage		(50 ~ 60) Hz		
		1 V	7 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	2.8×10^{-2}	
		(20 ~ 30) kV	2.3×10^{-2}	
		(30 ~ 40) kV	2.1×10^{-2}	
		(40 ~ 60) kV	2.0×10^{-2}	
		(60 ~ 70) kV	1.9×10^{-2}	
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}	

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 Current	40416	(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}	
		(0.04 ~ 1) kHz		
		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}	
DC Current		1 μA	7.1 nA	
		(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}	

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 Voltage	40416	(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}	
		(0.04 ~ 1) 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}	
		(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}	
DC Voltage		1 mV	0.80 μV	
		(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}	

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.
DC Voltage	40416	(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}	
Resistance		10 Ω	0.12 mΩ	
		(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	2.3×10^{-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	1.5×10^{-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}	
Charging/Discharging Tester		100 μA	5.8 nA	
Charging Current				
		(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	3.1×10^{-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	3.1×10^{-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		0 mV	0.20 μV	Current amplifiers,
		(0 ~ 100) mV	4.1×10^{-6}	Standard resistance
		(0 ~ -100) mV	4.1×10^{-6}	/HCT-CS-095-40419
		(0.1 ~ 1) V	1.5×10^{-6}	
		(-0.1 ~ -1) V	1.5×10^{-6}	
		(1 ~ 10) V	8.2×10^{-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.
DC Voltage	40419	(-1 ~ -10) V	8.2×10^{-7}	
		(10 ~ 100) V	1.6×10^{-6}	
		(-10 ~ -100) V	1.6×10^{-6}	
		(100 ~ 1 000) V	2.1×10^{-6}	
		(-100 ~ -1 000) V	2.1×10^{-6}	
DC Current		100 nA	2.7 pA	
		-100 nA	2.7 pA	
		0 μA	0.39 nA	
		(0 ~ 1) μA	3.8×10^{-4}	
		(0 ~ -1) μA	3.8×10^{-4}	
		(1 ~ 10) μA	3.8×10^{-5}	
		(-1 ~ -10) μA	3.8×10^{-5}	
		(10 ~ 100) μA	1.9×10^{-5}	
		(-10 ~ -100) μA	1.9×10^{-5}	
		(0.1 ~ 1) mA	2.4×10^{-5}	
		(-0.1 ~ -1) mA	2.4×10^{-5}	
		(1 ~ 10) mA	2.5×10^{-5}	
		(-1 ~ -10) mA	2.5×10^{-5}	
		(10 ~ 100) mA	1.9×10^{-5}	
		(-10 ~ -100) mA	1.9×10^{-5}	
		(0.1 ~ 1) A	4.7×10^{-5}	
		(-0.1 ~ -1) A	4.7×10^{-5}	
		(1 ~ 10) A	8.7×10^{-5}	
		(-1 ~ -10) A	8.7×10^{-5}	
		(10 ~ 20) A	8.7×10^{-5}	
		(-10 ~ -20) A	8.7×10^{-5}	
Resistance		0 Ω	2.1 μΩ	
		(0 ~ 100) Ω	2.2×10^{-6}	
		(0.1 ~ 1) kΩ	9.9×10^{-7}	
		(1 ~ 10) kΩ	1.2×10^{-6}	
		(10 ~ 100) kΩ	9.2×10^{-7}	
		(0.1 ~ 1) MΩ	1.5×10^{-6}	
		(1 ~ 10) MΩ	6.2×10^{-6}	
		(10 ~ 100) MΩ	3.1×10^{-5}	
		(0.1 ~ 1) GΩ	1.2×10^{-5}	
		(1 ~ 10) GΩ	5.6×10^{-4}	
AC Voltage		1 mV		
		10 Hz	0.64 μV	
		(10 ~ 40) Hz	0.62 μV	
		(40 ~ 500) Hz	0.63 μV	
		(0.5 ~ 1) kHz	0.63 μV	
		(1 ~ 10) kHz	0.63 μV	
		(10 ~ 20) kHz	0.61 μV	
		(20 ~ 50) kHz	0.91 μV	
		(50 ~ 100) kHz	1.5 μV	

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 Voltage	40419	(100 ~ 200) kHz	1.3 μV	
		(200 ~ 500) kHz	1.8 μV	
		(0.5 ~ 1) MHz	6.4 μV	
		(1 ~ 100) mV		
		10 Hz	8.2×10^{-5}	
		(10 ~ 40) Hz	4.7×10^{-5}	
		(40 ~ 500) Hz	4.5×10^{-5}	
		(0.5 ~ 1) kHz	4.5×10^{-5}	
		(1 ~ 10) kHz	4.5×10^{-5}	
		(10 ~ 20) kHz	4.5×10^{-5}	
		(20 ~ 50) kHz	6.7×10^{-5}	
		(50 ~ 100) kHz	1.0×10^{-4}	
		(100 ~ 200) kHz	2.0×10^{-4}	
		(200 ~ 500) kHz	3.1×10^{-4}	
		(0.5 ~ 1) MHz	6.5×10^{-4}	
		(0.1 ~ 1) V		
		10 Hz	6.9×10^{-5}	
		(10 ~ 40) Hz	3.8×10^{-5}	
		(40 ~ 500) Hz	2.3×10^{-5}	
		(0.5 ~ 1) kHz	2.3×10^{-5}	
		(1 ~ 10) kHz	2.8×10^{-5}	
		(10 ~ 20) kHz	2.8×10^{-5}	
		(20 ~ 50) kHz	3.8×10^{-5}	
		(50 ~ 100) kHz	4.8×10^{-5}	
		(100 ~ 200) kHz	1.3×10^{-4}	
		(200 ~ 500) kHz	3.0×10^{-4}	
		(0.5 ~ 1) MHz	1.2×10^{-3}	
		(1 ~ 10) V		
		10 Hz	6.8×10^{-5}	
		(10 ~ 40) Hz	3.3×10^{-5}	
		(40 ~ 500) Hz	2.2×10^{-5}	
		(0.5 ~ 1) kHz	2.2×10^{-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	4.6×10^{-5}	
		(100 ~ 200) kHz	1.7×10^{-4}	
		(200 ~ 500) kHz	4.0×10^{-4}	
		(0.5 ~ 1) MHz	1.5×10^{-4}	
		(10 ~ 100) V		
		10 Hz	8.5×10^{-5}	
		(10 ~ 40) Hz	4.1×10^{-5}	
		(40 ~ 500) Hz	2.6×10^{-5}	
		(0.5 ~ 1) kHz	2.6×10^{-5}	
		(1 ~ 10) kHz	2.6×10^{-5}	
		(10 ~ 20) kHz	2.6×10^{-5}	
		(20 ~ 50) kHz	3.4×10^{-5}	
		(50 ~ 100) kHz	7.8×10^{-5}	
		(100 ~ 1 000) V		
		40 Hz	2.6×10^{-5}	
		(40 ~ 500) Hz	2.0×10^{-5}	
		(0.5 ~ 1) kHz	2.0×10^{-5}	
		(1 ~ 10) kHz	8.9×10^{-5}	
		(10 ~ 20) kHz	1.3×10^{-4}	
		(20 ~ 30) kHz	1.9×10^{-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.
AC Current	40419	10 μA		
		10 Hz	10 nA	
		(10 ~ 40) Hz	7.3 nA	
		(40 ~ 500) Hz	1.4 nA	
		(0.5 ~ 1) kHz	3.8 nA	
		(1 ~ 5) kHz	6.7 nA	
		(5 ~ 10) kHz	9.7 nA	
		(10 ~ 100) μA		
		10 Hz	1.0×10^{-4}	
		(10 ~ 40) Hz	7.3×10^{-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	4.1×10^{-4}	
		(0.1 ~ 1) mA		
		10 Hz	1.1×10^{-4}	
		(10 ~ 40) Hz	6.3×10^{-5}	
		(40 ~ 500) Hz	6.2×10^{-5}	
		(0.5 ~ 1) kHz	6.2×10^{-5}	
		(1 ~ 5) kHz	1.2×10^{-4}	
		(5 ~ 10) kHz	4.0×10^{-4}	
		(1 ~ 10) mA		
		10 Hz	1.2×10^{-4}	
		(10 ~ 40) Hz	6.6×10^{-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}	
		(10 ~ 100) mA		
		10 Hz	1.3×10^{-4}	
		(10 ~ 40) Hz	6.8×10^{-5}	
		(40 ~ 500) Hz	6.6×10^{-5}	
		(0.5 ~ 1) kHz	6.6×10^{-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	1.1×10^{-4}	
		(0.5 ~ 1) kHz	1.1×10^{-4}	
		(1 ~ 5) kHz	3.4×10^{-4}	
		(5 ~ 10) kHz	1.3×10^{-3}	
		(1 ~ 10) A		
		40 Hz	7.2×10^{-5}	
		(40 ~ 500) Hz	8.1×10^{-5}	
		(0.5 ~ 1) kHz	6.5×10^{-5}	
		(1 ~ 5) kHz	1.2×10^{-4}	
		(5 ~ 10) kHz	2.2×10^{-3}	
		(10 ~ 20) A		
		40 Hz	6.7×10^{-5}	
		(40 ~ 500) Hz	7.1×10^{-5}	
		(0.5 ~ 1) kHz	7.2×10^{-5}	
		(1 ~ 5) kHz	1.8×10^{-4}	
		(5 ~ 10) kHz	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.
Frequency	40419	10 Hz (10 ~ 100) Hz (0.1 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) kHz (0.1 ~ 1) MHz (1 ~ 10) MHz	0.24 mHz 2.5×10^{-5} 2.3×10^{-5} 1.0×10^{-4} 2.5×10^{-5} 2.3×10^{-5} 2.3×10^{-5}	
Noise meters AC level(rms & Q-peak)	40420	 100 mV 10 Hz 10 Hz ~ 50 kHz (50 ~ 100) kHz (100 ~ 300) mV 10 Hz 10 Hz ~ 50 kHz (50 ~ 100) kHz (0.3 ~ 1) V 10 Hz 10 Hz ~ 50 kHz (50 ~ 100) kHz (1 ~ 3) V 10 Hz 10 Hz ~ 50 kHz (50 ~ 100) kHz (3 ~ 10) V 10 Hz 10 Hz ~ 50 kHz (50 ~ 100) kHz (10 ~ 30) V 10 Hz 10 Hz ~ 50 kHz (50 ~ 100) kHz (30 ~ 100) V 10 Hz 10 Hz ~ 50 kHz (50 ~ 100) kHz (100 ~ 300) V 10 Hz 10 Hz ~ 10 kHz	 0.16 mV 1.6×10^{-3} 1.8×10^{-3} 0.63 mV 2.1×10^{-3} 2.2×10^{-3} 1.6 mV 1.7×10^{-3} 1.8×10^{-3} 6.3 mV 2.1×10^{-3} 2.1×10^{-3} 16 mV 1.5×10^{-3} 1.6×10^{-3} 63 mV 2.1×10^{-3} 2.6×10^{-3} 0.15 V 1.5×10^{-3} 2.0×10^{-3} 0.63 V 2.1×10^{-3}	Multimeter calibrators /HCT-CS-097-40420
Weighting filter Filter(DIN/AUDIO, JIS A CCIR, CCIR/ARM)		1V	1.5 mV	
Frequency Reponse		(-10 ~10) dB 20 Hz ~ 100 kHz	 0.016 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.
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}	
		(80 ~ 90) mV	9.3×10^{-4}	
		(90 ~ 100) mV	8.4×10^{-4}	
		(100 ~ 150) mV	5.6×10^{-4}	
		(150 ~ 200) mV	4.8×10^{-4}	
		(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.
Square wave Voltage	40421	1 kHz		
		1 mV	19 μV	
		(1 ~ 2) mV	9.3×10^{-3}	
		(2 ~ 3) mV	6.2×10^{-3}	
		(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}	
Bandwidth level		50 kHz ~ 1 MHz		
		60 mV	37 μV	
		(0.06 ~ 3) V	2.2×10^{-2}	
		(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}	

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.
Time mark	40421	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}	
		(200 ~ 500) ms	1.2×10^{-6}	
		(0.5 ~ 1) s	5.8×10^{-6}	
		(1 ~ 2) s	2.9×10^{-6}	
		(2 ~ 5) s	1.2×10^{-6}	
		(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}	

404. 기타 직류 및 저주파측정

측정량/장비	분류번호	교정범위	측정불확도 (신뢰수준 약 95 %)	사용표준/측정방법 등
Frequency	40421	(200 ~ 500) MHz	1.2×10^{-6}	
		(0.5 ~ 1) GHz	5.8×10^{-6}	
AC Voltage		50 Hz ~ 10 kHz		
		10 mV	5.8 μV	
		(10 ~ 15) mV	4.1×10^{-4}	
		(15 ~ 20) mV	3.3×10^{-4}	
		(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}	
		(8 ~ 9) V	9.3×10^{-5}	
		(9 ~ 10) V	8.2×10^{-5}	
		(10 ~ 15) V	6.9×10^{-5}	
		(15 ~ 20) V	6.2×10^{-5}	
		(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}	

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.
Output Voltage	40421	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}	
		1 kHz		
		100 mV	63 μV	
		(0.1 ~ 1) V	1.1×10^{-4}	
		(1 ~ 2) V	4.6×10^{-4}	
		(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	Synchro / Resolver		RESOLVER/SYNCHRO SIMULATOR / HCT-CS-217-40422
		0 °	0.002 °	
		(0 ~ 360) °	0.002 °	
Random wave generators	40423			Frequency counters Digital multimeters, Spectrum analyzers, Oscillpscopes /HCT-CS-098-40423
Frequency		1 Hz ~ 350 MHz	5.8×10^{-9}	
Output level		10 mV		
		20 Hz	7.0 μV	
		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.
Output level	40423	(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		
		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}	
FM modulation		(9 ~ 400) kHz	1.2×10^{-2}	
Duty Cycle		(1 ~ 99) %	5.8×10^{-3}	
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}	

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.
DC Voltage	40424	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}	
		(-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}	
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 Current shunts /HCT-CS-218-40425
AC Voltage		(20 ~ 55) Hz		
		100 mV	21 μV	
		100 mV ~ 10 V	1.6×10^{-4}	
		(10 ~ 1 000) V	1.8×10^{-4}	
		(55 ~ 300) Hz		
		100 mV	16 μV	
		100 mV ~ 100 V	1.4×10^{-4}	
		(100 ~ 1 000) V	1.8×10^{-4}	
		300 Hz ~ 1 kHz		
		100 mV	16 μV	
		100 mV ~ 100 V	1.6×10^{-4}	
		(100 ~ 1 000) V	1.7×10^{-4}	
AC Current		20 Hz ~ 1 kHz		
		10 mA	5.3 μA	
		(10 ~ 100) mA	5.3×10^{-4}	
		100 mA ~ 1 A	9.3×10^{-4}	
		(1 ~ 10) A	1.3×10^{-3}	
		(10 ~ 50) A	2.4×10^{-3}	
		(50 ~ 100) A	2.3×10^{-3}	
DC Voltage		100 mV	6.0 μV	
		(0.1 ~ 1) V	5.8×10^{-5}	
		(1 ~ 5) V	1.2×10^{-4}	
		(5 ~ 1 000) V	5.9×10^{-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.
DC Current	40425	10 mA	0.76 μA	
		(10 ~ 100) mA	8.8×10^{-5}	
		100 mA ~ 1 A	2.4×10^{-4}	
		(1 ~ 10) A	5.0×10^{-4}	
		(10 ~ 20) A	8.2×10^{-3}	
		(20 ~ 100) A	7.7×10^{-4}	
Frequency		50 Hz	8.2 mHz	
		(50 ~ 60) Hz	1.6×10^{-4}	
		60 Hz ~ 1 kHz	1.8×10^{-4}	
Time interval		1 s	0.01 s	
		(1 ~ 60) s	1.0×10^{-3}	
LF signal generators	40426			Frequency counters, Digital multimeters, Spectrum analyzers, Oscilloscopes /HCT-CS-101-40426
Frequency		1 Hz ~ 2 MHz	5.8×10^{-9}	
Output level		10 mV		
		20 Hz	7.0 μV	
		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}	
		(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		(-10 ~ 10) dB		
		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	

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.
Output amplitude	40426	20 Hz ~ 1 kHz (0 ~ -60) dB (1 ~ 20) kHz (0 ~ -60) dB (20 ~ 100) kHz (0 ~ -60) dB	 0.007 dB 0.009 dB 0.015 dB	
Rise/Fall time		1 ns (1 ~ 10) ns (10 ~ 100) ns 100 ns ~ 1 s	5.9 ps 1.3×10^{-3} 1.2×10^{-3} 1.2×10^{-3}	
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 Input level	40427	 27 dBm 10 Hz 10 Hz ~ 20 kHz (20 ~ 100) kHz (27 ~ 10) dBm 10 Hz 10 Hz ~ 20 kHz 20 kHz ~ 100 kHz (100 ~ 200) kHz (10 ~ -10) dBm 10 Hz 10 Hz ~ 20 kHz (20 ~ 100) kHz (100 ~ 200) kHz (-10 ~ -40) dBm 10 Hz 10 Hz ~ 20 kHz (20 ~ 100) kHz (100 ~ 200) kHz (-40 ~ -50) dBm 10 Hz 10 Hz ~ 20 kHz (20 ~ 100) kHz (100 ~ 200) kHz 10 mV 10 Hz 10 Hz ~ 10 kHz (10 ~ 100) kHz (100 ~ 200) kHz (10 ~ 100) mV 10 Hz 10 Hz ~ 10 kHz (10 ~ 100) kHz (100 ~ 200) kHz	 0.008 dB 0.007 dB 0.008 dB 0.008 dB 0.007 dB 0.007 dB 0.009 dB 0.008 dB 0.007 dB 0.007 dB 0.009 dB 0.008 dB 0.008 dB 0.013 dB 0.022 dB 0.017 dB 0.016 dB 0.024 dB 0.045 dB 22 μV 2.2×10^{-3} 2.3×10^{-3} 2.3×10^{-3} 88 μV 6.3×10^{-4} 8.3×10^{-4} 1.2×10^{-3}	Function generators /HCT-CS-180-40427

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.
Input level	40427	(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}	
		(10 ~ 100) mV		
		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.
Output level	40429	(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}	
		(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		(-10 ~ 10) dB		
		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	
Rise/Fall Time		1 ns	5.9 ps	
		(1 ~ 10) ns	5.9×10^{-3}	
		(10 ~ 100) ns	1.3×10^{-3}	
		100 ns ~ 1 s	1.2×10^{-3}	
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	3.7×10^{-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	3.7×10^{-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.
DC Voltage	40432	(-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	3.7×10^{-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	3.7×10^{-6}	
		(10 ~ 100) V	5.2×10^{-6}	
		(100 ~ 200) V	1.1×10^{-5}	
		(200 ~ 1 000) V	5.5×10^{-6}	
VMU (Base/Emitter/Collector)		(-1 000 ~ -200) V	5.5×10^{-6}	
		(-200 ~ -100) V	1.1×10^{-5}	
		(-100 ~ -10) V	5.2×10^{-6}	
		(-10 ~ -1) V	3.7×10^{-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	3.7×10^{-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 ~ -1) pA	1.2×10^{-2}	
		-1 pA ~ 0 A	1.5×10^{-2}	
		0 A	8.1 nA	
		0 A ~ 1 pA	1.5×10^{-2}	
		(1 ~ 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}	
		(0.1 ~ 1) mA	1.3×10^{-5}	
		(1 ~ 10) mA	1.5×10^{-5}	
		(10 ~ 100) mA	4.8×10^{-5}	
		(0.1 ~ 1) A	2.2×10^{-4}	
		(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}	

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 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	8.2×10^{-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}	
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		(-10 ~ 10) dB		
		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}	

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 Input level	40433	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}	
		(2 ~ 100) mV		
		10 Hz	43 μV	
		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}	
Distortion factor		20 Hz ~ 20 kHz		
		(-10 ~ -60) dB	0.31 dB	
		(-60 ~ -70) dB	0.38 dB	
		(-70 ~ -80) dB	0.56 dB	
		20 Hz ~ 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 /HCT-CS-055-40434
DC Voltage		(+)		
		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}	

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.
DC Voltage	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}	
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}	
AC/DC high voltage probes	40435	(±)		High voltage sources /HCT-CS-056-40435
DC Voltage Ratio		1 kV less than		
		(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}	
AC Voltage		50 Hz ~ 1 kHz		
		1 V	0.09 mV	
		(1 ~ 10) 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.
AC Voltage	40435	(1 ~ 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 /HCT-CS-201-40436
Input voltage		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}	
		-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}	
Telephone testers	40437			Frequency couters, Digital multimeters /HCT-CS-127-40437
Frequency		1 Hz ~ 1 MHz	6.2×10^{-7}	
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}	

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 Amplitude	40437	(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	
		(-10 ~ -40) dBm		
		20 Hz	0.006 1 dB	
		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.
Vector scopes, Video signal monitors	40438	50 mV	3.4 mV	
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 electronic & magenetic 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	0.6 μWb 1.5×10^{-3} 8.2×10^{-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	12 nWb 1.2×10^{-4} 1.4×10^{-5} 6.1×10^{-6} 1.2×10^{-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 6.7×10^{-3} 3.7×10^{-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 ~ 10) mT (10 ~ 100) mT (0.1 ~ 1) T (1 ~ 2) T	31 μT 3.2×10^{-3} 3.7×10^{-3} 1.5×10^{-3} 1.2×10^{-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		(5 Hz ~ 1 GHz)		Network analyzers
		0 dB ~ 30 dB	0.08 dB	/ HCT-CS-105-40601
		30 dB ~ 60 dB	0.11 dB	
		60 dB ~ 90 dB	0.24 dB	
		(1 GHz ~ 10 GHz)		
		0 dB ~ 30 dB	0.08 dB	
		30 dB ~ 60 dB	0.11 dB	
		60 dB ~ 90 dB	0.24 dB	
		(10 GHz ~ 18 GHz)		
		0 dB ~ 30 dB	0.15 dB	
		30 dB ~ 60 dB	0.23 dB	
		60 dB ~ 90 dB	0.60 dB	
		(18 GHz ~ 40 GHz)		
		0 dB ~ 30 dB	0.15 dB	
		30 dB ~ 60 dB	0.23 dB	
Harmonics		(9 kHz ~ 18 GHz)		
		-100 dBc ~ 0 dBc	1.5 dB	
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	

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.
Attenuation	40602	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	
Waveguide attenuators Attenuation	40603	(40 GHz ~ 75 GHz)		Network analyzers, Calibration kits / HCT-CS-343-40603
		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	
		(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	
Burst pulse generators Output Voltage	40605	50 Ω (±)		Attenuators, Oscilloscopes / 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	2.8×10^{-2}	
		(2.5 ~ 3) kV	2.6×10^{-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.
Output Voltage	40605	1 kΩ (±) 10 V (10 ~ 40) V (40 ~ 100) V (100 ~ 400) V (0.4 ~ 1) kV (1 ~ 2) kV (2 ~ 4) kV (4 ~ 5) kV (5 ~ 6) kV (6 ~ 8) kV	 0.36 V 4.2×10^{-2} 3.8×10^{-2} 4.2×10^{-2} 3.8×10^{-2} 4.2×10^{-2} 3.6×10^{-2} 3.4×10^{-2} 3.3×10^{-2} 3.1×10^{-2}	
Delta time measurement (rise/fall/duration/period/ repetition rate/burst duration)		1.0 ns (1.0 ~ 2.0) ns (2.0 ~ 5.0) ns (5.0 ~ 10.0) ns (10 ~ 20) ns (20 ~ 50) ns (50 ~ 100) ns (100 ~ 200) ns (200 ~ 500) ns (0.5 ~ 1.0) µs (1.0 ~ 2.0) µs (2.0 ~ 5.0) µs (5.0 ~ 10.0) µs (10 ~ 20) µs (20 ~ 50) µs (50 ~ 100) µs (100 ~ 200) µs (200 ~ 500) µs (0.5 ~ 1) ms (1 ~ 2) ms (2 ~ 5) ms (5 ~ 10) ms (10 ~ 20) ms (20 ~ 50) ms (50 ~ 100) ms (100 ~ 200) ms (200 ~ 500) ms (0.5 ~ 1.0) s (1.0 ~ 2.0) s (2.0 ~ 5.0) s	0.014 ns 7.0×10^{-3} 2.8×10^{-3} 1.5×10^{-3} 7.5×10^{-4} 3.1×10^{-4} 6.0×10^{-4} 6.7×10^{-4} 2.7×10^{-4} 1.2×10^{-3} 5.8×10^{-4} 2.3×10^{-4} 5.9×10^{-4} 3.1×10^{-4} 1.3×10^{-4} 8.3×10^{-4} 4.2×10^{-4} 6.1×10^{-4} 2.8×10^{-2} 3.5×10^{-2} 2.3×10^{-4} 5.9×10^{-4} 3.0×10^{-4} 1.6×10^{-4} 5.8×10^{-4} 6.7×10^{-4} 2.7×10^{-4} 2.1×10^{-3} 1.0×10^{-3} 4.2×10^{-4}	
Frequency measurement		2.5 kHz (2.5 ~ 5) kHz (5 ~ 10) kHz (10 ~ 100) kHz (0.1 ~ 1) MHz (1 ~ 3) MHz (3 ~ 10) MHz (10 ~ 30) MHz (30 ~ 100) MHz	1.6 Hz 3.3×10^{-4} 8.8×10^{-4} 6.6×10^{-4} 1.2×10^{-3} 3.2×10^{-4} 6.6×10^{-4} 3.6×10^{-4} 1.5×10^{-3}	
Attenuator calibrators Attenuation measurement accuracy	40606	0 dB ~ 10 dB 10 dB ~ 20 dB 20 dB ~ 30 dB 30 dB ~ 40 dB 40 dB ~ 50 dB 50 dB ~ 60 dB 60 dB ~ 70 dB	0.027 dB 0.029 dB 0.032 dB 0.038 dB 0.043 dB 0.043 dB 0.048 dB	Standard attenuators / HCT-CS-175-40606

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.
Attenuation measurement accuracy	40606	70 dB ~ 80 dB 80 dB ~ 90 dB 90 dB ~ 100 dB 100 dB ~ 110 dB 110 dB ~ 120 dB	0.054 dB 0.060 dB 0.066 dB 0.069 dB 0.074 dB	
RF power meter calibrators Power range	40607	 3 μW 10 μW 30 μW 100 μW 300 μW 1 mW 3 mW 10 mW 30 mW 100 mW	 0.27 nW 0.44 nW 1.8 nW 2.9 nW 15 nW 0.02 μW 0.10 μW 0.18 μW 0.45 μW 2.5 μW	Digital multimeter / HCT-CS-166-40607
EMC tranducers; current probes, absorbing clamps etc. EMC tranducers Transfer impedance Reflection coefficient Absorbing clamps Insertion loss	40608	 5 Hz ~ 400 MHz 400 MHz ~ 3 GHz 5 Hz ~ 3 GHz 30 MHz ~ 1 GHz	 0.54 dB 1.1 dB 5.9×10^{-3} 1.8 dB	Network analyzers, Calibration kits / HCT-CS-167-40608 / HCT-CS-198-40608
Coaxial directional couplers /splitters Coupling factor	40610	 (5 Hz ~ 9 kHz) 0 dB ~ 10 dB 10 dB ~ 20 dB 20 dB ~ 30 dB 30 dB ~ 40 dB 40 dB ~ 50 dB 50 dB ~ 60 dB (9 kHz ~ 26.5 GHz) 0 dB ~ 10 dB 10 dB ~ 20 dB 20 dB ~ 30 dB 30 dB ~ 40 dB 40 dB ~ 50 dB 50 dB ~ 60 dB 60 dB ~ 70 dB 70 dB ~ 80 dB 80 dB ~ 90 dB 90 dB ~ 100 dB 100 dB ~ 110 dB 110 dB ~ 120 dB (26.5 GHz ~ 40 GHz) 0 dB ~ 10 dB 10 dB ~ 20 dB 20 dB ~ 30 dB 30 dB ~ 40 dB 40 dB ~ 50 dB 50 dB ~ 60 dB	 0.11 dB 0.13 dB 0.15 dB 0.17 dB 0.21 dB 0.30 dB 0.04 dB 0.04 dB 0.05 dB 0.05 dB 0.06 dB 0.06 dB 0.07 dB 0.08 dB 0.08 dB 0.09 dB 0.09 dB 0.10 dB 0.21 dB 0.23 dB 0.29 dB 0.30 dB 0.47 dB 1.2 dB	Network analyzers, Calibration kits / HCT-CS-110-40610

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
Current(Ip)		(±)		measurement system,
		(6.7 ~ 7.5) A	3.0×10^{-2}	Oscilloscope calibrators
		(7.5 ~ 15) A	2.1×10^{-2}	/ HCT-CS-111-40613
		(15 ~ 22.5) A	2.7×10^{-2}	
		(22.5 ~ 30) A	2.3×10^{-2}	
		(30 ~ 45.0) A	2.7×10^{-2}	
		(45.0 ~ 56.3) A	2.5×10^{-2}	
		(56.3 ~ 75) A	2.3×10^{-2}	
		(75 ~ 93.8) A	2.2×10^{-2}	
		(93.8 ~ 150) A	2.5×10^{-2}	
T1				
30 ns, 65 ns		(±)		
		(2 ~ 4) A	4.9×10^{-2}	
		(4 ~ 8) A	2.9×10^{-2}	
		(8 ~ 12) A	4.2×10^{-2}	
		(12 ~ 16) A	3.4×10^{-2}	
		(16 ~ 24) A	4.3×10^{-2}	
		(24 ~ 30) A	3.6×10^{-2}	
		(30 ~ 40) A	3.0×10^{-2}	
		(40 ~ 50) A	2.7×10^{-2}	
		(50 ~ 80) A	3.5×10^{-2}	
T2				
60 ns, 130 ns		(±)		
		(1 ~ 2) A	9.4×10^{-2}	
		(2 ~ 4) A	4.9×10^{-2}	
		(4 ~ 6) A	7.9×10^{-2}	
		(6 ~ 8) A	6.0×10^{-2}	
		(8 ~ 12) A	8.1×10^{-2}	
		(12 ~ 15) A	6.4×10^{-2}	
		(15 ~ 20) A	5.0×10^{-2}	
		(20 ~ 25) A	4.1×10^{-2}	
		(25 ~ 40) A	6.2×10^{-2}	
T3				
180 ns, 400 ns		(±)		
		(0.3 ~ 0.55) A	6.1×10^{-2}	
		(0.55 ~ 1.10) A	3.4×10^{-2}	
		(1.10 ~ 1.65) A	5.5×10^{-2}	
		(1.65 ~ 2.20) A	4.3×10^{-2}	
		(2.20 ~ 3.30) A	7.8×10^{-2}	
		(3.30 ~ 4.13) A	6.8×10^{-2}	
		(4.13 ~ 5.50) A	5.3×10^{-2}	
		(5.50 ~ 6.88) A	4.4×10^{-2}	
		(6.88 ~ 10.6) A	4.5×10^{-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.
T4	40613			
360 ns, 800 ns		(±)		
		(0.1 ~ 0.30) A	1.1×10^{-1}	
		(0.30 ~ 0.60) A	5.7×10^{-2}	
		(0.60 ~ 0.90) A	9.7×10^{-2}	
		(0.90 ~ 1.20) A	7.4×10^{-2}	
		(1.20 ~ 1.80) A	1.4×10^{-1}	
		(1.80 ~ 2.25) A	1.2×10^{-1}	
		(2.25 ~ 3.00) A	9.2×10^{-2}	
		(3.00 ~ 3.75) A	7.4×10^{-2}	
		(3.75 ~ 5.90) A	7.6×10^{-2}	
Rise/Fall Time		(0.5 ~ 1) ns	3.7×10^{-2}	
Voltage		(±)		
		(0.1 ~ 0.5) kV	1.5×10^{-2}	
		(0.5 ~ 1) kV	9.0×10^{-3}	
		(1 ~ 2) kV	2.4×10^{-2}	
		(2 ~ 4) kV	1.2×10^{-2}	
		(4 ~ 6) kV	1.1×10^{-2}	
		(6 ~ 8) kV	8.6×10^{-3}	
		(8 ~ 10) kV	7.8×10^{-3}	
		(10 ~ 12) kV	8.1×10^{-3}	
		(12 ~ 14) kV	8.4×10^{-3}	
		(14 ~ 16) kV	7.4×10^{-3}	
		(16 ~ 18) kV	7.1×10^{-3}	
		(18 ~ 20) kV	6.9×10^{-3}	
		(20 ~ 25) kV	7.9×10^{-3}	
		(25 ~ 30) kV	6.6×10^{-3}	
Semiconductor ESD Peak Current (HBM)		(±)		
		(0.15 ~ 0.17) A	4.9×10^{-2}	
		(0.17 ~ 0.33) A	3.9×10^{-2}	
		(0.33 ~ 1.33) A	3.6×10^{-2}	
		(1.33 ~ 5.23) A	3.5×10^{-2}	
Semiconductor ESD Peak Current (MM)		(±)		
		(1.5 ~ 7.0) A	3.7×10^{-2}	
		(7 ~ 16) A	3.6×10^{-2}	
Semiconductor ESD Rise/Fall Time		(1 ~ 11) ns	1.8×10^{-2}	
Semiconductor ESD Decay Time		(100 ~ 200) ns	3.5×10^{-3}	
Semi ESD Peak Voltage		(±)		
		(0.01 ~ 1) kV	3.5×10^{-2}	
		(1 ~ 2) kV	6.1×10^{-2}	
		(2 ~ 4) kV	4.4×10^{-2}	
		(4 ~ 8) kV	3.8×10^{-2}	
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}	

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.
Sinewave voltage accuracy	40614	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}	
RF filters	40615			Network analyzers,
Cutoff frequency		9 kHz ~ 26.5 GHz	6.4×10^{-7}	Calibration kits
		(9 kHz ~ 1 GHz)		/ HCT-CS-113-40615
Insert loss		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	
		(26.5 GHz ~ 40 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	0.29 dB	
		40 dB ~ 50 dB	0.47 dB	
		50 dB ~ 60 dB	1.2 dB	
		60 dB ~ 70 dB	3.1 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	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
Line impedance stabilization networks	40618			Network analyzers, Calibration kits
LISN				
Impedance		5 Hz ~ 1 GHz	2.0×10^{-2}	/ HCT-CS-114-40618
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	
Coupling decoupling networks				
CDN				
Impedance		5 Hz ~ 1 GHz	2.0×10^{-2}	/ HCT-CS-163-40618
Phase angle		5 Hz ~ 1 GHz	0.02 °	
Voltage division factor		5 Hz ~ 1 GHz	0.12 dB	
Impedance stabilization networks				
ISN				
Impedance		9 kHz ~ 1 GHz	2.0×10^{-2}	/ HCT-CS-199-40618
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	/ HCT-CS-206-40618
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}	/ HCT-CS-249-40618
Phase angle		5 Hz ~ 3 GHz	0.011 °	
Attenuator		5 Hz ~ 3 GHz	0.13 dB	
Coaxial standard mismatches	40619			Network analyzers,
Reflection coefficients		(0 ~ 1)		Calibration kits
		9 kHz ~ 1 GHz	4.8×10^{-3}	/ HCT-CS-174-40619
		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.
Mobile communication test sets	40621			Frequency standards,
Output frequency		1 mHz ~ 46 GHz	5.8×10^{-11}	Power sensors,
				Measuring receivers,
Output level		(-30 dBm ~ 20 dBm)		RF spentrumm analyzers
		9 kHz ~ 100 MHz	0.05 dB	/HCT-CS-115-40621
		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	
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}	
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 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	

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.
Output AC Voltage	40621	(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 100 MHz ~ 1 GHz 1 GHz ~ 8 GHz 8 GHz ~ 12 GHz 12 GHz ~ 18 GHz 18 GHz ~ 50 GHz	 0.05 dB 0.07 dB 0.08 dB 0.09 dB 0.12 dB 0.12 dB	
Input level linearity		(9 kHz ~ 26.5 GHz) -10 dBm ~ 30 dBm -20 dBm ~ -10 dBm -30 dBm ~ -20 dBm -40 dBm ~ -30 dBm -50 dBm ~ -40 dBm -60 dBm ~ -50 dBm -70 dBm ~ -60 dBm -80 dBm ~ -70 dBm -90 dBm ~ -80 dBm -100 dBm ~ -90 dBm -110 dBm ~ -100 dBm -140 dBm ~ -110 dBm	 0.034 dB 0.040 dB 0.046 dB 0.052 dB 0.058 dB 0.064 dB 0.070 dB 0.076 dB 0.080 dB 0.086 dB 0.092 dB 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 10 GHz ~ 18 GHz	1.4 dB 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}	
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}	
Phase Modulation		(CW 100 kHz ~ 26.5 GHz, Rate 10 Hz ~ 100 kHz) (0.1 ~ 10) krad	 1.2×10^{-2}	
Audio RMS Accuracy		(20 Hz ~ 50 kHz) 100 mV ~ 5 V	 1.2×10^{-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.
Reference Power	40622	(50 MHz) 1 mW	 8.0×10^{-3}	
Zero Set		0.000 μW 0.00 μW 0.0 μW 0.000 mW 0.00 mW	0.001 μW 0.01 μW 0.1 μW 0.001 mW 0.01 mW	
Range-to-Range Error		10 μW ~ 100 mW	1.3×10^{-3}	
Tuned RF Level		(0 ~ 10) dB (10 ~ 20) dB (20 ~ 30) dB (30 ~ 40) dB (40 ~ 50) dB (50 ~ 60) dB (60 ~ 70) dB (70 ~ 80) dB (80 ~ 90) dB (90 ~ 100) dB (100 ~ 110) dB (110 ~ 120) dB	0.027 dB 0.029 dB 0.032 dB 0.038 dB 0.043 dB 0.043 dB 0.048 dB 0.054 dB 0.060 dB 0.066 dB 0.069 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) 5 Hz ~ 100 MHz 100 MHz ~ 1 GHz 1 GHz ~ 8 GHz 8 GHz ~ 12 GHz 12 GHz ~ 18 GHz 18 GHz ~ 26 GHz 26 GHz ~ 33 GHz 33 GHz ~ 40 GHz 40 GHz ~ 50 GHz 50 GHz ~ 75 GHz 75 GHz ~ 110 GHz	 0.06 dB 0.07 dB 0.08 dB 0.09 dB 0.12 dB 0.12 dB 0.14 dB 0.15 dB 0.15 dB 0.24 dB 0.28 dB	Power sensors, Standard mismatches / HCT-CS-117-40623
Absolute TRFL accuracy		(9 kHz ~ 8 GHz) 0 dBm ~ 30 dBm -40 dBm ~ 0 dBm -80 dBm ~ -40 dBm -120 dBm ~ -80 dBm -140 dBm ~ -120 dBm (8 GHz ~ 18 GHz) 0 dBm ~ 30 dBm -40 dBm ~ 0 dBm -80 dBm ~ -40 dBm -120 dBm ~ -80 dBm -140 dBm ~ -120 dBm (18 GHz ~ 26.5 GHz) 0 dBm ~ 30 dBm -40 dBm ~ 0 dBm -80 dBm ~ -40 dBm -120 dBm ~ -80 dBm -140 dBm ~ -120 dBm	 0.15 dB 0.16 dB 0.18 dB 0.20 dB 0.21 dB 0.20 dB 0.20 dB 0.22 dB 0.24 dB 0.25 dB 0.27 dB 0.27 dB 0.29 dB 0.31 dB 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.
Absolute TRFL accuracy	40623	(26.5 GHz ~ 40 GHz)		
		-30 dBm ~ 20 dBm	0.27 dB	
		(40 GHz ~ 50 GHz)		
		-30 dBm ~ 20 dBm	0.31 dB	
Output level linearity		(9 kHz ~ 26.5 GHz)		
		0 dBm ~ 10 dBm	0.034 dB	
		-10 dBm ~ 0 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	
		-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}	
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	

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
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	2.8×10^{-2}	
		(2.5 ~ 3) kV	2.7×10^{-2}	
		(3 ~ 4) kV	3.8×10^{-2}	
Delta time measurement		0.1 ns	0.014 ns	
(rise/fall/duration/period/		(0.1 ~ 1.0) ns	1.4×10^{-2}	
repetition rate/burst duration)		(1.0 ~ 2.0) ns	7.0×10^{-3}	
		(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}	
RF power meters	40635			Range calibrators,
RF power meters				Power sensors
Output frequency		1 mHz ~ 18 GHz	5.8×10^{-11}	/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	

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.
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-123-40646
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}	
DC Level		10 mV	6.2 μV	
		10 mV ~ 100 V	6.2×10^{-4}	
Output Level		10 mV		
		20 Hz ~ 1 kHz	9.4 μV	
		(1 ~ 20) kHz	9.4 μV	
		(20 ~ 100) kHz	9.4 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}	

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.
Output Level	40638	(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	
Harmonics		(9 kHz ~ 5 GHz)		
		-100 dBc ~ 0 dBc	1.2 dB	
		(5 GHz ~ 18 GHz)		
		-100 dBc ~ 0 dBc	1.5 dB	
Output modulation signal level		(9 kHz ~ 18 GHz)		
		-100 dBc ~ 0 dBc	1.3 dB	
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}	
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	

406. Radio frequency measuremet

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Absolute output level	40640	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	
Relative TRFL accuracy		(9 kHz ~ 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}	
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, Frequency standards, RF signal generators, Standard attenuators / HCT-CS-125-40641
Reference frequency		10 MHz ~ 1 GHz	5.8×10^{-11}	
Reference level		(10 MHz ~ 1 GHz)		
		-30 dBm ~ 10 dBm	0.07 dB	
Frequency readout		5 Hz ~ 110 GHz	9.6×10^{-4} · SPAN	
Frequency counter		5 Hz ~ 110 GHz	0.1 Hz	

406. Radio frequency measuremet

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Frequency span	40641	5 Hz ~ 110 GHz	1.4×10^{-3} · SPAN	
Resolution bandwidth		1 Hz ~ 100 MHz	2.2×10^{-3} · RBW	
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
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 ~ 1000 V)	4.0×10^{-3}	
		(1 ~ 2) kV	5.0×10^{-2}	
		(2 ~ 4) kV	2.8×10^{-2}	
		(4 ~ 6) kV	2.0×10^{-2}	
		(6 ~ 8) kV	1.6×10^{-2}	
		(8 ~ 10) kV	1.4×10^{-2}	
		(10 ~ 12) kV	1.2×10^{-2}	
		(12 ~ 15) kV	1.1×10^{-2}	
		(15 ~ 18) kV	9.8×10^{-3}	
		(18 ~ 20) kV	8.8×10^{-3}	
Current output		(±)		
		1 A	28 mA	
		(1 ~ 2) A	1.4×10^{-2}	
		(2 ~ 5) A	7.2×10^{-3}	
		(5 ~ 10) A	6.2×10^{-3}	
		(10 ~ 20) A	6.0×10^{-3}	
		(20 ~ 50) A	5.5×10^{-3}	
		(50 ~ 100) A	4.2×10^{-3}	

406. Radio frequency measuremet

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Current output	40643	(100 ~ 200) A	6.0×10^{-3}	
		(200 ~ 500) A	5.5×10^{-3}	
		(500 ~ 1 000) A	4.2×10^{-4}	
		(1 000 ~ 2 000) A	6.3×10^{-3}	
		(2 000 ~ 3 000) A	9.6×10^{-3}	
		(3 000 ~ 5 000) A	5.7×10^{-3}	
		(5 000 ~ 7 000) A	6.3×10^{-3}	
		(7 000 ~ 10 000) A	4.4×10^{-3}	
		(10 000 ~ 20 000) A	6.1×10^{-3}	
		(20 000 ~ 50 000) A	2.5×10^{-3}	
		(50 000 ~ 100 000) A	1.3×10^{-3}	
Delta time measurement (rise/fall/duration/period/ repetition rate/burst duration)		0.2 ns	0.015 ns	
		(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	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}	
Frequency		0.1 Hz	5.8 mHz	
		(0.1 ~ 1) Hz	5.9×10^{-6}	
		1 Hz ~ 10 MHz	1.2×10^{-6}	
RF terminations Reflection coefficients	40645	(0 ~ 1)		Network analyzers, Calibration kits / HCT-CS-128-40645
		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}	
		50 GHz ~ 75 GHz	2.1×10^{-2}	
		75 GHz ~ 110 GHz	2.4×10^{-2}	

406. Radio frequency measuremet

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
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	
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	

406. Radio frequency measuremet

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
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}	
Dip simulators	40654			Digital multimeters,
Output voltage				Oscilloscopes,
DC Output voltage		1 V	0.65 mV	High voltage probes
		(1 ~ 10) V	6.5×10^{-4}	/HCT-CS-202-40654
		(10 ~ 50) V	8.2×10^{-5}	
		(50 ~ 100) V	1.6×10^{-4}	
		(100 ~ 150) V	9.2×10^{-5}	
		(150 ~ 200) V	2.4×10^{-2}	
		(200 ~ 250) V	1.9×10^{-2}	
		(250 ~ 300) V	1.6×10^{-2}	
		(300 ~ 400) V	1.4×10^{-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	0.36 V	
		(0 ~ 40) %		
		(0 ~ 4.8) V	7.9×10^{-2}	
		(40 ~ 70) %		
		(4.8 ~ 8.4) V	5.0×10^{-2}	
		(70 ~ 80) %		
		(8.4 ~ 9.6) V	4.4×10^{-2}	
		(80 ~ 120) %		
		(9.6 ~ 14.4) V	3.5×10^{-2}	

406. Radio frequency measuremet

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Dip & Up Voltage	40654	(12 ~ 25) V		
DC Voltage		0 %		
		0 V	0.36 V	
		(0 ~ 40) %		
		(0 ~ 10) V	4.3×10^{-2}	
		(40 ~ 70) %		
		(10 ~ 17.5) V	3.1×10^{-2}	
		(70 ~ 80) %		
		(17.5 ~ 20) V	2.9×10^{-2}	
		(80 ~ 120) %		
		(20 ~ 30) V	2.6×10^{-2}	
		(25 ~ 50) V		
		0 %		
		0 V	0.36 V	
		(0 ~ 40) %		
		(0 ~ 20) V	2.9×10^{-2}	
		(40 ~ 70) %		
		(20 ~ 35) V	2.5×10^{-2}	
		(70 ~ 80) %		
		(35 ~ 40) V	2.5×10^{-2}	
		(80 ~ 120) %		
		(40 ~ 60) V	2.4×10^{-2}	
		(50 ~ 100) V		
		0 %		
		0 V	0.37 V	
		(0 ~ 40) %		
		(0 ~ 40) V	2.6×10^{-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}	
		(100 ~ 200) V		
		0 %		
		0 V	0.37 V	
		(0 ~ 40) %		
		(0 ~ 80) V	2.8×10^{-2}	
		(40 ~ 70) %		
		(80 ~ 140) V	2.4×10^{-2}	
		(70 ~ 80) %		
		(140 ~ 160) V	2.4×10^{-2}	
		(80 ~ 120) %		
		(160 ~ 240) V	2.4×10^{-2}	
		(200 ~ 300) V		
		0 %		
		0 V	0.35 V	
		(0 ~ 40) %		
		(0 ~ 120) V	2.8×10^{-2}	
		(40 ~ 70) %		
		(120 ~ 210) V	2.5×10^{-2}	
		(70 ~ 80) %		
		(210 ~ 240) V	2.5×10^{-2}	
		(80 ~ 120) %		
		(240 ~ 360) V	2.4×10^{-2}	

406. Radio frequency measuremet

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Dip & Up Voltage	40654	(300 ~ 400) V		
DC Voltage		0 %		
		0 V	0.37 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}	
		(100 ~ 110) V, (50 ~ 60) Hz		
		0 %		
		0 V	0.37 V	
		(0 ~ 40) %		
		(0 ~ 44) V	3.3×10^{-2}	
		(40 ~ 70) %		
		(44 ~ 77) V	2.7×10^{-2}	
		(70 ~ 80) %		
		(77 ~ 88) V	2.6×10^{-2}	
		(80 ~ 120) %		
		(88 ~ 132) V	2.4×10^{-2}	
		(110 ~ 120) V, (50 ~ 60) Hz		
		0 %		
		0 V	0.37 V	
		(0 ~ 40) %		
		(0 ~ 48) V	3.2×10^{-2}	
		(40 ~ 70) %		
		(48 ~ 84) V	2.6×10^{-2}	
		(70 ~ 80) %		
		(84 ~ 96) V	2.6×10^{-2}	
		(80 ~ 120) %		
		(96 ~ 144) V	2.4×10^{-2}	
		(120 ~ 220) V, (50 ~ 60) Hz		
		0 %		
		0 V	0.38 V	
		(0 ~ 40) %		
		(0 ~ 88) V	3.2×10^{-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}	
		(220 ~ 230) V, (50 ~ 60) Hz		
		0 %		
		0 V	0.38 V	
		(0 ~ 40) %		
		(0 ~ 92) V	3.2×10^{-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}	

406. Radio frequency measuremet

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Dip & Up Voltage	40654	(230 ~ 380) V, (50 ~ 60) Hz		
DC Voltage		0 %		
		0 V	0.39 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	0.39 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}	
Delta Time		0.2 ns	0.015 ns	
		(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}	
		(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	0.24 A	
		(50 ~ 100) A	4.2×10^{-3}	
		(100 ~ 500) A	4.7×10^{-3}	
		(500 ~ 1 000) A	4.2×10^{-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
				/ HCT-CS-310-40701
Power Density		2.45 GHz		
		(0.01 ~ 3) mW/cm^2	0.16	
Probes	40702			Transfer probes
E-field 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				
Frequency response		10 Hz ~ 400 kHz		H-field probes
		(0.16 ~ 40) A/m	0.06	/ HCT-CS-311-40702
		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	
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

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.
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		(-80 ~ 500) ℃	0.03 ℃	/HCT-CS-211-50101
Furnaces		(250 ~ 1 100) ℃ (1 100 ~ 1 600) ℃	0.9 ℃ 2.6 ℃	/HCT-CS-212-50101
Temperature controlled chambers/ovens		(-80 ~ 250) ℃ (250 ~ 400) ℃	0.5 ℃ 1.0 ℃	/HCT-CS-134-50101
Temperature inducators/recoders/ controllers, temperature calibrators	50102			Standard thermometers,
Temperature indicators/recorders /controllers				/HCT-CS-135-50102
(With Sensor)				
Thermoeletric Type		(-80 ~ 250) ℃ (250 ~ 500) ℃ (500 ~ 1 100) ℃	0.4 ℃ 0.7 ℃ 1.7 ℃	
Resistance Type		(-80 ~ 250) ℃ (250 ~ 500) ℃	0.03 ℃ 0.06 ℃	/HCT-CS-274-50102
(Without Sensor)				
Thermoelectric Type		(-80 ~ 1 100) ℃	0.04 ℃	/HCT-CS-137-50102
Resistance Type		(-80 ~ 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		(-80 ~ 500) ℃	0.04 ℃	
Thermal expansion thermometers; bimetal, gas or liquid type	50105			Standard thermometers, / HCT-CS-149-50105
bimetal		(-80 ~ 250) ℃ (250 ~ 500) ℃	0.6 ℃ 1.4 ℃	
Thermomecoules: noble metal, base metal, pure metal, special type, etc.	50106			Standard thermometers, Standard thermocouples
Jewelry thermocouple		(0 ~ 250) ℃ (250 ~ 500) ℃ (500 ~ 1 100) ℃	0.5 ℃ 0.4 ℃ 1.0 ℃	/HCT-CS-152-50106
Nonmmetal thermocouple		(-80 ~ 250) ℃ (250 ~ 500) ℃ (500 ~ 1 100) ℃	0.4 ℃ 0.7 ℃ 1.8 ℃	/HCT-CS-151-50106
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 ~ 50) ℃ (50 ~ 200) ℃ (200 ~ 800) ℃ (800 ~ 1 000) ℃	1.0 ℃ 0.3 ℃ 0.4 ℃ 1.4 ℃ 1.8 ℃	Standard radiation thermometers, Blackbody sources HCT-CS-222-50204
Thermal image apparatus	50205	(-20 ~ 0) ℃ (0 ~ 50) ℃ (50 ~ 200) ℃ (200 ~ 800) ℃ (800 ~ 1 000) ℃	1.0 ℃ 0.3 ℃ 0.4 ℃ 1.4 ℃ 1.8 ℃	Standard radiation thermometers, Blackbody sources HCT-CS-286-50205
Blackbody furnaces	50206	(-20 ~ 0) ℃ (0 ~ 200) ℃ (200 ~ 400) ℃ (400 ~ 500) ℃ (500 ~ 800) ℃ (800 ~ 1 000) ℃	1.0 ℃ 0.4 ℃ 0.8 ℃ 1.0 ℃ 1.4 ℃ 1.8 ℃	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. Alumina thinfilm	50301	(-20 ~ 47) ℃ D.P.	0.7 ℃ D.P.	Automatic dewpoint hygrometers /HCT-CS-154-50301
Relative humidity hygrometers; polimer thinfilm, etc. Hair (Humidity) (Termometry) Polimer thinfilm (Humidity) (Termometry)	50302	 (30 ~ 90) % R.H. (-20 ~ 50) ℃ (5 ~ 98) % R.H. (-40 ~ 85) ℃	 2.9 % R.H. 0.5 ℃ 2.1 % R.H. 0.4 ℃	Audomatic dewpoint hygrometers, Standard thermometers / HCT-CS-153-50302 / HCT-CS-156-50302
Temperature humidity recoders; Hygrothermograph, etc. (Humidity) (Termometry)	50304	 (30 ~ 90) % R.H. (-20 ~ 50) ℃	 2.8 % R.H. 0.8 ℃	Audomatic dewpoint hygrometers / HCT-CS-157-50304
Transducers; dew-point/ relative humidity Relative humidity	50305	 (5 ~ 95) % R.H.	 2.6 % R.H.	Audomatic dewpoint hygrometers / HCT-CS-171-50305
Humidity generators; two-pressure, two-temperature, flow mixing humidity generator, contstant temperature and humidity chamber, etc. Flow mixing humidity generator Constant temperature and humidity chamber Humidity Thermometry	50306	 (5 ~ 98) % R.H. (10 ~ 98) % R.H. (-80 ~ 250) ℃	 2.0 % R.H. 2.5 % R.H. 0.5 ℃	 Audomatic dewpoint hygrometers / HCT-CS-213-50306 Audomatic dewpoint hygrometers / HCT-CS-182-50306 Temperature indicators / 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	0.14 dB	/HCT-CS-196-60102
		(31.5 ~ 63) Hz	0.12 dB	
		(63 ~ 8 000) Hz	0.11 dB	
		(8 000 ~ 12 500) Hz	0.13 dB	
Pistonphone, Sound caliberaor		250 Hz	0.11 dB	Autostic calibrators /HCT-CS-196-60102
		1 000 Hz	0.11 dB	
Microphones	60104			
Pistonphone		250 Hz	0.14 dB	Pistonphone / HCT-CS-194-60104
3-port coupler		20 Hz	0.16 dB	3-port Coupler, Microphone
		(20 ~ 25) Hz	0.14 dB	/ HCT-CS-293-60104
		(25 ~ 31.5) Hz	0.13 dB	
		(31.5 ~ 50) Hz	0.12 dB	
		(50 ~ 63) Hz	0.10 dB	
		(63 ~ 1 250) Hz	0.09 dB	
		(1 250 ~ 6 300) Hz	0.10 dB	
		(6 300 ~ 8 000) Hz	0.24 dB	
		(8 000 ~ 10 000) Hz	0.26 dB	
		(10 000 ~ 12 500) Hz	0.27 dB	
		(12 500 ~ 16 000) Hz	0.36 dB	
Sound level meters	60106			
Multifunction calibrator		(63 ~ 4 000) Hz	0.3 dB	ACOUSTIC CALIBRATOR
		(4 000 ~ 8 000) Hz	0.4 dB	/ HCT-CS-158-60106
3-port coupler		125 Hz	0.4 dB	3-port Coupler
		(125 ~ 2 500) Hz	0.2 dB	/ HCT-CS-172-60106
		(2 500 ~ 8 000) Hz	0.3 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			
Vibration calibrator		(20 ~ 1 250) Hz	1.9×10^{-2}	Standard accelerometer / HCT-CS-219-60301
Vibration transducers	60302			
Vibration transducer		1 Hz	1.9×10^{-2}	Standard accelerometers / HCT-CS-220-60302
		(1 ~ 5) Hz	2.0×10^{-2}	
		(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	1.7×10^{-2}	
		(2 500 ~ 5 000) Hz	2.1×10^{-2}	
		(5 000 ~ 10 000) Hz	3.0×10^{-2}	
		(10 000 ~ 15 000) Hz	4.1×10^{-2}	
		(15 000 ~ 20 000) Hz	5.3×10^{-2}	
Vibration transducer(Shock)		(0.1 ~ 11) ms		
		200 m/s^2	3.6×10^{-2}	Standard accelerometers / HCT-CS-291-60302
		(200 ~ 500) m/s^2	3.2×10^{-2}	
		(500 ~ 1 000) m/s^2	3.1×10^{-2}	
		(1 000 ~ 5 000) m/s^2	3.6×10^{-2}	
		(5 000 ~ 20 000) m/s^2	3.3×10^{-2}	
		(20 000 ~ 100 000) m/s^2	4.0×10^{-2}	

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 instruments	60303			
Vibration measuring instrument				
Acceleration		10 Hz	1.7×10^{-2}	Standard accelerometers
		(10 ~ 40) Hz	1.8×10^{-2}	/ HCT-CS-221-60303
		(40 ~ 100) Hz	1.7×10^{-2}	
		(100 ~ 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 ~ 40) Hz	1.8×10^{-2}	
		(40 ~ 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}	
ration measurring instrument(Shock)		200 m/s^2	4.9×10^{-2}	Standard accelerometers
		(200 ~ 500) m/s^2	3.5×10^{-2}	/ HCT-CS-292-60303
		(500 ~ 1 000) m/s^2	3.3×10^{-2}	
		(1 000 ~ 1 500) m/s^2	3.2×10^{-2}	
		(1 500 ~ 2 000) m/s^2	3.7×10^{-2}	

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	0.5 lx (0.5 ~ 10) lx (10 ~ 2 000) lx (2 000 ~ 11 000) lx	3.4×10^{-2} 2.9×10^{-2} 2.8×10^{-2} 2.9×10^{-2}	Reference Illummunance meters /HCT-CS-159-70101
Luminance meters Luminance	70102	(2 ~ 10) cd/㎡ (10 ~ 100) cd/㎡ (100 ~ 1 000) cd/㎡ (1 000 ~ 13 000) cd/㎡	2.4×10^{-2} 1.7×10^{-2} 1.6×10^{-2} 1.8×10^{-2}	Luminance standard sources /HCT-CS-316-70102
Total luminous flux meters Total luminous flux	70103	(70 ~ 20 000) lm	2.3×10^{-2}	Total luminous flux standard lamp / HCT-CS-296-70103
Luminous intensity meters Luminous intensity	70104	(8.22 ~ 2 950) cd	3.3×10^{-2}	Luminous intensity 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 Color Temperature	70202	(2 715 ~ 3 058) K	22 K	Color Temperature Standard lamps / HCT-CS-298-70202
Color temperature standard lamps Color temperature	70203	2 856 K	22 K	Color temperature standard lamps, Spectral irradiancee meters / HCT-CS-299-70203
Calorimeters; source color Chromaticity coordinates (CIE 1931)	70204	x,y : (0.01 ~ 0.9) Tungsten light sources 2 856 K x y Red x y Green x y Blue x y White x y	 0.003 0.003 0.005 0.004 0.006 0.005 0.004 0.004 0.004 0.004	Luminance standard sources, Color temperature standard lamps, Color filters / HCT-CS-317-70204
Luminance		(2 ~ 10) cd/㎡ (10 ~ 100) cd/㎡ (100 ~ 1 000) cd/㎡ (1 000 ~ 13 000) cd/㎡	2.4×10^{-2} 1.7×10^{-2} 1.6×10^{-2} 1.8×10^{-2}	
Illuminance		1 lx (1 ~ 2 000) lx	3.0×10^{-2} 2.8×10^{-2}	
Total luminance flux standard lamps Total luminance flux	70209	(70 ~ 20 000) lm	3.6×10^{-2}	Total luminous flux standard lamps, Total luminous flux meters / HCT-CS-300-70209
Display color analyzers; luminance,, chromaticity, white balance, etc. Chromaticity(x, y) Chromaticity coordinates (CIE 1931)	70213	x,y : (0.01 ~ 0.9) 텅스텐광원 2 856 K x y Red x y Green x y Blue x y White x y	 0.003 0.003 0.005 0.004 0.006 0.005 0.004 0.004 0.004 0.004	Luminance standard sources, Color filters / HCT-CS-318-70213
Luminance		(2 ~ 10) cd/㎡ (10 ~ 100) cd/㎡ (100 ~ 1 000) cd/㎡ (1 000 ~ 13 000) cd/㎡	2.4×10^{-2} 1.7×10^{-2} 1.6×10^{-2} 1.8×10^{-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.
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
Spectal irraduance standard lamps	70215			Spectral irradiance standard
Spectral irradiance		250 nm	7.6×10^{-2}	lamps,
		(250 ~ 255) nm	6.6×10^{-2}	Spectral irradiance meters
		(255 ~ 265) nm	6.2×10^{-2}	/ HCT-CS-302-70215
		(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	
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)		텅스텐광원 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	

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 standard sources	70218			Spectral radiance standard sources, Spectral radiance meters / HCT-CS-320-70218
Spectral radiance		380 nm	4.3×10^{-2}	
		(380 ~ 395) nm	3.8×10^{-2}	
		(395 ~ 410) nm	3.4×10^{-2}	
		(410 ~ 430) nm	3.1×10^{-2}	
		(430 ~ 450) nm	2.9×10^{-2}	
		(450 ~ 475) nm	2.5×10^{-2}	
		(475 ~ 505) nm	2.2×10^{-2}	
		(505 ~ 1 005) nm	2.0×10^{-2}	
		(1 005 ~ 1 040) nm	2.1×10^{-2}	
UV irradiance meters	70219			UV Sensor /HCT-CS-159-70219
		365 nm 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}	
Spectral irradiance meters	70220			Spectral irradiance standard lamps / HCT-CS-304-70220
Wavelength		(350 ~ 850) nm	0.51 nm	
Spectral irradiance		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}	
Iluminance		(6 833 ~ 7 224) lx	2.9×10^{-2}	
Color temperature		(3 014 ~ 3 061) 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	5.0×10^{-2}	
		(350 ~ 355) nm	4.0×10^{-2}	
		(355 ~ 370) nm	3.7×10^{-2}	
		(370 ~ 390) nm	3.1×10^{-2}	
		(390 ~ 425) nm	2.4×10^{-2}	
		(425 ~ 460) nm	2.0×10^{-2}	
		(460 ~ 850) nm	1.9×10^{-2}	
Total luminous flux meters		(2 130 ~ 2 208) lm	2.3×10^{-2}	
Color temperature		(2 715 ~ 2 876) K	22 K	
Chromaticity coordinates (CIE 1931)		x (0.454 ~ 0.460)	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, Luminance standard sources / HCT-CS-321-70222
Wavelength		(400 ~ 765) nm	0.51 nm	
Spectral radiance		(380) nm	4.1×10^{-2}	
		(380 ~ 395) nm	3.6×10^{-2}	
		(395 ~ 410) nm	3.3×10^{-2}	
		(410 ~ 430) nm	3.0×10^{-2}	
		(430 ~ 445) nm	2.7×10^{-2}	
		(445 ~ 465) nm	2.4×10^{-2}	
		(465 ~ 485) nm	2.1×10^{-2}	
		(485 ~ 1 040) nm	1.8×10^{-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 (CIE 1931)		x : (0.447 ~ 0.451)	0.003	
		y : (0.409 ~ 0.413)	0.003	
Spectral radiant intensity meters	70223			Luminous intensity standard lamps / HCT-CS-306-70223
Wavelength		(350 ~ 850) nm	0.51 nm	
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}	

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 Standard Illuminant				/ HCT-CS-354-70301
A, C, D65 Standard Observe : 2° , 10°)				
White		X	0.81×10^{-2}	
		Y	0.81×10^{-2}	
		Z	0.82×10^{-2}	
M. Grey		X	0.83×10^{-2}	
		Y	0.82×10^{-2}	
		Z	0.85×10^{-2}	
D. Grey		X	0.93×10^{-2}	
		Y	0.88×10^{-2}	
		Z	0.93×10^{-2}	
Red		X	0.98×10^{-2}	
		Y	0.93×10^{-2}	
		Z	1.08×10^{-2}	
Orange		X	0.86×10^{-2}	
		Y	0.91×10^{-2}	
		Z	0.92×10^{-2}	
Yellow		X	0.82×10^{-2}	
		Y	0.84×10^{-2}	
		Z	1.19×10^{-2}	
Green		X	0.93×10^{-2}	
		Y	0.95×10^{-2}	
		Z	1.03×10^{-2}	
D. Blue		X	0.99×10^{-2}	
		Y	0.94×10^{-2}	
		Z	1.15×10^{-2}	
(Excluding Specular Component Standard Illuminant				
A, C, D65 Standard Observe : 2° , 10°)				
White		X	0.81×10^{-2}	
		Y	0.81×10^{-2}	
		Z	0.82×10^{-2}	
M. Grey		X	0.83×10^{-2}	
		Y	0.83×10^{-2}	
		Z	0.88×10^{-2}	
D. Grey		X	1.01×10^{-2}	
		Y	0.99×10^{-2}	
		Z	1.12×10^{-2}	
Red		X	1.05×10^{-2}	
		Y	1.04×10^{-2}	
		Z	1.43×10^{-2}	
Orange		X	0.87×10^{-2}	
		Y	0.92×10^{-2}	
		Z	1.04×10^{-2}	
Yellow		X	0.82×10^{-2}	
		Y	0.84×10^{-2}	
		Z	1.42×10^{-2}	
Green		X	0.90×10^{-2}	
		Y	0.88×10^{-2}	
		Z	1.13×10^{-2}	

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.
D. Blue	70301	X	1.35×10^{-2}	
		Y	1.49×10^{-2}	
		Z	1.45×10^{-2}	
(Including 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 5	
		y	0.000 5	
Green		x	0.000 5	
		y	0.000 5	
D. Blue		x	0.000 5	
		y	0.000 5	
(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 6	
		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 7	
		y	0.000 7	
Reflectance meters	70321	(1.332 97 ~ 1.490 78)nD	0.000 06 nD	Reflectance meters / HCT-CS-355-70321

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	5.4×10^{-7}	Optical power meters
		1 550 nm	4.6×10^{-7}	/ HCT-CS-266-70402
Optical power output		1 310 nm		
		(-60 ~ 0) dBm	0.08 dB	
		1 550 nm		
		(-60 ~ 0) dBm	0.08 dB	
Optical attenuators	70410			Optical power meters
Optical attenuation		1 310 nm, 1 550 nm		/ HCT-CS-267-70410
		(-60 ~ 0) dB	0.04 dB	
Optical loss testers	70413			Wavelength meters,
Wavelength output		1 310 nm	5.4×10^{-7}	Optical power meters
		1 550 nm	4.6×10^{-7}	/ HCT-CS-280-70413
Optical power input				
		1 310 nm		
		(-60 ~ 0) dBm	0.08 dB	
		1 550 nm		
		(-60 ~ 0) dBm	0.08 dB	
Linearity measure				
		1 310 nm, 1 550 nm		
		(-60 ~ 0) dB	0.04 dB	
Optical mmultimeters	70415			Optical power meters
Optical power input		1 310 nm		/ HCT-CS-268-70415
		(-60 ~ 0) dBm	0.08 dB	
		1 550 nm		
		(-60 ~ 0) dBm	0.08 dB	
Linearity measure		1 310 nm, 1 550 nm		
		(-60 ~ 0) dB	0.04 dB	
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	0.08 dB	
		1 550 nm		
		(-60 ~ 0) dBm	0.08 dB	
Linearity measure		1 310 nm, 1 550 nm		
		(-60 ~ 0) dB	0.04 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	

704. Fiber optics

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Length	70418	(1 550 nm)		
		3 km	0.1 m	
		13 km	0.34 m	
Return loss		(1 310 nm)		
		3 km	0.07 dB	
		13 km	0.18 dB	
		(1 550 nm)		
		3 km	0.07 dB	
		13 km	0.07 dB	
ASE light sources	70430			Wavelength meters,
Wavelength output		1 310 nm	5.4×10^{-7}	Optical power meters
		1 550 nm	4.6×10^{-7}	/ HCT-CS-281-70430
Optical power output		1 310 nm		
		(-60 ~ 0) dBm	0.08 dB	
		1 550 nm		
		(-60 ~ 0) dBm	0.08 dB	
Optical power stabilized lasers and LDs	70433			Wavelength meters, Optical power meters
Wavelength output		1 310 nm	5.4×10^{-7}	/ HCT-CS-271-70433
		1 550 nm	4.6×10^{-7}	
Optical power output		1 310 nm		
		(-60 ~ 0) dBm	0.08 dB	
		1 550 nm		
		(-60 ~ 0) dBm	0.08 dB	

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 ~ 0.020) % BAC	4.0×10^{-2}	CRM
		(0.020 ~ 0.030) % BAC	2.8×10^{-2}	/ HCT-CS-358-90101
		(0.030 ~ 0.080) % BAC	1.6×10^{-2}	
		(0.080 ~ 0.400) % BAC	1.3×10^{-2}	
Environmental air quality monitoring instruments	90102			CRM / HCT-CS-346-90102
Oxygen(O_2)		0 cmol/mol ~ 22.0 cmol/mol	3.0×10^{-2}	
Carbon monoxide(CO)		0 μmol/mol ~ 105 μmol/mol	2.6×10^{-2}	
Sulfer dioxide(SO_2)		0 μmol/mol ~ 110 μmol/mol	4.9×10^{-2}	
Nitrogen monoxide(NO)		0 μmol/mol ~ 110 μmol/mol	2.0×10^{-2}	
Gas analyzers	90103			CRM
Oxygen(O_2)		0 cmol/mol ~ 22.0 cmol/mol	3.0×10^{-2}	/ HCT-CS-164-90103
Carbon monoxide(CO)		0 μmol/mol ~ 105 μmol/mol	2.6×10^{-2}	
Methane(CH_4)		0 cmol/mol ~ 2.2 cmol/mol	2.2×10^{-2}	
Carbon dioxide(CO_2)		0 cmol/mol ~ 10.5 cmol/mol	2.2×10^{-2}	
Hydrogen sulfide(H_2S)		0 μmol/mol ~ 53 μmol/mol	3.5×10^{-2}	
Sulfer dioxide(SO_2)		0 μmol/mol ~ 110 μmol/mol	4.9×10^{-2}	
Hydrogen chloride(HCl)		0 μmol/mol ~ 53 μmol/mol	5.0×10^{-2}	
Nitrogen monoxide(NO)		0 μmol/mol ~ 110 μmol/mol	2.1×10^{-2}	
Hydrogen(H_2)		0 cmol/mol ~ 2.2 cmol/mol	4.7×10^{-2}	
Exhaust gas test instruments	90104			CRM
Oxygen(O_2)		0.3 cmol/mol ~ 1.0 cmol/mol	3.0×10^{-2}	/ HCT-CS-347-90104
Carbon monoxide(CO)		0.3 cmol/mol ~ 5.0 cmol/mol	2.2×10^{-2}	
Carbon dioxide(CO_2)		5.0 cmol/mol ~ 10.5 cmol/mol	2.2×10^{-2}	
Nitrogen monoxide(NO)		500 μcmol/mol ~ 1 000 μ cmol/mol	2.0×10^{-2}	