Accreditation No. : KC01-052

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

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CALIBRATION

Valid to : Aug. 04, 2026 Accreditation No. : KC01-052

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		
10203	Electrical/Mechanical comparators	N
10206	Dial/Cylinder gauge testers	N
10207	Doctor blades	N
10209	End bars	N
10210	Extensometers, linear displacement transducers	Y
10211	Filler gauges	Y
10212	Film applicators	N
10213	Gap gauges	N
10214	Gauge blocks, by comparison	N
10216	Height gauges/ measuring machines	Y
10220	Standard measuring machines	Y
10223	Electronic micrometers	Y
10224	Height micrometers, Riser blocks	N
10227	Standard tape rules, Peripheral gauges	N
10228	Cylindrical plug/pin gauges, Thread measuring wire gauges	Y
10229	Radius gauges	N
10230	Cylindrical ring gauges	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
104.Form		
10401	Form testers	Y
10404	Optical flats	N
10405	Optical parallels	N
10406	Paralled blocks	N
10407	Precision surface plates	Y
105.Complex geometry		
10503	Contact coordinate measuring machines	Y
10504	Non-contact coordinate measuring machines	Y
10511	Measuring microscopes, Profile projectors	Y
10512	Micro measuring microscopes	Y
10517	Stylus type roughness testers	Y
10525	Thread plug gauges	N
10527	Thread ring 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
10608	Grind gauges	N
10609	Micro indicators, Test indicators	Y
10610	Micrometer heads	N
10611	3-point micrometers	Y
10612	Inside micrometers	Y
10613	Micrometer, outside	Y
10617	Standard sieves	N
201.Mass		
20103	Auto-packer scale balances	Y
20105	Counter beam balances	Y
20109	Electric balances	Y
20112	Platform scale balances	Y
20113	Spring scale balances	Y
20116	Weights	N
202.Force		
20203	Tension/Compression testing machines	Y
20204	Push-Pull Gauges	N
203.Torque		
204.Pressure		
20406	Absolute pressure gauges	N
20407	Blood pressure gauges	Y
20408	Compound pressure gauges	Y
20409	Differential pressure gauges	Y
20411	Gauge pressure gauges	Y
20412	Pressure transducers/ transmitters	Y
20413	Dial type vacuum gauges	Y
20414	Water depth meters	N
206.Volume		
20601	Volumetric glasswares	N
20604	Standard volume vessels	Y
20605	Concrete air content meters	N
20606	Piston type volume meters	N
207.Density		
20704	Salinity meters	N
20705	Sucrose meters	N
20707	Chloride meters	N
208.Viscosity		
20801	Kinematic viscometers; capillary, etc.	N
20802	Dynamic viscometers; rotaional, etc.	N
209.Fluid flow		
20901	Anemometers; hot-wire	N
20902	Anemometers; pitot tube,etc.	N
20908	Gas flowmeters ; differential pressure	N
20909	Liquid flowers ; differential pressure	N
20910	Liquid flowers ; electromagnetic	N
20911	Gas flowers ; thermal mass, etc	N
20912	Liquid flowers ; thermal mass, etc	N
20914	Gas flowers ; positive	N

10409	Roundness measurement instruments	Y	20302	Torque measuring devices	N		displacement	
10412	Straight edges	N				20915	Liquid flowers ; positive displacement	N
10413	Straight rules	N	20303	Torque wrenches/drivers	Y			

Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site
209.Fluid flow			402.Resistance,Capacitance and Inductance			404.Other DC & LF Measurements		
20916	Gas flowers ; turbine	N	40206	Inductance bridges /indicators	Y	40427	LF spectrum analyzers	Y
20917	Liquid flowers ; turbine	N				40429	Sweep generators	Y
20918	Gas flowers ; ultrasonic	N	40208	Inductors	Y	40430	Signal transducers	Y
20919	Liquid flowers ; ultrasonic	N	40210	Insulation testers	Y	40433	Waveform analyzers	Y
20920	Gas flowers ; variable area	N	40213	Resistance bridges & Similar instruments	Y	40434	AC/DC high voltage generators	Y
20921	Liquid flowers ; variable area	N				40435	AC/DC high voltage probes	Y
			40214	Resistance meters	Y	40436	Logic analyzers	Y
20922	Gas flowers ; vortex	N	40215	Resistors	Y	40437	Telephone testers	Y
20923	Liquid flowers ; vortex	N	40217	Impedance bridges /LCR meters	Y	40438	Video signal analyzers	Y
210. Hardness						406.Radio frequency measurements		
21001	Brinell Hardness Testing Machines	Y	403.AC voltage, current & power			40601	RF amplifiers	Y
			40301	AC ammeters	Y	40602	Coaxial attenuators	Y
21002	Rockwell Hardness Testing Machines	Y	40302	Clamp ammeters/voltmeters	Y	40605	Burst Pulse generators	Y
			40303	AC voltage/current calibrators	Y	40607	RF power meter calibrators	Y
21004	Vickers Hardness Testing Machines	Y				40608	EMC transducers ; current probes, absorbing clamps, etc.	Y
			40304	Power calibrators	N			
21005	Durometer Hardness Testers	N	40305	AC current shunts	Y	40610	Coaxial directional couplers/splitters	Y
			40307	Voltage/current phase angle meters/synchro resolve meters	Y			
21006	Leeb Hardness Testers	N				40613	Electrostatic discharge generators	N
301.Time/Frequency			40310	Power factor meters	Y			
30102	Frequency standards	N	40311	AC power meters	Y	40614	EMC receivers	Y
30103	Frequency standards	N	40312	AC power supplies	Y	40615	Filters, RF/microwave	Y
30104	General frequency sources	Y	40313	Puncture/safety testers	Y	40618	Line impedance stabilization networks ; LISN, CDN, ISN, etc.	Y
30105	Time interval sources	Y	40314	Power recorders	Y			
30106	Time interval meters/ Stop watches/Timers	Y	40318	AC voltmeters	Y			
			404.Other DC & LF Measurements			40621	Mobile communication test sets	Y
302.Velocity & revolution			40401	LF amplifiers	Y			
30201	Standard RPM generators	Y	40402	DC/LF attenuators	Y	40622	Modulation meters	Y
30202	Contact type tachometers	N	40403	Multimeter calibrators	Y	40623	Network analyzers	Y
30203	Photo tachometers/ stroboscopes	Y	40404	Oscilloscope calibrators	Y	40626	Noise impulse simulators	Y
			40406	Video signal generators	Y	40635	RF power meters	Y
401.DC voltage & current			40407	Audio distortion analyzers /meters	Y	40636	Diode power sensors	Y
40101	DC ammeters	Y				40637	Thermocouple power sensors	Y
40102	Transconductance amplifiers	Y	40408	LF filters	Y	40638	Pulse generator	Y
			40409	LF/Audio signal analyzers	Y	40639	Radar test sets	Y
40103	DC voltage/current calibrators	Y	40410	Line frequency meters	Y	40640	RF signal generators	Y
			40411	Function generators	Y	40641	RF spectrum analyzers	Y
40104	Electrical temperature calibrators	Y	40413	AC/DC high voltages volt meters	Y	40642	RF speed guns	Y
						40643	Surge generators	Y
40105	DC current shunts	Y	40414	LF impulse generators	Y	40644	SWR meters	Y
40106	Galvanometers/null	Y	40416	Leakage current testers	Y	40645	RF terminations	Y

	detectors		40417	Electronic AC/DC loads	Y	40646	Thermistor mount, coaxial	N
40108	DC power supplies	Y	40418	Modulation meters	Y	40650	RF voltmeters	Y
40112	DC voltmeters	Y	40419	Analogue/Digital multimeters	Y	40652	Field strength meters	Y
40113	Static/Ionic voltmeters	N	40420	Noise meters	Y	40654	Dip simulators	Y
402.Resistance,Capacitance and Inductance			40421	Oscilloscopes	Y	407.Field strength & antennas		
40201	Capacitance bridges/ indicators	Y	40422	LF phase meters	Y	40704	Loop antennas	N
			40423	Random wave generators	N	40705	molopole antennas	N
40202	Decade capacitors	Y	40424	Volt/Current recorders	Y			
40204	Standard capacitors	Y	40425	Relay test sets	Y			
40205	Earth testers	Y	40426	LF signal generators	Y			
Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site
501.Contact thermometry			503.Humidity			601.Sound in air		
50101	Temperature generators: ovens, furnaces, isothermal liquid baths, ice-point baths, dry-block calibrators	Y	50301	Dew-point hygrometers: chilled mirror,alumina thin film, etc.	N	60106	Sound level meters	N
						603.Vibration		
			50302	Relative humidity hygrometers; polimer thinfilm, hair, etc.	N	60301	Vibration Calibrators	N
						60302	Vibration transducers	N
						60303	Vibration measuring instruments	N
50102	Temperature indicators /recorders/controllers, temperature calibrators	Y	50303	Psychrometers; assmann ventilated, PRT type, etc.	N	701.Photometry		
						70101	Iluminance meters	N
			50304	Temperature humidity recorders;Hygrothermograph,etc	N	901. Chemical analysis		
50103	Glass thermometers; liquid-in-glass, Beckmann	N				90103	Gas analyzers	N
			50305	Transducers; dew-point /relative humidity	N	90104	Exhaust gas test instrument	N
50104	Resistance thermometers; SPRT, IPRT, thermistors, etc.	Y	50306	Humidity generators; two-pressure, two-temperature,flow mixing humidity gererator, constant temperature and humidity chamber, etc.	Y			
50105	Thermal expansion thermometers ; bimetal, gas or liquid type	Y						
50106	Thermomecoules:noble metal, base metal, pure metal, special type, etc.	Y						
			504.Moisture					
			50402	Wood moisture meters	N			
50107	Temperature transducers	Y						
502.non contact thermometry								
50204	Standard radiation thermometers	N						
50206	Blackbody Furnaces	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.

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102. Linear dimension

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Electrical/Mechanical Comparators	10203	(0 ~ 2) mm	0.15 µm	CP-10203
Dial/Cylinder gauge testers	10206	(0 ~ 25) mm	$\sqrt{0.24^2+0.004\ 2^2\times l^2}$ µm (unit of the l:mm)	CP-10206
Doctor blades	10207	(0 ~ 10) mm	2.5 µm	CP-10207
End bars	10209	(0 ~ 500) mm	$\sqrt{0.7^2+0.005\ 3^2\times l^2}$ µm (unit of the l:mm)	CP-10209
Extensometers, linear displacement tranducers	10210	(0 ~ 100) mm (100 ~ 500) mm (500 ~ 1 000) mm	5.9 µm 0.031 mm 0.12 mm	CP-10210
Filler gauges	10211	(0 ~ 10) mm	0.6 µm	CP-10211
film applicators	10212	(0 ~ 10) mm	2.5 µm	CP-10212
Gap gauges	10213	(3 ~ 300) mm	$\sqrt{0.7^2+0.005\ 3^2\times l^2}$ µm (unit of the l:mm)	CP-10213
Gauge blocks, by comparison	10214	(0.5 ~ 100) mm	$\sqrt{81^2+1.3^2\times l^2}$ nm (unit of the l:mm)	CP-10214
Height gauges/measuring machines	10216	(0 ~ 1 000) mm	$\sqrt{0.8^2+0.004\ 3^2\times l^2}$ µm (unit of the l:mm)	CP-10216
Standard measuring machines	10220	(0 ~ 500) mm	$\sqrt{0.3^2+0.003\ 1^2\times l^2}$ µm (unit of the l:mm)	CP-10220
Electronic micrometers	10223	(0 ~ 5) mm	0.18 µm	CP-10223
Height micrometers, Riser blocks Block calibration Head calibration	10224	 (0 ~ 600) mm 30 mm	 $\sqrt{0.8^2+0.004\ 3^2\times l^2}$ µm (unit of the l:mm)	CP-10224
Standard tape rules, Peripheral gauges	10227	(0 ~ 15) m	$\sqrt{0.34^2+0.004\ 6^2\times l^2}$ mm (unit of the l:m)	CP-10227
Cylindrical plug/pin gauges, Thread measuring wire gauges Cylindrical plug/pin gauges	10228	 (0.1 ~ 200) mm	 $\sqrt{0.6^2+0.005\ 2^2\times l^2}$ µm (unit of the l:mm)	CP-10228
Radius gauges	10229	(0.35 ~ 100) mm	3.6 µm	CP-10229
Cylindrical ring gauges	10230	(2 ~ 200) mm	$\sqrt{1.2^2+0.004\ 1^2\times l^2}$ µm (unit of the l:mm)	CP-10230

102. Linear dimension

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Step gauges	10232	(0 ~ 670) mm	$\sqrt{1.0^2+0.004\ 5^2\times l^2}$ μm (unit of the l:mm)	CP-10232
Taper thickness gauges	10233	(0 ~ 50) mm	30 μm	CP-10233
Ultrasonic thickness gauges	10234	(0 ~ 100) mm (100 ~ 500) mm	4 μm 8 μm	CP-10234
Ultrasonic/coating thickness specimens Coating thickness specimens Ultrasonic specimens	10235	 (0 ~ 10) mm (0 ~ 500) mm	 3.5 μm $\sqrt{0.8^2+0.004\ 3^2\times l^2}$ μm (unit of the l:mm)	 CP-10235-1 CP-10235-2
Coating thickness testers	10236	(0 ~ 7.4) mm	2.1 μm	CP-10236

104. Form

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Form testers Longitudinal direction (Z-axis) Transverse direction (X-axis)	10401	 (0 ~ 100) mm (0 ~ 50) mm	 $\sqrt{0.6^2+0.004\ 3^2\times l^2}$ μm $\sqrt{1.1^2+0.004\ 1^2\times l^2}$ μm (unit of the l:mm)	CP-10401
Optical flats Flatness	10404	 (0 ~ 75) mm	 0.06 μm	CP-10404
Optical parallels Flatness Parallelism	10405	 (0 ~ 60) mm (0 ~ 60) mm	 0.06 μm 0.11 μm	CP-10405
Parallel blocks Flatness Parallelism Length differnce of both block	10406	 (0 ~ 1 000) mm	 1.4 μm 1.4 μm 2.0 μm	CP-10406
Precision surface plates Flatness	10407	 (1 000 × 1 000) mm^2 (3 000 × 3 000) mm^2	 3.9 μm 7.1 μm	CP-10407
Roundness measurement instruments Accuracy of detector Rotating accuracy of circumferential direction	10409	 (0 ~ 30) μm 360°	 0.41 μm 0.026 μm	CP-10409

Straight edges	10412			CP-10412
Straightness		(0 ~ 1 500) mm	2.1 μm	
Parallelism		(0 ~ 1 500) mm	2.0 μm	
Straight rules	10413	(0 ~ 2 000) mm	0.13 mm	CP-10413

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	(0 ~ 1 000) mm	$\sqrt{1.0^2+0.004\ 6^2\times l^2}$ μm (unit of the l:mm)	CP-10503
Non-contact coordinate measuring machines	10504	(0 ~ 1 000) mm	$\sqrt{0.5^2+0.003\ 7^2\times l^2}$ μm (unit of the l:mm)	CP-10504
Measuring microscopes, Profile projectors	10511			
Measuring microscopes				CP-10511-1
Length		(0 ~ 500) mm	$\sqrt{0.6^2+0.004\ 1^2\times l^2}$ μm (unit of the l:mm)	
Measuring microscopes, Profile projectors				
Profile projectors				CP-10511-2
Length		(0 ~ 500) mm	$\sqrt{1.4^2+0.003\ 2^2\times l^2}$ μm (unit of the l:mm)	
Rectangular		-	2.4 μm	
Scale		-	0.06 %	
Angle		-	1.1'	
Micro measuring microscopes	10512	(0 ~ 30) mm	1.0 μm	CP-10512
Stylus type roughness testers	10517			CP-10517
Ra		(0 ~ 5) μm	0.060 μm	
Rz		(0 ~ 20) μm	0.20 μm	
H		(0 ~ 20) μm	0.041 μm	
Thread plug gauges	10525			CP-10525
Outside diameter		(0 ~ 150) mm	$\sqrt{0.7^2+0.005\ 1^2\times l^2}$ μm	
Pitch		(0.2 ~ 6) mm	1.9 μm	
Half angle of thread		(0 ~ 30)°	2.1'	
Thread diameter		(0 ~ 150) mm	$\sqrt{2.1^2+0.005\ 1^2\times l^2}$ μm (unit of the l:mm)	
Thread ring gauges	10527			CP-10527
Pitch diameter		(6 ~ 100) mm	2.3 μm	
Minor diameter		(6 ~ 100) mm	2.5 μm	
V-blocks, Box blocks	10529			CP-10529
Flatness		(0 ~ 150) mm	1.2 μm	
Prallelism			1.9 μm	

Gradient			0.8 μm	
Differemce of both part			1.9 μm	

106. Various dimensional

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Caliper gauges Inside/Outside/gear tooth calipers	10601			
		(0 ~ 200) mm	$\sqrt{3.6^2+0.004\ 3^2\times l^2}$ μm	CP-10601-1
Caliper gauges Inside/Outside calipers		(0 ~ 2 000) mm	$\sqrt{9.2^2+0.004\ 3^2\times l^2}$ μm (unit of the l:mm)	CP-10601-2
Cylinder/Bore gauges	10603	(0 ~ 800) mm	0.7 μm	CP-10603

106. Various dimensional

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Depth gauges, Depth micrometers	10604	(0 ~ 300) mm	$\sqrt{1.0^2+0.004\ 5^2\times l^2}$ μm	CP-10604
		(300 ~ 1 000) mm	$\sqrt{7.6^2+0.004\ 5^2\times l^2}$ μm (unit of the l:mm)	
Dial/Digital gauges	10605	(0 ~ 100) mm	$\sqrt{1.7^2+0.004\ 1^2\times l^2}$ μm (unit of the l:mm)	CP-10605
Grind gauges	10608			CP-10608
Depth of inclined plane		(0 ~ 1) mm	2.7 μm	
Straightness of scraper		(0 ~ 70) mm	1.8 μm	
Micro indicators, Test indicators	10609	(0 ~ 5) mm	0.5 μm	CP-10609
Micrometer head	10610	(0 ~ 50) mm	$\sqrt{0.7^2+0.004\ 3^2\times l^2}$ μm (unit of the l:mm)	CP-10610
3-points micrometers	10611	(2 ~ 200) mm	$\sqrt{3.0^2+0.004\ 1^2\times l^2}$ μm (unit of the l:mm)	CP-10611
Inside micrometers	10612	(5 ~ 1 000) mm	$\sqrt{0.9^2+0.004\ 3^2\times l^2}$ μm (unit of the l:mm)	CP-10612
Outside micrometers	10613			
Outside micrometers		(0 ~ 2 000) mm	$\sqrt{1.6^2+0.004\ 3^2\times l^2}$ μm (unit of the l:mm)	CP-10613-1
V-anvil micrometer		(5 ~ 25) mm	1.3 μm	CP-10613-2
Standard sieves	10617			CP-10617
Sieve		(0 ~ 100) mm	4.4 μm	
Wire		(0 ~ 10) mm	2.9 μm	

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201. Mass

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Auto-packer scale balances	20103	(0 ~ 5) kg	1.1 g	CP-20103
		(5 ~ 10) kg	2.2 g	
		(10 ~ 50) kg	12 g	
		(50 ~ 200) kg	0.12 kg	
Counter beam balances	20105	(0 ~ 311) g	9.1 mg	CP-20105
		(311 ~ 2 610) g	91 mg	
		(2.61 ~ 20) kg	0.91 g	
Electric balancers	20109	(0 ~ 2) g	6.0 µg	CP-20109
		(2 ~ 10) g	10 µg	
		(10 ~ 30) g	14 µg	
		(30 ~ 100) g	23 µg	
		(100 ~ 200) g	35 µg	
		(200 ~ 1 000) g	0.18 mg	
		(1 ~ 2) kg	0.34 mg	
		(2 ~ 10) kg	1.9 mg	
		(10 ~ 30) kg	20 mg	
		(30 ~ 60) kg	53 mg	
		(60 ~ 150) kg	1.1 g	
		(150 ~ 300) kg	11 g	
		(300 ~ 1 000) kg	0.2 kg	

201. Mass

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Platform scale balances	20112	(0 ~ 50) kg	19 g	CP-20112
		(50 ~ 100) kg	46 g	
		(100 ~ 200) kg	91 g	
		(200 ~ 500) kg	0.19 kg	
Spring scale balances	20113	(0 ~ 1) kg	1.9 g	CP-20113
		(1 ~ 50) kg	91 g	
		(50 ~ 100) kg	0.16 kg	
Weights	20116	E2급 (1 mg ~ 5 kg)		CP-20116
		1 mg	2.0 µg	
		2 mg	2.0 µg	
		5 mg	2.2 µg	
		10 mg	2.2 µg	
		20 mg	2.2 µg	
		50 mg	2.6 µg	
		100 mg	2.9 µg	
		200 mg	2.9 µg	
		500 mg	3.0 µg	
		1 g	3.0 µg	
		2 g	5.2 µg	
		5 g	14 µg	
		10 g	14 µg	
		20 g	14 µg	
		50 g	17 µg	
		100 g	20 µg	

		200 g	43 µg	
		500 g	0.13 mg	
		1 kg	0.30 mg	
		2 kg	0.60 mg	
		5 kg	3.4 mg	
		F1급 (10 kg ~ 20 kg)		
		10 kg	10 mg	
		20 kg	19 mg	

202. Force

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Tension/Compression testing machine	20203			CP-20203
Pull		(10 ~ 100) N	2.0×10^{-3}	
		(100 ~ 200) N	2.0×10^{-3}	
		(200 ~ 500) N	2.2×10^{-3}	
		(500 ~ 1 000) N	4.0×10^{-3}	
		(1 ~ 2) kN	1.5×10^{-3}	
		(2 ~ 5) kN	1.9×10^{-3}	
		(5 ~ 10) kN	1.5×10^{-3}	
Push		(10 ~ 100) N	2.6×10^{-3}	
		(100 ~ 200) N	1.9×10^{-3}	
		(200 ~ 500) N	3.6×10^{-3}	
		(500 ~ 1 000) N	2.4×10^{-3}	
		(1 ~ 2) kN	3.2×10^{-3}	
		(2 ~ 5) kN	1.3×10^{-3}	
		(5 ~ 10) kN	1.7×10^{-3}	
		(10 ~ 30) kN	1.4×10^{-3}	
		(30 ~ 50) kN	2.0×10^{-3}	
		(50 ~ 100) kN	2.2×10^{-3}	

		(100 ~ 300) kN (300 ~ 500) kN (500 ~ 1 000) kN	1.4×10^{-3} 1.6×10^{-3} 1.6×10^{-3}	
Push-pull gauges	20204	(1 ~ 500) N	1.4×10^{-3}	CP-20204

203. Torque

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Torque measuring devices	20302	(0.1 ~ 1) N·m (1 ~ 5) N·m (5 ~ 10) N·m (10 ~ 50) N·m	2.8×10^{-3} 2.8×10^{-3} 3.2×10^{-3} 2.7×10^{-3}	CP-20302
Torque wrenches/drivers	20303	(0.001 ~ 0.009) N·m (0.009 ~ 0.03) N·m (0.03 ~ 0.1) N·m (0.1 ~ 1) N·m (1 ~ 5) N·m (5 ~ 10) N·m (10 ~ 50) N·m	5.8×10^{-2} 2.5×10^{-2} 2.9×10^{-2} 1.1×10^{-2} 1.1×10^{-2} 1.1×10^{-2} 4.4×10^{-3}	CP-20303

		(50 ~ 200) N·m (200 ~ 500) N·m (500 ~ 1 000) N·m	4.4×10^{-3} 5.6×10^{-3} 4.6×10^{-3}	

204. Pressure

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Absolute pressure gauges	20406	(80 ~ 110) kPa	1.5×10^{-4}	CP-20406
Sphygmomanometer	20407	(0 ~ 40) kPa	0.035 kPa	CP-20407

Compound pressure gauges	20408	(-100 ~ 0) kPa (0 ~ 1) kPa (1 ~ 200) kPa (0.2 ~ 2) MPa (2 ~ 7) MPa	3.2×10^{-4} 7.0×10^{-3} 1.5×10^{-4} 9.0×10^{-5} 1.7×10^{-4}	CP-20408
Differential presure gauges	20409	(0 ~ 1) kPa (1 ~ 200) kPa (0.2 ~ 2) MPa	7.0×10^{-3} 1.5×10^{-4} 9.0×10^{-5}	CP-20409
Gauge pressure gauges	20411	(0 ~ 1) kPa (1 ~ 200) kPa (0.2 ~ 2) MPa (2 ~ 7) MPa (7 ~ 100) MPa	7.0×10^{-3} 1.5×10^{-4} 9.0×10^{-5} 1.7×10^{-4} 1.3×10^{-4}	CP-20411
Pressure transducers/ transmitters	20412	(0 ~ 1) kPa (1 ~ 200) kPa (0.2 ~ 2) MPa (2 ~ 7) MPa (7 ~ 100) MPa	3.0×10^{-3} 2.1×10^{-4} 2.3×10^{-4} 2.5×10^{-4} 2.8×10^{-4}	CP-20412
Dial type vacuum gauges	20413	(-100 ~ 0) kPa	8.9×10^{-4}	CP-20413
Scuba pressure gauges	20414	(0 ~ 100) m	7.0×10^{-3}	CP-20414

206. Volume

Measured Quantity	Field		Measurement uncertainty	Standard/Method of

Accreditation No : KC01-052

Measured Quantity Instrument or Gauge	Field Code	Range	(The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Volumetric glasswares	20601	(0 ~ 1) mL	1.5 µL	CP-20601
		(1 ~ 2) mL	2.8 µL	
		(2 ~ 5) mL	3.6 µL	
		(5 ~ 10) mL	6.0 µL	
		(10 ~ 25) mL	9.3 µL	
		(25 ~ 50) mL	14 µL	
		(50 ~ 100) mL	20 µL	
		(100 ~ 250) mL	52 µL	
		(250 ~ 500) mL	88 µL	
		(500 ~ 1 000) mL	0.14 mL	
		(1 000 ~ 2 000) mL	0.24 mL	
Standard volume vessels	20604	(0 ~ 20) L	6.8 mL	CP-20604
		(20 ~ 100) L	34 mL	
		(100 ~ 200) L	65 mL	
		(200 ~ 500) L	0.16 L	
		(500 ~ 1 000) L	0.32 L	
		(1 000 ~ 2 000) L	0.64 L	
		(2 000 ~ 5 000) L	1.7 L	
		(5 000 ~ 10 000) L	3.4 L	
Concrete air content meters	20605	(0 ~ 10) %	0.02 %	CP-20605
Piston type volume meters	20606	(0.1 ~ 2) µL	5.8 nL	CP-20606
		(2 ~ 5) µL	7.9 nL	
		(5 ~ 10) µL	9.9 nL	
		(0.01 ~ 0.02) mL	0.021 µL	
		(0.02 ~ 0.05) mL	0.045 µL	
		(0.05 ~ 0.1) mL	0.076 µL	
		(0.1 ~ 0.2) mL	0.22 µL	
		(0.2 ~ 0.5) mL	0.37 µL	
		(0.5 ~ 1) mL	0.73 µL	
		(1 ~ 2) mL	1.4 µL	
		(2 ~ 5) mL	3.7 µL	
		(5 ~ 10) mL	7.2 µL	
		(10 ~ 20) mL	14 µL	
		(20 ~ 50) mL	32 µL	
		(50 ~ 100) mL	64 µL	

Accreditation No : KC01-052

207. Density

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Salinity meters	20704	(0.5 ~ 15) %	0.03 %	CP-20704
Sucrose meters	20705	(0 ~ 60) %	0.15%	CP-20705
Chloride meters	20707	(0.000 ~ 1.000) %	0.006 8 %	CP-20707

Accreditation No : KC01-052

208. Viscosity

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Kinematic viscometers;capillary, etc.	20801			CP-20801
Cpillary viscometers		(2.5 ~ 200 000) mm^2/s	1.6×10^{-2}	
Ford cup viscometers		(2.5 ~ 2 000) mm^2/s	2.7×10^{-2}	
Zhan cup viscometers		(2.5 ~ 2 000) mm^2/s	3.6×10^{-2}	
Dynamic viscometers; rotaional Rotational viscometers	20802	(2.5 ~ 200 000) mPa·s	1.7×10^{-2}	CP-20802

Accreditation No : KC01-052

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	(2 ~ 30) m/s	5.5×10^{-2}	CP-20901
Anemometers ; pitot tube, etc	20902	(2 ~ 30) m/s	5.5×10^{-2}	CP-20902
Gas flowmeters ;differential pressure Sonic Nozzle	20908	(0.002 ~ 250) m^3/h	4.3×10^{-3}	CP-20928
Liquid flowers ; differential pr Master Meter Weighing	20909	(0.005 ~ 50) m^3/h (0.001 ~ 2) m^3/h	2.8×10^{-3} 2.2×10^{-3}	CP-20926 CP-20927
Liquid flowers ; electromagnetic Master Meter Weighing	20910	(0.005 ~ 50) m^3/h (0.001 ~ 2) m^3/h	2.8×10^{-3} 2.2×10^{-3}	CP-20926 CP-20927
Gas flowers ; thermal mass, etc Sonic Nozzle	20911	(0.002 ~ 250) m^3/h	4.3×10^{-3}	CP-20928
Liquid flowers ; thermal mass, e Master Meter Weighing	20912	(0.005 ~ 50) m^3/h (0.001 ~ 2) m^3/h	2.8×10^{-3} 2.2×10^{-3}	CP-20926 CP-20927
Gas flowers ; positive displacem Sonic Nozzle	20914	(0.002 ~ 250) m^3/h	4.3×10^{-3}	CP-20928
Liquid flowers ; positive displa Master Meter Weighing	20915	(0.005 ~ 50) m^3/h (0.001 ~ 2) m^3/h	2.8×10^{-3} 2.2×10^{-3}	CP-20926 CP-20927
Gas flowers ; turbine Sonic Nozzle	20916	(0.002 ~ 250) m^3/h	4.3×10^{-3}	CP-20928

Liquid flowers ; turbine Master Meter Weighing	20917	$(0.005 \sim 50)\ m^3/h$ $(0.001 \sim 2)\ m^3/h$	2.8×10^{-3} 2.2×10^{-3}	CP-20926 CP-20927
Gas flowers ; ultrasonic Sonic Nozzle	20918	$(0.002 \sim 250)\ m^3/h$	4.3×10^{-3}	CP-20928

209. Fluid flow

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Liquid flowers ; ultrasonic Master Meter Weighing	20919	$(0.005 \sim 50)\ m^3/h$ $(0.001 \sim 2)\ m^3/h$	2.8×10^{-3} 2.2×10^{-3}	CP-20926 CP-20927
Gas flowers ; variable area Sonic Nozzle	20920	$(0.002 \sim 250)\ m^3/h$	4.3×10^{-3}	CP-20928
Liquid flowers ; variable area Master Meter Weighing	20921	$(0.005 \sim 50)\ m^3/h$ $(0.001 \sim 2)\ m^3/h$	2.8×10^{-3} 2.2×10^{-3}	CP-20926 CP-20927
Gas flowers ; vortex Sonic Nozzle	20922	$(0.002 \sim 250)\ m^3/h$	4.3×10^{-3}	CP-20928
Liquid flowers ; vortex Master Meter Weighing	20923	$(0.005 \sim 50)\ m^3/h$ $(0.001 \sim 2)\ m^3/h$	2.8×10^{-3} 2.2×10^{-3}	CP-20926 CP-20927

210. HARDNESS

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Brinell Hardness Testing Machines	21001	(100 ~ 250) HBW 10/3 000 (250 ~ 450) HBW 10/3 000	3.2 HBW 10/3 000 4.8 HBW 10/3 000	CP-21001
Rockwell Hardness Testing Machines	21002	(20 ~ 70) HRC (20 ~ 100) HRBW	0.44 HRC 0.74 HRBW	CP-21002
Vickers Hardness Testing Machines	21004	225 HV 0.2 이하 (400 ~ 600) HV 0.2 700 HV 0.2 이상 225 HV 0.3 이하 (400 ~ 600) HV 0.3 700 HV 0.3 이상 225 HV 0.5 이하 (400 ~ 600) HV 0.5 700 HV 0.5 이상	7.4 HV 0.2 22 HV 0.2 36 HV 0.2 6.8 HV 0.3 16 HV 0.3 30 HV 0.3 6.8 HV 0.5 17 HV 0.5 26 HV 0.5	CP-21004

		225 HV 1 이하 (400 ~ 600) HV 1 700 HV 1 이상	4.6 HV 1 15 HV 1 22 HV 1	
Durometer Hardness Testers	21005	(0 ~ 100) HDA (0 ~ 100) HDD	0.44 HDA 0.44 HDD	CP-21005
Leeb Hardness Testers	21006	(400 ~ 1 000) HLD	4.6 HLD	CP-21006

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 Time base Frequency	30102	(0.1 ~ 10) MHz	3.0×10^{-12}	CP-30102
General frequency sources Time base Frequency	30103	(0.1 ~ 10) MHz	3.0×10^{-12}	CP-30103
Frequency meters/counters Time base Frequency Input Frequency	30104	(0.1 ~ 10) MHz 1 Hz ~ 40 GHz	3.0×10^{-12} 7.0×10^{-7}	CP-30104
Time interval sources Period Time base Frequency	30105	(0.1 ~ 10) MHz 10 ns ~ 5 s	3.0×10^{-12} 5.8×10^{-6}	CP-30105

Time interval meters/Stop watches/Timers	30106			CP-30106
Stop watch		1 ms ~ 24 h	1.4×10^{-7}	
Timer		(1 ~ 100) s	6.4 ms	
		(100 ~ 1 000) s	64 ms	
		(1 000 ~ 10 000) s	0.64 s	

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 (Centrifugal separator)	30201			CP-30201
		(6 ~ 90) min^{-1}	0.6 min^{-1}	
		(90 ~ 1 000) min^{-1}	0.7 min^{-1}	
		(1 000 ~ 3 000) min^{-1}	0.8 min^{-1}	
		(3 000 ~ 6 000) min^{-1}	1.1 min^{-1}	
		(6 000 ~ 9 000) min^{-1}	1.4 min^{-1}	
		(9 000 ~ 10 000) min^{-1}	2.5 min^{-1}	

		(10 000 ~ 15 000) min^{-1} (15 000 ~ 30 000) min^{-1} (30 000 ~ 50 000) min^{-1}	2.8 min^{-1} 4.2 min^{-1} 6.3 min^{-1}	
Contact type tachometers	30202	(6 ~ 1 000) min^{-1} (1 000 ~ 4 000) min^{-1}	0.11 min^{-1} 0.2 min^{-1}	CP-30202
Photo tachometers/ stroboscopes	30203	(6 ~ 100) min^{-1} (100 ~ 1 000) min^{-1} (1 000 ~ 100 000) min^{-1} (100 000 ~ 200 000) min^{-1}	0.061 min^{-1} 0.07 min^{-1} 0.1 min^{-1} 1 min^{-1}	CP-30203

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.

Accreditation No : KC01-052

DC ammeters	40101	(±)		CP-40101
		0 μA	11 nA	
		(0 ~ 10) μA	6.5×10^{-4}	
		(10 ~ 100) μA	1.1×10^{-4}	
		(0.1 ~ 1) mA	4.4×10^{-5}	
		(1 ~ 10) mA	4.1×10^{-5}	
		(10 ~ 100) mA	5.4×10^{-5}	
		(0.1 ~ 1) A	9.3×10^{-5}	
		(1 ~ 10) A	1.9×10^{-4}	
		(10 ~ 20) A	1.3×10^{-4}	
		(20 ~ 30) A	2.3×10^{-4}	
		(30 ~ 40) A	3.0×10^{-4}	
		(40 ~ 60) A	2.3×10^{-4}	
		(60 ~ 80) A	1.9×10^{-4}	
		(80 ~ 100) A	1.8×10^{-4}	
Transconductance amplifier	40102			CP-40102
DC Current		10 μA	0.8 nA	
		(10 ~ 100) μA	2 nA	
		(0.1 ~ 1) mA	0.02 μA	
		(1 ~ 10) mA	0.2 μA	
		(10 ~ 100) mA	2 μA	
		(0.1 ~ 1) A	0.03 mA	
		(1 ~ 10) A	0.3 mA	
		(10 ~ 50) A	0.010 A	
		(50 ~ 100) A	0.019 A	
AC Current		10 μA		
		40 Hz ~ 1 kHz	0.023 μA	
		(10 ~ 100) μA		
		40 Hz ~ 1 kHz	0.04 μA	
		(0.1 ~ 1) mA		
		40 Hz	0.14 μA	
		40 Hz ~ 1 kHz	0.11 μA	
		(1 ~ 10) mA		
		40 Hz	1.3 μA	
		40 Hz ~ 1 kHz	0.93 μA	
		(10 ~ 100) mA		
		40 Hz	13 μA	
		40 Hz ~ 1 kHz	9.2 μA	
		(0.1 ~ 1) A		
		40 Hz	0.13 mA	
		40 Hz ~ 1 kHz	0.094 mA	
		(1 ~ 10) A		
		40 Hz	1.3 mA	
		40 Hz ~ 1 kHz	1.0 mA	
		(10 ~ 50) A		
		40 Hz ~ 1 kHz	0.062 A	
		(50 ~ 100) A		

		40 Hz ~ 1 kHz	0.12 A	

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
DC voltage/current calibrators	40103	(±)		CP-40103
DC voltage		0 mV	0.21 μV	
		(0 ~ 1) mV	0.38 μV	
		(1 ~ 10) mV	0.39 μV	
		(10 ~ 100) mV	0.57 μV	
		(0.1 ~ 1) V	3.2 μV	
		(1 ~ 10) V	0.029 mV	
		(10 ~ 100) V	0.45 mV	
		(100 ~ 1 000) V	4.8 mV	
		(±)		
DC Current		0 μA	0.42 nA	
		(0 ~ 1) μA	0.44 nA	
		(1 ~ 10) μA	0.90 nA	
		(10 ~ 100) μA	1.3 nA	
		(0.1 ~ 1) mA	0.013 μA	
		(1 ~ 10) mA	0.14 μA	
		(10 ~ 100) mA	4.4 μA	
		(0.1 ~ 1) A	0.12 mA	
		(1 ~ 10) A	1.4 mA	
		(10 ~ 20) A	3.9 mA	
		(20 ~ 100) A	20 mA	
Resistance		1 Ω	16 μΩ	
		(1 ~ 10) Ω	0.11 mΩ	
		(10 ~ 100) Ω	1.1 mΩ	
		(0.1 ~ 1) kΩ	11 mΩ	
		(1 ~ 10) kΩ	0.10 Ω	
		(10 ~ 100) kΩ	1.2 Ω	
		(0.1 ~ 1) MΩ	11 Ω	
		(1 ~ 10) MΩ	0.21 kΩ	
Electrical temperature calibrators	40104			CP-40104
Resistance(Source) PT 100 Ω		(18.52 ~ 375.70) Ω	0.008 Ω	
JPT 100 Ω		(17.14 ~ 327.03) Ω	0.008 Ω	
PT 1000 Ω		(185.20 ~ 1 000.00) Ω	0.011 Ω	
		(1 000.00 ~ 3 233.02) Ω	0.042 Ω	
Temperature(Source) TC E		(-8.824 ~ 76.373) mV	0.86 μV	
J		(-7.890 ~ 69.553) mV	0.85 μV	
K		(-5.891 ~ 54.819) mV	0.84 μV	
N		(-3.990 ~ 47.513) mV	0.83 μV	
T		(-5.602 ~ 20.872) mV	0.82 μV	
R		(0 ~ 21.031) mV	0.82 μV	
S		(0 ~ 18.637) mV	0.82 μV	
B		(1.792 ~ 13.820) mV	0.81 μV	
Resistance(Measure) PT 100 Ω		(18.52 ~ 375.70) Ω	0.012 Ω	
JPT 100 Ω		(17.14 ~ 327.03) Ω	0.011 Ω	
PT 1000 Ω		(185.20 ~ 602.56) Ω	0.017 Ω	

		(602.56 ~ 1 758.56) Ω	0.052 Ω	
		(1 758.56 ~ 3 233.02) Ω	0.086 Ω	

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.
Electrical temperature calibrators	40104			CP-40104
Temperature(Measure) TC E		(-8.824 ~ 76.373) mV	1.0 μV	
J		(-7.890 ~ 69.553) mV	0.95 μV	
K		(-5.891 ~ 54.819) mV	0.84 μV	
N		(-3.990 ~ 47.513) mV	0.79 μV	
T		(-5.602 ~ 20.872) mV	0.79 μV	
R		(0 ~ 21.031) mV	0.79 μV	
S		(0 ~ 18.637) mV	0.79 μV	
B		(1.792 ~ 13.820) mV	0.79 μV	
DC current shunts	40105			CP-40105
Resistance		0.1 mΩ	1.4×10^{-4}	
		(0.1 ~ 1) mΩ	1.3×10^{-4}	
		(1 ~ 10) mΩ	1.7×10^{-4}	
		(10 ~ 100) mΩ	1.0×10^{-4}	
		(0.1 ~ 0.3) Ω	6.0×10^{-5}	
		(0.3 ~ 0.4) Ω	5.5×10^{-5}	
Resistance		(0.4 ~ 0.5) Ω	5.6×10^{-5}	
		(0.5 ~ 0.6) Ω	5.7×10^{-5}	
		(0.6 ~ 0.7) Ω	5.4×10^{-5}	
		(0.7 ~ 0.8) Ω	5.5×10^{-5}	
		(0.8 ~ 1) Ω	5.6×10^{-5}	
		(1 ~ 2) Ω	5.0×10^{-5}	
		(2 ~ 3) Ω	4.7×10^{-5}	
		(3 ~ 4) Ω	4.5×10^{-5}	
		(4 ~ 5) Ω	4.4×10^{-5}	
		(5 ~ 8) Ω	4.3×10^{-5}	
		(8 ~ 10) Ω	4.4×10^{-5}	
		(10 ~ 20) Ω	5.0×10^{-5}	
		(20 ~ 30) Ω	4.7×10^{-5}	
		(30 ~ 40) Ω	4.5×10^{-5}	
		(40 ~ 50) Ω	4.0×10^{-5}	
		(50 ~ 60) Ω	4.7×10^{-5}	
		(60 ~ 70) Ω	4.6×10^{-5}	
		(70 ~ 80) Ω	4.8×10^{-5}	
		(80 ~ 90) Ω	4.7×10^{-5}	
		(90 ~ 100) Ω	4.6×10^{-5}	
Galvanometers/null detectors	40106			CP-40106
DC voltage		(±)		
		0μV	0.60 μV	
		(0 ~ 100) μV	4.6×10^{-4}	
		(0.1 ~ 1) mV	5.2×10^{-5}	
		(1 ~ 10) mV	5.2×10^{-5}	

		(10 ~ 100) mV	1.2×10^{-5}	
		(0.1 ~ 1) V	1.1×10^{-5}	
		(1 ~ 10) V	6.0×10^{-6}	
		(10 ~ 100) V	1.3×10^{-5}	
		(100 ~ 1 000) V	1.4×10^{-5}	
DC current		(±)		
		0 uA	6.1 nA	
		(0 ~ 10) uA	6.5×10^{-4}	
		(10 ~ 100) uA	1.1×10^{-4}	
		(0.1 ~ 1) mA	8.5×10^{-5}	
		(1 ~ 10) mA	7.5×10^{-5}	
		(10 ~ 100) mA	9.0×10^{-5}	
		(0.1 ~ 1) A	1.5×10^{-4}	
		(1 ~ 5) 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 power supply	40108			CP-40108
DC voltage		(±)		
		0 V	0.22 μV	
		(0 ~ 100) mV	3.9×10^{-4}	
		(0.1 ~ 1 000) V	2.9×10^{-5}	
DC current		(±)		
		0 μA	5.8 nA	
		(0 ~ 1) mA	8.2×10^{-5}	
		(1 ~ 10) mA	2.9×10^{-4}	
		(10 ~ 100) mA	4.4×10^{-5}	
		(0.1 ~ 1) A	1.3×10^{-4}	
		(1 ~ 10) A	1.5×10^{-4}	
		(10 ~ 100) A	2.0×10^{-4}	
		(100 ~ 200) A	7.6×10^{-4}	
DC voltmeters	40112			CP-40112
		(±)		
		0 mV	0.80 μV	
		(0 ~ 10) mV	5.4×10^{-5}	
		(10 ~ 100) mV	1.2×10^{-5}	
		(0.1 ~ 1) V	5.9×10^{-6}	
		(1 ~ 10) V	4.0×10^{-6}	
		(10 ~ 100) V	5.9×10^{-6}	
		(100 ~ 1 000) V	7.3×10^{-6}	
Static/Ionic voltmeters	40113			CP-40113
		(±)		
		(0 ~ 4) kV	0.013 kV	
		(4 ~ 6) kV	0.014 kV	
		(6 ~ 8) kV	0.016 kV	
		(8 ~ 10) kV	0.017 kV	
		(10 ~ 12) kV	0.019 kV	
		(12 ~ 14) kV	0.021 kV	
		(14 ~ 16) kV	0.023 kV	
		(16 ~ 18) kV	0.025 kV	
		(18 ~ 35) kV	0.11 kV	

		(35 ~ 50) kV	0.12 kV	

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 Capacitance	40201			CP-40201
		120 Hz		
		1 nF	3.0×10^{-4}	
		(1 ~ 100) nF	4.0×10^{-4}	
		(0.1 ~ 1) µF	6.0×10^{-4}	
		1 kHz		
		1 pF	4.9×10^{-4}	
		(1 ~ 100) pF	4.4×10^{-4}	
		(100 ~ 1 000) pF	1.6×10^{-4}	
		(1 ~ 100) nF	1.7×10^{-4}	
		(0.1 ~ 1) µF	1.9×10^{-4}	
		10 kHz		
		1 nF	2.6×10^{-4}	
		(1 ~ 100) nF	3.9×10^{-4}	
		(0.1 ~ 1) µF	5.7×10^{-4}	
		1 MHz		
		1 pF	4.4×10^{-4}	
		(1 ~ 100) pF	4.4×10^{-4}	
		(0.1 ~ 1) nF	4.4×10^{-4}	
		2 MHz		
		1 pF	4.9×10^{-4}	
		(1 ~ 100) pF	4.4×10^{-4}	
		(0.1 ~ 1) nF	4.6×10^{-4}	
		3 MHz		
		1 pF	6.0×10^{-4}	

		(1 ~ 100) pF	4.4×10^{-4}	
		(0.1 ~ 1) nF	5.2×10^{-4}	
		4 MHz		
		1 pF	7.7×10^{-4}	
		(1 ~ 100) pF	4.4×10^{-4}	
		(0.1 ~ 1) nF	6.2×10^{-4}	
		5 MHz		
		1 pF	9.8×10^{-4}	
		(10 ~ 100) pF	4.6×10^{-4}	
		(0.1 ~ 1) nF	7.7×10^{-4}	
		10 MHz		
		1 pF	3.4×10^{-3}	
		(10 ~ 100) pF	2.4×10^{-3}	
		(0.1 ~ 1) nF	3.1×10^{-3}	
		13 MHz		
		1 pF	4.3×10^{-3}	
		(10 ~ 100) pF	2.4×10^{-3}	
		(0.1 ~ 1) nF	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.
Decade capacitors	40202	120 Hz		CP-40202
Capacitance		1 nF	0.001 5 nF	
		(1 ~ 10) nF	0.004 3 nF	
		(10 ~ 100) nF	0.055 nF	
		(100 ~ 1 000) nF	0.59 nF	
		1 kHz		
		1 pF	0.002 1 pF	
		(1 ~ 10) pF	0.005 0 pF	
		(10 ~ 100) pF	0.047 pF	
		(100 ~ 1 000) pF	0.46 pF	
		(1 ~ 10) nF	0.002 2 nF	
		(10 ~ 100) nF	0.023 nF	
		(100 ~ 1 000) nF	0.55 nF	
		(1 ~ 10) kHz		
		1 nF	0.001 5 nF	
		(1 ~ 10) nF	0.004 2 nF	
		(10 ~ 100) nF	0.043 nF	
		(100 ~ 1 000) nF	0.59 nF	
Standard capacitors	40204			CP-40204
Capacitance		1 pF		

		1 kHz	4.9×10^{-4}	
		(0.001 ~ 1) MHz	4.5×10^{-4}	
		(1 ~ 2) MHz	9.5×10^{-4}	
		(2 ~ 5) MHz	1.3×10^{-3}	
		(5 ~ 10) MHz	3.5×10^{-3}	
		(10 ~ 13) MHz	4.4×10^{-3}	
		1 kHz	4.4×10^{-4}	
		(0.001 ~ 1) MHz	4.4×10^{-4}	
		(1 ~ 5) MHz	9.2×10^{-4}	
		(5 ~ 13) MHz	2.6×10^{-3}	
		(10 ~ 100) pF		
		1 kHz	4.4×10^{-4}	
		(0.001 ~ 1) MHz	4.4×10^{-4}	
		(1 ~ 5) MHz	9.3×10^{-4}	
		(5 ~ 13) MHz	2.6×10^{-3}	
		(100 ~ 1 000) pF		
		1 kHz	4.5×10^{-4}	
		(0.001 ~ 1) MHz	4.5×10^{-4}	
		(1 ~ 3) MHz	9.6×10^{-4}	
		(3 ~ 5) MHz	1.1×10^{-3}	
		(5 ~ 10) MHz	3.9×10^{-3}	
		(10 ~ 13) MHz	3.9×10^{-3}	
		1 nF		
		120 Hz	1.7×10^{-4}	
		(0.12 ~ 1) kHz	1.7×10^{-4}	
		(1 ~ 10) kHz	1.7×10^{-4}	
		(1 ~ 10) nF		
		120 Hz	3.4×10^{-4}	
		(0.12 ~ 1) kHz	1.8×10^{-4}	
		(1 ~ 10) kHz	3.3×10^{-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.
Standard capacitors	40204			CP-40204
		(10 ~ 100) nF		
		120 Hz	3.4×10^{-3}	
		(0.12 ~ 1) kHz	1.8×10^{-3}	
		(1 ~ 10) kHz	3.4×10^{-3}	
		(100 ~ 1 000) nF		
		120 Hz	5.4×10^{-5}	
		(0.12 ~ 1) kHz	2.0×10^{-5}	
		(1 ~ 10) kHz	5.4×10^{-5}	
Earth testers Resistance	40205			CP-40205
		10 mΩ	6.6×10^{-4}	
		(0.01 ~ 10) Ω	6.1×10^{-4}	
		(10 ~ 100) Ω	6.5×10^{-4}	
		(0.1 ~ 1) kΩ	6.8×10^{-4}	

		(1 ~ 100) kΩ	7.1×10^{-4}	
AC Voltage		40 Hz		
		0.1 V	1.3×10^{-4}	
		(0.1 ~ 1) V	1.5×10^{-4}	
		(1 ~ 100) V	1.4×10^{-4}	
		(100 ~ 300) V	1.6×10^{-4}	
		(300 ~ 500) V	1.1×10^{-4}	
		(500 ~ 1 000) V	1.2×10^{-4}	
		(40 ~ 100) Hz		
		0.1 V	1.3×10^{-4}	
		(0.1 ~ 1) V	1.2×10^{-4}	
		(1 ~ 100) V	1.1×10^{-4}	
		(1 ~ 100) V	1.6×10^{-4}	
		(300 ~ 500) V	1.1×10^{-4}	
		(500 ~ 1 000) V	1.2×10^{-4}	
		100 Hz ~ 1 kHz		
		0.1 V	1.3×10^{-4}	
		(0.1 ~ 1) V	1.2×10^{-4}	
		(1 ~ 100) V	1.1×10^{-4}	
		(100 ~ 300) V	1.6×10^{-4}	
		(300 ~ 500) V	1.1×10^{-4}	
		(500 ~ 1 000) V	1.2×10^{-4}	
AC Current		40 Hz ~ 1 kHz		
		1 A	3.6×10^{-4}	
		(1 ~ 10) A	8.5×10^{-4}	
		(10 ~ 30) A	8.2×10^{-4}	
		(30 ~ 50) A	1.2×10^{-3}	
		(50 ~ 100) A	1.3×10^{-3}	
Inductance bridges/indicators	40206			CP-40206
Standard Inductance		1 kHz		
		100 µH	0.045 µH	
		1 mH	0.000 32 mH	
		10 mH	0.003 2 mH	
		100 mH	0.032 mH	
		1 H	0.000 32 H	

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.
Inductance bridges/indicators	40206			CP-40206
Decade Inductance		1 kHz		
		100 µH	2.2×10^{-3}	
		(0.1 ~ 0.9) mH	2.5×10^{-3}	
		(0.9 ~ 1) mH	1.6×10^{-3}	
		(1 ~ 9) mH	2.5×10^{-3}	
		(9 ~ 10) mH	1.3×10^{-3}	
		(10 ~ 90) mH	2.5×10^{-3}	
		(90 ~ 100) mH	1.3×10^{-3}	

		(100 ~ 900) mH	2.5×10^{-3}	
		(0.9 ~ 1) mH	5.2×10^{-4}	
Inductors	40208			CP-40208
Inductance		1 kHz		
		100 μH	0.046 μH	
		(0.1 ~ 1) mH	0.000 34 mH	
		(1 ~ 10) mH	0.003 4 mH	
		(10 ~ 100) mH	0.034 mH	
		(0.1 ~ 1) H	0.000 34 H	
Insulation testers	40210			CP-40210
DC Voltage (Output)		(10 ~ 1 000) V	0.071 V	
		(1 ~ 5) kV	14 V	
		(5 ~ 10) kV	17 V	
DC Voltage (Input)		(1 ~ 20) V	0.000 75 V	
		(20 ~ 200) V	0.007 5 V	
		(200 ~ 1 000) V	0.071 V	
AC Voltage (Input)		(1 ~ 10) V	0.001 0 V	
		(10 ~ 20) V	0.004 4 V	
		(20 ~ 200) V	0.045 V	
		(200 ~ 1 000) V	0.11 V	
Insulation Resistance		(1 ~ 10) kΩ	0.000 78 kΩ	
		(10 ~ 100) kΩ	0.007 8 kΩ	
		(0.1 ~ 1) MΩ	0.000 078 MΩ	
		(1 ~ 10) MΩ	0.000 87 MΩ	
		(10 ~ 100) MΩ	0.017 MΩ	
		(100 ~ 500) MΩ	0.31 MΩ	
		(0.5 ~ 1) GΩ	0.001 0 GΩ	
		(1 ~ 5) GΩ	0.005 9 GΩ	
		(5 ~ 10) GΩ	0.014 GΩ	
		(10 ~ 50) GΩ	0.067 GΩ	
		(50 ~ 100) GΩ	0.14 GΩ	
		(100 ~ 500) GΩ	1.3 GΩ	
		(0.5 ~ 1) TΩ	0.002 5 TΩ	
Resistance		10 mΩ	6.6×10^{-3}	
		(0.01 ~ 10) Ω	6.1×10^{-4}	
		(10 ~ 100) Ω	6.5×10^{-4}	
		(0.1 ~ 1) kΩ	6.8×10^{-4}	
		(1 ~ 100) kΩ	7.1×10^{-4}	

402. Resistance, Capacitance and Inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Resistance bridges&Similar instruments	40213			CP-40213
Measuring ARM		0.01 Ω	4.8×10^{-4}	

		(0.01 ~ 0.1) Ω	6.0×10^{-5}	
		(0.1 ~ 1) Ω	1.4×10^{-5}	
		(1 ~ 10) Ω	8.9×10^{-6}	
		(10 ~ 100) Ω	7.7×10^{-6}	
		(100 ~ 1 000) Ω	7.7×10^{-6}	
		(1 ~ 10) kΩ	7.7×10^{-6}	
		(10 ~ 100) kΩ	7.8×10^{-6}	
		(100 ~ 1 000) kΩ	9.2×10^{-6}	
		(1 ~ 10) MΩ	2.0×10^{-5}	
Ratio ARM		1 mΩ	2.4×10^{-4}	
		10 mΩ	1.2×10^{-4}	
		100 mΩ	5.9×10^{-5}	
		1 Ω	1.4×10^{-5}	
		10 Ω	1.4×10^{-5}	
		100 Ω	1.3×10^{-5}	
		1 kΩ	1.3×10^{-5}	
		10 kΩ	1.1×10^{-5}	
		100 kΩ	1.3×10^{-5}	
		1 MΩ	1.3×10^{-5}	
		10 MΩ	1.7×10^{-5}	
Resistance meters	40214			CP-40214
DC Resistance		1 mΩ	2.4×10^{-4}	
		(1 ~ 10) mΩ	1.2×10^{-4}	
		(10 ~ 100) mΩ	5.9×10^{-5}	
		(0.1 ~ 1) Ω	1.3×10^{-5}	
		(1 ~ 10) Ω	1.3×10^{-5}	
		(10 ~ 100) Ω	1.2×10^{-5}	
		(0.1 ~ 1) kΩ	1.2×10^{-5}	
		(1 ~ 10) kΩ	1.0×10^{-5}	
		(10 ~ 100) kΩ	1.0×10^{-5}	
		(0.1 ~ 1) MΩ	1.1×10^{-5}	
		(1 ~ 10) MΩ	1.4×10^{-5}	
		(10 ~ 100) MΩ	1.6×10^{-4}	
		(0.1 ~ 1) GΩ	7.0×10^{-4}	
		(1 ~ 10) GΩ	1.2×10^{-3}	
		(10 ~ 100) GΩ	1.2×10^{-3}	
		(0.1 ~ 1) TΩ	3.0×10^{-3}	
AC Resistance		1 kHz		
		10 mΩ	6.0×10^{-3}	
		(10 ~ 100) mΩ	3.0×10^{-3}	
		(0.1 ~ 1) Ω	3.0×10^{-4}	
		(1 ~ 10) Ω	3.0×10^{-4}	
		(10 ~ 100) Ω	3.0×10^{-4}	
		(0.1 ~ 1) kΩ	3.0×10^{-4}	
		(1 ~ 10) kΩ	3.0×10^{-4}	
		(10 ~ 100) kΩ	3.0×10^{-4}	
		(0.1 ~ 1) MΩ	1.7×10^{-4}	

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402. Resistance, Capacitance and Inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Resistors	40215			CP-40215
DC Resistance		1 mΩ	0.41 μΩ	
		(1 ~ 10) mΩ	1.0 μΩ	
		(10 ~ 100) mΩ	9.2 μΩ	
		(0.1 ~ 1) Ω	53 μΩ	
		(1 ~ 10) Ω	0.40 mΩ	
		(10 ~ 100) Ω	1.1 mΩ	
		(0.1 ~ 1) kΩ	11 mΩ	
		(1 ~ 10) kΩ	91 mΩ	
		(10 ~ 100) kΩ	0.86 Ω	
		(0.1 ~ 1) MΩ	11 Ω	
		(1 ~ 10) MΩ	0.24 kΩ	
Decade Resistance		1 mΩ	4.7 μΩ	
		(1 ~ 10) mΩ	4.8 μΩ	
		(10 ~ 100) mΩ	6.0 μΩ	
		(0.1 ~ 1) Ω	14 μΩ	
		(1 ~ 10) Ω	0.089 mΩ	
		(10 ~ 100) Ω	0.77 mΩ	
		(0.1 ~ 1) kΩ	7.7 mΩ	
		(1 ~ 10) kΩ	77 mΩ	
		(10 ~ 100) kΩ	0.78 Ω	
		(0.1 ~ 1) MΩ	9.2 Ω	
		(1 ~ 10) MΩ	0.20 kΩ	
		(10 ~ 100) MΩ	14 kΩ	
		(0.1 ~ 1) GΩ	1.6 MΩ	
AC Resistance		10 mΩ		
		1 kHz	0.060 mΩ	
		(10 ~ 100)mΩ		
		1 kHz	0.30 mΩ	
		(0.1 ~ 1)Ω		
		1 kHz	0.33 mΩ	
		(1 ~ 10)Ω		
		1 kHz	3.3 mΩ	
		(1kHz ~ 1 MHz)	7.2 mΩ	
		(10 ~ 100)Ω		
		1 kHz	0.032 Ω	
		(1 kHz ~ 1 MHz)	0.048 Ω	
		(0.1 ~ 1)kΩ		
		1 kHz	0.32 Ω	
		100 kHz	0.66 Ω	
		1 MHz	0.48 Ω	
		(1 ~ 10)kΩ		
		1 kHz	3.2 Ω	
		100 kHz	6.6 Ω	
		1 MHz	4.8 Ω	

		(10 ~ 100)kΩ		
		1 kHz	33 Ω	
		(1 kHz ~ 100 kHz)	66 Ω	
		(0.1 ~ 1)MΩ		
		1 kHz	0.21 kΩ	

402. Resistance, Capacitance and Inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Impedance bridges/LCR meters	40217			CP-40217
RESISTANCE		1 kHz		
		10 mΩ	6.0×10^{-3}	
		(10 ~ 100) mΩ	3.0×10^{-3}	
		(0.1 ~ 1) Ω	1.3×10^{-3}	
		(1 ~ 10) Ω	7.1×10^{-4}	
		(10 ~ 100) Ω	5.2×10^{-4}	
		(0.1 ~ 1) kΩ	5.2×10^{-4}	
		(1 ~ 10) kΩ	4.2×10^{-4}	
		(10 ~ 100) kΩ	5.2×10^{-4}	
		(0.1 ~ 1) MΩ	1.7×10^{-4}	
		100 kHz		
		1 kΩ	4.7×10^{-4}	
		(1 ~ 10) kΩ	4.7×10^{-4}	
		(10 ~ 100) kΩ	7.4×10^{-5}	
		1 MHz		
		10 Ω	7.1×10^{-4}	
		(10 ~ 100) Ω	2.4×10^{-4}	
		(0.1 ~ 1) kΩ	2.4×10^{-4}	
		(1 ~ 10) kΩ	4.7×10^{-4}	
CAPACITANCE		1 kHz		
		1 pF	4.8×10^{-4}	
		(1 ~ 100) pF	4.3×10^{-4}	
		(0.1 ~ 1) nF	1.4×10^{-4}	
		(1 ~ 100) nF	2.3×10^{-4}	
		(0.1 ~ 1) µF	2.4×10^{-4}	
		120 Hz		
		1 nF	2.4×10^{-4}	
		(1 ~ 100) nF	3.8×10^{-4}	
		(0.1 ~ 1) µF	6.5×10^{-4}	
		10 kHz		
		1 nF	2.4×10^{-4}	
		(1 ~ 100) nF	3.8×10^{-4}	
		(0.1 ~ 1) µF	6.5×10^{-5}	
		1 MHz		
		1 pF	4.4×10^{-4}	
		(1 ~ 100) pF	4.3×10^{-4}	
		(0.1 ~ 1) nF	4.4×10^{-4}	
		2 MHz		
		1 pF	4.9×10^{-4}	

		(1 ~ 100) pF	4.3×10^{-4}	
		(0.1 ~ 1) nF	4.5×10^{-4}	
		3 MHz		
		1 pF	5.9×10^{-4}	
		(1 ~ 100) pF	4.4×10^{-4}	
		(0.1 ~ 1) nF	5.1×10^{-4}	
		4 MHz		
		1 pF	7.6×10^{-4}	
		(1 ~ 100) pF	4.4×10^{-4}	
		(0.1 ~ 1) nF	6.2×10^{-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.
Impedance bridges/LCR meters	40217			CP-40217
		5 MHz		
		1 pF	9.8×10^{-4}	
		(1 ~ 100) pF	4.5×10^{-4}	
		(0.1 ~ 1) nF	7.6×10^{-4}	
		10 MHz		
		1 pF	3.4×10^{-3}	
		(1 ~ 100) pF	2.4×10^{-3}	
		(0.1 ~ 1) nF	3.1×10^{-3}	
		13 MHz		
		1 pF	4.3×10^{-3}	
		(1 ~ 100) pF	2.4×10^{-3}	
		(0.1 ~ 1) nF	3.8×10^{-3}	
INDUCTANCE		1 kHz		
		100 µH	4.6×10^{-4}	
		(0.1 ~ 1) mH	4.0×10^{-4}	
		(1 ~ 10) mH	3.4×10^{-4}	
		(10 ~ 100) mH	3.4×10^{-4}	
		(0.1 ~ 1) H	4.0×10^{-4}	

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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			CP-40301
		0.1 uA		
		10 Hz	0.81 uA	
		10 Hz ~ 40 Hz	0.79 uA	
		40 Hz ~ 1 kHz	0.79 uA	
		1 kHz ~ 10 kHz	0.66 uA	
		0.1 μA ~ 10 μA		
		10 Hz	82 nA	
		10 Hz ~ 40 Hz	7.9×10^{-3}	
		40 Hz ~ 1 kHz	7.9×10^{-3}	
		1 kHz ~ 10 kHz	6.7×10^{-2}	
		10 μA ~ 100 μA		
		10 Hz	0.96 uA	
		10 Hz ~ 40 Hz	8.7×10^{-4}	
		40 Hz ~ 1 kHz	8.5×10^{-4}	
		1 kHz ~ 10 kHz	7.7×10^{-3}	
		100 μA ~ 1 mA		
		10 Hz	0.42 uA	
		10 Hz ~ 40 Hz	2.1×10^{-4}	
		40 Hz ~ 1 kHz	2.0×10^{-4}	
		1 kHz ~ 10 kHz	1.8×10^{-3}	
		1 mA ~ 10 mA		
		10 Hz	0.30 uA	
		10 Hz ~ 40 Hz	2.1×10^{-4}	
		40 Hz ~ 1 kHz	1.8×10^{-4}	
		1 kHz ~ 10 kHz	1.7×10^{-3}	
		10 mA ~ 100 mA		
		10 Hz	0.31 uA	

		10 Hz ~ 40 Hz	2.2×10^{-4}	
		40 Hz ~ 1 kHz	1.8×10^{-4}	
		1 kHz ~ 10 kHz	1.3×10^{-3}	
		100 mA ~ 1 A		
		10 Hz	3.3×10^{-4}	
		10 Hz ~ 40 Hz	3.3×10^{-4}	
		40 Hz ~ 1 kHz	3.3×10^{-4}	
		1 kHz ~ 10 kHz	7.2×10^{-3}	
		1 A ~ 10 A		
		40 Hz ~ 1 kHz	5.3×10^{-4}	
		1 kHz ~ 10 kHz	5.3×10^{-4}	
		10 A ~ 20 A		
		50 Hz ~ 100 Hz	2.5×10^{-4}	
		100 Hz ~ 1 kHz	2.5×10^{-4}	
		20 A ~ 50 A		
		50 Hz ~ 100 Hz	2.4×10^{-4}	
		100 Hz ~ 1 kHz	2.0×10^{-4}	
		50 A ~ 100 A		
		50 Hz ~ 100 Hz	1.7×10^{-4}	
		100 Hz ~ 1 kHz	1.5×10^{-4}	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Clamp ammeters/voltmeters	40302			CP-40302
DC Voltage		0 mV	0.001 1 mV	
		(0 ~ 10) mV	0.000 82 mV	
		(10 ~ 100) mV	0.006 6 mV	
		(0.1 ~ 1) V	0.000 066 V	
		(1 ~ 10) V	0.000 66 V	
		(10 ~ 100) V	0.006 6 V	
		(0.1 ~ 1) kV	0.066 V	
AC Voltage		(1 ~ 2) mV		
		10 Hz	0.006 8 mV	
		10 Hz ~ 10 kHz	0.006 6 mV	
		(2 ~ 20) mV		
		10 Hz	0.011 mV	
		10 Hz ~ 10 kHz	0.007 6 mV	
		(20 ~ 50) mV		
		10 Hz	0.026 mV	
		10 Hz ~ 40 Hz	0.015 mV	
		40 Hz ~ 20 kHz	0.014 mV	
		20 kHz ~ 50 kHz	0.020 mV	
		50 kHz ~ 100 kHz	0.042 mV	
		100 kHz ~ 200 kHz	0.070 mV	
		200 kHz ~ 500 kHz	0.099 mV	
		500 kHz ~ 1 MHz	0.19 mV	

		(50 ~ 100) mV		
		10 Hz	0.037 mV	
		10 Hz ~ 40 Hz	0.018 mV	
		40 Hz ~ 20 kHz	0.017 mV	
		20 kHz ~ 50 kHz	0.029 mV	
		50 kHz ~ 100 kHz	0.064 mV	
		100 kHz ~ 200 kHz	0.12 mV	
		200 kHz ~ 500 kHz	0.17 mV	
		500 kHz ~ 1 MHz	0.32 mV	
		(100 ~ 500) mV		
		10 Hz	0.18 mV	
		10 Hz ~ 40 Hz	0.10 mV	
		40 Hz ~ 20 kHz	0.083 mV	
		20 kHz ~ 50 kHz	0.090 mV	
		50 kHz ~ 100 kHz	0.12 mV	
		100 kHz ~ 200 kHz	0.32 mV	
		200 kHz ~ 500 kHz	0.72 mV	
		500 kHz ~ 1 MHz	1.2 mV	
		(0.5 ~ 1) V		
		10 Hz	0.30 mV	
		10 Hz ~ 40 Hz	0.13 mV	
		40 Hz ~ 20 kHz	0.093 mV	
		20 kHz ~ 50 kHz	0.12 mV	
		50 kHz ~ 100 kHz	0.17 mV	
		100 kHz ~ 200 kHz	0.52 mV	
		200 kHz ~ 500 kHz	1.3 mV	
		500 kHz ~ 1 MHz	2.1 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.
Clamp ammeters/voltmeters AC Voltage	40302	(1 ~ 5) V		CP-40302
		10 Hz	1.8 mV	
		10 Hz ~ 40 Hz	0.98 mV	
		40 Hz ~ 20 kHz	0.82 mV	
		20 kHz ~ 50 kHz	0.90 mV	
		50 kHz ~ 100 kHz	1.1 mV	
		100 kHz ~ 200 kHz	2.3 mV	
		200 kHz ~ 500 kHz	7.2 mV	
		500 kHz ~ 1 MHz	11 mV	
		(5 ~ 10) V		
		10 Hz	3.0 mV	
		10 Hz ~ 40 Hz	1.3 mV	
		40 Hz ~ 20 kHz	0.92 mV	
		20 kHz ~ 50 kHz	1.2 mV	
		50 kHz ~ 100 kHz	1.5 mV	
		100 kHz ~ 200 kHz	3.6 mV	
		200 kHz ~ 500 kHz	13 mV	

		500 kHz ~ 1 MHz	19 mV	
		(10 ~ 50) V		
		10 Hz	0.018 V	
		10 Hz ~ 40 Hz	0.007 9 V	
		40 Hz ~ 20 kHz	0.006 0 V	
		20 kHz ~ 50 kHz	0.007 7 V	
		50 kHz ~ 100 kHz	0.013 V	
		(50 ~ 100) V		
		10 Hz	0.029 V	
		10 Hz ~ 40 Hz	0.012 V	
		40 Hz ~ 20 kHz	0.007 7 V	
		20 kHz ~ 50 kHz	0.011 V	
		50 kHz ~ 100 kHz	0.020 V	
		(100 ~ 500) V		
		50 Hz	0.24 V	
		50 Hz ~ 1 kHz	0.086 V	
		(500 ~ 1 000) V		
		50 Hz	0.43 V	
		50 Hz ~ 1 kHz	0.11 V	
DC Current		0 mA	0.066 µA	
		(0 ~ 1) A	2.3×10^{-3}	
		(1 ~ 10) A	2.4×10^{-3}	
		(10 ~ 200) A	2.3×10^{-3}	
		(200 ~ 1 000) A	2.4×10^{-3}	
AC Current		1 mA		
		10 Hz ~ 1 kHz	2.3×10^{-3}	
		(1 ~ 2) mA		
		10 Hz ~ 1 kHz	2.4×10^{-3}	
		1 kHz ~ 10 kHz	4.3×10^{-3}	
		(2 ~ 5) mA		
		10 Hz ~ 1 kHz	2.4×10^{-3}	
		1 kHz ~ 10 kHz	3.2×10^{-3}	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Clamp ammeters/voltmeters	40302			CP-40302
AC Current		(5 ~ 20) mA		
		10 Hz ~ 1 kHz	2.4×10^{-3}	
		1 kHz ~ 10 kHz	2.9×10^{-3}	
		(20 ~ 50) mA		
		10 Hz ~ 1 kHz	2.4×10^{-3}	
		1 kHz ~ 10 kHz	2.8×10^{-3}	
		(50 ~ 100) mA		
		10 Hz ~ 1 kHz	2.4×10^{-3}	
		1 kHz ~ 10 kHz	2.6×10^{-3}	

		(0.1 ~ 0.2) A		
		10 Hz ~ 1 kHz	2.5×10^{-3}	
		1 kHz ~ 10 kHz	8.5×10^{-3}	
		(0.2 ~ 0.5) A		
		10 Hz ~ 1 kHz	2.5×10^{-3}	
		1 kHz ~ 10 kHz	7.8×10^{-3}	
		(0.5 ~ 1) A		
		10 Hz ~ 1 kHz	2.5×10^{-3}	
		1 kHz ~ 10 kHz	7.6×10^{-3}	
		(1 ~ 2) A		
		40 Hz ~ 1 kHz	2.7×10^{-3}	
		1 kHz ~ 10 kHz	4.8×10^{-3}	
		(2 ~ 10) A		
		40 Hz ~ 1 kHz	2.4×10^{-3}	
		1 kHz ~ 10 kHz	4.4×10^{-3}	
		(10 ~ 20) A		
		40 Hz ~ 60 Hz	2.5×10^{-3}	
		60 Hz ~ 100 Hz	2.7×10^{-3}	
		100 Hz ~ 1 kHz	5.5×10^{-3}	
		1 kHz ~ 10 kHz	6.0×10^{-2}	
		(20 ~ 40) A		
		40 Hz ~ 60 Hz	2.4×10^{-3}	
		60 Hz ~ 100 Hz	2.5×10^{-3}	
		100 Hz ~ 1 kHz	3.8×10^{-3}	
		1 kHz ~ 10 kHz	4.8×10^{-2}	
		(40 ~ 60) A		
		40 Hz ~ 100 Hz	2.5×10^{-3}	
		100 Hz ~ 1 kHz	3.2×10^{-3}	
		(60 ~ 80) A		
		40 Hz ~ 100 Hz	2.4×10^{-3}	
		100 Hz ~ 1 kHz	3.0×10^{-3}	
		(80 ~ 100) A		
		40 Hz ~ 100 Hz	2.4×10^{-3}	
		100 Hz ~ 1 kHz	2.8×10^{-3}	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Clamp ammeters/voltmeters AC Current	40302	60 Hz		CP-40302
		(100 ~ 200) A	2.7×10^{-3}	
		(200 ~ 400) A	2.4×10^{-3}	
		(400 ~ 600) A	2.7×10^{-3}	

		(600 ~ 1 000) A	2.5×10^{-3}	
Resistance		(0 ~ 1) Ω	0.000 12 Ω	
		(1 ~ 10) Ω	0.000 66 Ω	
		(10 ~ 100) Ω	0.006 3 Ω	
		(0.1 ~ 1) kΩ	0.000 062 kΩ	
		(1 ~ 10) kΩ	0.000 62 kΩ	
		(10 ~ 100) kΩ	0.006 3 kΩ	
		(0.1 ~ 1) MΩ	0.000 066 MΩ	
		(1 ~ 10) MΩ	0.000 76 MΩ	
		(10 ~ 100) MΩ	0.012 MΩ	
AC voltage/current calibrators	40303			CP-40303
AC Voltage		10 Hz ~ 40 Hz		
		(1 ~ 100) mV	0.014 mV	
		(0.1 ~ 1) V	0.11 mV	
		(1 ~ 10) V	1.1 mV	
		(10 ~ 100) V	0.013 V	
		10 Hz ~ 40 Hz		
		(100 ~ 200) V	0.019 V	
		(200 ~ 300) V	0.037 V	
		(300 ~ 600) V	0.073 V	
		(600 ~ 1 000) V	0.14 V	
		40 Hz ~ 20 kHz		
		(1 ~ 100) mV	0.010 mV	
		(0.1 ~ 1) V	0.084 mV	
		(1 ~ 10) V	0.85 mV	
		(10 ~ 100) V	0.008 7 V	
		(100 ~ 200) V	0.013 V	
		(200 ~ 300) V	0.020 V	
		(300 ~ 600) V	0.038 V	
		(600 ~ 1 000) V	0.088 V	
		20 kHz ~ 100 kHz		
		(1 ~ 100) mV	0.024 mV	
		(0.1 ~ 1) V	0.12 mV	
		(1 ~ 10) V	1.3 mV	
		(10 ~ 100) V	0.014 V	
		(100 ~ 200) V	0.026 V	
		(200 ~ 300) V	0.17 V	
		(300 ~ 600) V	0.35 V	
		100 kHz ~ 500 kHz		
		(1 ~ 100) mV	0.033 mV	
		(0.1 ~ 1) V	0.17 mV	
		(1 ~ 10) V	1.7 mV	
		(10 ~ 20) V	0.003 2 V	
		500 kHz ~ 1 MHz		
		(1 ~ 100) mV	0.15 mV	
		(0.1 ~ 1) V	1.1 mV	
		(1 ~ 10) V	0.013 V	
		(10 ~ 20) V	0.026 V	

403. AC voltage, current & power

Measured Quantity	Field		Measurement uncertainty	Standard/Method of

Accreditation No : KC01-052

Measured Quantity Instrument or Gauge	Field Code	Range	(The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC voltage/current calibrators	40303			CP-40303
AC current		40 Hz ~ 1 kHz		
		(10 ~ 100) μA	0.28 μA	
		(0.1 ~ 1) mA	0.48 μA	
		(1 ~ 10) mA	0.004 8 mA	
		(10 ~ 100) mA	0.028 mA	
		(0.1 ~ 1) A	0.86 mA	
		(1 ~ 10) A	11 mA	
		(10 ~ 100) A	0.13 A	
		1 kHz ~ 10 kHz		
		(10 ~ 100) μA	1.6 μA	
		(0.1 ~ 1) mA	1.7 μA	
		(1 ~ 10) mA	0.016 mA	
		(10 ~ 100) mA	0.031 mA	
		(0.1 ~ 1) A	6.6 mA	
Power calibrators	40304			CP-40304
AC Voltage		40 Hz ~ 20 kHz		
		(0.1 ~ 1) V	6.4×10^{-5}	
		(1 ~ 10) V	5.5×10^{-5}	
		(10 ~ 100) V	6.0×10^{-5}	
		(100 ~ 200) V	5.2×10^{-5}	
		40 Hz ~ 10 kHz		
		(200 ~ 1 000) V	5.6×10^{-5}	
		20 kHz ~ 50 kHz		
		(0.1 ~ 1) V	8.3×10^{-5}	
		(1 ~ 10) V	4.8×10^{-5}	
		(10 ~ 100) V	5.3×10^{-5}	
		50 kHz ~ 100 kHz		
		(0.1 ~ 1) V	1.0×10^{-4}	
		(1 ~ 100) V	8.1×10^{-5}	
		100 kHz ~ 500 kHz		
		(0.1 ~ 1) V	4.4×10^{-4}	
		(1 ~ 10) V	4.0×10^{-4}	
		500 kHz ~ 1 MHz		
		(0.1 ~ 1) V	1.1×10^{-3}	
		(1 ~ 10) V	1.2×10^{-3}	
AC Current		40 Hz ~ 10 kHz		
		1 mA	6.0×10^{-5}	
		(1 ~ 10) mA	3.9×10^{-5}	
		(10 ~ 100) mA	3.9×10^{-5}	
		(0.1 ~ 1) A	4.1×10^{-5}	
		(1 ~ 10) A	4.9×10^{-5}	
		(10 ~ 20) A	4.9×10^{-5}	
AC Wattage		(50 ~60) Hz		
		(0.6 ~ 120) W	1.8×10^{-4}	
		(120 ~ 240) W	1.5×10^{-4}	
		(240 ~ 1 200) W	1.8×10^{-4}	

		(1.2 ~ 4.8) kW (4.8 ~ 7.2) kW (7.2 ~ 12) kW	1.5×10^{-4} 1.8×10^{-4} 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.
Power calibrators Power Factor	40304	(50 ~ 60) Hz lead, lag (0 ~ 0.3) lead, lag (0.3 ~ 0.5) lead, lag (0.5 ~ 0.8) lead, lag (0.8 ~ 1)	 0.000 13 0.000 14 0.000 16 0.000 17	CP-40304
AC current shunts Resistance	40305	0.1 mΩ (40 ~ 60) Hz (60 ~ 100) Hz (0.1 ~ 1) kHz (0.1 ~ 1) mΩ (40 ~ 60) Hz (60 ~ 100) Hz (0.1 ~ 1) kHz (1 ~ 10) mΩ 40 Hz ~ 5 kHz (10 ~ 100) mΩ 10 Hz ~ 1 kHz (1 ~ 10) kHz (0.1 ~ 1) Ω 10 Hz (10 ~ 40) Hz 40 Hz ~ 1 kHz (1 ~ 10) kHz (1 ~ 10) Ω 10 Hz (10 ~ 40) Hz 40 Hz ~ 1 kHz (1 ~ 10) kHz (10 ~ 100) Ω 10 Hz (10 ~ 40) Hz 40 Hz ~ 1 kHz (1 ~ 10) kHz	 4.6×10^{-4} 6.0×10^{-4} 1.6×10^{-4} 3.4×10^{-4} 5.0×10^{-4} 1.6×10^{-4} 5.4×10^{-4} 3.4×10^{-4} 7.2×10^{-4} 3.2×10^{-4} 2.2×10^{-4} 1.8×10^{-4} 1.2×10^{-3} 3.0×10^{-4} 2.2×10^{-4} 1.8×10^{-4} 1.6×10^{-3} 3.0×10^{-4} 2.2×10^{-4} 1.8×10^{-4} 1.8×10^{-3}	CP-40305
Voltage/current phase angle meters/ synchro resolve meters Phase	40307	 (50 ~ 60) Hz -180° ~ 180°	 0.012°	CP-40307
Power factor meters Power Factor	40310	 50 Hz ~ 60 Hz		CP-40310

		lead, lag (0 ~ 1)	0.000 22	
AC power meters	40311			CP-40311
AC Voltage		1 mV		
		(10 Hz)	9.0 µV	
		(10 Hz ~ 10 kHz)	9.1 µV	
		1 mV ~ 10 mV		
		(10 Hz)	11 µV	
		(10 Hz ~ 10 kHz)	10 µV	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC power meters	40311			CP-40311
AC Voltage		10 mV ~ 100 mV		
		(10 Hz)	37 µV	
		(10 Hz ~ 20 kHz)	18 µV	
		(20 kHz ~ 200 kHz)	0.12 mV	
		(200 kHz ~ 1 MHz)	0.32 mV	
		100 mV ~ 1 V		
		(10 Hz)	0.29 mV	
		(10 Hz ~ 40 Hz)	0.12 mV	
		(40 Hz ~ 20 kHz)	67 µV	
		(20 kHz ~ 200 kHz)	0.51 mV	
		(200 kHz ~ 1 MHz)	2.1 mV	
		1 V ~ 10 V		
		(10 Hz)	2.9 mV	
		(10 Hz ~ 40 Hz)	1.2 mV	
		(40 Hz ~ 20 kHz)	0.65 mV	
		(20 kHz ~ 100 kHz)	1.4 mV	
		(100 kHz ~ 1 MHz)	19 mV	
		10 V ~ 100 V		
		(10 Hz)	29 mV	
		(10 Hz ~ 40 Hz)	12 mV	
		(40 Hz ~ 20 kHz)	7.1 mV	
		(20 kHz ~ 100 kHz)	19 mV	
		100 V ~ 300 V		
		(50 Hz)	29 mV	
		(50 Hz ~ 60 Hz)	28 mV	
		(60 Hz ~ 1 kHz)	48 mV	
		300 V ~ 600 V		
		(50 Hz)	59 mV	
		(50 Hz ~ 60 Hz)	54 mV	
		(60 Hz ~ 1 kHz)	62 mV	
		600 V ~ 1 000 V		
		(50 Hz ~ 1 kHz)	85 mV	
AC Current		1 mA		
		(10 Hz)	0.30 µA	
		(10 Hz ~ 1 kHz)	0.21 µA	

		(1 kHz ~ 10 kHz)	1.8 μA	
		1 mA ~ 10 mA		
		(10 Hz)	3.0 μA	
		(10 Hz ~ 1 kHz)	2.1 μA	
		(1 kHz ~ 10 kHz)	17 μA	
		10 mA ~ 100 mA		
		(10 Hz)	31 μA	
		(10 Hz ~ 1 kHz)	22 μA	
		(1 kHz ~ 10 kHz)	0.13 mA	
		100 mA ~ 1 A		
		(40 Hz)	0.33 mA	
		(40 Hz ~ 60 Hz)	0.14 mA	
		(60 Hz ~ 1 kHz)	0.33 mA	
		(1 kHz ~ 10 kHz)	7.2 mA	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC power meters	40311			CP-40311
AC Current		1 A ~ 10 A		
		(40 Hz)	5.3 mA	
		(40 Hz ~ 60 Hz)	1.5 mA	
		(60 Hz ~ 1 kHz)	5.3 mA	
		(1 kHz ~ 10 kHz)	37 mA	
		10 A ~ 40 A		
		(40 Hz)	23 mA	
		(40 Hz ~ 60 Hz)	7.2 mA	
		(40 Hz ~ 100 Hz)	34 mA	
		(100 Hz ~ 1 kHz)	0.11 A	
		(1 kHz ~ 10 kHz)	1.9 A	
		40 A ~ 100 A		
		(40 Hz)	33 mA	
		(40 Hz ~ 60 Hz)	33 mA	
		(60 Hz ~ 100 Hz)	49 mA	
		(100 Hz ~ 1 kHz)	0.16 A	
		100 A ~ 1 000 A		
		(50 Hz)	2.6 A	
		(50 Hz ~ 60 Hz)	2.6 A	
DC Voltage		1 mV	6.2 μV	
		1 mV ~ 100 mV	6.3 μV	
		100 mV ~ 3 V	16 μV	
		3 V ~ 10 V	0.10 mV	
		10 V ~ 100 V	0.84 mV	
		100 V ~ 1 000 V	11 mV	
DC Current		100 μA	0.014 μA	
		100 μA ~ 1 mA	0.044 μA	
		1 mA ~ 10 mA	0.41 μA	
		10 mA ~ 100 mA	5.3 μA	

		100 mA ~ 1 A	0.093 mA	
		1 A ~ 10 A	4.1 mA	
		10 A ~ 40 A	7.7 mA	
		40 A ~ 100 A	0.013 A	
		100 A ~ 1 000 A	2.4 A	
AC Wattage		(50 Hz ~ 60 Hz)		
		1.2 W	7.0×10^{-4}	
		1.2 W ~ 120 W	7.5×10^{-4}	
		120 W ~ 24 kW	3.1×10^{-4}	
DC Wattage		1.2 W	2.3×10^{-4}	
		1.2 W ~ 24 W	3.7×10^{-4}	
		24 W ~ 4.8 kW	1.3×10^{-3}	
Power Factor		(50 Hz ~ 60 Hz)		
		Lead, Lag (0 ~ 1)	0.000 24	
Harmonic Voltage		(50 Hz ~ 60 Hz)		
		0.5 % ~ 20 %	0.091 %	
Harmonic Current		(50 Hz ~ 60 Hz)		
		0.5 % ~ 20 %	0.061 %	

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			CP-40312
AC Voltage		10 Hz		
		100 mV	0.015 mV	
		(0.1 ~ 1) V	0.12 mV	
		(1 ~ 10) V	0.52 mV	
		(10 ~ 100) V	0.011 V	
		40 Hz ~ 20 kHz		
		100 mV	0.015 mV	
		(0.1 ~ 1) V	0.12 mV	
		(1 ~ 10) V	0.54 mV	
		(10 ~ 100) V	0.012 V	
		(100 ~ 200) V	0.014 V	
		(200 ~ 300) V	0.038 V	
		(300 ~ 600) V	0.074 V	
		(600 ~ 1 000) V	0.15 V	
		20 kHz ~ 100 kHz		
		100 mV	0.024 mV	
		(0.1 ~ 1) V	0.13 mV	
		(1 ~ 10) V	1.4 mV	
		(10 ~ 100) V	0.015 V	
		(100 ~ 200) V	0.027 V	
		(200 ~ 300) V	0.18 V	
		(300 ~ 600) V	0.35 V	
		100 kHz ~ 500 kHz		
		100 mV	0.034 mV	
		(0.1 ~ 1) V	0.18 mV	

		(1 ~ 10) V	1.8 mV	
		(10 ~ 20) V	3.3 mV	
		500 kHz ~ 1 MHz		
		100 mV	0.15 mV	
		(0.1 ~ 1) V	1.1 mV	
		(1 ~ 10) V	0.013 V	
		(10 ~ 20) V	0.026 V	
	AC Current	40 Hz ~ 1 kHz		
		(0.1 ~ 1) mA	0.64 μA	
		(1 ~ 10) mA	0.003 7 mA	
		(10 ~ 100) mA	0.037 mA	
		(0.1 ~ 1) A	0.36 mA	
		(1 ~ 10) A	8.5 mA	
		(10 ~ 100) A	0.13 A	
	Frequency	40 Hz ~ 1 kHz	0.005 9 Hz	
	DC Voltage	(±)		
		0 V	0.22 μV	
		(0 ~ 100) mV	3.9×10^{-4}	
		(0.1 ~ 1 000) V	2.9×10^{-5}	
	DC Current	(±)		
		0 μA	5.8 nA	
		(0 ~ 1) mA	8.2×10^{-5}	
		(1 ~ 10) mA	2.9×10^{-4}	
		(10 ~ 100) mA	4.4×10^{-5}	
		(0.1 ~ 1) A	1.3×10^{-4}	
		(1 ~ 10) A	1.5×10^{-4}	
		(10 ~ 100) A	2.0×10^{-4}	
		(100 ~ 200) A	7.6×10^{-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.
Puncture/safety testers	40313			CP-40313
DC Voltage		(±)		
		(0.1 ~ 1) kV	9.0×10^{-2}	
		(1 ~ 10) kV	9.0×10^{-3}	
		(10 ~ 20) kV	1.0×10^{-2}	
		(20 ~ 50) kV	6.7×10^{-3}	
		(50 ~ 70) kV	3.3×10^{-3}	
		(70 ~ 100) kV	7.0×10^{-3}	
AC Voltage		60 Hz		
		(0.1 ~ 1) kV	6.0×10^{-2}	
		(1 ~ 6) kV	3.0×10^{-2}	
		(6 ~ 9) kV	4.3×10^{-3}	
		(9 ~ 15) kV	7.0×10^{-3}	
		(15 ~ 20) kV	1.0×10^{-2}	
		(20 ~ 50) kV	6.7×10^{-3}	
		(50 ~ 70) kV	5.0×10^{-3}	
		(70 ~ 100) kV	3.8×10^{-3}	
DC Current		(0.1 ~ 0.5) mA	1.2×10^{-2}	
		(0.5 ~ 1) mA	1.3×10^{-2}	
		(1 ~ 50) mA	1.2×10^{-2}	
		(50 ~ 100) mA	1.3×10^{-2}	

AC Current		60 Hz		
		(0.1 ~ 0.5) mA	1.2×10^{-2}	
		(0.5 ~ 1) mA	1.4×10^{-2}	
		(1 ~ 50) mA	1.3×10^{-2}	
		(50 ~ 100) mA	1.4×10^{-2}	
Times		(1 ~ 60) s	71 ms	
Insulation Voltage		(10 ~ 500) V	0.08 V	
		(0.5 ~ 5) kV	13 V	
		(5 ~ 10) kV	17 V	
Insulation Resistance		(1 ~ 10) kΩ	0.000 8 kΩ	
		(10 ~ 100) kΩ	0.007 8 kΩ	
		(0.1 ~ 1) MΩ	0.000 08 MΩ	
		(1 ~ 10) MΩ	0.000 87 MΩ	
		(10 ~ 100) MΩ	0.017 MΩ	
		(100 ~ 500) MΩ	0.31 MΩ	
		(0.5 ~ 1) GΩ	0.001 0 GΩ	
		(1 ~ 5) GΩ	0.005 9 GΩ	
		(5 ~ 10) GΩ	0.014 GΩ	
		(10 ~ 50) GΩ	0.067 GΩ	
		(50 ~ 100) GΩ	0.14 GΩ	
		(100 ~ 500) GΩ	1.3 GΩ	
		(0.5 ~ 1) TΩ	0.002 5 TΩ	
Power recorders	40314			CP-40314
AC Wattage		(50 Hz ~ 60 Hz)		
		1.2 W	7.0×10^{-4}	
		1.2 W ~ 120 W	7.5×10^{-4}	
		120 W ~ 24 kW	3.1×10^{-4}	
DC Wattage		1.2 W	2.3×10^{-4}	
		1.2 W ~ 24 W	3.7×10^{-4}	
		24 W ~ 4.8 kW	1.3×10^{-3}	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC voltmeters	40318			CP-40318
AC Voltage		0.1 mV		
		10 Hz	6.5 μV	
		10 Hz ~ 40 Hz	6.5 μV	
		40 Hz ~ 1 kHz	6.5 μV	
		1 kHz ~ 20 kHz	8.1 μV	
		20 kHz ~ 50 kHz	10 μV	
		50 kHz ~ 100 kHz	19 μV	
		100 kHz ~ 500 kHz	35 μV	
		500 kHz ~ 1 MHz	61 μV	
		0.1 mV ~ 10 mV		
		10 Hz	8.2 μV	
		10 Hz ~ 40 Hz	8.0×10^{-4}	
		40 Hz ~ 1 kHz	7.0×10^{-4}	
		1 kHz ~ 20 kHz	8.8×10^{-4}	

		20 kHz ~ 50 kHz	1.2×10^{-3}	
		50 kHz ~ 100 kHz	2.3×10^{-3}	
		100 kHz ~ 500 kHz	4.6×10^{-3}	
		500 kHz ~ 1 MHz	8.3×10^{-3}	
		10 mV ~ 100 mV		
		10 Hz	37 µV	
		10 Hz ~ 40 Hz	1.7×10^{-4}	
		40 Hz ~ 1 kHz	1.6×10^{-4}	
		1 kHz ~ 20 kHz	1.6×10^{-4}	
		20 kHz ~ 50 kHz	2.8×10^{-4}	
		50 kHz ~ 100 kHz	6.4×10^{-4}	
		100 kHz ~ 500 kHz	1.7×10^{-3}	
		500 kHz ~ 1 MHz	3.2×10^{-3}	
		100 mV ~ 1 V		
		10 Hz	0.29 mV	
		10 Hz ~ 40 Hz	1.2×10^{-4}	
		40 Hz ~ 1 kHz	6.7×10^{-5}	
		1 kHz ~ 20 kHz	6.7×10^{-5}	
		20 kHz ~ 50 kHz	1.0×10^{-4}	
		50 kHz ~ 100 kHz	1.5×10^{-4}	
		100 kHz ~ 500 kHz	1.3×10^{-3}	
		500 kHz ~ 1 MHz	2.1×10^{-3}	
		1 V ~ 10 V		
		10 Hz	2.9 mV	
		10 Hz ~ 40 Hz	1.2×10^{-4}	
		40 Hz ~ 1 kHz	6.5×10^{-5}	
		1 kHz ~ 20 kHz	6.5×10^{-5}	
		20 kHz ~ 50 kHz	1.0×10^{-4}	
		50 kHz ~ 100 kHz	1.4×10^{-4}	
		100 kHz ~ 500 kHz	1.3×10^{-3}	
		500 kHz ~ 1 MHz	1.9×10^{-3}	
		10 V ~ 100 V		
		10 Hz	29 mV	
		10 Hz ~ 40 Hz	1.2×10^{-4}	
		40 Hz ~ 1 kHz	7.2×10^{-5}	
		1 kHz ~ 20 kHz	7.1×10^{-5}	
		20 kHz ~ 50 kHz	1.1×10^{-4}	
		50 kHz ~ 100 kHz	1.9×10^{-4}	
		100 V ~ 1 000 V		
		50 Hz	4.3×10^{-4}	
		50 Hz ~ 1 kHz	8.5×10^{-5}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF amplifiers	40401			CP-40401
Amplifier		DC		
		10 mV ~ 100 mV	2.6×10^{-4}	
		100 mV ~ 1 V	1.0×10^{-6}	
		1 V ~ 1 000 V	1.2×10^{-5}	
		10 Hz		
		10 mV ~ 100 mV	3.5×10^{-3}	
		100 mV ~ 1 V	3.8×10^{-4}	

		1 V ~ 10 V	3.0×10^{-4}	
		10 V ~ 100 V	3.1×10^{-4}	
		10 Hz ~ 40 Hz		
		10 mV ~ 100 mV	3.3×10^{-3}	
		100 mV ~ 1 V	1.9×10^{-4}	
		1 V ~ 10 V	1.4×10^{-4}	
		10 V ~ 100 V	1.5×10^{-4}	
		100 V ~ 1 000 V	1.8×10^{-4}	
		40 Hz ~ 1 kHz		
		10 mV ~ 100 mV	3.3×10^{-3}	
		100 mV ~ 1 V	1.8×10^{-4}	
		1 V ~ 10 V	1.1×10^{-4}	
		10 V ~ 100 V	1.2×10^{-4}	
		100 V ~ 1 000 V	1.6×10^{-4}	
		1 kHz ~ 10 kHz		
		10 mV ~ 100 mV	3.3×10^{-3}	
		100 mV ~ 1 V	2.1×10^{-4}	
		1 V ~ 10 V	1.5×10^{-4}	
		10 V ~ 100 V	1.4×10^{-4}	
		100 V ~ 1 000 V	1.6×10^{-4}	
		10 kHz ~ 30 kHz		
		100 mV ~ 1 V	3.7×10^{-4}	
		1 V ~ 10 V	2.6×10^{-4}	
		10 V ~ 100 V	2.6×10^{-4}	
		100 V ~ 1 000 V	2.8×10^{-4}	
		30 kHz ~ 100 kHz		
		100 mV ~ 1 V	8.6×10^{-4}	
		1 V ~ 10 V	6.0×10^{-4}	
		10 V ~ 100 V	6.6×10^{-4}	
		100 kHz ~ 1 MHz		
		100 mV ~ 1 V	1.2×10^{-2}	
		1 V ~ 10 V	1.2×10^{-2}	
		DC		
		0 dB ~ 30 dB	0.01 dB	
		30 dB ~ 40 dB	0.01 dB	
		40 dB ~ 50 dB	0.03 dB	
		50 dB ~ 60 dB	0.10 dB	
		10 Hz		
		0 dB ~ 10 dB	0.01 dB	
		10 dB ~ 20 dB	0.03 dB	
		20 dB ~ 30 dB	0.10 dB	
		30 dB ~ 40 dB	0.27 dB	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF amplifiers	40401			CP-40401
Amplifier		10 Hz ~ 40 Hz		
		0 dB ~ 10 dB	0.01 dB	
		10 dB ~ 20 dB	0.02 dB	

		20 dB ~ 30 dB	0.07 dB	
		30 dB ~ 40 dB	0.13 dB	
		40 dB ~ 50 dB	0.63 dB	
		50 dB ~ 60 dB	1.5 dB	
		40 Hz ~ 1 kHz		
		0 dB ~ 10 dB	0.01 dB	
		10 dB ~ 20 dB	0.01 dB	
		20 dB ~ 30 dB	0.06 dB	
		30 dB ~ 40 dB	0.11 dB	
		40 dB ~ 50 dB	0.58 dB	
		50 dB ~ 60 dB	1.3 dB	
		1 kHz ~ 30 kHz		
		0 dB ~ 10 dB	0.02 dB	
		10 dB ~ 20 dB	0.06 dB	
		20 dB ~ 30 dB	0.22 dB	
		30 dB ~ 40 dB	0.23 dB	
		40 dB ~ 50 dB	0.91 dB	
		50 dB ~ 60 dB	2.2 dB	
		30 kHz ~ 100 kHz		
		0 dB ~ 10 dB	0.02 dB	
		10 dB ~ 20 dB	0.06 dB	
		20 dB ~ 30 dB	0.22 dB	
		30 dB ~ 40 dB	0.56 dB	
		100 kHz ~ 200 kHz		
		0 dB ~ 10 dB	0.09 dB	
		10 dB ~ 20 dB	0.22 dB	
		200 kHz ~ 1 MHz		
		0 dB ~ 10 dB	0.38 dB	
		10 dB ~ 20 dB	0.99 dB	
DC/LF attenuators	40402			CP-40402
Attenuator		10 Hz		
		0 dB ~ -40 dB	0.006 dB	
		-40 dB ~ -50 dB	0.007 dB	
		-50 dB ~ -60 dB	0.018 dB	
		10 Hz ~ 20 kHz		
		0 dB ~ -40 dB	0.005 dB	
		-40 dB ~ -50 dB	0.008 dB	
		-50 dB ~ -60 dB	0.020 dB	
		20 kHz ~ 100 kHz		
		0 dB ~ -30 dB	0.006 dB	
		-30 dB ~ -40 dB	0.028 dB	
		-40 dB ~ -50 dB	0.030 dB	
		-50 dB ~ -60 dB	0.039 dB	

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Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
DC/LF attenuators	40402			CP-40402
Attenuator		100 kHz ~ 200 kHz		
		0 dB ~ -30 dB	0.027 dB	
		-30 dB ~ -40 dB	0.091 dB	
		-40 dB ~ -50 dB	0.11 dB	
		-50 dB ~ -60 dB	0.13 dB	
		200 kHz ~ 1 MHz		
		0 dB ~ -30 dB	0.13 dB	
		-30 dB ~ -50 dB	0.19 dB	
		-50 dB ~ -60 dB	0.23 dB	
Multimeter calibrators	40403			CP-40403
DC Voltage		(±)		
		0 mV	0.23 µV	
		(0 ~ 10) mV	0.23 µV	
		(10 ~ 100) mV	0.50 µV	
		(0.1 ~ 1) V	3.0 µV	
		(1 ~ 10) V	38 µV	
		(10 ~ 100) V	0.49 mV	
		(0.1 ~ 1) kV	6.8 mV	
DC Current		(±)		
		0 µA	0.47 nA	
		(0 ~ 100) µA	3.9 nA	
		(0.1 ~ 1) mA	25 nA	
		(1 ~ 10) mA	0.24 µA	
		(10 ~ 100) mA	2.4 µA	
		(0.1 ~ 1) A	24 µA	
		(1 ~ 10) A	0.27 mA	
		(10 ~ 20) A	0.75 mA	
AC Voltage		40 Hz ~ 20 kHz		
		(1 ~ 100) mV	6.7 µV	
		(0.1 ~ 1) V	58 µV	
		(1 ~ 10) V	0.59 mV	
		(10 ~ 100) V	14 mV	
		(0.1 ~ 1.0) kV	56 mV	
		20 kHz ~ 50 kHz		
		(1 ~ 100) mV	9.1 µV	
		(0.1 ~ 1) V	56 µV	
		(1 ~ 10) V	0.57 mV	
		(10 ~ 100) V	14 mV	
		50 kHz ~ 100 kHz		
		(1 ~ 100) mV	11 µV	
		(0.1 ~ 1) V	79 µV	
		(1 ~ 10) V	0.88 mV	
		(10 ~ 100) V	14 mV	
		100 kHz ~ 500 kHz		
		(1 ~ 100) mV	0.045 mV	
		(0.1 ~ 1) V	0.27 mV	
		(1 ~ 10) V	4.1 mV	

		500 kHz ~ 1 MHz		
		(1 ~ 100) mV	0.12 mV	
		(0.1 ~ 1) V	0.90 mV	
		(1 ~ 10) V	13 mV	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			CP-40403
AC Current		10 Hz		
		(0.01 ~ 1) mA	0.084 μA	
		(1 ~ 10) mA	0.77 μA	
		(10 ~ 100) mA	7.7 μA	
		(0.1 ~ 1) A	0.033 mA	
		(1 ~ 10) A	0.41 mA	
		(10 ~ 20) A	0.82 mA	
		10 Hz ~ 10 kHz		
		(0.01 ~ 1) mA	0.052 μA	
		(1 ~ 10) mA	0.39 μA	
		(10 ~ 100) mA	3.9 μA	
		(0.1 ~ 1) A	0.033 mA	
		(1 ~ 10) A	0.41 mA	
		(10 ~ 20) A	0.82 mA	
Resistance		1 Ω	10 μΩ	
		(1 ~ 10) Ω	0.11 mΩ	
		(10 ~ 100) Ω	0.79 mΩ	
		(0.1 ~ 1) kΩ	7.5 mΩ	
		(1 ~ 10) kΩ	52 mΩ	
		(10 ~ 100) kΩ	0.76 Ω	
		(0.1 ~ 1) MΩ	11 Ω	
		(1 ~ 10) MΩ	0.14 kΩ	
		(10 ~ 100) MΩ	1.5 kΩ	
Oscilloscope calibrators	40404			CP-40404
DC Voltage Amplitude(1 MΩ)		(±)		
		(1 ~ 5) mV	0.9 μV	
		(5 ~ 50) mV	1.1 μV	
		(50 ~ 500) mV	8 μV	
		(500 ~ 5) V	8 μV	
		(5 ~ 50) V	0.9 mV	
		(50 ~ 200) V	9 mV	
AC Voltage Amplitude		100 Hz ~ 1 kHz		
		1 mV ~ 10 mV	0.033 mV	
		10 mV ~ 50 mV	0.034 mV	
		50 mV ~ 100 mV	0.037 mV	
		100 mV ~ 200 mV	0.042 mV	
		200 mV ~ 500 mV	0.16 mV	
		500 mV ~ 1 V	0.20 mV	
		1 V ~ 2 V	0.24 mV	
		2 V ~ 5 V	1.6 mV	
		5 V ~ 10 V	2.0 mV	
		10 V ~ 20 V	2.4 mV	
		20 V ~ 50 V	16 mV	
		50 V ~ 100 V	20 mV	

		100 V ~ 200 V	23 mV	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscope calibrators	40404			CP-40404
AC Voltage Amplitude		1 kHz ~ 10 kHz		
		1 mV ~ 10 mV	0.034 mV	
		10 mV ~ 20 mV	0.034 mV	
		20 mV ~ 50 mV	0.035 mV	
		50 mV ~ 100 mV	0.039 mV	
		100 mV ~ 200 mV	0.044 mV	
		200 mV ~ 500 mV	0.17 mV	
		500 mV ~ 1 V	0.21 mV	
		1 V ~ 2 V	0.27 mV	
		2 V ~ 5 V	1.7 mV	
		5 V ~ 10 V	2.1 mV	
		10 V ~ 20 V	2.7 mV	
		20 V ~ 50 V	17 mV	
		50 V ~ 100 V	21 mV	
		100 V ~ 200 V	27 mV	
		10 kHz ~ 20 kHz		
		1 mV ~ 5 mV	0.037 mV	
		5 mV ~ 10 mV	0.038 mV	
		10 mV ~ 20 mV	0.039 mV	
		20 mV ~ 50 mV	0.045 mV	
		50 mV ~ 100 mV	0.057 mV	
		100 mV ~ 200 mV	0.084 mV	
		200 mV ~ 500 mV	0.23 mV	
		500 mV ~ 1 V	0.33 mV	
		1 V ~ 2 V	0.51 mV	
		2 V ~ 5 V	2.3 mV	
		5 V ~ 10 V	3.3 mV	
		10 V ~ 20 V	5.1 mV	
		20 V ~ 50 V	23 mV	
		50 V ~ 100 V	33 mV	
		100 V ~ 200 V	51 mV	
Time Marker Generator		1 ns ~ 5 s	9.3×10^{-8}	
Sine Wave Generator		600 mV		
		50 kHz ~ 100 kHz	2.0×10^{-3}	
		100 kHz ~ 3 000 MHz	2.8×10^{-2}	
Video signal generators	40406			CP-40406
Amplitude				

Luminance		(500 ~ 800) mV	4.1 mV	
Burst		(200 ~ 400) mV	4.9 mV	
Sync		(200 ~ 400) mV	4.9 mV	
Frequency				
Sub carrier Frequency		(3.5 ~ 4.5) MHz	0.88 Hz	
Line Frequency PAL		15.625 kHz	19 Hz	
NTSC		15.734 kHz	19 Hz	
Field Frequency PAL		50.00 Hz	0.059 Hz	
NTSC		59.94 Hz	0.071 Hz	
Color Bar				
Luminance		(50 ~ 714) mV	4.1 mV	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Video signal generators	40406			CP-40406
Chrominance		(50 ~ 714) mV	8.8 mV	
Phase		(0 ~ 360) °	1.4 °	
H-Timming				
H Blanking		(6.9 ~ 16.4) µs	0.062 µs	
Sync-to-Burst Start		(5 ~ 8) µs	0.036 µs	
Sync Duration, Width		(1 ~ 8) µs	0.024 µs	
Sync Rise Time		80 ns ~ 1 µs	14 ns	
Sync Fall Time		80 ns ~ 1 µs	12 ns	
Burst Duration, Width		(1.4 ~ 3) µs	0.036 µs	
Audio distortion analyzers/meters	40407			CP-40407
AC Input level		(1 mV)		
		40 Hz ~ 10 kHz	9 µV	
		10 kHz ~ 100 kHz	20 µV	
		(1 mV ~ 10 mV)		
		40 Hz ~ 10 kHz	10 µV	
		10 kHz ~ 100 kHz	24 µV	
		(10 mV ~ 100 mV)		
		40 Hz ~ 10 kHz	71 µV	
		10 kHz ~ 100 kHz	73 µV	
		(100 mV ~ 1 V)		
		40 Hz ~ 10 kHz	0.71 mV	
		10 kHz ~ 100 kHz	0.72 mV	

		(1 V ~ 10 V)		
		40 Hz ~ 100 kHz	7.1 mV	
		(10 V ~ 100 V)		
		40 Hz ~ 10 kHz	0.071 V	
		10 kHz ~ 100 kHz	0.073 V	
		(100 V ~ 300 V)		
		50 Hz	0.12 V	
		50 Hz ~ 500 Hz	0.084 V	
		500 Hz ~ 1 kHz	0.084 V	
AC Input level flatness		1 V (40 Hz ~ 100 kHz)	0.72 mV	
AC Output level		(1 mV)		
		40 Hz ~ 20 kHz	19 µV	
		20 kHz ~ 50 kHz	35 µV	
		50 kHz ~ 100 kHz	69 µV	
		(1 mV ~ 10 mV)		
		40 Hz ~ 20 kHz	20 µV	
		20 kHz ~ 50 kHz	39 µV	
		50 kHz ~ 100 kHz	72 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.
Audio distortion analyzers/meters	40407			CP-40407
AC Output level		(10 mV ~ 100 mV)		
		40 Hz ~ 1 kHz	0.021 mV	
		1 kHz ~ 20 kHz	0.042 mV	
		20 kHz ~ 50 kHz	0.095 mV	
		50 kHz ~ 100 kHz	0.11 mV	
		(100 mV ~ 1 V)		
		40 Hz ~ 1 kHz	0.59 mV	
		1 kHz ~ 20 kHz	0.62 mV	
		20 kHz ~ 50 kHz	0.77 mV	
		50 kHz ~ 100 kHz	0.78 mV	
		(1 V ~ 10 V)		
		40 Hz ~ 1 kHz	1.3 mV	
		1 kHz ~ 20 kHz	2.6 mV	
		20 kHz ~ 50 kHz	7.1 mV	
		50 kHz ~ 100 kHz	7.2 mV	
AC Output level flatness		1 V (40 Hz ~ 10 kHz)	0.79 mV	
		(10 kHz ~ 100 kHz)	0.93 mV	
DC Input level		10 mV ~ 100 mV	0.58 mV	
		0.1 V ~ 1 V	0.70 mV	
		1 V ~ 10 V	7.0 mV	
		10 V ~ 300 V	70 mV	
DC Output level		10 mV ~ 100 mV	0.58 mV	

		0.1 V ~ 1 V	0.70 mV	
		1 V ~ 10 V	7.0 mV	
		10 V ~ 50 V	70 mV	
Input Frequency		1 Hz ~ 100 kHz	1.1×10^{-5}	
Output Frequency		1 Hz ~ 100 kHz	7.0×10^{-6}	
Distortion		400 Hz ~ 1 kHz (0.1 ~ 31.6) %	1.2×10^{-2}	
		400 Hz ~ 1 kHz (-10 ~ -60) dB	0.03 dB	
LF filters	40408			CP-40408
Cut off Frequency		100 Hz	0.11 Hz	
		100 Hz ~ 1 kHz	1.1 Hz	
		1 kHz ~ 10 kHz	2.8 Hz	
		10 kHz ~ 90 kHz	20 Hz	
insertion Loss		5 Hz ~ 10 MHz	0.15 dB	
LF/Audio signal analyzers	40409			CP-40409
AC Input level		(1 mV)		
		40 Hz ~ 10 kHz	9 μV	
		10 kHz ~ 100 kHz	20 μV	
		(1 mV ~ 10 mV)		
		40 Hz ~ 10 kHz	10 μV	
		10 kHz ~ 100 kHz	24 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.
LF/Audio signal analyzers	40409			CP-40409
AC Input level		(10 mV ~ 100 mV)		
		40 Hz ~ 10 kHz	71 μV	
		10 kHz ~ 100 kHz	73 μV	
		(100 mV ~ 1 V)		
		40 Hz ~ 10 kHz	0.71 mV	
		10 kHz ~ 100 kHz	0.72 mV	
		(1 V ~ 10 V)		
		40 Hz ~ 100 kHz	7.1 mV	
		(10 V ~ 100 V)		
		40 Hz ~ 10 kHz	0.071 V	
		10 kHz ~ 100 kHz	0.073 V	
		(100 V ~ 300 V)		
		50 Hz	0.12 V	
		50 Hz ~ 500 Hz	0.084 V	
		500 Hz ~ 1 kHz	0.084 V	

AC Input level flatness		1 V (40 Hz ~ 100 kHz)	0.72 mV	
AC Output level		(1 mV)		
		40 Hz ~ 20 kHz	19 μV	
		20 kHz ~ 50 kHz	35 μV	
		50 kHz ~ 100 kHz	69 μV	
		(1 mV ~ 10 mV)		
		40 Hz ~ 20 kHz	20 μV	
		20 kHz ~ 50 kHz	39 μV	
		50 kHz ~ 100 kHz	72 μV	
		(10 mV ~ 100 mV)		
		40 Hz ~ 1 kHz	0.021 mV	
		1 kHz ~ 20 kHz	0.042 mV	
		20 kHz ~ 50 kHz	0.095 mV	
		50 kHz ~ 100 kHz	0.11 mV	
		(100 mV ~ 1 V)		
		40 Hz ~ 1 kHz	0.59 mV	
		1 kHz ~ 20 kHz	0.62 mV	
		20 kHz ~ 50 kHz	0.77 mV	
		50 kHz ~ 100 kHz	0.78 mV	
		(1 V ~ 10 V)		
		40 Hz ~ 1 kHz	1.3 mV	
		1 kHz ~ 20 kHz	2.6 mV	
		20 kHz ~ 50 kHz	7.1 mV	
		50 kHz ~ 100 kHz	7.2 mV	
AC output level flatness		1 V (40 Hz ~ 10 kHz)	0.79 mV	
		(10 kHz ~ 100 kHz)	0.93 mV	
DC Input level		10 mV ~ 100 mV	0.58 mV	
		0.1 V ~ 1 V	0.70 mV	
		1 V ~ 10 V	7.0 mV	
		10 V ~ 300 V	70 mV	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF/Audio signal analyzers	40409			CP-40409
DC Output level		10 mV ~ 100 mV	0.58 mV	
		0.1 V ~ 1 V	0.70 mV	
		1 V ~ 10 V	7.0 mV	
		10 V ~ 50 V	70 mV	
Input frequency		1 Hz ~ 100 kHz	1.1×10^{-5}	
Output frequency		1 Hz ~ 100 kHz	7.0×10^{-6}	
Distortion		400 Hz ~ 1 kHz		
		(0.1 ~ 31.6) %	1.2×10^{-2}	
		400 Hz ~ 1 kHz		
		(-10 ~ -60) dB	0.03 dB	

Linr frequency meters	40410			CP-40410
Frequency		(10 ~ 100) Hz	0.001 1 Hz	
		(0.1 ~ 1) kHz	0.011 Hz	
Function generators	40411			CP-40411
Output Frequency		1 Hz ~ 1 GHz	5.8×10^{-6}	
		1 GHz ~ 3 GHz	2.9×10^{-6}	
AC Output Level		(10 Hz ~ 1 kHz)		
		10 mV	8.3×10^{-4}	
		10 mV ~ 100 mV	4.2×10^{-4}	
		0.1 V ~ 1 V	1.8×10^{-4}	
		1 V ~ 10 V	1.3×10^{-4}	
		10 V ~ 20 V	1.6×10^{-4}	
		20 V ~ 30 V	1.2×10^{-4}	
		(1 kHz ~ 10 kHz)		
		10 mV	8.7×10^{-4}	
		10 mV ~ 100 mV	4.2×10^{-4}	
		0.1 V ~ 1 V	1.9×10^{-4}	
		1 V ~ 10 V	1.6×10^{-4}	
		10 V ~ 20 V	1.5×10^{-4}	
		20 V ~ 30 V	1.2×10^{-4}	
AC Output Level Flatness		(40 Hz ~ 60 Hz)		
		0.0 dB	0.19 dB	
		(60 Hz ~ 100 kHz)		
		0.0 dB	0.14 dB	
		(100 kHz ~ 1 MHz)		
		0.0 dB	0.20 dB	
		(10 Hz ~ 100 kHz)		
		100 mV	0.6 mV	
		100 mV ~ 1 V	0.8 mV	
		(10 Hz ~ 1 kHz)		
		1 V ~ 10 V	0.9 mV	
		10 V ~ 30 V	3.5 mV	
		(1 kHz ~ 10 kHz)		
		1 V ~ 10 V	1.2 mV	
		10 V ~ 30 V	3.6 mV	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Function generators	40411			CP-40411
AC Output Level Flatness		(10 kHz ~ 100 kHz)		
		1 V ~ 10 V	5.5 mV	
		10 V ~ 30 V	20 mV	
Attenuation		1 kHz		
		10 dB ~ -20 dB	0.14 dB	

		-20 dB ~ -60 dB	0.19 dB	
DC Offset		(-20 ~ 20) V	0.8 mV	
Rise/fall Time		1 ns 1 ns ~ 100 μs	1.1×10^{-2} 1.2×10^{-3}	
AC/DC high voltages volt meters	40413			CP-40413
DC Voltage		(0.1 ~ 0.2) kV	1.0×10^{-2}	
		(0.2 ~ 0.3) kV	5.0×10^{-3}	
		(0.3 ~ 0.4) kV	4.7×10^{-3}	
		(0.4 ~ 0.5) kV	4.0×10^{-3}	
		(0.5 ~ 0.6) kV	3.6×10^{-3}	
		(0.6 ~ 0.8) kV	3.4×10^{-3}	
		(0.8 ~ 0.9) kV	3.3×10^{-3}	
		(0.9 ~ 1) kV	3.2×10^{-3}	
		(1 ~ 2) kV	3.2×10^{-3}	
		(2 ~ 3) kV	3.1×10^{-3}	
		(3 ~ 6) kV	3.0×10^{-3}	
		(6 ~ 9) kV	3.1×10^{-3}	
AC Voltage		60 Hz		
		(0.1 ~ 0.2) kV	1.0×10^{-1}	
		(0.2 ~ 0.3) kV	5.1×10^{-2}	
		(0.3 ~ 0.4) kV	3.4×10^{-2}	
		(0.4 ~ 0.5) kV	2.6×10^{-2}	
		(0.5 ~ 0.6) kV	2.0×10^{-2}	
		(0.6 ~ 0.7) kV	1.7×10^{-2}	
		(0.7 ~ 0.8) kV	1.5×10^{-2}	
		(0.8 ~ 0.9) kV	1.3×10^{-2}	
		(0.9 ~ 1) kV	1.1×10^{-2}	
		(1 ~ 2) kV	1.0×10^{-2}	
		(2 ~ 3) kV	5.2×10^{-3}	
		(3 ~ 4) kV	3.6×10^{-3}	
		(4 ~ 5) kV	2.8×10^{-3}	
		(5 ~ 6) kV	3.5×10^{-3}	
LF impulse generators	40414			CP-40414
Output Voltage		1 V	0.014 V	
		(1 ~ 5) V	1.3×10^{-2}	
		5 V ~ 20 kV	5.2×10^{-2}	
Pulse Width		50 ns	0.014 ns	
		50 ns ~ 100 ms	1.4×10^{-3}	
Rising Time		1 ns	0.016 ns	
		1 ns ~ 100 ms	1.4×10^{-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.

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Leakage current testers	40416			CP-40416
DC Current		10 μA	8.6 nA	
		(10 ~ 100) μA	0.059 μA	
		(0.1 ~ 1) mA	0.58 μA	
		(1 ~ 10) mA	0.005 8 mA	
		(10 ~ 100) mA	0.058 mA	
AC Current		40 Hz ~ 1 kHz		
		10 μA	0.080 μA	
		(10 ~ 100) μA	0.11 μA	
		(0.1 ~ 1) mA	0.62 μA	
		(1 ~ 10) mA	0.006 2 mA	
		(10 ~ 100) mA	0.062 mA	
AC Voltage		40 Hz ~ 1 kHz		
		(10 ~ 100) mV	0.060 mV	
		(0.1 ~ 1) V	0.59 mV	
		(1 ~ 10) V	5.9 mV	
		(10 ~ 100) V	0.059 V	
		(100 ~ 1 000) V	0.59 V	
Electronic AC/DC loads	40417			CP-40417
DC Voltage		(0 ~ 1 000) V	1.3×10^{-5}	
DC Current		1 mA	7.9×10^{-5}	
		(1 ~ 10) mA	7.3×10^{-5}	
		(10 ~ 100) mA	1.3×10^{-4}	
		(0.1 ~ 1) A	1.7×10^{-4}	
		(1 ~ 10) A	1.5×10^{-4}	
		(10 ~ 100) A	1.9×10^{-4}	
AC Voltage		50 Hz ~ 400 Hz		
		(0.1 ~ 1 000) V	2.2×10^{-4}	
AC Current		50 Hz ~ 400 Hz		
		1 mA	6.6×10^{-4}	
		(1 ~ 10) mA	5.5×10^{-4}	
		(10 ~ 100) mA	5.9×10^{-4}	
		(0.1 ~ 1) A	7.9×10^{-4}	
		(1 ~ 100) A	1.3×10^{-3}	
Charge and Discharge Tester				
DC Voltage		0 mV	0.98 μV	
		(0 ~ 1 000) V	1.3×10^{-5}	
DC Current		(±)		
(Charge/Discharge)		0 μA	5.8 nA	
		(0 ~ 1) mA	8.2×10^{-5}	
		(1 ~ 10) mA	2.9×10^{-4}	
		(10 ~ 100) mA	4.4×10^{-5}	
		(0.1 ~ 1) A	1.3×10^{-4}	
		(1 ~ 10) A	1.5×10^{-4}	
		(10 ~ 100) A	1.9×10^{-4}	
		(100 ~ 1 000) A	2.1×10^{-4}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Modulation meters	40418			CP-40418
Frequency Modulation		1 kHz ~ 400 kHz	2.5×10^{-2}	
Amplitude Modulation		5 % ~ 99 %	2.5×10^{-2} (상대불확도)	
Phase Modulation		1 rad ~ 10 rad	2.5×10^{-2}	
Distortion of Modulation		0 % ~ 10 %	1.5×10^{-2} (상대불확도)	
Analoque/Digital multimeters	40419			CP-40419
DC Voltage				
		(±)		
		0 mV	0.80 μV	
		0 mV ~ 10 mV	5.4×10^{-5}	
		10 mV ~ 100 mV	1.2×10^{-5}	
		100 mV ~ 1 V	5.9×10^{-6}	
		1 V ~ 10 V	4.0×10^{-6}	
		10 V ~ 100 V	5.9×10^{-6}	
		100 V ~ 1 000 V	7.3×10^{-6}	
AC Voltage		0.1 mV		
		10 Hz	6.6 μV	
		10 Hz ~ 40 Hz	6.5 μV	
		40 Hz ~ 1 kHz	6.5 μV	
		1 kHz ~ 20 kHz	8.2 μV	
		20 kHz ~ 50 kHz	10 μV	
		50 kHz ~ 100 kHz	19 μV	
		100 kHz ~ 500 kHz	35 μV	
		500 kHz ~ 1 MHz	61 μV	
		0.1 mV ~ 10 mV		
		10 Hz	8.2 μV	
		10 Hz ~ 40 Hz	8.0×10^{-4}	
		40 Hz ~ 1 kHz	7.0×10^{-4}	
		1 kHz ~ 20 kHz	8.8×10^{-4}	
		20 kHz ~ 50 kHz	1.2×10^{-3}	
		50 kHz ~ 100 kHz	2.3×10^{-3}	
		100 kHz ~ 500 kHz	4.6×10^{-3}	
		500 kHz ~ 1 MHz	8.3×10^{-3}	
		10 mV ~ 100 mV		
		10 Hz	37 μV	
		10 Hz ~ 40 Hz	1.7×10^{-4}	
		40 Hz ~ 1 kHz	1.6×10^{-4}	
		1 kHz ~ 20 kHz	1.6×10^{-4}	
		20 kHz ~ 50 kHz	2.8×10^{-4}	
		50 kHz ~ 100 kHz	6.4×10^{-4}	
		100 kHz ~ 500 kHz	1.7×10^{-3}	
		500 kHz ~ 1 MHz	3.2×10^{-3}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Analoque/Digital multimeters	40419			CP-40419
AC Voltage		100 mV ~ 1 V		
		10 Hz	0.29 mV	
		10 Hz ~ 40 Hz	1.2×10^{-4}	
		40 Hz ~ 1 kHz	6.7×10^{-5}	
		1 kHz ~ 20 kHz	6.7×10^{-5}	
		20 kHz ~ 50 kHz	1.0×10^{-4}	
		50 kHz ~ 100 kHz	1.5×10^{-4}	
		100 kHz ~ 500 kHz	1.3×10^{-3}	
		500 kHz ~ 1 MHz	2.1×10^{-3}	
		1 V ~ 10 V		
		10 Hz	2.9 mV	
		10 Hz ~ 40 Hz	1.2×10^{-4}	
		40 Hz ~ 1 kHz	6.5×10^{-5}	
		1 kHz ~ 20 kHz	6.5×10^{-5}	
		20 kHz ~ 50 kHz	1.0×10^{-4}	
		50 kHz ~ 100 kHz	1.4×10^{-4}	
		100 kHz ~ 500 kHz	1.3×10^{-3}	
		500 kHz ~ 1 MHz	1.9×10^{-3}	
		10 V ~ 100 V		
		10 Hz	29 mV	
		10 Hz ~ 40 Hz	1.2×10^{-4}	
		40 Hz ~ 1 kHz	7.2×10^{-5}	
		1 kHz ~ 20 kHz	7.1×10^{-5}	
		20 kHz ~ 50 kHz	1.1×10^{-4}	
		50 kHz ~ 100 kHz	1.9×10^{-4}	
		100 V ~ 1 000 V		
		50 Hz	4.3×10^{-4}	
		50 Hz ~ 1 kHz	8.5×10^{-5}	
DC Current		(±)		
		0 µA	11 nA	
		0 µA ~ 10 µA	6.5×10^{-4}	
		10 µA ~ 100 µA	1.1×10^{-4}	
		100 µA ~ 1 mA	4.4×10^{-5}	
		1 mA ~ 10 mA	4.1×10^{-5}	
		10 mA ~ 100 mA	5.4×10^{-5}	
		100 mA ~ 1 A	9.3×10^{-5}	
		1 A ~ 10 A	4.1×10^{-4}	
		10 A ~ 20 A	1.3×10^{-3}	

AC Current		0.1 μA		
		10 Hz	81 nA	
		10 Hz ~ 40 Hz	79 nA	
		40 Hz ~ 1 kHz	79 nA	
		1 kHz ~ 10 kHz	0.66 μA	
		0.1 μA ~ 10 μA		
		10 Hz	82 nA	
		10 Hz ~ 40 Hz	7.9×10^{-3}	
		40 Hz ~ 1 kHz	7.9×10^{-3}	
		1 kHz ~ 10 kHz	6.7×10^{-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.
Analoque/Digital multimeters	40419			CP-40419
AC Current		10 μA ~ 100 μA		
		10 Hz	96 nA	
		10 Hz ~ 40 Hz	8.7×10^{-4}	
		40 Hz ~ 1 kHz	8.5×10^{-4}	
		1 kHz ~ 10 kHz	7.7×10^{-3}	
		100 μA ~ 1 mA		
		10 Hz	0.30 μA	
		10 Hz ~ 40 Hz	2.1×10^{-4}	
		40 Hz ~ 1 kHz	1.8×10^{-4}	
		1 kHz ~ 10 kHz	1.8×10^{-3}	
		1 mA ~ 10 mA		
		10 Hz	3.0 μA	
		10 Hz ~ 40 Hz	2.1×10^{-4}	
		40 Hz ~ 1 kHz	1.8×10^{-4}	
		1 kHz ~ 10 kHz	1.7×10^{-3}	
		10 mA ~ 100 mA		
		10 Hz	31 μA	
		10 Hz ~ 40 Hz	2.2×10^{-4}	
		40 Hz ~ 1 kHz	1.8×10^{-4}	
		1 kHz ~ 10 kHz	1.3×10^{-3}	
		100 mA ~ 1 A		
		10 Hz	0.33 mA	
		10 Hz ~ 40 Hz	3.3×10^{-4}	
		40 Hz ~ 1 kHz	3.3×10^{-4}	
		1 kHz ~ 10 kHz	7.2×10^{-3}	
		1 A ~ 10 A		
		40 Hz	5.3×10^{-4}	
		40 Hz ~ 500 Hz	5.3×10^{-4}	
		500 Hz ~ 1 kHz	5.3×10^{-4}	
		1 kHz ~ 10 kHz	5.3×10^{-4}	

		10 A ~ 20 A		
		50 Hz	2.0×10^{-3}	
		50 Hz ~ 100 Hz	2.0×10^{-3}	
		100 Hz ~ 400 Hz	2.3×10^{-3}	
		400 Hz ~ 1 kHz	2.3×10^{-3}	
Resistance				
		1 Ω	0.13 mΩ	
		1 Ω ~ 10 Ω	2.5×10^{-5}	
		10 Ω ~ 100 Ω	1.2×10^{-5}	
		100 Ω ~ 1 kΩ	1.0×10^{-5}	
		1 kΩ ~ 10 kΩ	1.0×10^{-5}	
		10 kΩ ~ 100 kΩ	1.5×10^{-5}	
		100 kΩ ~ 1 MΩ	2.3×10^{-5}	
		1 MΩ ~ 10 MΩ	4.5×10^{-5}	
		10 MΩ ~ 100 MΩ	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.
Noise meters	40420			CP-40420
Input Level		10 Hz		
		(1 ~ 10) mV	1.3×10^{-2}	
		(10 ~ 100) mV	3.7×10^{-4}	
		(0.1 ~ 1) V	3.0×10^{-4}	
		(1 ~ 10) V	3.0×10^{-4}	
		(10 ~ 100) V	3.0×10^{-4}	
		10 Hz ~ 40 Hz		
		(1 ~ 10) mV	8.7×10^{-3}	
		(10 ~ 100) mV	1.9×10^{-4}	
		(0.1 ~ 1) V	1.4×10^{-4}	
		(1 ~ 10) V	1.4×10^{-4}	
		(10 ~ 100) V	1.4×10^{-4}	
		40 Hz ~ 20 kHz		
		(1 ~ 10) mV	8.2×10^{-3}	
		(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	1.1×10^{-4}	
		20 kHz ~ 50 kHz		
		(1 ~ 10) mV	1.0×10^{-2}	
		(10 ~ 100) mV	2.9×10^{-4}	
		(0.1 ~ 1) V	1.4×10^{-4}	
		(1 ~ 10) V	1.3×10^{-4}	
		(10 ~ 100) V	1.4×10^{-4}	
		50 kHz ~ 100 kHz		

		(1 ~ 10) mV	1.9×10^{-2}	
		(10 ~ 100) mV	6.4×10^{-4}	
		(0.1 ~ 1) V	1.7×10^{-4}	
		(1 ~ 10) V	1.6×10^{-4}	
		(10 ~ 100) V	2.1×10^{-4}	
		100 kHz ~ 200 kHz		
		(1 ~ 10) mV	3.2×10^{-2}	
		(10 ~ 100) mV	1.1×10^{-3}	
		(0.1 ~ 1) V	5.2×10^{-4}	
		(1 ~ 10) V	3.6×10^{-4}	
		200 kHz ~ 500 kHz		
		(1 ~ 10) mV	3.6×10^{-2}	
		(10 ~ 100) mV	1.7×10^{-3}	
		(0.1 ~ 1) V	1.2×10^{-3}	
		(1 ~ 10) V	1.2×10^{-3}	
		500 kHz ~ 1 MHz		
		(1 ~ 10) mV	6.0×10^{-2}	
		(10 ~ 100) mV	3.2×10^{-3}	
		(0.1 ~ 1) V	3.2×10^{-3}	
		(1 ~ 10) V	1.8×10^{-3}	
		50 Hz ~ 1 kHz		
		(100 ~ 300) V	3.3×10^{-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.
Noise meters	40420			CP-40420
Weighting		CCTIC	0.19 dB	
		CCIR/ARM	0.19 dB	
		DIN	0.19 dB	
		JIS	0.19 dB	
Frequency Response		1 V		
		10 Hz	3.0×10^{-4}	
		10 Hz ~ 40 Hz	1.4×10^{-4}	
		40 Hz ~ 20 kHz	1.1×10^{-4}	
		20 kHz ~ 50 kHz	1.3×10^{-4}	
		50 kHz ~ 100 kHz	1.7×10^{-4}	
		100 kHz ~ 1 MHz	2.0×10^{-3}	
Oscilloscopes	40421			CP-40421
DC Voltage		1 mV ~ 5 mV	0.031 mV	
		5 mV ~ 10 mV	0.033 mV	
		10 mV ~ 20 mV	0.037 mV	
		20 mV ~ 50 mV	0.049 mV	
		50 mV ~ 100 mV	0.094 mV	
		100 mV ~ 200 mV	0.14 mV	
		200 mV ~ 500 mV	0.34 mV	
		500 mV ~ 1 V	0.80 mV	

		1 V ~ 2 V	1.2 mV	
		2 V ~ 5 V	2.6 mV	
		5 V ~ 10 V	7.9 mV	
		10 V ~ 20 V	12 mV	
		20 V ~ 50 V	26 mV	
Square Wave Voltage		1 mV ~ 5 mV	0.024 mV	
		5 mV ~ 10 mV	0.032 mV	
		10 mV ~ 20 mV	0.043 mV	
		20 mV ~ 50 mV	0.064 mV	
		50 mV ~ 100 mV	0.14 mV	
		100 mV ~ 200 mV	0.33 mV	
		200 mV ~ 500 mV	0.65 mV	
		500 mV ~ 1 V	0.96 mV	
		1 V ~ 2 V	3.4 mV	
		2 V ~ 5 V	4.7 mV	
		5 V ~ 10 V	9.6 mV	
		10 V ~ 20 V	16 mV	
		20 V ~ 50 V	37 mV	
Time Marker		1 ns ~ 5 ns	0.000 8 ns	
		5 ns ~ 50 ns	0.008 ns	
		50 ns ~ 500 ns	0.08 ns	
		500 ns ~ 5 µs	0.000 8 µs	
		5 µs ~ 50 µs	0.008 µs	
		50 µs ~ 500 µs	0.08 µs	
		500 µs ~ 5 ms	0.000 8 ms	
		5 ms ~ 50 ms	0.008 ms	
		50 ms ~ 500 ms	0.08 ms	
		500 ms ~ 5 s	0.000 8 s	

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			CP-40421
Bandwidth (at 600 mV)		50 kHz ~ 100 MHz	11 mV	
		100 MHz ~ 500 MHz	22 mV	
		500 MHz ~ 1 100 MHz	28 mV	
		1 100 MHz ~ 6 GHz	32 mV	
		6 GHz ~ 18 GHz	34 mV	
		18 GHz ~ 26 GHz	46 mV	
		26 GHz ~ 33 GHz	77 mV	
Calout Signal Volt		10 mV ~ 100 mV	0.2 mV	
		100 mV ~ 200 mV	1.1 mV	
		200 mV ~ 500 mV	1.1 mV	
		500 mV ~ 1 V	2.0 mV	
		1 V ~ 2 V	11 mV	
		2 V ~ 5 V	11 mV	
		5 V ~ 10 V	13 mV	

Calout Signal Frequency		100 Hz ~ 500 Hz 500 Hz ~ 5 kHz 5 kHz ~ 20 kHz	0.071 Hz 0.71 Hz 7.1 Hz	
LF phase meters Phase	40422	 (50 ~ 60) Hz (-180 ~ 180)°	 0.072°	CP-40422
Random wave generators Output Frequency	40423	 1 Hz ~ 1 GHz 1 GHz ~ 3 GHz	 5.8×10^{-6} 2.9×10^{-6}	CP-40423
Output Level		(10 Hz ~ 1 kHz) 10 mV 10 mV ~ 100 mV 0.1 V ~ 1 V 1 V ~ 10 V 10 V ~ 20 V 20 V ~ 30 V	 8.3×10^{-4} 4.2×10^{-4} 1.8×10^{-4} 1.3×10^{-4} 1.6×10^{-4} 1.2×10^{-4}	
		(1 kHz ~ 10 kHz) 10 mV 10 mV ~ 100 mV 0.1 V ~ 10 V 1 V ~ 10 V 10 V ~ 20 V 20 V ~ 30 V	 8.7×10^{-4} 4.2×10^{-4} 1.9×10^{-4} 1.6×10^{-4} 1.5×10^{-4} 1.2×10^{-4}	
AC Output Level Flatness		(40 Hz ~ 60 Hz) 0.0 dB	 0.19 dB	
		(60 Hz ~ 100 kHz) 0.0 dB	 0.14 dB	
		(100 kHz ~ 1 MHz) 0.0 dB	 0.20 dB	
		(10 Hz ~ 100 kHz) 100 mV 100 mV ~ 1 V	 0.6 mV 0.8 mV	
		(10 Hz ~ 1 kHz) 1 V ~ 10 V 10 V ~ 30 V	 0.9 mV 3.5 mV	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Random wave generators AC Output Level Flatness	40423	 (1 kHz ~ 10 kHz) 1 V ~ 10 V 10 V ~ 30 V	 1.2 mV 3.6 mV	CP-40423
		(10 kHz ~ 100 kHz) 1 V ~ 10 V 10 V ~ 30 V	 5.5 mV 20 mV	

Attenuation		1 kHz		
		10 dB ~ -20 dB	0.14 dB	
		-20 dB ~ -60 dB	0.19 dB	
DC offset		(-20 ~ 20) V	0.8 mV	
Rise/fall Time		1 ns	1.1×10^{-2}	
		1 ns ~ 100 μs	1.2×10^{-3}	
Volt/Current recorders	40424			CP-40424
DC Voltage		(±)		
		0 mV	0.79 μV	
		(0 ~ 10) mV	4.6×10^{-4}	
		(10 ~ 100) mV	2.9×10^{-5}	
		(0.1 ~ 1) V	1.0×10^{-5}	
		(1 ~ 10) V	6.1×10^{-6}	
		(10 ~ 100) V	1.3×10^{-5}	
		(0.1 ~ 1) kV	1.4×10^{-5}	
DC Current		(±)		
		0 μA	0.011 μA	
		(0 ~ 100) μA	6.5×10^{-4}	
		(0.1 ~ 1) mA	8.4×10^{-5}	
		(1 ~ 10) mA	7.2×10^{-5}	
		(10 ~ 100) mA	9.2×10^{-5}	
		(0.1 ~ 1) A	1.5×10^{-4}	
		(1 ~ 10) A	7.1×10^{-4}	
Relay test sets	40425			CP-40425
DC Voltage		(0.1 ~ 700) V	5.8×10^{-5}	
DC Current		1 mA	0.58 μA	
		(1 ~ 10) mA	2.9×10^{-4}	
		(10 ~ 100) mA	2.9×10^{-4}	
		(0.1 ~ 1) A	1.7×10^{-4}	
		(1 ~ 10) A	1.8×10^{-4}	
		(10 ~ 100) A	3.5×10^{-4}	
AC Voltage		(50 Hz ~ 1 kHz)		
		(0.1 ~ 750) V	1.0×10^{-4}	
AC Current		(50 Hz ~ 1 kHz)		
		1 mA	0.71 μA	
		(1 ~ 10) mA	4.1×10^{-4}	
		(10 ~ 100) mA	3.1×10^{-4}	
		(0.1 ~ 1) A	3.6×10^{-4}	
		(1 ~ 10) A	1.2×10^{-3}	
		(10 ~ 100) A	1.3×10^{-3}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF signal generators	40426			CP-40426
Output Frequency		1 Hz ~ 100 MHz	5.8×10^{-6}	

Output Voltage		(10 Hz ~ 1 kHz)		
		10 mV	8.3×10^{-4}	
		10 mV ~ 100 mV	4.2×10^{-4}	
		0.1 V ~ 1 V	1.8×10^{-4}	
		1 V ~ 10 V	1.3×10^{-4}	
		10 V ~ 20 V	1.6×10^{-4}	
		(1 kHz ~ 10 kHz)		
		10 mV	8.7×10^{-4}	
		10 mV ~ 100 mV	4.2×10^{-4}	
		0.1 V ~ 1 V	1.9×10^{-4}	
		1 V ~ 10 V	1.6×10^{-4}	
		10 V ~ 20 V	1.5×10^{-4}	
AC Output Level Flatness		(60 Hz ~ 100 kHz)		
		0.0 dB	0.14 dB	
		(100 kHz ~ 1 MHz)		
		0.0 dB	0.20 dB	
		(10 Hz ~ 100 kHz)		
		100 mV	0.6 mV	
		100 mV ~ 1 V	0.8 mV	
		(10 Hz ~ 1 kHz)		
		1 V ~ 10 V	0.9 mV	
		10 V ~ 20 V	3.2 mV	
		(1 kHz ~ 10 kHz)		
		1 V ~ 10 V	1.2 mV	
		10 V ~ 20 V	3.0 mV	
		(10 kHz ~ 100 kHz)		
		1 V ~ 10 V	5.5 mV	
		10 V ~ 20 V	15 mV	
Attenuation		1 kHz		
		10 dB ~ -20 dB	0.14 dB	
		-20 dB ~ -60 dB	0.19 dB	
DC offset		(-20 ~ 20) V	0.8 mV	
LF spectrum analyzers	40427			CP-40427
Time Base		10 MHz	0.007 1 Hz	
Center Frequency		10 Hz ~ 20 Hz	7.1×10^{-5}	
		20 Hz ~ 200 Hz	7.1×10^{-6}	
		200 Hz ~ 2 kHz	7.1×10^{-7}	
		2 kHz ~ 20 kHz	7.1×10^{-8}	
		20 kHz ~ 200 kHz	7.1×10^{-9}	
		200 kHz ~ 100 MHz	7.1×10^{-10}	
Frequency Counter		10 Hz ~ 20 Hz	7.1×10^{-5}	
		20 Hz ~ 200 Hz	7.1×10^{-6}	
		200 Hz ~ 2 kHz	7.1×10^{-7}	
		2 kHz ~ 20 kHz	7.1×10^{-8}	
		20 kHz ~ 200 kHz	7.1×10^{-9}	
		200 kHz ~ 100 MHz	7.1×10^{-10}	

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404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF spectrum analyzers	40427			CP-40427
Frequency Resonse		9 kHz ~ 100 MHz	0.15 dB	
Scale Fidelity		(0 ~ 100) dB	0.06 dB	
If Frequency Gain		(0 ~ 100) dB	0.06 dB	
		9 kHz ~ 100 MHz	0.9 dB	
		10 Hz ~ 3 MHz	2.4×10^{-3}	
		10 Hz ~ 3 MHz	3.1×10^{-3}	
		10 Hz ~ 3 MHz	0.04 dB	
Frequency Span		1 kHz ~ 100 MHz	1.1×10^{-4}	
Output Frequency		1 MHz ~ 100 MHz	6.1×10^{-8}	
Output Level		9 kHz ~ 100 MHz	0.16 dB	
Sweep generators	40429			CP-40429
Output Frequency		1 Hz ~ 100 MHz	5.8×10^{-6}	
Output Voltage		(10 Hz ~ 1 kHz)		
		10 mV	8.3×10^{-4}	
		10 mV ~ 100 mV	4.2×10^{-4}	
		0.1 V ~ 1 V	1.8×10^{-4}	
		1 V ~ 10 V	1.3×10^{-4}	
		10 V ~ 20 V	1.6×10^{-4}	
		(1 kHz ~ 10 kHz)		
		10 mV	8.7×10^{-4}	
		10 mV ~ 100 mV	4.2×10^{-4}	
		0.1 V ~ 1 V	1.9×10^{-4}	
		1 V ~ 10 V	1.6×10^{-4}	
		10 V ~ 20 V	1.5×10^{-4}	
AC Output Level Flatness		(40 Hz ~ 60 Hz)		
		0.0 dB	0.19 dB	
		(60 Hz ~ 100 kHz)		
		0.0 dB	0.14 dB	
		(100 kHz ~ 1 MHz)		
		0.0 dB	0.20 dB	
		(10 Hz ~ 100 kHz)		
		100 mV	0.6 mV	
		100 mV ~ 1 V	0.8 mV	
		(10 Hz ~ 1 kHz)		
		1 V ~ 10 V	0.9 mV	
		10 V ~ 20 V	3.2 mV	
		(1 kHz ~ 10 kHz)		
		1 V ~ 10 V	1.2 mV	

		10 V ~ 20 V	3.0 mV	
		(10 kHz ~ 100 kHz)		
		1 V ~ 10 V	5.5 mV	
		10 V ~ 20 V	15 mV	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Sweep generators	40429			CP-40429
Attenuation		1 kHz		
		10 dB ~ -20 dB	0.14 dB	
		-20 dB ~ -60 dB	0.19 dB	
DC offset		(-20 ~ 20) V	0.8 mV	
Signal transducers	40430			CP-40430
DC Voltage		0 μV	0.22 μV	
		(0 ~ 10) mV	8.1×10^{-4}	
		(10 ~ 100) mV	4.1×10^{-5}	
		(0.1 ~ 1) V	1.2×10^{-5}	
		(1 ~ 10) V	7.7×10^{-6}	
		(10 ~ 100) V	2.1×10^{-5}	
DC Current		0 μA	0.86 nA	
		(0 ~ 1) mA	1.1×10^{-4}	
		(1 ~ 10) mA	4.4×10^{-5}	
		(10 ~ 100) mA	1.2×10^{-4}	
		(0.1 ~ 1) A	2.5×10^{-4}	
		(1 ~ 10) A	6.3×10^{-4}	
Waveform analyzers	40433			CP-40433
AC Input Voltage		(1 mV ~ 10 mV)		
		40 Hz ~ 10 kHz	10 μV	
		10 kHz ~ 100 kHz	24 μV	
		(10 mV ~ 100 mV)		
		40 Hz ~ 10 kHz	71 μV	
		10 kHz ~ 100 kHz	73 μV	
		(100 mV ~ 1 V)		
		40 Hz ~ 10 kHz	0.71 mV	
		10 kHz ~ 100 kHz	0.72 mV	
		(1 V ~ 10 V)		
		40 Hz ~ 100 kHz	7.1 mV	
		(10 V ~ 100 V)		
		40 Hz ~ 10 kHz	0.071 V	
		10 kHz ~ 100 kHz	0.073 V	
AC Output Voltage		(1 mV ~ 10 mV)		
		40 Hz ~ 10 kHz	7.3 μV	
		10 kHz ~ 50 kHz	32 μV	
		50 kHz ~ 100 kHz	32 μV	
		(10 mV ~ 100 mV)		

		40 Hz ~ 1 kHz	0.010 mV	
		1 kHz ~ 10 kHz	0.022 mV	
		10 kHz ~ 50 kHz	0.056 mV	
		50 kHz ~ 100 kHz	0.056 mV	
		(100 mV ~ 1 V)		
		100 Hz ~ 1 kHz	0.58 mV	
		1 kHz ~ 10 kHz	0.62 mV	
		10 kHz ~ 50 kHz	0.80 mV	
		50 kHz ~ 100 kHz	0.80 mV	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Waveform analyzers	40433			CP-40433
AC Output Voltage		(1 V ~ 10 V)		
		100 Hz ~ 1 kHz	1.0 mV	
		1 kHz ~ 10 kHz	2.2 mV	
		10 kHz ~ 50 kHz	5.6 mV	
		50 kHz ~ 100 kHz	5.6 mV	
		(10 V ~ 100 V)		
		100 Hz ~ 1 kHz	11 mV	
		1 kHz ~ 10 kHz	22 mV	
		10 kHz ~ 50 kHz	56 mV	
		50 kHz ~ 100 kHz	56 mV	
Input Frequency		10 Hz ~ 100 kHz	1.2×10^{-5}	
Output Frequency		10 Hz ~ 100 kHz	7.6×10^{-6}	
AC/DC high voltage generators	40434			CP-40434
DC Output Voltage		0.1 kV	0.008 2 kV	
		(0.1 ~ 5) kV	2.9×10^{-3}	
		(5 ~ 10) kV	1.8×10^{-3}	
		(10 ~ 15) kV	1.5×10^{-3}	
		(15 ~ 20) kV	6.8×10^{-3}	
		(20 ~ 30) kV	4.6×10^{-3}	
		(30 ~ 40) kV	3.5×10^{-3}	
		(40 ~ 50) kV	2.9×10^{-3}	
		(50 ~ 60) kV	2.5×10^{-3}	
		(60 ~ 70) kV	2.2×10^{-3}	
		(70 ~ 80) kV	2.0×10^{-3}	
		(80 ~ 90) kV	1.9×10^{-3}	
		(90 ~ 100) kV	1.8×10^{-3}	
AC Output Voltage		60 Hz		
		0.1 kV	0.032 kV	
		(0.1 ~ 5) kV	3.0×10^{-3}	
		(5 ~ 10) kV	1.8×10^{-3}	
		(10 ~ 15) kV	1.5×10^{-3}	
		(15 ~ 20) kV	6.8×10^{-3}	
		(20 ~ 30) kV	4.6×10^{-3}	
		(30 ~ 40) kV	3.6×10^{-3}	
		(40 ~ 50) kV	2.9×10^{-3}	

		(50 ~ 60) kV (60 ~ 70) kV (70 ~ 80) kV (80 ~ 90) kV (90 ~ 100) kV	2.5×10^{-3} 2.2×10^{-3} 2.0×10^{-3} 1.9×10^{-3} 1.8×10^{-3}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC/DC high voltage probes	40435			CP-40435
DC Voltage		(±)		
		0.1 V ~ 1 000 V	1.0×10^{-4}	
		(1 ~ 2) kV	3.2×10^{-3}	
		(2 ~ 5) kV	3.1×10^{-3}	
		(5 ~ 9) kV	3.1×10^{-3}	
AC Voltage		50 Hz ~ 1 kHz		
		0.1 V ~ 1 kV	2.0×10^{-4}	
		60 Hz		
		(1 ~ 2) kV	4.0×10^{-3}	
		(2 ~ 3) kV	3.0×10^{-3}	
		(3 ~ 4) kV	2.8×10^{-3}	
		(4 ~ 5) kV	2.8×10^{-3}	
		(5 ~ 6) kV	2.6×10^{-3}	
Logic analyzers	40436			CP-40436
DC Voltage		(- 10 ~ 10) V	7.6×10^{-5}	
Telephone testers	40437			CP-40437
Bell Frequency		(1 ~ 100) Hz	0.58 Hz	
Bell Voltage		(1 ~ 100) V	0.58 V	
		(100 ~ 150) V	0.59 V	
Tone Frequency		(1 209, 1 336) Hz	0.8 Hz	
		(1 477) Hz	0.9 Hz	
		(697, 770) Hz	0.5 Hz	
		(852, 941) Hz	0.6 Hz	
Tone Level		(- 20 ~ 0) dBm	0.3 dB	

Power Of Local Line		(16 ~ 96) V	0.6 V	
Video signal analyzers	40438			CP-40438
Color Bar Level (NTSC)		YL 62.2 IRE 444.1 mV	6.5 mV	
		CY 88.2 IRE 629.7 mV	7.9 mV	
		G 82.4 IRE 588.3 mV	7.9 mV	
		MG 82.4 IRE 588.3 mV	7.9 mV	
		R 88.2 IRE 629.7 mV	7.9 mV	
		B 62.2 IRE 444.1 mV	6.5 mV	
Color Bar Level (PAL)		YL 470.5 mV	3.7 mV	
		CY 663.8 mV	7.6 mV	
		G 620.1 mV	6.5 mV	
		MG 620.1 mV	6.5 mV	
		R 663.8 mV	7.6 mV	
		B 470.5 mV	5.5 mV	
Phase (NTSC/PAL)		YL 167.1 °	1.4 °	
		CY 283.4 °	1.4 °	
		G 240.8 °	1.4 °	
		MG 60.8 °	1.4 °	
		R 103.8 °	1.4 °	
		B 347.1 °	1.4 °	

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.
Video signal analyzers	40438			CP-40438
Frequency Response (NTSC)		(50 kHz ~ 100 kHz)		
		714 mV	19 mV	
(PAL)		(50 kHz ~ 100 kHz)		
		800 mV	21 mV	
Frequency Bust (NTSC)		3.579 545 MHz	1.5 Hz	
(PAL)		4.433 619 MHz	2.1 Hz	
Line (NTSC)		15.734 kHz	1.2 Hz	
(PAL)		15.625 kHz	1.2 Hz	
Field (NTSC)		59.94 Hz	0.012 Hz	
(PAL)		50.00 Hz	0.012 Hz	

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF amplifiers	40601			CP-40601
Gain		(0 ~ 40) dB		
		5 Hz ~ 9 kHz	0.15 dB	
		9 kHz ~ 5 GHz	0.17 dB	
		5 GHz ~ 18 GHz	0.27 dB	
		18 GHz ~ 40 GHz	0.29 dB	
		(40 ~ 60) dB		
		5 Hz ~ 9 kHz	0.19 dB	
		9 kHz ~ 5 GHz	0.17 dB	
		5 GHz ~ 18 GHz	0.27 dB	
		18 GHz ~ 40 GHz	0.29 dB	
		(60 ~ 70) dB		
		5 Hz ~ 9 kHz	0.21 dB	
		9 kHz ~ 5 GHz	0.17 dB	
		5 GHz ~ 18 GHz	0.27 dB	
Coaxial attenuators	40602			CP-40602
Attenuator		(0 ~ 10) dB		

		5 Hz ~ 2 GHz	0.18 dB	
		2 GHz ~ 20 GHz	0.31 dB	
		20 GHz ~ 30 GHz	0.68 dB	
		30 GHz ~ 40 GHz	0.96 dB	
		(10 ~ 20) dB		
		5 Hz ~ 2 GHz	0.20 dB	
		2 GHz ~ 20 GHz	0.31 dB	
		20 GHz ~ 30 GHz	0.73 dB	
		30 GHz ~ 40 GHz	1.1 dB	
		(20 ~ 30) dB		
		5 Hz ~ 2 GHz	0.21 dB	
		2 GHz ~ 20 GHz	0.31 dB	
		20 GHz ~ 30 GHz	0.75 dB	
		30 GHz ~ 40 GHz	1.1 dB	
		(30 ~ 40) dB		
		5 Hz ~ 2 GHz	0.23 dB	
		2 GHz ~ 20 GHz	0.31 dB	
		20 GHz ~ 30 GHz	0.76 dB	
		30 GHz ~ 40 GHz	1.1 dB	
		(40 ~ 50) dB		
		5 Hz ~ 2 GHz	0.24 dB	
		2 GHz ~ 20 GHz	0.31 dB	
		20 GHz ~ 30 GHz	0.77 dB	
		30 GHz ~ 40 GHz	1.1 dB	
		(50 ~ 60) dB		
		5 Hz ~ 2 GHz	0.26 dB	
		2 GHz ~ 20 GHz	0.33 dB	
		20 GHz ~ 30 GHz	0.79 dB	
		30 GHz ~ 40 GHz	1.2 dB	

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Coaxial attenuators	40602			CP-40602
Attenuator		(60 ~ 70) dB		
		5 Hz ~ 100 Hz	0.33 dB	
		100 Hz ~ 3 GHz	0.25 dB	
		3 GHz ~ 5 GHz	0.31 dB	
		5 GHz ~ 20 GHz	0.45 dB	
		20 GHz ~ 30 GHz	0.82 dB	
		30 GHz ~ 40 GHz	1.2 dB	
		(70 ~ 80) dB		
		5 Hz ~ 100 Hz	0.50 dB	
		100 Hz ~ 3 GHz	0.37 dB	
		3 GHz ~ 20 GHz	0.50 dB	

		20 GHz ~ 30 GHz	0.85 dB	
		30 GHz ~ 40 GHz	1.2 dB	
		(80 ~ 110) dB		
		150 kHz ~ 18 GHz	0.60 dB	
Burst Pulse generators	40605			CP-40605
Output Voltage		(-4 ~ 4) kV	6.0×10^{-3}	
Pulse Width		(10 ~ 200) ns	1.4×10^{-3}	
Rise time		1 ns ~ 1 µs	1.4×10^{-3}	
Repetition Frequency		(1 ~ 100) kHz	5.9×10^{-3}	
Burst Duration Time		10 ms	0.014 ms	
		(10 ~ 15) ms	8.8×10^{-4}	
		(15 ~ 20) ms	6.6×10^{-4}	
		(20 ~ 30) ms	4.4×10^{-4}	
		(30 ~ 40) ms	3.3×10^{-4}	
		(40 ~ 50) ms	2.7×10^{-4}	
Burst period		(10 ~ 100) ms	1.4×10^{-3}	
		(100 ~ 200) ms	6.6×10^{-4}	
		(200 ~ 300) ms	4.4×10^{-4}	
		(300 ~ 400) ms	3.3×10^{-4}	
RF power meter calibrators	40607			CP-40607
Range		3 µW	2.5×10^{-5}	
		10 µW	1.1×10^{-5}	
		30 µW	2.5×10^{-5}	
		100 µW	1.1×10^{-5}	
		300 µW	2.6×10^{-5}	
		1 mW	4.9×10^{-5}	
		3 mW	2.0×10^{-5}	
		10 mW	7.2×10^{-6}	
		30 mW	3.6×10^{-6}	
		100 mW	5.3×10^{-6}	
EMC transducers ; current probes,	40608			CP-40608
Current Probe				
Transfer impedance		5 Hz ~ 1 000 MHz	1.8 dB	
Absorbing Clamp				
Insertion loss		(30 ~ 1 000) MHz	2.2 dB	

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Coaxial directional couplers/splitters	40610			CP-40610
Coupling Factor		(0 ~ 10) dB		
		9 kHz ~ 2 GHz	0.18 dB	
		2 GHz ~ 20 GHz	0.31 dB	
		20 GHz ~ 30 GHz	0.68 dB	
		30 GHz ~ 40 GHz	0.96 dB	

		(10 ~ 20) dB		
		9 kHz ~ 2 GHz	0.20 dB	
		2 GHz ~ 20 GHz	0.31 dB	
		20 GHz ~ 30 GHz	0.73 dB	
		30 GHz ~ 40 GHz	1.1 dB	
		(20 ~ 30) dB		
		9 kHz ~ 2 GHz	0.21 dB	
		2 GHz ~ 20 GHz	0.31 dB	
		20 GHz ~ 30 GHz	0.75 dB	
		30 GHz ~ 40 GHz	1.1 dB	
		(30 ~ 40) dB		
		9 kHz ~ 2 GHz	0.23 dB	
		2 GHz ~ 4 GHz	0.25 dB	
		(40 ~ 50) dB		
		9 kHz ~ 1 GHz	0.24 dB	
		(50 ~ 60) dB		
		9 kHz ~ 1 GHz	0.26 dB	
		(60 ~ 70) dB		
		9 kHz ~ 1 GHz	0.33 dB	
Electrostatic discharge generators	40613			CP-40613
Peak Current		±(0 A ~ 112.5 A)	2.7×10^{-2}	
T1 Current				
(330 Ω)		±(0 A ~ 60 A)	2.8×10^{-2}	
(2 kΩ)		±(0 A ~ 8.25 A)	2.7×10^{-2}	
T2 Current				
(330 Ω)		±(0 A ~ 30 A)	2.8×10^{-2}	
(2 kΩ)		±(0 A ~ 4.5 A)	2.7×10^{-2}	
Time		0.6 ns	0.019 ns	
		0.6 ns ~ 0.7 ns	0.016 ns	
		0.7 ns ~ 0.8 ns	0.014 ns	
		0.8 ns ~ 0.9 ns	0.013 ns	
		0.9 ns ~ 1.0 ns	0.012 ns	
HV		±(1 kV ~ 2 kV)	1.3×10^{-2}	
		±(2 kV ~ 4 kV)	8.5×10^{-3}	
		±(4 kV ~ 5 kV)	7.2×10^{-3}	
		±(5 kV ~ 7 kV)	8.0×10^{-3}	
		±(7 kV ~ 9 kV)	7.6×10^{-3}	
		±(9 kV ~ 15 kV)	7.3×10^{-3}	
		±(15 kV ~ 30 kV)	7.5×10^{-3}	

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence	Standard/Method of Measurement etc

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Instrument or Gauge	Code		Level is about 95 %)	Measurement etc.
EMC receivers	40614			CP-40614
Time Base		10 MHz	0.007 1 Hz	
Center Freqeuncy		10 Hz ~ 20 Hz	7.1×10^{-5}	
		20 Hz ~ 200 Hz	7.1×10^{-6}	
		200 Hz ~ 2 kHz	7.1×10^{-7}	
		2 kHz ~ 20 kHz	7.1×10^{-8}	
		20 kHz ~ 200 kHz	7.1×10^{-9}	
		200 kHz ~ 40 GHz	7.1×10^{-10}	
Freqeuncy Counter		10 Hz ~ 20 Hz	7.1×10^{-5}	
		20 Hz ~ 200 Hz	7.1×10^{-6}	
		200 Hz ~ 2 kHz	7.1×10^{-7}	
		2 kHz ~ 20 kHz	7.1×10^{-8}	
		20 kHz ~ 200 kHz	7.1×10^{-9}	
		200 kHz ~ 40 GHz	7.1×10^{-10}	
Frequency Response		9 kHz ~ 1 GHz	0.15 dB	
		1 GHz ~ 8 GHz	0.17 dB	
		8 GHz ~ 20 GHz	0.23 dB	
		20 GHz ~ 26 GHz	0.25 dB	
		26 GHz ~ 34 GHz	0.30 dB	
		34 GHz ~ 40 GHz	0.32 dB	
Scale Fidelity		(0 ~ 100) dB	0.06 dB	
If Frequency Gain		(0 ~ 100) dB	0.06 dB	
Display Average Noise Level		9 kHz ~ 40 GHz	1.0 dB	
RBW		10 Hz ~ 3 MHz	2.4×10^{-3}	
RBW Selectivity		10 Hz ~ 3 MHz	3.1×10^{-3}	
RBW Swiching		10 Hz ~ 3 MHz	0.04 dB	
Frequency Span		1 kHz ~ 20 GHz	1.1×10^{-4}	
Output Frequency		1 MHz ~ 1 GHz	6.1×10^{-8}	
Output Level		9 kHz ~ 1 GHz	0.16 dB	
RF filters	40615			CP-40615
Cut off Frequency		5 Hz ~ 10 Hz	1.4 mHz	
		10 Hz ~ 100 Hz	1.7 mHz	
		100 Hz ~ 1 kHz	9.3 mHz	
		1 kHz ~ 10 kHz	93 mHz	
		10 kHz ~ 100 kHz	0.94 Hz	
		100 kHz ~ 1 MHz	9.5 Hz	
		1 MHz ~ 10 MHz	20 Hz	
		10 MHz ~ 100 MHz	0.20 kHz	
		100 MHz ~ 1 GHz	1.8 kHz	
		1 GHz ~ 10 GHz	18 kHz	
		10 GHz ~ 20 GHz	33 kHz	
		20 GHz ~ 30 GHz	48 kHz	
		30 GHz ~ 40 GHz	55 kHz	

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF filters	40615			CP-40615
Insertion Loss		5 Hz ~ 10 MHz	0.15 dB	
		10 MHz ~ 50 MHz	0.18 dB	
		50 MHz ~ 2 GHz	0.24 dB	
		2 GHz ~ 18 GHz	0.26 dB	
		18 GHz ~ 25 GHz	0.32 dB	
		25 GHz ~ 40 GHz	0.46 dB	
Line impedance stabilization networks ; LISN, CDN, ISN, etc.	40618			CP-40618
LISN				
Impedance		9 kHz ~ 1 GHz	0.78 Ω	
Insertion Loss		9 kHz ~ 1 GHz	0.16 dB	
Phase		9 kHz ~ 1 GHz	0.6°	
CDN				
Impedance		9 kHz ~ 230 MHz	2.9 Ω	
Insertion Loss		9 kHz ~ 230 MHz	0.16 dB	
Phase		9 kHz ~ 230 MHz	0.6°	
Mobile communication test sets	40621			CP-40621
Time Base		10 MHz	0.007 1 Hz	
Output Freqeuncy		10 Hz ~ 6 GHz	1.0×10^{-8}	
Output Level		9 kHz ~ 100 kHz		
		(20 ~ 0) dBm	0.23 dB	
		(0 ~ -10) dBm	0.26 dB	
		(-10 ~ -60) dBm	0.30 dB	
		100 kHz ~ 1 GHz		
		(20 ~ -30)dBm	0.23 dB	
		(-30 ~ -60)dBm	0.27 dB	
		(-60 ~ -120)dBm	0.60 dB	
		1 GHz ~ 6 GHz		
		(20 ~ -30)dBm	0.26 dB	
		(-30 ~ -60)dBm	0.29 dB	
		(-60 ~ -120)dBm	0.61 dB	
Flatness of Output Level		9 kHz ~ 50 MHz	0.16 dB	
		50 MHz ~ 6 GHz	0.18 dB	
Freqeuncy Modulation		0 kHz ~ 400 kHz	2.5×10^{-2}	
Amplitude Modulation		0 % ~ 100 %	2.5×10^{-2} (상대불확도)	
Phase Modulation		0 rad ~ 400 rad	2.5×10^{-2}	

Distortion of Mudulation		0 % ~ 10 %	1.5×10^{-2} (상대불확도)	
Harmonics		9 kHz ~ 6 GHz	2 dB	
Input Freqeuncy		10 Hz ~ 6 GHz	7.1×10^{-8}	

406. Radio frequency measurements

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			CP-40621
Freqeuncy Response		9 kHz ~ 1 GHz	0.15 dB	
		1 GHz ~ 6 GHz	0.17 dB	
Linearity of Input Level		(0 ~ 100) dB	0.06 dB	
AC Input Voltage		10 mV		
		40 Hz ~ 10 kHz	10 μV	
		10 kHz ~ 100 kHz	24 μV	
		(10 mV ~ 100 mV)		
		40 Hz ~ 10 kHz	71 μV	
		10 kHz ~ 100 kHz	73 μV	
		(1 V ~ 10 V)		
		40 Hz ~ 100 kHz	7.1 mV	
		(10 V ~ 30 V)		
		40 Hz ~ 10 kHz	0.070 V	
		10 kHz ~ 100 kHz	0.071 V	
AC output Voltage		10 mV		
		40 Hz ~ 20 kHz	20 μV	
		20 kHz ~ 40 kHz	39 μV	
		(10 mV ~ 100 mV)		
		40 Hz ~ 1 kHz	0.021 mV	
		1 kHz ~ 20 kHz	0.042 mV	
		20 kHz ~ 40 kHz	0.095 mV	
		(100 mV ~ 1 V)		
		40 Hz ~ 1 kHz	0.59 mV	
		1 kHz ~ 20 kHz	0.62 mV	
		20 kHz ~ 40 kHz	0.77 mV	
		(1 V ~ 6 V)		
		40 Hz ~ 1 kHz	1.1 mV	
		1 kHz ~ 20 kHz	1.9 mV	
		20 kHz ~ 40 kHz	5.2 mV	
DC input Voltage		10 mV ~ 100 mV	0.58 mV	
		0.1 V ~ 1 V	0.70 mV	
		1 V ~ 10 V	7.0 mV	

		10 V ~ 30 V	76 mV	
Modulation meters	40622			CP-40622
Frequency Modulation		0 kHz ~ 400 kHz	2.5×10^{-2}	
Amplitude Modulation		0 % ~ 100 %	2.5×10^{-2} (상대불확도)	
Phase Modulation		0 rad ~ 400 rad	2.5×10^{-2}	
Distortion of Modulation		0 % ~ 10 %	1.5×10^{-2} (상대불확도)	

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Network Analyzer	40623			CP-40623
Time base		10 MHz	0.007 1 Hz	
Output Frequency		5 Hz ~ 40 GHz	1.0×10^{-8}	
Output Level		9 kHz ~ 100 kHz		
		(20 ~ 0) dBm	0.23 dB	
		(0 ~ -10) dBm	0.26 dB	
		(-10 ~ -60) dBm	0.30 dB	
		100 kHz ~ 1 GHz		
		(20 ~ -30)dBm	0.23 dB	
		(-30 ~ -60)dBm	0.27 dB	
		(-60 ~ -120)dBm	0.60 dB	
		1 GHz ~ 18 GHz		
		(20 ~ -30)dBm	0.27 dB	
		(-30 ~ -60)dBm	0.30 dB	
		(-60 ~ -120)dBm	0.61 dB	
Output Level		18 GHz ~ 26 GHz		
		(20 ~ -30)dBm	0.29 dB	
		26 GHz ~ 40 GHz		
		(20 ~ -30)dBm	0.43 dB	
Flatness of Output Level		9 kHz ~ 50 MHz	0.16 dB	
		50 MHz ~ 6 GHz	0.18 dB	
		6 GHz ~ 18 GHz	0.20 dB	
		18 GHz ~ 26 GHz	0.29 dB	
		26 GHz ~ 40 GHz	0.43 dB	
Dynamic Attenuation		50 MHz ~ 18 GHz		
		(0 ~ 10) dB	0.08 dB	
		(10 ~ 20) dB	0.09 dB	
		(20 ~ 30) dB	0.10 dB	

		(30 ~ 40) dB	0.11 dB	
		(40 ~ 50) dB	0.12 dB	
		(50 ~ 60) dB	0.12 dB	
		(60 ~ 70) dB	0.13 dB	
		(70 ~ 80) dB	0.15 dB	
Noise impulse simulators	40626			CP-40626
Peak Voltage		±0.1 kV	6.1×10^{-2}	
		±(0.1 ~ 0.2) kV	3.5×10^{-2}	
		±(0.2 ~ 0.3) kV	2.8×10^{-2}	
		±(0.3 ~ 0.4) kV	2.5×10^{-2}	
		±(0.4 ~ 0.9) kV	2.2×10^{-2}	
		±(0.9 ~ 4) kV	2.0×10^{-2}	
Pulse Width		50 ns	0.013 ns	
		50 ns ~ 500 ns	0.13 ns	
		500 ns ~ 1 µs	0.001 3 µs	

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF power meters	40635			CP-40635
Power Range		3 µW ~ 100 mW	3.1×10^{-3}	
Ref. Power Output		1 mW	14 µW	
High Power Range		100 mW		
		1.5 MHz ~ 50 MHz	5.5 mW	
		50 MHz ~ 1 GHz	8.6 mW	
		100 mW ~ 20 W		
		1.5 MHz ~ 50 MHz	5.5×10^{-2}	
		50 MHz ~ 1 GHz	8.6×10^{-2}	
		20 W ~ 50 W		
		1.5 MHz ~ 25 MHz	5.5×10^{-2}	
		25 MHz ~ 1 GHz	5.3×10^{-2}	
		50 W ~ 80 W		
		80 MHz ~ 1 GHz	5.2×10^{-2}	
		80 W ~ 100 W		
		80 MHz ~ 400 MHz	4.6×10^{-2}	
		400 MHz ~ 1 GHz	5.3×10^{-2}	
Diode power sensors	40636			CP-40636
Cal Factor		1 µW ~ 100 mW		
		9 kHz ~ 10 MHz	2.1×10^{-2}	
		10 MHz ~ 50 MHz	2.3×10^{-2}	
		50 MHz ~ 5 GHz	2.4×10^{-2}	

		5 GHz ~ 10 GHz	2.6×10^{-2}	
		10 GHz ~ 18 GHz	3.0×10^{-2}	
		18 GHz ~ 24 GHz	3.7×10^{-2}	
		24 GHz ~ 40 GHz	4.6×10^{-2}	
Thermocouple power sensors	40637			CP-40637
Cal Factor		1 μW ~ 100 mW		
		9 kHz ~ 10 MHz	2.1×10^{-2}	
		10 MHz ~ 50 MHz	2.3×10^{-2}	
		50 MHz ~ 5 GHz	2.4×10^{-2}	
		5 GHz ~ 10 GHz	2.6×10^{-2}	
		10 GHz ~ 18 GHz	3.0×10^{-2}	
		18 GHz ~ 24 GHz	3.7×10^{-2}	
		24 GHz ~ 40 GHz	4.6×10^{-2}	
Pulse generators	40638			CP-40638
Frequency		1 Hz ~ 200 MHz	7.6×10^{-7}	
Output Level		40 Hz		
		10 mV	18 μV	
		(10 ~ 20) mV	9.0×10^{-4}	
		(20 ~ 50) mV	3.8×10^{-4}	
		(50 ~ 100) mV	2.2×10^{-4}	
		(100 ~ 200) mV	3.9×10^{-4}	
		(200 ~ 500) mV	1.8×10^{-4}	
		(0.5 ~ 1) V	1.3×10^{-4}	
		(1 ~ 2) V	3.9×10^{-4}	
		(2 ~ 5) V	1.8×10^{-4}	
		(5 ~ 10) V	1.3×10^{-4}	
		(10 ~ 20) V	3.9×10^{-4}	

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Pulse generators	40638			CP-40638
Output Level		40 Hz ~ 1 kHz		
		10 mV	18 μV	
		(10 ~ 20) mV	9.0×10^{-4}	
		(20 ~ 50) mV	3.8×10^{-4}	
		(50 ~ 100) mV	2.2×10^{-4}	
		(100 ~ 200) mV	3.9×10^{-4}	
		(200 ~ 500) mV	1.7×10^{-4}	
		(0.5 ~ 1) V	1.3×10^{-4}	
		(1 ~ 2) V	3.9×10^{-4}	
		(2 ~ 5) V	1.7×10^{-4}	
		(5 ~ 10) V	1.3×10^{-4}	
		(10 ~ 20) V	3.9×10^{-4}	
		1 kHz ~ 10 kHz		
		10 mV	21 μV	
		(10 ~ 20) mV	1.2×10^{-3}	
		(20 ~ 50) mV	5.8×10^{-4}	
		(50 ~ 100) mV	4.2×10^{-4}	
		(100 ~ 200) mV	5.4×10^{-4}	
		(200 ~ 500) mV	3.1×10^{-4}	
		(0.5 ~ 1) V	2.6×10^{-4}	

		(1 ~ 2) V	5.4×10^{-4}	
		(2 ~ 5) V	3.1×10^{-4}	
		(5 ~ 10) V	2.6×10^{-4}	
		(10 ~ 20) V	5.4×10^{-4}	
		10 kHz ~ 20 kHz		
		10 mV	21 µV	
		(10 ~ 20) mV	1.2×10^{-3}	
		(20 ~ 50) mV	5.8×10^{-4}	
		(50 ~ 100) mV	4.2×10^{-4}	
		(100 ~ 200) mV	5.5×10^{-4}	
		(200 ~ 500) mV	3.3×10^{-4}	
		(0.5 ~ 1) V	2.6×10^{-4}	
		(1 ~ 2) V	5.5×10^{-4}	
		(2 ~ 5) V	3.2×10^{-4}	
		(5 ~ 10) V	2.6×10^{-4}	
		(10 ~ 20) V	5.4×10^{-4}	
		20 kHz ~ 50 kHz		
		10 mV	40 µV	
		(10 ~ 20) mV	2.3×10^{-3}	
		(20 ~ 50) mV	1.3×10^{-3}	
		(50 ~ 100) mV	9.5×10^{-4}	
		(100 ~ 200) mV	1.6×10^{-3}	
		(200 ~ 500) mV	9.4×10^{-4}	
		(0.5 ~ 1) V	7.2×10^{-4}	
		(1 ~ 2) V	1.6×10^{-3}	
		(2 ~ 5) V	9.4×10^{-4}	
		(5 ~ 10) V	7.2×10^{-4}	
		(10 ~ 20) V	1.6×10^{-3}	

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Pulse generators	40638			CP-40638
Output Level		50 kHz ~ 100 kHz		
		10 mV	72 µV	
		(10 ~ 20) mV	3.8×10^{-3}	
		(20 ~ 50) mV	1.7×10^{-3}	
		(50 ~ 100) mV	1.2×10^{-3}	
		(100 ~ 200) mV	1.7×10^{-3}	
		(200 ~ 500) mV	9.6×10^{-4}	
		(0.5 ~ 1) V	7.2×10^{-4}	
		(1 ~ 2) V	1.7×10^{-3}	
		(2 ~ 5) V	9.4×10^{-4}	
		(5 ~ 10) V	7.2×10^{-4}	
		(10 ~ 20) V	1.8×10^{-3}	
Period		1 ns ~ 1 s	1.3×10^{-3}	

Pulse Width		1 ns ~ 1 s	1.3×10^{-3}	
Delay Time		1 ns ~ 1 s	1.3×10^{-3}	
Double Pulse		1 ns ~ 1 s	1.3×10^{-3}	
Radar test sets	40639			CP-40639
Output Frequency		100 kHz ~ 40 GHz	1.0×10^{-8}	
Output Level		9 kHz ~ 100 kHz		
		(20 ~ 0) dBm	0.23 dB	
		(0 ~ -10) dBm	0.26 dB	
		(-10 ~ -60) dBm	0.30 dB	
		100 kHz ~ 1 GHz		
		(20 ~ -30)dBm	0.23 dB	
		(-30 ~ -60)dBm	0.27 dB	
		(-60 ~ -120)dBm	0.60 dB	
		1 GHz ~ 18 GHz		
		(20 ~ -30)dBm	0.27 dB	
		(-30 ~ -60)dBm	0.30 dB	
		(-60 ~ -120)dBm	0.61 dB	
Frequency Response		9 kHz ~ 50 MHz	0.16 dB	
		50 MHz ~ 6 GHz	0.18 dB	
		6 GHz ~ 18 GHz	0.20 dB	
Frequency Modulation		0 kHz ~ 400 kHz	2.5×10^{-2}	
Amplitude Modulation		0 % ~ 100 %	2.5×10^{-2} (상대 불확도)	
Distortion of Modulation		0 % ~ 10 %	1.5×10^{-2} (상대 불확도)	
Pulse Width		10 ns ~ 10 ms	1.3×10^{-3}	
Input Frequency		100 kHz ~ 18 GHz	8.4×10^{-6}	
Input Level		(0 ~ -80) dB	0.08 dB	

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Radar test sets	40639			CP-40639
High power		100 mW		
		1.5 MHz ~ 50 MHz	5.5 mW	
		50 MHz ~ 1 GHz	8.6 mW	
		100 mW ~ 20 W		
		1.5 MHz ~ 50 MHz	5.5×10^{-2}	
		50 MHz ~ 1 GHz	8.6×10^{-2}	

		20 W ~ 50 W 1.5 MHz ~ 50 MHz 50 MHz ~ 1 GHz 50 W ~ 80 W 80 MHz ~ 1 GHz 80 W ~ 100 W 80 MHz ~ 400 MHz 400 MHz ~ 1 GHz	 5.5×10^{-2} 5.3×10^{-2} 5.2×10^{-4} 4.6×10^{-2} 5.3×10^{-2}	
RF signal generators	40640			CP-40640
Time Base		10 MHz	0.007 1 Hz	
Frequency		20 Hz ~ 40 GHz	1.0×10^{-8} (Relative Uncertainty)	
Output Level		9 kHz ~ 100 kHz (20 ~ 0) dBm (0 ~ -10) dBm (-10 ~ -60) dBm 100 kHz ~ 1 GHz (20 ~ -30) dBm (-30 ~ -60) dBm (-60 ~ -120) dBm 1 GHz ~ 18 GHz (20 ~ -30) dBm (-30 ~ -60) dBm (-60 ~ -120) dBm 18 GHz ~ 26 GHz (20 ~ -30) dBm 26 GHz ~ 40 GHz (20 ~ -30) dBm	 0.23 dB 0.26 dB 0.30 dB 0.23 dB 0.27 dB 0.60 dB 0.27 dB 0.30 dB 0.61 dB 0.29 dB 0.43 dB	
Frequency Response		9 kHz ~ 50 MHz 50 MHz ~ 6 GHz 6 GHz ~ 18 GHz 18 GHz ~ 26 GHz 26 GHz ~ 40 GHz	0.16 dB 0.18 dB 0.20 dB 0.29 dB 0.43 dB	
Frequency Modulation		0 kHz ~ 400 kHz	2.5×10^{-2}	
Amplitude Modulation		0 % ~ 100 %	2.5×10^{-2} (Relative Uncertainty)	
Phase Modulation		0 rad ~ 400 rad	2.5×10^{-2}	

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF signal generators	40640			CP-40640
Distortion of Modulation		0 % ~ 10 %	1.5×10^{-2}	

			(Relative Uncertainty)	
Hamonics		9 kHz ~ 26.5 GHz	2.0 dB	
RF spectrum analyzers	40641			CP-40641
Time Base		10 MHz	0.007 1 Hz	
Center Frequency		10 Hz ~ 20 Hz	7.1×10^{-5}	
		20 Hz ~ 200 Hz	7.1×10^{-6}	
		200 Hz ~ 2 kHz	7.1×10^{-7}	
		2 kHz ~ 20 kHz	7.1×10^{-8}	
		20 kHz ~ 200 kHz	7.1×10^{-9}	
		200 kHz ~ 40 GHz	7.1×10^{-10}	
Frequency Counter		10 Hz ~ 20 Hz	7.1×10^{-5}	
		20 Hz ~ 200 Hz	7.1×10^{-6}	
		200 Hz ~ 2 kHz	7.1×10^{-7}	
		2 kHz ~ 20 kHz	7.1×10^{-8}	
		20 kHz ~ 200 kHz	7.1×10^{-9}	
		200 kHz ~ 40 GHz	7.1×10^{-10}	
Frequency Response		9 kHz ~ 1 GHz	0.15 dB	
		1 GHz ~ 8 GHz	0.17 dB	
		8 GHz ~ 20 GHz	0.23 dB	
		20 GHz ~ 26 GHz	0.25 dB	
		26 GHz ~ 34 GHz	0.30 dB	
		34 GHz ~ 40 GHz	0.32 dB	
Scale Fidelity		(0 ~ 100) dB	0.06 dB	
If Frequency Gain		(0 ~ 100) dB	0.06 dB	
Average Noise Level		9 kHz ~ 40 GHz	1.0 dB	
RBW		10 Hz ~ 3 MHz	2.4×10^{-3}	
RBW Selectivity		10 Hz ~ 3 MHz	3.1×10^{-3}	
RBW Switching		10 Hz ~ 3 MHz	0.04 dB	
Frequency Span		1 kHz ~ 20 GHz	1.1×10^{-4}	
Output Frequency		1 MHz ~ 1 GHz	6.1×10^{-8}	
Output Level		9 kHz ~ 1 GHz	0.16 dB	
RF speed guns	40642			CP-40642
Speed		(5 ~ 2 000) m/s	0.073 m/s	
Surge generators	40643			CP-40643
Peak Voltage		(-20 ~ 20) kV	3.9×10^{-2}	
Front Time		0.1 µs	0.000 77 µs	
		(0.1 ~ 0.4) µs	2.0×10^{-3}	
		(0.4 ~ 1.2) µs	1.6×10^{-3}	
		(1.2 ~ 4.0) µs	7.9×10^{-4}	
		(4.0 ~ 10.0) µs	1.7×10^{-3}	

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Surge generators	40643			CP-40643
Duration Time		10 μs	0.069 μs	
		(10 ~ 30) μs	3.5×10^{-3}	
		(30 ~ 50) μs	1.8×10^{-3}	
		(50 ~ 60) μs	2.4×10^{-3}	
		(60 ~ 100) μs	1.6×10^{-3}	
		(100 ~ 200) μs	6.1×10^{-4}	
		(200 ~ 500) μs	2.5×10^{-4}	
		(500 ~ 1 000) μs	1.3×10^{-3}	
Peak Current		(- 5 000 ~ 5 000) A	1.9×10^{-2}	
Front Time		1 μs	0.007 3 μs	
		(1.0 ~ 2.0) μs	3.7×10^{-3}	
		(2.0 ~ 8.0) μs	2.1×10^{-3}	
		(8.0 ~ 10.0) μs	1.5×10^{-3}	
Duration Time		10 μs	0.073 μs	
		(10 ~ 12) μs	6.1×10^{-3}	
		(12 ~ 24) μs	4.6×10^{-3}	
		(24 ~ 100) μs	2.1×10^{-3}	
SWR meters	40644			CP-40644
Time Base		10 MHz	0.007 1 Hz	
Output Freqeuncy		20 Hz ~ 26 GHz	1.0×10^{-8}	
Output Level		9 kHz ~ 100 kHz		
		(10 ~ 0) dBm	0.23 dB	
		(0 ~ -10) dBm	0.26 dB	
		(-10 ~ -30) dBm	0.30 dB	
		100 kHz ~ 1 GHz		
		(10 ~ -30) dBm	0.23 dB	
		1 GHz ~ 10 GHz		
		(10 ~ -30) dBm	0.26 dB	
		10 GHz ~ 26 GHz		
		(10 ~ -30) dBm	0.29 dB	
SWR		50 MHz ~ 1 GHz		
		1.04	0.023	
		1.20	0.019	
		1.50	0.025	
		2.00	0.042	
		1 GHz ~ 4 GHz		
		1.04	0.023	
		1.20	0.029	
		1.50	0.040	
		2.00	0.070	
		4 GHz ~ 18 GHz		

		1.04	0.031	
		1.20	0.035	
		1.50	0.050	
		2.00	0.090	

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF terminations	40645			CP-40645
VSWR		5 Hz ~ 3 GHz	0.008 3	
		3 GHz ~ 20 GHz	0.015	
		20 GHz ~ 40 GHz	0.030	
Coaxial thermistor mounts	40646			CP-40646
Cal Factor		1 μW ~ 100 mW		
		10 MHz ~ 50 MHz	2.3×10^{-2}	
		50 MHz ~ 5 GHz	2.4×10^{-2}	
		5 GHz ~ 10 GHz	2.6×10^{-2}	
		10 GHz ~ 18 GHz	2.9×10^{-2}	
RF voltmeters	40650			CP-40650
Voltage		100 kHz		
		1 mV	0.019 mV	
		(1 ~ 10) mV	0.025 mV	
		(10 ~ 100) mV	0.11 mV	
		(0.1 ~ 1) V	0.000 87 V	
		(1 ~ 10) V	0.008 7 V	
		(10 ~ 100) V	0.088 V	
		1 MHz		
		1 mV	0.063 mV	
		(1 ~ 10) mV	0.083 mV	
		(10 ~ 100) mV	0.33 mV	
		(0.1 ~ 1) V	0.002 2 V	
		(1 ~ 10) V	0.020 V	
Field strength meters	40652			CP-40652
Input Freqeuncy		10 Hz ~ 20 Hz	7.1×10^{-5}	
		20 Hz ~ 200 Hz	7.1×10^{-6}	
		200 Hz ~ 2 kHz	7.1×10^{-7}	
		2 kHz ~ 20 kHz	7.1×10^{-8}	
		20 kHz ~ 200 kHz	7.1×10^{-9}	
		200 kHz ~ 40 GHz	7.1×10^{-10}	
Frequency Response		9 kHz ~ 1 GHz	0.15 dB	
		1 GHz ~ 8 GHz	0.17 dB	
		8 GHz ~ 20 GHz	0.23 dB	
		20 GHz ~ 26 GHz	0.25 dB	
		26 GHz ~ 34 GHz	0.30 dB	
		34 GHz ~ 40 GHz	0.32 dB	
Scale Fidelity		(0 ~ 100) dB	0.06 dB	
If Frequency Gain		(0 ~ 100) dB	0.06 dB	

Dip simulators	40654			CP-40654
AC Voltage		10 V	0.058 V	
		(10 ~ 50) V	1.2×10^{-3}	
		(50 ~ 100) V	5.9×10^{-4}	
		(100 ~ 150) V	4.8×10^{-4}	
		(150 ~ 250) V	3.7×10^{-4}	
		(250 ~ 300) V	3.0×10^{-4}	
Dip up AC Voltage		(0 ~ 120) %		
		(0 ~ 240) V	3.1×10^{-2}	
Duration Time		(1 ~ 1 000) ms	1.3×10^{-3}	

407. Field strength & antennas

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Loop antennas Antenna factor	40704	30 Hz ~ 30 MHz	2.3 dB	CP-40704
molopole antennas Antenna factor	40705	9 kHz ~ 30 MHz	1.8 dB	CP-40705

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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 ; ovens, furnaces, isothermal liquid baths, ice-point baths, dry-block calibrators	50101			
ovens		(-80 ~ 250) ℃	0.66 ℃	CP-50101-1
Temperature generators		(-196 ~ 550) ℃	0.02 ℃	CP-50101-2
		(550 ~ 1 100) ℃	0.86 ℃	
Temperature indicators/recorders /controllers, temperature calibrators	50102			CP-50102
Include Sensor		(-196 ~ 550) ℃	0.08 ℃	
		(550 ~ 1 100) ℃	0.95 ℃	
Exclude Sensor(Resistance)		(-196 ~ 550) ℃	0.10 ℃	
(Thermocouple)		(-196 ~ 1 100) ℃	0.36 ℃	
Temperature Calibrators				
Resistance(Source)		(-190 ~ 630) ℃	0.18 ℃	CP-40104
TC E		(-196 ~ 1 100) ℃	0.22 ℃	
J		(-196 ~ 1 100) ℃	0.23 ℃	
K		(-196 ~ 1 100) ℃	0.31 ℃	
N		(-196 ~ 1 100) ℃	0.41 ℃	
R		(0 ~ 1 100) ℃	0.74 ℃	
S		(0 ~ 1 100) ℃	0.73 ℃	
B		(600 ~ 1 100) ℃	0.75 ℃	
T		(-196 ~ 399) ℃	0.31 ℃	
Resistance(Input)		(-190 ~ 630) ℃	0.19 ℃	
TC E		(-196 ~ 1 100) ℃	0.19 ℃	
J		(-196 ~ 1 100) ℃	0.24 ℃	
K		(-196 ~ 1 100) ℃	0.34 ℃	

N		(-196 ~ 1 100) ℃	0.45 ℃	
R		(0 ~ 1 100) ℃	0.80 ℃	
S		(0 ~ 1 100) ℃	0.80 ℃	
B		(600 ~ 1 100) ℃	0.88 ℃	
T		(-196 ~ 399) ℃	0.34 ℃	
Glass thermometers ; liquid-in-glass, Beckmann	50103			CP-50103
liquid-in-glass		(-80 ~ -50) ℃	0.25 ℃	
		(-50 ~ 400) ℃	0.09 ℃	
		(400 ~ 550) ℃	0.25 ℃	
Resistance thermometers ; SPRT, IPRT, thermistors, etc	50104			CP-50104
		(-196 ~ 550) ℃	0.05 ℃	
Thermal expansion thermometers ; bimetal, gas or liquid type	50105			CP-50105
bimetal		(-80 ~ 100) ℃	0.32 ℃	
		(100 ~ 250) ℃	0.67 ℃	
		(250 ~ 550) ℃	1.4 ℃	
Thermomecouples ; noble metal, base metal, pure metal, special type, etc.	50106			
		(-196 ~ 550) ℃	0.66 ℃	CP-50106-1
Base metal		(550 ~ 1 100) ℃	1.3 ℃	
		(0 ~ 550) ℃	1.1 ℃	CP-50106-2
Noble metal		(550 ~ 1 100) ℃	1.2 ℃	

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 transducers	50107			CP-50107
Temperature		(-196 ~ 550) ℃	0.23 ℃	
		(550 ~ 1 100) ℃	0.96 ℃	

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			CP-50204
Temperature		(0 ~ 100) ℃	1.3 ℃	
		(100 ~ 200) ℃	1.5 ℃	
		(200 ~ 500) ℃	1.9 ℃	
		(500 ~ 800) ℃	2.5 ℃	
		(800 ~ 1 000) ℃	2.9 ℃	
Blackbody Furnaces	50206			CP-50206
		(0 ~ 100) ℃	1.4 ℃	
		(100 ~ 200) ℃	1.6 ℃	
		(200 ~ 500) ℃	1.8 ℃	
		(500 ~ 800) ℃	2.3 ℃	
		(800 ~ 1 000) ℃	2.7 ℃	

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503. Humidity

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Dew-point hygrometers: chilled mirror,alumina thin film, etc.	50301			CP-50301
Dew-point		(-75 ~ -60) ℃dp	0.66 ℃dp	
		(-60 ~ 20) ℃dp	0.37 ℃dp	
Relative humidity hygrometers ; polimer thinfilm, hair, etc.	50302			
Hair		(4 ~ 20) % R.H.	2.4 % R.H.	CP-50302-1
(Relative Humidity)		(20 ~ 50) % R.H.	1.5 % R.H.	
		(50 ~ 70) % R.H.	1.8 % R.H.	
		(70 ~ 90) % R.H.	2.3 % R.H.	
		(90 ~ 95) % R.H.	3.1 % R.H.	
Polimer thinfilm(Digital hygro meter)		(4 ~ 20) % R.H.	2.4 % R.H.	CP-50302-2
(Relative humidity)		(20 ~ 50) % R.H.	1.5 % R.H.	
		(50 ~ 70) % R.H.	1.8 % R.H.	

		(70 ~ 90) % R.H.	2.3 % R.H.	
		(90 ~ 95) % R.H.	3.1 % R.H.	
(Temperature)		(-80 ~ 0) ℃	0.64 ℃	
		(0 ~ 70) ℃	0.53 ℃	
		(70 ~ 100) ℃	1.5 ℃	
		(100 ~ 150) ℃	2.1 ℃	
Psychrometers ; assmann ventilated, PRT type, etc.	50303			CP-50303
PRT type(Relative humidity)		(4 ~ 20) % R.H.	2.7 % R.H.	
		(20 ~ 50) % R.H.	1.6 % R.H.	
		(50 ~ 70) % R.H.	2.0 % R.H.	
		(70 ~ 90) % R.H.	2.5 % R.H.	
		(90 ~ 95) % R.H.	3.2 % R.H.	
Temperature humidity recorders ; Hygrothermograph, etc.	50304			CP-50304
Relative humidity		(10 ~ 20) % R.H.	2.3 % R.H.	
		(20 ~ 50) % R.H.	1.5 % R.H.	
		(50 ~ 70) % R.H.	1.8 % R.H.	
		(70 ~ 90) % R.H.	2.3 % R.H.	
		(90 ~ 95) % R.H.	3.1 % R.H.	
Temperature		(-20 ~ 50) ℃	0.47 ℃	
		(50 ~ 100) ℃	1.5 ℃	
Transducers ; dew-point/ relative humidity	50305			CP-50305
		(4 ~ 20) % R.H.	2.4 % R.H.	
Relative humidity		(20 ~ 50) % R.H.	1.6 % R.H.	
		(50 ~ 70) % R.H.	1.8 % R.H.	
		(70 ~ 90) % R.H.	2.4 % R.H.	
		(90 ~ 95) % R.H.	3.1 % R.H.	

503. Humidity

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Humidity generators ; two-pressure, two-temperature, flow mixing humidity generator, constant temperature and humidity chamber, etc.	50306			CP-50306
		(4 ~ 20) % R.H.	2.6 % R.H.	
		(20 ~ 50) % R.H.	2.7 % R.H.	
Constant Temperature and humidity chamber		(50 ~ 70) % R.H.	3.5 % R.H.	
(Relative humidity)		(70 ~ 95) % R.H.	4.5 % R.H.	
		(-80 ~ 250) ℃	0.70 ℃	
(Temperature)				

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504. Moisture

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Wood moisture meters	50402	(8 ~ 25) % M.C.	3.5 % M.C.	CP-50402

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 level meters	60106			CP-60107
		31.5 Hz	0.5 dB	
		63 Hz	0.4 dB	

		125 Hz	0.3 dB	
		250 Hz	0.2 dB	
		500 Hz	0.2 dB	
		1 kHz	0.2 dB	
		2 kHz	0.2 dB	
		4 kHz	0.2 dB	
		8 kHz	0.5 dB	
		12.5 kHz	0.8 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	(20 ~ 1 250) Hz	1.7 %	CP-60301
Vibration transducers	60302			CP-60302
acceleration		10 Hz	1.9 %	
		(10 ~ 630) Hz	1.6 %	
		(630 ~ 1 250) Hz	2.3 %	
		(1 250 ~ 2 500) Hz	2.5 %	
		(2 500 ~ 5 000) Hz	2.8 %	
Vibration measuring instruments	60303			CP-60303
acceleration		10 Hz	2.4 %	
		(10 ~ 20) Hz	1.8 %	
		(20 ~ 630) Hz	1.6 %	
		(630 ~ 1 250) Hz	2.3 %	
velocity		10 Hz	2.0 %	
		(10 ~ 20) Hz	1.7 %	
		(20 ~ 160) Hz	1.6 %	
		(160 ~ 630) Hz	1.7 %	
		(630 ~ 1 000) Hz	2.4 %	
		(1 000 ~ 1 250) Hz	2.5 %	
displacement		10 Hz	2.0 %	
		(10 ~ 20) Hz	1.7 %	
		(20 ~ 80) Hz	1.6 %	
		(80 ~ 160) Hz	1.7 %	
		(160 ~ 315) Hz	2.6 %	

701. Photometry

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Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Iluminance meters	70101	(1 ~ 10) lx (10 ~ 100) lx (100 ~ 1 000) lx (1 000 ~ 3 000) lx (3 000 ~ 5 000) lx	3.1 % 2.7 % 2.8 % 2.9 % 3.4 %	CP-70101

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901. Chemical analysis

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Gas analyzers /	90103			CP-90103
Carbon Dioxide(CO_2)		(0 ~ 5 000) μmol/mol	1.7×10^{-2}	
		(0.5 ~ 5) cmol/mol	1.7×10^{-2}	
Carbon Monoxide(CO)		(0 ~ 100) μmol/mol	2.2×10^{-2}	
Oxygen(O_2)		(0 ~ 18) cmol/mol	2.0×10^{-2}	
Methane(CH_4)		(0 ~ 2) cmol/mol	1.7×10^{-2}	
Hydrogen(H_2)		(0 ~ 2) cmol/mol	2.1×10^{-2}	
Sulfur Dioxide(SO_2)		(0 ~ 500) μmol/mol	2.2×10^{-2}	
Isobutane(i-C_4H_{10})		(0 ~ 1) cmol/mol	2.7×10^{-2}	
Nitrogen Monoxide(NO)		(0 ~ 500) μmol/mol	2.2×10^{-2}	
Propane(C_3H_8)		(0 ~ 1) cmol/mol	2.4×10^{-2}	
Hydrongen sulfide(H_2S)		(0 ~ 30)μmol/mol	4.9×10^{-2}	
Exhaust gas test instrument /	90104			CP-90104
Oxygen(O_2)		(0 ~ 18) cmol/mol	2.0×10^{-2}	
Carbon Dioxide(CO_2)		(0 ~ 5) cmol/mol	1.6×10^{-2}	
Sulfur Dioxide(SO_2)		(0 ~ 1 000) μmol/mol	2.2×10^{-2}	
Nitrogen Monoxide(NO)		(0 ~ 1 000) μmol/mol	2.2×10^{-2}	
Propane(C_3H_8)		(0 ~ 1) cmol/mol	2.4×10^{-2}	
Carbon Monoxide(CO)		(0 ~ 1 000) μmol/mol	2.2×10^{-2}	