

SCOPE OF ACCREDITATION TO ISO/IEC 17025-2005 & KS Q ISO/IEC 17025-2006

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CALIBRATION

Valid to : Aug. 08, 2022

Accreditation No. : KC01-052 (1/68)

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

Field Code	Measured Quantity Instrument or Gauge	on-site	Field Code	Measured Quantity Instrument or Gauge	on-site	Field Code	Measured Quantity Instrument or Gauge	on-site
102.Linear dimension			105.Complex geometry			207.Density		
10203	Electrical/Mechanical comparators	N	10512	Micro measuring microscopes	Y	20704	Salinity meters	N
			10518	Stylus type roughness testers	Y	20705	Sucrose meters	N
10206	Dial/Cylinder gauge testers	N	10525	Thread plug gauges	N	20707	Chloride meters	N
			10527	Thread ring gauges	N	208.Viscosity		
10207	Doctor blades	N	10529	V-blocks, Box blocks	N	20801	Kinematic viscometers; capillary, etc.	N
10209	End bars	N	106.Various dimensional			20802	Dynamic viscometers; rotaional, etc.	N
10210	Extensometers, linear displacement transducers	Y	10601	Inside/Outside/Gear tooth calipers, Caliper gauges	Y	209.Fluid flow		
10211	Filler gauges	Y	10603	Cylinder/bore gauges	Y	20901	Anemometers; hot-wire	N
10212	Film applicators	N	10604	Depth gauges,Depth micrometers	Y	20902	Anemometers; pitot tube,etc.	N
10213	Gap gauges	N	10605	Dial/Digital gauges	Y	210. Hardness		
10214	Gauge blocks, by comparison	N	10608	Grind gauges	N	21001	Brinell Hardness Testing Machines	Y
10216	Height gauges/measuring machines	Y	10609	Micro indicators, Test indicators	Y	21002	Rockwell Hardness Testing Machines	Y
10220	Standard measuring machines	Y	10610	Micrometer heads	N	21004	Vickers Hardness Testing Machines	Y
10223	Electronic micrometers	Y	10611	3-point micrometers	Y	21005	Durometer Hardness Testers	N
10224	Height micrometers, Riser blocks	N	10612	Inside micrometers	Y	301.Time/Frequency		
			10613	Micrometer, outside	Y	30102	Frequency standards	N
10227	Standard tape rules, Peripheral gauges	N	10617	Standard sieves	N	30103	Frequency standards	N
			201.Mass			30104	General frequency sources	Y
10228	Cylindrical plug/pin gauges, Thread measuring wire gauges	Y	20103	Auto-packer scale balances	Y	30105	Time interval sources	Y
			20105	Counter beam balances	Y	30106	Time interval meters/ Stop watches/Timers	Y
10229	Radius gauges	N	20109	Electric balances	Y	302.Velocity & revolution		
10230	Cylindrical ring gauges	N	20112	Platform scale balances	Y	30202	Contact type tachometers	N
10232	Step gauges	N	20113	Spring scale balances	Y	30203	Photo tachometers/stroboscopes	Y
10233	Taper thickness gauges	N	20116	Weights	N	401.DC voltage & current		
10234	Ultrasonic thickness gauges	Y	202.Force			40101	DC ammeters	Y
10235	Ultrasonic/coating thickness specimens	N	20203	Tension/Compression testing machines	Y	40102	Transconductance amplifiers	Y
10236	Coating thickness testers	Y	20204	Push-Pull Gauges	N	40103	DC voltage/current calibrators	Y
104.Form			203.Torque			40104	Electrical temperature calibrators	Y
10401	Form testers	Y	20302	Torque measuring devices	N	40105	DC current shunts	Y
10404	Optical flats	N				40106	Galvanometers/null detectors	Y
10405	Optical parallels	N	20303	Torque wrenches/drivers	Y	40108	DC power supplies	Y
10406	Paralled blocks	N	204.Pressure			40112	DC voltmeters	Y
10407	Precision surface plates	Y	20406	Absolute pressure gauges	N	40113	Static/Ionic voltmeters	N
			20408	Compound pressure gauges	Y			
10409	Roundness measurement instruments	Y	20409	Differential pressure gauges	Y			
10412	Straight edges	N	20411	Gauge pressure gauges	Y			
10413	Straight rules	N	20412	Pressure transducers/transmitters	Y			
105.Complex geometry			20413	Dial type vacuum gauges	Y			
10503	Contact coordinate measuring machines	Y	206.Volume					
			20601	Volumetric glasswares	N			
10504	Non-contact coordinate measuring machines	Y	20604	Standard volume vessels	Y			
			20605	Concrete air content meters	N			
10511	Measuring microscopes, Profile projectors	Y	20606	Piston type volume meters	N			

Field Code	Measured Quantity Instrument or Gauge	on-site	Field Code	Measured Quantity Instrument or Gauge	on-site	Field Code	Measured Quantity Instrument or Gauge	on-site
402. Resistance, Capacitance and Inductance			404. Other DC & LF Measurements			501. Contact thermometry		
40201	Capacitance bridges/ indicators	Y	40423	Random wave generators	Y	50101	Temperature generators: ovens, furnaces, isothermal liquid baths, ice-point baths, dry-block calibrators	Y
40202	Decade capacitors	Y	40424	Volt/Current recorders	Y			
40205	Earth testers	Y	40425	Relay test sets	Y			
40206	Inductance bridges /indicators	Y	40426	LF signal generators	Y			
40208	Inductors	Y	40427	LF spectrum analyzers	Y			
40210	Insulation testers	Y	40429	Sweep generators	Y	50102	Temperature indicators /recorders/controllers, temperature calibrators	Y
40213	Resistance bridges & Similar instruments	Y	40430	Signal transducers	Y	50103	Glass thermometers; liquid-in-glass, Beckmann	N
40214	Resistance meters	Y	40433	Waveform analyzers	Y			
40215	Resistors	Y	40434	AC/DC high voltage generators	Y			
40217	Impedance bridges /LCR meters	Y	40435	AC/DC high voltage probes	Y	50104	Resistance thermometers; SPRT, IPRT, thermistors, etc.	Y
403. AC voltage, current & power			406. Radio frequency measurements			50105	Thermal expansion thermometers ; bimetal, gas or liquid type	Y
40301	AC ammeters	Y	40601	RF amplifiers	Y			
40302	Clamp ammeters/voltmeters	Y	40602	Coaxial attenuators	Y	50106	Thermocouples:noble metal, base metal, pure metal, special type, etc.	Y
40303	AC voltage/current calibrators	Y	40605	Burst Pulse generators	Y			
40304	Power calibrators	N	40607	RF power meter calibrators	Y	50107	Temperature transducers	Y
40305	AC current shunts	Y	40608	EMC transducers ; current probes, absorbing clamps, etc.	Y			
40307	Voltage/current phase angle meters/synchro resolve meters	Y	40610	Coaxial directional couplers/splitters	Y	502. non contact thermometry		
40310	Power factor meters	Y	40613	Electrostatic discharge generators	N	50204	Standard radiation thermometers	N
40311	AC power meters	Y	40614	EMC receivers	Y	50206	Blackbody Furnaces	N
40312	AC power supplies	Y	40615	Filters, RF/microwave	Y	503. Humidity		
40313	Puncture/safety testers	Y	40618	Line impedance stabilization networks ; LISN, CDN, ISN, etc.	Y	50301	Dew-point hygrometers: chilled mirror, alumina thin film, etc.	N
40314	Power recorders	Y	40621	Mobile communication test sets	Y	50302	Relative humidity hygrometers; polimer thinfilm, hair, etc.	N
40318	AC voltmeters	Y						
404. Other DC & LF Measurements			40622	Modulation meters	Y	50303	Psychrometers; assmann ventilated, PRT type, etc.	N
40401	LF amplifiers	Y	40623	Network analyzers	Y	50304	Temperature humidity recorders:Hygrothermograph, etc	N
40402	DC/LF attenuators	Y	40626	Noise impulse simulators	Y			
40403	Multimeter calibrators	Y	40635	RF power meters	Y	50305	Transducers; dew-point /relative humidity	N
40404	Oscilloscope calibrators	Y	40636	Diode power sensors	Y			
40406	Video signal generators	Y	40637	Thermocouple power sensors	Y	50306	Humidity generators; two-pressure, two-temperature, flow mixing humidity generator, constant temperature and humidity chamber, etc.	Y
40407	Audio distortion analyzers /meters	Y	40638	Pulse generator	Y			
40408	LF filters	Y	40639	Radar test sets	Y			
40409	LF/Audio signal analyzers	Y	40640	RF signal generators	Y			
40410	Line frequency meters	Y	40641	RF spectrum analyzers	Y			
40411	Function generators	Y	40642	RF speed guns	Y			
40413	AC/DC high voltages volt meters	Y	40643	Surge generators	Y			
40414	LF impulse generators	Y	40644	SWR meters	Y	504. Moisture		
40416	Leakage current testers	Y	40645	RF terminations	Y	50402	Wood moisture meters	N
40417	Electronic AC/DC loads	Y	40646	Thermistor mount, coaxial	N	601. Sound in air		
40418	Modulation meters	Y	40650	RF voltmeters	Y	60106	Sound level meters	N
40419	Analogue/Digital multimeters	Y	40652	Field strength meters	Y	603. Vibration		
40420	Noise meters	Y	40654	Dip simulators	Y	60301	Vibration Calibrators	N
40421	Oscilloscopes	Y	407. Field strength & antennas			60302	Vibration transducers	N
40422	LF phase meters	Y	40704	Loop antennas	N	60303	Vibration measuring instruments	N
			40705	monopole antennas	N	701. Photometry		
						70101	Illuminance meters	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-008.
3. On-site calibration is allowed to items with marking 'Y', not allowed to items with marking 'N'.
4. Calibration and Measurement Capability (CMC) means capabilities provided by accredited calibration laboratories. It expresses the lowest uncertainty of measurement that can be achieved during a calibration. CMC normally is quoted as an expanded uncertainty.
5. Due to the calibration environment such as reference standards or customers' facilities, it is noted that uncertainty of measurement on a calibration certificate may be expressed larger than CMC on scope of accreditation in general.

102. Linear dimension

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Electrical/Mechanical Comparators	10203	(0 ~ 2) mm	0.12 μm	CP-10203
Dial/Cylinder gauge testers	10206	(0 ~ 25) mm	$\sqrt{0.23^2+0.004 L^2} \mu\text{m} (L = \text{mm})$	CP-10206
Doctor blades	10207	(0 ~ 10) mm	2.2 μm	CP-10207
End bars	10209	(0 ~ 500) mm	$\sqrt{0.7^2+0.005 L^2} \mu\text{m} (L = \text{mm})$	CP-10209
Extensometers, linear displacement transducers	10210	(0 ~ 500) mm	$\sqrt{0.6^2+0.004 L^2} \mu\text{m} (L = \text{mm})$	CP-10210
Filler gauges	10211	(0 ~ 10) mm	0.6 μm	CP-10211
film applicators	10212	(0 ~ 10) mm	2.1 μm	CP-10212
Gap gauges	10213	(1 ~ 300) mm	$\sqrt{0.7^2+0.005 L^2} \mu\text{m} (L = \text{mm})$	CP-10213
Gauge blocks, by comparison	10214	(0.5 ~ 100) mm	$\sqrt{81^2+1.3^2 L^2} \text{nm} (L = \text{mm})$	CP-10214
Height gauges/measuring machines	10216	(0 ~ 1 000) mm	$\sqrt{0.8^2+0.004 L^2} \mu\text{m} (L = \text{mm})$	CP-10216
Standard measuring machines	10220	(0 ~ 500) mm	$\sqrt{0.2^2+0.003 L^2} \mu\text{m} (L = \text{mm})$	CP-10220
Electronic micrometers	10223	(0 ~ 5) mm	0.12 μm	CP-10223
Height micrometers, Riser blocks Block calibration Head calibration	10224	(0 ~ 600) mm 30 mm	$\sqrt{0.8^2+0.004 L^2} \mu\text{m} (L = \text{mm})$ 1.0 μm	CP-10224
Standard tape rules, Peripheral gauges	10227	(0 ~ 15) m	$\sqrt{0.14^2+0.009 L^2} \text{mm} (L = \text{mm})$	CP-10227
Cylindrical plug/pin gauges, Thread measuring wire gauges Cylindrical plug/pin gauges	10228	(0.1 ~ 200) mm	$\sqrt{0.6^2+0.005 L^2} \mu\text{m} (L = \text{mm})$	CP-10228
Radius gauges	10229	(0.35 ~ 100) mm	1.8 μm	CP-10229
Cylindrical ring gauges	10230	(2 ~ 200) mm	$\sqrt{1.2^2+0.004 L^2} \mu\text{m} (L = \text{mm})$	CP-10230

102. Linear dimension

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Step gauges	10232	(0 ~ 670) mm	$\sqrt{0.9^2+(0.004 \cdot 4 \times I_0)^2} \mu\text{m} (I_0 = \text{mm})$	CP-10232
Taper thickness gauges	10233	(0 ~ 50) mm	1.5 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 $\sqrt{0.8^2+0.004 \cdot 3^2 \times I^2} \mu\text{m} (I = \text{mm})$	CP-10235-1 CP-10235-2
Coating thickness testers	10236	(0 ~ 7.4) mm	1.6 μm	CP-10236

104. Form

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Form testers Longitudinal direction (Z-axis) Transverse direction (X-axis)	10401	(0 ~ 100) mm (0 ~ 50) mm	$\sqrt{0.6^2+0.004 \cdot 4^2 \times 1^2} \mu\text{m} (1 = \text{mm})$ $\sqrt{1.0^2+0.004 \cdot 2^2 \times 1^2} \mu\text{m} (1 = \text{mm})$	CP-10401
Optical flats Flatness	10404	(0 ~ 75) mm	0.11 μm	CP-10404
Optical parallels Flatness Parallelism	10405	(0 ~ 60) mm (0 ~ 60) mm	0.08 μm 0.06 μm	CP-10405
Parallel blocks Flatness Parallelism Length difference of both block	10406	(0 ~ 1 000) mm	1.1 μm 1.1 μm 1.5 μm	CP-10406
Precision surface plates Flatness	10407	(1 000 × 1 000) mm (3 000 × 3 000) mm	2.5 μm 5.3 μm	CP-10407
Roundness measurement instruments Accuracy of detector Rotating accuracy of circumferential direction	10409	(0 ~ 30) μm 360°	0.50 μm 0.076 μm	CP-10409
Straight edges Straightness Parallelism	10412	(0 ~ 1 500) mm (0 ~ 1 500) mm	1.6 μm 1.6 μm	CP-10412
Straight rules	10413	(0 ~ 2 000) mm	0.06 mm	CP-10413

105. Complex geometry

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Contact coordinate measuring machines	10503	(0 ~ 1 000) mm	$\sqrt{0.6^2+0.004 \cdot 6^2 \times J^2} \mu\text{m} (J = \text{mm})$	CP-10503
Non-contact coordinate measuring machines	10504	(0 ~ 1 000) mm	$\sqrt{0.5^2+0.003 \cdot 8^2 \times J^2} \mu\text{m} (J = \text{mm})$	CP-10504
Measuring microscopes, Profile projectors Measuring microscopes Length Profile projectors Length Rectangular Scale Angle	10511	(0 ~ 500) mm (0 ~ 500) mm (0 ~ 360) °	$\sqrt{0.5^2+0.003 \cdot 8^2 \times J^2} \mu\text{m} (J = \text{mm})$ $\sqrt{1.3^2+0.003 \cdot 8^2 \times J^2} \mu\text{m} (J = \text{mm})$ 2.4 μm 6×10^{-4} 1.1'	CP-10511-1 CP-10511-2
Micro measuring microscopes	10512	(0 ~ 30) mm	4 μm	CP-10512
Stylus type roughness testers Ra Rz H	10517	(0 ~ 5) μm (0 ~ 20) μm (0 ~ 20) μm	0.040 μm 0.11 μm 0.040 μm	CP-10517
Thread plug gauges Outside diameter Pitch Half angle of thread Thread diameter	10525	(0 ~ 150) mm (0.2 ~ 6) mm (0 ~ 30) ° (0 ~ 150) mm	$\sqrt{0.6^2+0.004 \cdot 2^2 \times J^2} \mu\text{m} (J = \text{mm})$ 1.2 μm 1.9' $\sqrt{1.6^2+0.004 \cdot 2^2 \times J^2} \mu\text{m} (J = \text{mm})$	CP-10525
Thread ring gauges Pitch diameter Minor diameter	10527	(6 ~ 100) μm (6 ~ 100) μm	1.6 μm 2.2 μm	CP-10527
V-blocks, Box blocks Flatness Parallelism Gradient Difference of both part	10529	(0 ~ 150) mm	1.0 μm 2.1 μm 0.7 μm 2.1 μm	CP-10529

106. Various dimensional

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Caliper gauges Inside/Outside/gear tooth calipers Caliper gauges Inside/Outside calipers	10601	(0 ~ 200) mm (0 ~ 2 000) mm	$\sqrt{3.6^2+0.004 4^2 \times l^2}$ μm (l = mm) $\sqrt{9.1^2+0.004 3^2 \times l^2}$ μm (l = mm)	CP-10601-1 CP-10601-2
Cylinder/Bore gauges	10603	(0 ~ 800) mm	0.9 μm	CP-10603
Depth gauges, Depth micrometers Depth gauges Depth micrometers	10604	(300 ~ 1 000) mm (0 ~ 300) mm	$\sqrt{7.6^2+0.004 7^2 \times l^2}$ μm (l = mm) $\sqrt{1.0^2+0.004 6^2 \times l^2}$ μm (l = mm)	CP-10604-1 CP-10604-2
Dial/Digital gauges	10605	(0 ~ 100) mm	$\sqrt{1.5^2+0.005 6^2 \times l^2}$ μm (l = mm)	CP-10605
Grind gauges Depth of inclined plane Straightness of scraper	10608	(0 ~ 1) mm (0 ~ 70) mm	2.2 μm 1.6 μm	CP-10608
Micro indicators, Test indicators	10609	(0 ~ 5) mm	0.4 μm	CP-10609
Micrometer head	10610	(0 ~ 50) mm	$\sqrt{0.7^2+0.004 5^2 \times l^2}$ μm (l = mm)	CP-10610
3-points micrometers	10611	(2 ~ 200) mm	$\sqrt{1.4^2+0.004 1^2 \times l^2}$ μm (l = mm)	CP-10611
Inside micrometers	10612	(5 ~ 1 000) mm	$\sqrt{0.8^2+0.004 3^2 \times l^2}$ μm (l = mm)	CP-10612
Outside micrometers	10613	(0 ~ 2 000) mm (5 ~ 25) mm	$\sqrt{1.6^2+0.004 3^2 \times l^2}$ μm (l = mm) 1.3 μm	CP-10613-1 CP-10613-2
Standard sieves Sieve Wire	10617	(0 ~ 100) mm (0 ~ 10) mm	4.4 μm 2.9 μm	CP-10617

201. Mass

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Auto-packer scale balances	20103	(0 ~ 5) kg (5 ~ 10) kg (10 ~ 50) kg (50 ~ 200) kg	1.2 g 2.3 g 12 g 0.12 kg	CP-20103
Counter beam balances	20105	(0 ~ 311) g (311 ~ 2 610) g (2.61 ~ 20) kg	9.1 mg 91 mg 0.91 g	CP-20105
Electric balancers	20109	(0 ~ 5) g (5 ~ 30) g (30 ~ 200) g (200 ~ 2 500) g (2.5 ~ 5) kg (5 ~ 20) kg (20 ~ 100) kg (100 ~ 300) kg (300 ~ 1 000) kg	40 µg 63 µg 0.20 mg 1.8 mg 5.3 mg 11 mg 1.4 g 2.0 g 7.9 g	CP-20109
Platform scale balances	20112	(0 ~ 50) kg (50 ~ 100) kg (100 ~ 200) kg (200 ~ 500) kg	19 g 46 g 91 g 0.19 kg	CP-20112
Spring scale balances	20113	(0 ~ 1) kg (1 ~ 50) kg (50 ~ 100) kg	1.9 g 91 g 0.16 kg	CP-20113
Weights	20116	E2. (1 mg ~ 5 kg) 1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 500 mg 1 g 2 g 5 g 10 g 20 g 50 g 100 g 200 g 500 g 1 kg 2 kg 5 kg F1. (10 kg ~ 20 kg) 10 kg 20 kg	2.0 µg 2.0 µg 2.0 µg 2.0 µg 2.1 µg 2.4 µg 2.4 µg 2.6 µg 3.1 µg 3.5 µg 4.4 µg 13 µg 14 µg 15 µg 16 µg 20 µg 33 µg 0.14 mg 0.20 mg 0.33 mg 1.3 mg 5.4 mg 11 mg	CP-20116

202. Force

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments	
Tension/Compression testing machine	20203	Pull	(10 ~ 100) N (100 ~ 200) N (200 ~ 500) N (500 ~ 1 000) N (1 ~ 2) kN (2 ~ 5) kN (5 ~ 10) kN	8.2×10^{-4} 7.0×10^{-4} 7.6×10^{-4} 8.2×10^{-4} 7.0×10^{-4} 1.1×10^{-3} 1.2×10^{-3}	CP-20203
		Push	(10 ~ 100) N (100 ~ 200) N (200 ~ 500) N (500 ~ 1 000) N (1 ~ 2) kN (2 ~ 5) kN (5 ~ 10) kN (10 ~ 30) kN (30 ~ 50) kN (50 ~ 100) kN (100 ~ 300) kN (300 ~ 500) kN (500 ~ 1 000) kN	1.3×10^{-3} 1.1×10^{-3} 9.0×10^{-4} 7.6×10^{-4} 4.6×10^{-4} 4.2×10^{-4} 9.6×10^{-4} 1.2×10^{-3} 1.1×10^{-3} 1.1×10^{-3} 1.3×10^{-3} 1.4×10^{-3} 1.2×10^{-3}	
Push-pull gauges	20204	(1 ~ 500) N	1.2×10^{-3}	CP-20204	

203. Torque

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Torque measuring devices	20302	(0.1 ~ 1) N · m (1 ~ 5) N · m (5 ~ 10) N · m (10 ~ 50) N · m	2.9×10^{-3} 2.8×10^{-3} 3.0×10^{-3} 2.3×10^{-3}	CP-20302
Torque wrenches/drivers	20303	(0.001 ~ 0.009) N · m (0.009 ~ 0.06) N · m (0.06 ~ 0.1) N · m (0.1 ~ 1) N · m (1 ~ 5) N · m (5 ~ 50) N · m (50 ~ 200) N · m (200 ~ 1 000) N · m	4.2×10^{-2} 2.4×10^{-2} 7.8×10^{-3} 1.2×10^{-2} 9.1×10^{-3} 3.5×10^{-3} 4.2×10^{-3} 6.8×10^{-3}	CP-20303

204. Pressure

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Absolute pressure gauges	20406	(80 ~ 110) kPa	1.9×10^{-4}	CP-20406
Compound pressure gauges	20408	(-100 ~ 0) kPa (0 ~ 2) kPa (2 ~ 200) kPa (0.2 ~ 2) MPa (2 ~ 5) MPa	8.9×10^{-4} 6.0×10^{-4} 7.9×10^{-5} 7.8×10^{-5} 7.8×10^{-5}	CP-20408
Differential pressure gauges	20409	(0 ~ 2) kPa (2 ~ 200) kPa (0.2 ~ 2) MPa	6.0×10^{-4} 7.4×10^{-5} 7.2×10^{-5}	CP-20409
Gauge pressure gauges	20411	(0 ~ 2) kPa (2 ~ 200) kPa (0.2 ~ 2) MPa (2 ~ 5) MPa (5 ~ 100) MPa	6.0×10^{-4} 7.9×10^{-5} 7.8×10^{-5} 8.0×10^{-5} 2.0×10^{-4}	CP-20411
Pressure transducers/ transmitters	20412	(0 ~ 200) kPa (0.2 ~ 2) MPa (2 ~ 5) MPa (5 ~ 100) MPa	5.0×10^{-4} 5.0×10^{-4} 4.7×10^{-4} 4.5×10^{-4}	CP-20412
Dial type vacuum gauges	20413	(-100 ~ 0) kPa	8.9×10^{-4}	CP-20413

206. Volume

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Volumetric glasswares	20601	(0 ~ 1) ml (1 ~ 2) ml (2 ~ 5) ml (5 ~ 10) ml (10 ~ 25) ml (25 ~ 50) ml (50 ~ 100) ml (100 ~ 250) ml (250 ~ 500) ml (500 ~ 1 000) ml (1 000 ~ 2 000) ml	1.5 μ l 2.8 μ l 3.6 μ l 6.0 μ l 9.3 μ l 15 μ l 20 μ l 51 μ l 88 μ l 0.15 ml 0.24 ml	CP-20601
Standard volume vessels	20604	(0 ~ 20) L (20 ~ 100) L (100 ~ 200) L (200 ~ 500) L (500 ~ 1 000) L (1 000 ~ 2 000) L (2 000 ~ 5 000) L (5 000 ~ 10 000) L	6.9 ml 22 ml 66 ml 0.17 L 0.33 L 0.66 L 1.8 L 3.5 L	CP-20604
Concrete air content meters	20605	(0 ~ 10) %	0.02 %	CP-20605

206. Volume

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Piston type volume meters	20606	(0.1 ~ 2) μ l	5.8 nl	CP-20606
		(2 ~ 5) μ l	7.9 nl	
		(5 ~ 10) μ l	9.9 nl	
		(0.01 ~ 0.02) ml	0.021 μ l	
		(0.02 ~ 0.05) ml	0.045 μ l	
		(0.05 ~ 0.1) ml	0.076 μ l	
		(0.1 ~ 0.2) ml	0.17 μ l	
		(0.2 ~ 0.5) ml	0.37 μ l	
		(0.5 ~ 1) ml	0.73 μ l	
		(1 ~ 2) ml	1.4 μ l	
		(2 ~ 5) ml	3.7 μ l	
		(5 ~ 10) ml	7.2 μ l	
		(10 ~ 20) ml	14 μ l	
		(20 ~ 50) ml	32 μ l	
(50 ~ 100) ml	75 μ l			

207. Density

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Salinity meters	20704	(0.5 ~ 15) %	0.03 %	CP-20704
Sucrose meters	20705	(0 ~ 60) %	0.18 %	CP-20705
Chloride meters	20707	(0.000 ~ 1.000) %	0.008 4 %	CP-20707

208. Viscosity

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments	
Kinematic viscometers; capillary, etc.	20801			CP-20801	
		Cpillary viscometers	(2.5 ~ 200 000) mm^2/s		2.0×10^{-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, etc.	20802			CP-20802	
Rotational viscometers		(2.5 ~ 200 000) $\text{mPa} \cdot \text{s}$	2.0×10^{-2}		

209. Fluid flow

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
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

210. HARDNESS

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Brinell Hardness Testing Machines	21001	(100 ~ 225) HBW 10/3 000 (225 ~ 500) HBW 10/3 000	3.0 HBW 10/3 000 4.2 HBW 10/3 000	CP-21001
Rockwell Hardness Testing Machines	21002	(20 ~ 70) HRC (20 ~ 100) HRBW	0.44 HRC 0.75 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 225 HV 1 이하 (400 ~ 600) HV 1 700 HV 1 이상	7.1 HV 0.2 17 HV 0.2 29 HV 0.2 5.2 HV 0.3 18 HV 0.3 29 HV 0.3 7.0 HV 0.5 16 HV 0.5 24 HV 0.5 4.2 HV 1 15 HV 1 22 HV 1	CP-21004
Durometer Hardness Testers	21005	(0 ~ 100) HDA (0 ~ 100) HDD	0.18 HDA 0.18 HDD	CP-21005

301. Time/Frequency

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Frequency standards Time base Frequency	30102	(0.1 ~ 10) MHz	4.9×10^{-12}	CP-30102
General frequency sources Time base Frequency	30103	(0.1 ~ 10) MHz	4.9×10^{-12}	CP-30103
Frequency meters/counters Time base Frequency Input Frequency	30104	(0.1 ~ 10) MHz 1 Hz ~ 40 GHz	4.5×10^{-12} 6.0×10^{-8}	CP-30104
Time interval sources Period Time base Frequency	30105	10 ns ~ 5 s (0.1 ~ 10) MHz	5.8×10^{-6} 4.9×10^{-12}	CP-30105
Time interval meters/ Stop watches/Timers Stop watch Timer	30106	1 ms ~ 24 h (1 ~ 10) s (10 ~ 100) s (100 ~ 999) s	1.4×10^{-7} 6.4 ms 64 ms 0.64 s	CP-30106

302. Velocity & revolution

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Contact type tachometers	30202	(30 ~ 1 000) min ⁻¹ (1 000 ~ 4 000) min ⁻¹	7.0×10^{-2} min ⁻¹ 2.0×10^{-1} min ⁻¹	CP-30202
Photo tachometers/ stroboscopes	30203	(6 ~ 100) min ⁻¹ (100 ~ 1 000) min ⁻¹ (1 000 ~ 10 000) min ⁻¹ (10 000 ~ 90 000) min ⁻¹	8.0×10^{-3} min ⁻¹ 2.0×10^{-2} min ⁻¹ 2.0×10^{-1} min ⁻¹ 2.0 min ⁻¹	CP-30203

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
DC ammeters	40101	1 μA (1 ~ 10) μA (10 ~ 100) μA (0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 100) A	6.1 nA 6.1×10^{-3} 6.5×10^{-4} 3.4×10^{-4} 3.4×10^{-4} 3.2×10^{-4} 3.6×10^{-4} 7.7×10^{-4} 2.3×10^{-3}	CP-40101
Transconductance amplifier DC Current AC Current	40102	(10 ~ 100) μA (0.1 ~ 100) mA (0.1 ~ 10) A (10 ~ 100) A 40 Hz ~ 1 kHz (10 ~ 100) μA (0.1 ~ 1 000) mA (1 ~ 100) A	2.3×10^{-4} 2.5×10^{-5} 1.9×10^{-4} 9.0×10^{-2} 2.7×10^{-2} 2.8×10^{-4} 1.2×10^{-3}	CP-40102
DC voltage/current calibrators DC voltage DC Current	40103	(0 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V (1 ~ 10) μA (0.01 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 100) A	8.1×10^{-5} 9.0×10^{-6} 3.8×10^{-6} 4.0×10^{-6} 6.0×10^{-6} 6.1×10^{-6} 7.0×10^{-4} 2.4×10^{-5} 2.5×10^{-5} 4.7×10^{-5} 1.9×10^{-4} 4.3×10^{-4} 2.4×10^{-4}	CP-40103

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
DC voltage/current calibrators Resistance	40103	(0 ~ 1) Ω (0.001 ~ 100) kΩ (0.1 ~ 1) MΩ (1 ~ 10) MΩ	1.9×10^{-5} 1.4×10^{-5} 1.5×10^{-5} 4.2×10^{-5}	CP-40103
Electrical temperature calibrators Resistance(Source) PT 100 Ω JPT 100 Ω PT 1000 Ω Temperature(Source) TC E J Temperature(Source) K N R S B T Resistance(Measure)PT 100 Ω JPT 100 Ω Temperature(Measure) TC E J K N R S B T	40104	(18.49 ~ 375.52) Ω (17.14 ~ 317.11) Ω (185.21 ~ 3137.08) Ω (- 9.719 ~ 76.370) mV (- 8.086 ~ 69.555) mV (- 5.891 ~ 54.866) mV (- 3.990 ~ 47.514) mV (0 ~ 21.088) mV (0 ~ 18.681) mV (1.792 ~ 13.820) mV (- 6.180 ~ 20.843) mV (18.49 ~ 375.52) Ω (17.14 ~ 317.11) Ω (- 9.719 ~ 76.370) mV (- 8.086 ~ 69.555) mV (- 5.891 ~ 54.866) mV (- 3.990 ~ 47.514) mV (0 ~ 21.088) mV (0 ~ 18.681) mV (1.792 ~ 13.820) mV (- 6.180 ~ 20.843) mV	3.6×10^{-4} 5.8×10^{-4} 4.3×10^{-5} 7.3×10^{-4} 7.0×10^{-4} 2.9×10^{-4} 4.3×10^{-4} 3.1×10^{-4} 1.1×10^{-4} 5.8×10^{-4} 5.7×10^{-4} 3.4×10^{-4} 3.6×10^{-4} 5.9×10^{-4} 5.7×10^{-4} 2.4×10^{-4} 3.5×10^{-4} 2.5×10^{-4} 9.2×10^{-5} 4.7×10^{-4} 4.6×10^{-4}	CP-40104
DC current shunts Resistance	40105	(10 ~ 100) Ω (1 ~ 10) Ω (0.1 ~ 1) Ω (10 ~ 100) mΩ (1 ~ 10) mΩ (0.1 ~ 1) mΩ	4.4×10^{-5} 4.2×10^{-5} 5.4×10^{-5} 9.3×10^{-5} 7.0×10^{-4} 4.7×10^{-4}	CP-40105

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Galvanometers/null detectors DC voltage	40106	(10 ~ 100) μ V (0.1 ~ 1) mV (1 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V	0.45 μ V 0.85 μ V 7.2 μ V 0.072 mV 0.72 mV 7.2 mV 0.072 V 0.72 V	CP-40106
DC current		(10 ~ 100) μ A (0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A	73 nA 0.72 μ A 7.2 μ A 73 μ A 0.72 mA	
DC power supply DC voltage	40108	(0.01 ~ 0.1) V (0.1 ~ 10) V (10 ~ 1000) V	8.1×10^{-5} 3.8×10^{-5} 4.5×10^{-5}	CP-40108
DC current		(1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 200) A	6.7×10^{-4} 4.0×10^{-4} 2.9×10^{-4} 3.0×10^{-4} 2.9×10^{-4}	
DC voltmeters	40112	(0.1 ~ 1) mV (1 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V	4.5×10^{-3} 2.3×10^{-4} 4.1×10^{-5} 4.5×10^{-5} 3.9×10^{-5} 4.5×10^{-5} 5.0×10^{-5}	CP-40112
Static/Ionic voltmeters	40113	\pm (0 ~ 2) kV \pm (2 ~ 4) kV \pm (4 ~ 6) kV \pm (6 ~ 8) kV \pm (8 ~ 10) kV \pm (10 ~ 12) kV \pm (12 ~ 14) kV \pm (14 ~ 16) kV \pm (16 ~ 18) kV \pm (18 ~ 20) kV \pm (20 ~ 25) kV \pm (25 ~ 30) kV \pm (30 ~ 35) kV \pm (35 ~ 40) kV \pm (40 ~ 45) kV \pm (45 ~ 50) kV	0.011 kV 0.012 kV 0.015 kV 0.016 kV 0.064 kV 0.11 kV 0.11 kV 0.11 kV 0.11 kV 0.11 kV 0.16 kV 0.16 kV 0.20 kV 0.20 kV 0.25 kV 0.25 kV	CP-40113

402. Resistance, Capacitance and Inductance

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Capacitance bridges/indicators	40201	1 pF		CP-40201
		1 kHz	5.1×10^{-4}	
		1 MHz	5.0×10^{-4}	
		2 MHz	6.0×10^{-4}	
		3 MHz	7.7×10^{-4}	
		4 MHz	9.8×10^{-4}	
		5 MHz	3.5×10^{-3}	
		10 MHz	4.4×10^{-3}	
		13 MHz	2.4×10^{-2}	
		(1 ~ 10) pF		
		1 kHz	4.4×10^{-4}	
		1 MHz	4.3×10^{-4}	
		2 MHz	4.3×10^{-4}	
		3 MHz	4.3×10^{-4}	
		4 MHz	4.4×10^{-4}	
		5 MHz	4.4×10^{-4}	
		10 MHz	2.4×10^{-3}	
		13 MHz	2.4×10^{-3}	
		(10 ~ 100) pF		
		1 kHz	4.4×10^{-4}	
		1 MHz	4.4×10^{-4}	
		2 MHz	4.3×10^{-4}	
		3 MHz	4.3×10^{-4}	
		4 MHz	4.5×10^{-4}	
		5 MHz	4.6×10^{-4}	
		10 MHz	2.4×10^{-3}	
		13 MHz	2.4×10^{-3}	
		(0.1 ~ 1) nF		
		1 kHz	2.0×10^{-4}	
		1 MHz	4.5×10^{-4}	
		2 MHz	4.5×10^{-4}	
		3 MHz	5.4×10^{-4}	
		4 MHz	6.2×10^{-4}	
		5 MHz	7.7×10^{-4}	
		10 MHz	3.1×10^{-3}	
		13 MHz	3.8×10^{-3}	
1 nF				
120 Hz	1.5×10^{-4}			
1 kHz	1.5×10^{-4}			
10 kHz	1.5×10^{-4}			
(1 ~ 10) nF				
120 Hz	1.3×10^{-4}			
1 kHz	1.3×10^{-4}			
10 kHz	1.3×10^{-4}			
(10 ~ 100) nF				
120 Hz	1.4×10^{-4}			
1 kHz	1.4×10^{-4}			
10 kHz	1.4×10^{-4}			

402. Resistance, Capacitance and Inductance

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Capacitance bridges/indicators	40201	(0.1 ~ 1) μ F 120 Hz 1 kHz 10 kHz	5.3×10^{-4} 5.3×10^{-4} 5.3×10^{-4}	CP-40201
Decade capacitors	40202	1 kHz (1 ~ 100) pF (100 ~ 1 000) pF (1 ~ 10) nF (10 ~ 100) nF (0.1 ~ 1) μ F	0.2 pF 0.24 pF 0.002 3 nF 0.024 nF 0.24 nF	CP-40202
Earth testers Resistance AC Voltage	40205	0.1 Ω (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω (0.1 ~ 1) k Ω (1 ~ 10) k Ω (10 ~ 100) k Ω 40 Hz ~ 100 Hz (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 300) V (300 ~ 500) V (500 ~ 1 000) V 100 Hz ~ 1 kHz 0.1 V (0.1 ~ 1) V (1 ~ 100) V (100 ~ 300) V (300 ~ 500) V (500 ~ 1 000) V	9.0×10^{-4} 1.1×10^{-3} 9.0×10^{-4} 1.0×10^{-3} 1.1×10^{-3} 3.6×10^{-3} 2.6×10^{-3} 1.4×10^{-4} 1.3×10^{-4} 1.2×10^{-4} 1.6×10^{-4} 1.1×10^{-4} 3.4×10^{-4} 1.3×10^{-4} 1.5×10^{-4} 1.3×10^{-4} 1.6×10^{-4} 1.1×10^{-4} 1.4×10^{-4}	CP-40205
Inductance bridges/indicators	40206	1 kHz 100 μ H 1 mH 10 mH 100 mH 1 H	0.049 mH 0.000 33 mH 0.003 3 mH 0.040 mH 0.000 36 H	CP-40206
Inductors	40208	1 kHz 100 μ H (0.1 ~ 1) mH (1 ~ 10) mH (10 ~ 100) mH (0.1 ~ 1) H	0.4 μ H 0.43 μ H 0.004 3 mH 0.043 mH 0.43 mH	CP-40208

402. Resistance, Capacitance and Inductance

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Insulation testers Insulation Voltage	40210	(25 ~ 100) V (0.1 ~ 0.5) kV (0.5 ~ 1) kV (1 ~ 2) kV (2 ~ 3) kV (3 ~ 4) kV (4 ~ 5) kV	7.6×10^{-4} 1.5×10^{-4} 1.2×10^{-4} 3.3×10^{-3} 4.9×10^{-3} 5.9×10^{-3} 7.4×10^{-3}	CP-40210
AC Voltage		(1 ~ 100) V (0.1 ~ 0.2) kV (0.2 ~ 0.4) kV (0.4 ~ 0.6) kV	1.1×10^{-4} 2.2×10^{-4} 2.5×10^{-4} 1.9×10^{-4}	
Insulation Resistance		1 k Ω 1 k Ω ~ 1 M Ω (1 ~ 10) M Ω (10 ~ 100) M Ω (0.1 ~ 1) G Ω (1 ~ 10) G Ω (10 ~ 100) G Ω (0.1 ~ 1) T Ω	2.1×10^{-4} 4.0×10^{-5} 6.0×10^{-5} 3.0×10^{-4} 7.0×10^{-4} 1.6×10^{-3} 1.7×10^{-3} 4.0×10^{-3}	
Resistance bridges & Similar instruments Measuring ARM	40213	0.01 Ω (0.01 ~ 0.1) Ω (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω (100 ~ 1 000) Ω (1 ~ 10) k Ω (10 ~ 100) k Ω (100 ~ 1 000) k Ω (1 ~ 10) M Ω	7.0×10^{-3} 1.1×10^{-4} 1.7×10^{-5} 1.1×10^{-5} 8.6×10^{-6} 8.2×10^{-6} 8.2×10^{-6} 8.2×10^{-6} 9.5×10^{-6} 2.4×10^{-5}	CP-40213
Ratio ARM		1 m Ω 10 m Ω 100 m Ω 1 Ω 10 Ω 100 Ω 1 k Ω 10 k Ω 100 k Ω 1 M Ω 10 M Ω	2.3×10^{-4} 1.2×10^{-4} 6.5×10^{-5} 1.6×10^{-5} 1.6×10^{-5} 1.2×10^{-5} 3.8×10^{-5} 2.5×10^{-5} 3.0×10^{-5} 1.5×10^{-5} 2.0×10^{-5}	
Resistance meters	40214	1 m Ω (1 ~ 10) m Ω (10 ~ 100) m Ω (0.1 ~ 1) Ω (1 ~ 10) Ω	2.4×10^{-4} 1.2×10^{-4} 5.9×10^{-5} 1.3×10^{-5} 1.4×10^{-5}	CP-40214

402. Resistance, Capacitance and Inductance

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Resistance meters	40214	(10 ~ 100) Ω (0.1 ~ 1) kΩ (1 ~ 10) kΩ (10 ~ 100) kΩ (0.1 ~ 1) MΩ (1 ~ 10) MΩ (10 ~ 100) MΩ (0.1 ~ 1) GΩ (1 ~ 10) GΩ (10 ~ 100) GΩ (0.1 ~ 1) TΩ	1.1×10^{-5} 1.1×10^{-5} 1.0×10^{-5} 1.1×10^{-5} 1.1×10^{-5} 1.4×10^{-5} 2.5×10^{-4} 1.4×10^{-3} 1.7×10^{-3} 1.7×10^{-3} 3.2×10^{-3}	CP-40214
Resistors	40215	10 mΩ (10 ~ 100) mΩ (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω (0.1 ~ 1) kΩ (1 ~ 10) kΩ (10 ~ 100) kΩ (0.1 ~ 1) MΩ (1 ~ 10) MΩ (10 ~ 100) MΩ (0.1 ~ 1) GΩ	1.1×10^{-3} 1.1×10^{-4} 1.7×10^{-5} 1.1×10^{-5} 7.1×10^{-5} 1.4×10^{-6} 7.2×10^{-6} 7.2×10^{-6} 1.4×10^{-6} 7.6×10^{-6} 2.5×10^{-5} 2.3×10^{-4}	CP-40215
Impedance bridges/LCR meters RESISTANCE	40217	1 Ω 1 kHz (1 ~ 10) Ω 1 kHz 1 MHz (10 ~ 100) Ω 1 kHz 1 MHz (0.1 ~ 1) kΩ 1 kHz 100 kHz 1 MHz (1 ~ 10) kΩ 1 kHz 100 kHz 1 MHz 100 kΩ 1 kHz 100 kHz	3.8×10^{-4} 3.4×10^{-4} 7.1×10^{-4} 3.4×10^{-4} 4.8×10^{-4} 3.4×10^{-4} 4.9×10^{-4} 4.8×10^{-4} 2.6×10^{-4} 4.9×10^{-4} 4.8×10^{-4} 2.3×10^{-4} 4.9×10^{-4}	CP-40217

402. Resistance, Capacitance and Inductance

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Impedance bridges/LCR meters	40217	RESISTANCE		CP-40217
		CAPACITANCE		
		1 MΩ		
		1 kHz	2.8×10^{-4}	
		1 pF		
		1 kHz	5.1×10^{-4}	
		1 MHz	5.0×10^{-4}	
		2 MHz	6.0×10^{-4}	
		3 MHz	7.7×10^{-4}	
		4 MHz	9.8×10^{-4}	
		5 MHz	3.5×10^{-3}	
		10 MHz	4.4×10^{-3}	
		13 MHz	2.4×10^{-2}	
		(1 ~ 10) pF		
		1 kHz	4.4×10^{-4}	
		1 MHz	4.3×10^{-4}	
		2 MHz	4.3×10^{-4}	
		3 MHz	4.3×10^{-4}	
		4 MHz	4.4×10^{-4}	
		5 MHz	4.4×10^{-4}	
		10 MHz	2.4×10^{-3}	
		13 MHz	2.4×10^{-3}	
		(10 ~ 100) pF		
		1 kHz	4.4×10^{-4}	
		1 MHz	4.4×10^{-4}	
		2 MHz	4.3×10^{-4}	
		3 MHz	4.3×10^{-4}	
		4 MHz	4.5×10^{-4}	
		5 MHz	4.6×10^{-4}	
		10 MHz	2.4×10^{-3}	
		13 MHz	2.4×10^{-3}	
		(0.1 ~ 1) nF		
		1 kHz	2.0×10^{-4}	
		1 MHz	4.5×10^{-4}	
		2 MHz	4.5×10^{-4}	
		3 MHz	5.4×10^{-4}	
		4 MHz	6.2×10^{-4}	
		5 MHz	7.7×10^{-4}	
		10 MHz	3.1×10^{-3}	
		13 MHz	3.8×10^{-3}	
		1 nF		
		120 Hz	1.5×10^{-4}	
		1 kHz	1.5×10^{-4}	
		10 kHz	1.5×10^{-4}	

402. Resistance, Capacitance and Inductance

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments	
Impedance bridges/LCR meters CAPACITANCE INDUCTANCE	40217	(1 ~ 10) nF	120 Hz	1.3×10^{-4}	CP-40217
			1 kHz	1.3×10^{-4}	
			10 kHz	1.3×10^{-4}	
		(10 ~ 100) nF	120 Hz	1.4×10^{-4}	
			1 kHz	1.4×10^{-4}	
			10 kHz	1.4×10^{-4}	
		(0.1 ~ 1) μ F	120 Hz	5.3×10^{-4}	
			1 kHz	5.3×10^{-4}	
			10 kHz	5.3×10^{-4}	
		1 kHz	100 μ H	4.6×10^{-4}	
			1 mH	4.0×10^{-4}	
			10 mH	3.4×10^{-4}	
			100 mH	3.4×10^{-4}	
			1 H	4.0×10^{-4}	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
AC ammeters AC Current	40301	40 Hz ~ 1 kHz (0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA	4.4×10^{-3}	CP-40301
			5.0×10^{-3}	
			6.0×10^{-3}	
		(0.1 ~ 1) A (1 ~ 10) A	8.0×10^{-3}	
			1.3×10^{-3}	
			1 kHz ~ 10 kHz (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A	
		1.7×10^{-3}		
		7.9×10^{-3}		
		40 Hz ~ 400 Hz (10 ~ 100) A	7.8×10^{-3}	
Clamp ammeters/voltmeters DC Voltage	40302	(1 ~ 100) mV	0.0062 mV	CP-40302
		(0.1 ~ 1) V	0.000 061 V	
		(1 ~ 10) V	0.000 61 V	
		(10 ~ 100) V	0.006 1 V	
		(100 ~ 1 000) V	0.058 V	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Clamp ammeters/voltmeters AC Voltage	40302	10 Hz (1 ~ 100) mV	0.037 mV	CP-40302
		(0.1 ~ 1) V	0.29 mV	
		(1 ~ 10) V	0.002 9 V	
		(10 ~ 100) V	0.029 V	
		10 Hz ~ 20 kHz		
		(1 ~ 100) mV	0.018 mV	
		(0.1 ~ 1) V	0.13 mV	
		(1 ~ 10) V	0.001 3 V	
		(10 ~ 100) V	0.013 V	
		20 kHz ~ 50 kHz		
		(1 ~ 100) mV	0.064 mV	
		(0.1 ~ 1) V	0.16 mV	
		(1 ~ 10) V	0.001 4 V	
		(10 ~ 100) V	0.020 V	
		50 kHz ~ 1 MHz		
		(1 ~ 100) mV	0.19 mV	
		(0.1 ~ 1) V	2.0 mV	
		(1 ~ 10) V	0.018 V	
		50 Hz ~ 1 kHz		
		(0.1 ~ 0.2) kV	0.086 V	
		(0.2 ~ 0.5) kV	0.17 V	
		50 Hz		
		(0.5 ~ 1.0) kV	0.32 V	
		50 Hz ~ 1 kHz		
		(0.5 ~ 1.0) kV	0.10 V	
DC Current		(10 ~ 100) μ A	0.020 μ A	
		(0.1 ~ 1) mA	0.075 μ A	
		(1 ~ 10) mA	0.000 73 mA	
		(10 ~ 100) mA	0.008 1 mA	
		(0.1 ~ 1) A	0.11 mA	
		(1 ~ 10) A	0.004 8 A	
		(10 ~ 20) A	0.048 A	
		(20 ~ 100) A	0.24 A	
		(100 ~ 200) A	0.48 A	
		(200 ~ 500) A	1.2 A	
	(500 ~ 1 000) A	2.7 A		
AC Current		10 Hz		
		(0.01 ~ 1) mA	0.000 30 mA	
		(1 ~ 10) mA	0.003 0 mA	
		(10 ~ 100) mA	0.031 mA	
		(0.1 ~ 1) A	4.0×10^{-4}	
	(1 ~ 10) A	6.0×10^{-4}		

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Clamp ammeters/voltmeters AC Current	40302	10 Hz ~ 1 kHz		CP-40302
		(0.01 ~ 1) mA	0.000 22 mA	
		(1 ~ 10) mA	0.002 2 mA	
		(10 ~ 100) mA	0.026 mA	
		(0.1 ~ 1) A	0.33 mA	
		(1 ~ 10) A	0.006 0 A	
		1 kHz ~ 10 kHz		
		(0.01 ~ 1) mA	0.001 8 mA	
		(1 ~ 10) mA	0.016 mA	
		(10 ~ 100) mA	0.12 mA	
		(0.1 ~ 1) A	7.1 mA	
		60 Hz		
		(10 ~ 20) A	0.053 A	
		(20 ~ 50) A	0.12 A	
		(50 ~ 100) A	0.24 A	
		(100 ~ 200) A	0.49 A	
		(200 ~ 500) A	1.2 A	
		(500 ~ 1 000) A	8.1 A	
Resistance		(0 ~ 1) Ω	0.000 11 Ω	
		(1 ~ 10) Ω	0.000 65 Ω	
		(10 ~ 100) Ω	0.006 2 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	0.000 065 MΩ	
		(1 ~ 10) MΩ	0.000 76 MΩ	
		(10 ~ 100) MΩ	0.012 MΩ	
AC voltage/current calibrators AC Voltage	40303	10 Hz ~ 40 Hz		CP-40303
		(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	
		(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	0.079 mV	
		(1 ~ 10) V	0.79 mV	
		(10 ~ 100) V	0.008 1 V	
		(100 ~ 200) V	0.012 V	
		(200 ~ 300) V	0.020 V	
		(300 ~ 600) V	0.038 V	
		(600 ~ 1 000) V	0.085 V	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
AC voltage/current calibrators AC Voltage	40303	20 kHz ~ 100 kHz (1 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 200) V (200 ~ 300) V (300 ~ 600) V	0.023 mV 0.11 mV 1.2 mV 0.014 V 0.025 V 0.18 V 0.35 V	CP-40303
		100 kHz ~ 500 kHz (1 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 20) V	0.033 mV 0.16 mV 1.6 mV 0.003 1 V	
AC Current		500 kHz ~ 1 MHz (1 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 20) V	0.15 mV 1.1 mV 0.013 V 0.026 V	
		40 Hz ~ 1 kHz (0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 100) A	0.48 μA 0.004 8 mA 0.028 mA 0.90 mA 11 mA 0.13 A	
		1 kHz ~ 10 kHz (1 ~ 100) μA (0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA	1.6 μA 1.7 μA 0.016 mA 0.031 mA	
Power calibrators AC Voltage	40304	40 Hz ~ 20 kHz (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (0.1 ~ 1.0) kV	5.6×10^{-5} 4.6×10^{-5} 4.7×10^{-5} 4.7×10^{-4}	CP-40304
		20 kHz ~ 50 kHz (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V	8.3×10^{-5} 4.8×10^{-5} 5.3×10^{-5}	
		50 kHz ~ 100 kHz (0.1 ~ 1) V (1 ~ 100) V	1.0×10^{-4} 8.1×10^{-5}	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments		
Power calibrators AC Voltage	40304	100 kHz ~ 500 kHz (0.1 ~ 1) V (1 ~ 10) V	4.4×10^{-4} 4.0×10^{-4}	CP-40304		
		500 kHz ~ 1 MHz (0.1 ~ 1) V (1 ~ 10) V	1.1×10^{-3} 1.2×10^{-3}			
AC Current		40 Hz ~ 10 kHz (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 20) A	6.4×10^{-5} 6.3×10^{-5} 6.2×10^{-5} 6.5×10^{-5} 7.3×10^{-5}			
AC Wattage		50 Hz (0.6 ~ 120) W (120 ~ 240) W (240 ~ 1 200) W (1.2 ~ 4.8) kW (4.8 ~ 7.2) kW (7.2 ~ 12) kW	1.8×10^{-4} 1.5×10^{-4} 1.8×10^{-4} 1.5×10^{-4} 1.8×10^{-4} 1.6×10^{-4}			
		60 Hz (0.6 ~ 120) W (120 ~ 240) W (240 ~ 1 200) W (1.2 ~ 4.8) kW (4.8 ~ 7.2) kW (7.2 ~ 12) kW	1.8×10^{-4} 1.5×10^{-4} 1.8×10^{-4} 1.5×10^{-4} 1.8×10^{-4} 1.6×10^{-4}			
Power Factor		50 Hz ~ 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			
AC current shunts Resistance		40305	10 Hz ~ 40 Hz (1 ~ 10) mΩ (10 ~ 100) mΩ (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω		7.0×10^{-4} 3.9×10^{-4} 3.0×10^{-4} 3.0×10^{-4} 3.0×10^{-4}	CP-40305
			40 Hz ~ 500 Hz (1 ~ 10) mΩ (10 ~ 100) mΩ (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω		7.0×10^{-4} 3.9×10^{-4} 3.3×10^{-4} 2.7×10^{-4} 2.7×10^{-4}	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
AC current shunts	40305	500 Hz ~ 1 kHz (1 ~ 10) mΩ (10 ~ 100) mΩ (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω 1 kHz ~ 10 kHz (10 ~ 100) mΩ (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω 10 Hz ~ 400 Hz (0 ~ 1) mΩ	8.0×10^{-4} 5.0×10^{-4} 4.6×10^{-4} 4.2×10^{-4} 4.2×10^{-4} 7.2×10^{-3} 1.5×10^{-3} 1.8×10^{-3} 1.9×10^{-3} 3.0×10^{-3}	CP-40305
Voltage/current phase angle meters/ synchro resolve meters Phase	40307	(50 ~ 60) Hz -180 ° ~ 180 °	0.059 °	CP-40307
Power factor meters Power Factor	40310	50 Hz ~ 60 Hz lead, lag (0.001 ~ 0.8) lead, lag (0.8 ~ 1)	0.000 22 0.000 23	CP-40310
AC power meters AC Voltage AC current	40311	60 Hz (1 ~ 300) V (300 ~ 600) V (600 ~ 1 000) V 60 Hz (0.01 ~ 0.1) A (0.1 ~ 0.2) A (0.2 ~ 0.5) A (0.5 ~ 1) A (1 ~ 2) A (2 ~ 5) A (5 ~ 10) A (10 ~ 20) A (20 ~ 40) A (40 ~ 60) A (60 ~ 80) A (80 ~ 100) A (100 ~ 300) A (300 ~ 500) A	2.2×10^{-4} 1.3×10^{-4} 1.2×10^{-4} 6.0×10^{-4} 2.2×10^{-4} 4.4×10^{-4} 3.3×10^{-4} 1.3×10^{-3} 8.0×10^{-4} 7.0×10^{-4} 7.8×10^{-3} 5.3×10^{-3} 4.4×10^{-3} 4.0×10^{-3} 3.8×10^{-3} 4.4×10^{-3} 3.8×10^{-3}	CP-40311

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
AC power meters AC Wattage	40311	60 Hz (1 ~ 12) W (12 ~ 24) W (24 ~ 60) W (60 ~ 120) W (120 ~ 600) W (600 ~ 1 200) W (1.2 ~ 2.4) kW (2.4 ~ 3.6) kW (3.6 ~ 4.8) kW (4.8 ~ 6.0) kW (6.0 ~ 7.2) kW (7.2 ~ 9.6) kW (9.6 ~ 12) kW (12 ~ 15.2) kW (15.2 ~ 19) kW	1.1×10^{-3} 6.1×10^{-4} 3.3×10^{-4} 2.4×10^{-4} 1.8×10^{-4} 2.7×10^{-4} 2.6×10^{-4} 2.8×10^{-4} 2.7×10^{-4} 2.7×10^{-4} 2.8×10^{-4} 2.7×10^{-4} 4.5×10^{-4} 4.4×10^{-4} 4.8×10^{-4}	CP-40311
AC power supplies AC Voltage AC Current Frequency	40312	40 Hz ~ 20 kHz (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 200) V (200 ~ 300) V (300 ~ 600) V (600 ~ 1 000) V 20 kHz ~ 100 kHz (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 200) V (200 ~ 300) V (300 ~ 600) V 40 Hz ~ 1 kHz (0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 100) A 40 Hz ~ 1 kHz	 0.11 mV 1.1 mV 0.011 V 0.019 V 0.037 V 0.073 V 0.14 V 0.11 mV 1.2 mV 0.014 V 0.025 V 0.18 V 0.35 V 0.52 μA 0.005 2 mA 0.052 mA 0.86 mA 11 mA 0.12 A 0.005 9 Hz	CP-40312

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Puncture/safety testers DC Voltage	40313	(0.1 ~ 1) kV	6.0×10^{-3}	CP-40313
		(1 ~ 2) kV	3.8×10^{-3}	
		(2 ~ 3) kV	2.6×10^{-3}	
		(3 ~ 4) kV	2.4×10^{-3}	
		(4 ~ 5) kV	2.0×10^{-3}	
		(5 ~ 6) kV	2.1×10^{-3}	
		(6 ~ 8) kV	1.8×10^{-3}	
		(8 ~ 9) kV	1.7×10^{-3}	
		(9 ~ 10) kV	1.8×10^{-3}	
		(10 ~ 15) kV	6.9×10^{-3}	
		(15 ~ 19) kV	5.6×10^{-3}	
		(19 ~ 20) kV	6.3×10^{-3}	
		(20 ~ 30) kV	4.6×10^{-3}	
		(30 ~ 50) kV	3.5×10^{-3}	
		(50 ~ 60) kV	2.4×10^{-3}	
		(60 ~ 70) kV	2.1×10^{-3}	
		(70 ~ 80) kV	2.2×10^{-3}	
		(80 ~ 90) kV	1.9×10^{-3}	
		(90 ~ 100) kV	1.8×10^{-3}	
AC Voltage		60 Hz		
		(0.1 ~ 1) kV	2.6×10^{-2}	
		(1 ~ 2) kV	1.5×10^{-2}	
		(2 ~ 3) kV	1.0×10^{-2}	
		(3 ~ 4) kV	8.5×10^{-3}	
		(4 ~ 5) kV	7.2×10^{-3}	
		(5 ~ 6) kV	6.5×10^{-3}	
		(6 ~ 7) kV	5.9×10^{-3}	
		(7 ~ 8) kV	5.5×10^{-3}	
		(8 ~ 9) kV	5.2×10^{-3}	
		(9 ~ 10) kV	2.1×10^{-2}	
		(10 ~ 40) kV	1.5×10^{-2}	
		(40 ~ 50) kV	1.4×10^{-2}	
		(50 ~ 70) kV	1.2×10^{-2}	
		(70 ~ 100) kV	1.1×10^{-2}	
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 ~ 2) mA	1.3×10^{-2}	
		(2 ~ 5) mA	1.2×10^{-2}	
		(5 ~ 20) mA	1.3×10^{-2}	
		(20 ~ 50) mA	1.2×10^{-2}	
		(50 ~ 100) mA	1.4×10^{-2}	
Times		(1 ~ 60) s	61 ms	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Power recorders AC Wattage	40314	50 Hz (1 ~ 12) W (12 ~ 24) W (24 ~ 60) W (60 ~ 120) W (120 ~ 600) W (600 ~ 1 200) W (1.2 ~ 2.4) kW (2.4 ~ 3.6) kW (3.6 ~ 4.8) kW (4.8 ~ 6.0) kW (6.0 ~ 7.2) kW (7.2 ~ 9.6) kW (9.6 ~ 12) kW (12 ~ 15.2) kW (15.2 ~ 19) kW 60 Hz (1 ~ 12) W (12 ~ 24) W (24 ~ 60) W (60 ~ 120) W (120 ~ 600) W (600 ~ 1 200) W (1.2 ~ 2.4) kW (2.4 ~ 3.6) kW (3.6 ~ 4.8) kW (4.8 ~ 6.0) kW (6.0 ~ 7.2) kW (7.2 ~ 9.6) kW (9.6 ~ 12) kW (12 ~ 15.2) kW (15.2 ~ 19) kW	1.1×10^{-3} 6.2×10^{-4} 3.3×10^{-4} 2.4×10^{-4} 1.8×10^{-4} 2.7×10^{-4} 2.6×10^{-4} 2.8×10^{-4} 2.7×10^{-4} 2.8×10^{-4} 2.8×10^{-4} 2.7×10^{-4} 4.5×10^{-4} 4.4×10^{-4} 5.5×10^{-4} 1.1×10^{-3} 6.2×10^{-4} 3.3×10^{-4} 2.4×10^{-4} 1.8×10^{-4} 2.7×10^{-4} 2.6×10^{-4} 2.8×10^{-4} 2.7×10^{-4} 2.8×10^{-4} 2.8×10^{-4} 2.7×10^{-4} 4.5×10^{-4} 4.4×10^{-4} 4.8×10^{-4}	CP-40314
AC voltmeters AC Voltage	40318	10 Hz ~ 40 Hz (1 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V 40 Hz ~ 20 kHz (1 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V	2.0×10^{-2} 1.9×10^{-4} 1.5×10^{-4} 1.5×10^{-4} 1.5×10^{-4} 1.2×10^{-2} 1.8×10^{-4} 1.2×10^{-4} 1.1×10^{-4} 1.2×10^{-4}	CP-40318

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
AC voltmeters AC Voltage	40318	20 kHz ~ 50 kHz (1 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V	1.4×10^{-2} 3.0×10^{-4} 2.4×10^{-4} 1.3×10^{-4} 1.4×10^{-4}	CP-40318
		50 kHz ~ 100 kHz (1 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V	2.1×10^{-2} 6.5×10^{-3} 1.8×10^{-4} 1.6×10^{-4} 2.1×10^{-4}	
		100 kHz ~ 200 kHz (1 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V	6.1×10^{-2} 3.2×10^{-3} 2.1×10^{-4} 1.9×10^{-4}	
		200 kHz ~ 500 kHz (1 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V	6.1×10^{-2} 3.2×10^{-3} 2.1×10^{-4} 1.9×10^{-4}	
		500 kHz ~ 1 MHz (1 ~ 10) mV (1 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V	6.1×10^{-2} 3.2×10^{-3} 3.2×10^{-3} 1.9×10^{-3}	
		10 Hz ~ 40 Hz (0.1 ~ 1.0) kV	1.9×10^{-4}	
		40 Hz ~ 1 kHz (0.1 ~ 1.0) kV	1.8×10^{-4}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
LF amplifiers Amplifier	40401	(40 Hz) (10 ~ 100) mV (0.1 ~ 1 000) V	1.8×10^{-3} 5.0×10^{-4}	CP-40401
		(1 kHz) (10 ~ 100) mV (0.1 ~ 1 00) V (100 ~ 1 000) V	1.8×10^{-3} 4.0×10^{-4} 5.0×10^{-4}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
LF amplifiers Amplifier	40401	(10 kHz) (10 ~ 100) mV (0.1 ~ 1 00) V (100 ~ 1 000) V (20 kHz) (0 ~ 100) mV (0.1 ~ 1 00) V (100 ~ 1 000) V (50 kHz) (10 ~ 100) mV (0.1 ~ 1 00) V (100 kHz) (10 ~ 100) mV (0.1 ~ 10) V (10 ~ 100) V (100 Hz ~ 100 kHz) (0 ~ 30) dB (30 ~ 60) dB	 1.8×10^{-3} 4.0×10^{-4} 9.0×10^{-4} 2.0×10^{-3} 6.0×10^{-4} 9.0×10^{-4} 4.0×10^{-3} 1.6×10^{-3} 7.2×10^{-3} 1.7×10^{-3} 1.8×10^{-3} 0.12 dB 0.18 dB	CP-40401
DC/LF attenuators Level Level flatness	40402	(100 Hz ~ 100 kHz) 00 dB ~ 30 dB 30 dB ~ 60 dB (10 Hz) 0.0 dB (10 Hz ~ 100 kHz) 0.0 dB (100 kHz ~ 1 MHz) 0.0 dB	 0.12 dB 0.18 dB 0.41 dB 0.12 dB 0.18 dB	CP-40402
Multimeter calibrators DC Voltage DC Current	40403	(0 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (0.1 ~ 1.0) kV (0 ~ 100) μ A (0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 20) A	 0.47 μ V 3.0 μ V 0.038 mV 0.48 mV 5.1 mV 3.4 nA 23 nA 0.22 μ A 2.2 μ A 23 μ A 0.24 mA 0.47 mA	CP-40403

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Multimeter calibrators AC Voltage	40403	40 Hz ~ 20 kHz (1 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (0.1 ~ 1.0) kV	5.6 μ V 46 μ V 0.46 mV 4.7 mV 47 mV	CP-40403
		20 kHz ~ 50 kHz (1 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V	8.3 μ V 46 μ V 0.48 mV 5.3 mV	
		50 kHz ~ 100 kHz (1 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V	10 μ V 71 μ V 0.81 mV 6.9 mV	
		100 kHz ~ 500 kHz (1 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V	44 μ V 0.26 mV 4 mV	
		500 kHz ~ 1 MHz (1 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V	0.11 mV 0.90 mV 12 mV	
AC Current		10 Hz (0.01 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA	0.099 μ A 0.99 μ A 9.8 μ A	
		10 Hz (0.1 ~ 1) A (1 ~ 10) A (10 ~ 20) A	0.098 mA 1.0 mA 2.0 mA	
		10 Hz ~ 10 kHz (0.01 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 20) A	0.064 μ A 0.63 μ A 6.2 μ A 0.062 mA 0.65 mA 1.5 mA	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Multimeter calibrators Resistance	40403	1 Ω (1 ~ 10) Ω (10 ~ 100) Ω (0.1 ~ 1) kΩ (1 ~ 10) kΩ (10 ~ 100) kΩ (0.1 ~ 1) MΩ (1 ~ 10) MΩ (10 ~ 100) MΩ	9.9 μΩ 0.099 mΩ 0.79 mΩ 7.4 mΩ 51 mΩ 0.75 Ω 10 Ω 0.14 kΩ 1.4 kΩ	CP-40403
Oscilloscope calibrators DC Voltage Amplitude(1 MΩ) AC Voltage Amplitude	40404	1 mV ~ 5 mV 5 mV ~ 50 mV 50 mV ~ 500 mV 500 mV ~ 5 V 5 V ~ 50 V 50 V ~ 200 V 100 Hz ~ 1 kHz 1 mV ~ 10 mV 10 mV ~ 50 mV 50 mV ~ 100 mV 100 mV ~ 200 mV 200 mV ~ 500 mV 500 mV ~ 1 V 1 V ~ 2 V 2 V ~ 5 V 5 V ~ 10 V 10 V ~ 20 V 20 V ~ 50 V 50 V ~ 100 V 100 V ~ 200 V 1 kHz ~ 10 kHz 1 mV ~ 10 mV 10 mV ~ 20 mV 20 mV ~ 50 mV 50 mV ~ 100 mV 100 mV ~ 200 mV 200 mV ~ 500 mV 500 mV ~ 1 V 1 V ~ 2 V 2 V ~ 5 V 5 V ~ 10 V 10 V ~ 20 V 20 V ~ 50 V 50 V ~ 100 V 100 V ~ 200 V	0.8 μV 1.1 μV 8 μV 0.08 mV 0.8 mV 8 mV 0.032 mV 0.033 mV 0.036 mV 0.041 mV 0.16 mV 0.20 mV 0.24 mV 1.6 mV 2.0 mV 2.3 mV 16 mV 20 mV 23 mV 0.033 mV 0.034 mV 0.035 mV 0.038 mV 0.044 mV 0.16 mV 0.21 mV 0.26 mV 1.6 mV 2.1 mV 2.6 mV 16 mV 21 mV 26 mV	CP-40404

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Oscilloscope calibrators AC Voltage Amplitude	40404	10 kHz ~ 20 kHz 1 mV ~ 5 mV 5 mV ~ 10 mV 10 mV ~ 20 mV 20 mV ~ 50 mV 50 mV ~ 100 mV 100 mV ~ 200 mV 200 mV ~ 500 mV 500 mV ~ 1 V 1 V ~ 2 V 2 V ~ 5 V 5 V ~ 10 V 10 V ~ 20 V 20 V ~ 50 V 50 V ~ 100 V 100 V ~ 200 V	0.036 mV 0.037 mV 0.039 mV 0.045 mV 0.057 mV 0.083 mV 0.23 mV 0.33 mV 0.51 mV 2.3 mV 3.3 mV 5.1 mV 23 mV 33 mV 51 mV	CP-40404
Time Marker Generator		10 ns ~ 5 s	7.0×10^{-8}	
Sine Wave Generator		600 mV 50 kHz ~ 100 kHz 100 kHz ~ 50 MHz 50 MHz ~ 1 000 MHz 1 000 MHz ~ 3 000 MHz	1.1 mV 7.2 mV 7.8 mV 9.6 mV	
Video signal generators Amplitude Luminance	40406	(500 ~ 800) mV	4.8 mV	CP-40406
Burst		(200 ~ 400) mV	5.3 mV	
Sync		(200 ~ 400) mV	5.3 mV	
Frequency Sub carrier Frequency		(3.5 ~ 4.5) MHz	0.84 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	4.9 mV	
Chrominance		(50 ~ 714) mV	9.4 mV	
Phase		(0 ~ 360) °	1.4 °	
H-Timming H Blanking		(6.9 ~ 16.4) μs	0.062 μs	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Video signal generators	40406			CP-40406
Sync-to-Burst Start		(5 ~ 8) μ s	0.036 μ s	
Sync Duration, Width		(1 ~ 8) μ s	0.024 μ s	
Sync Rise Time		80 ns ~ 1 μ s	13 ns	
Sync Fall Time		80 ns ~ 1 μ s	12 ns	
Burst Duration, Width		(1.4 ~ 3) μ s	0.036 μ s	
Audio distortion analyzers/meters	40407			CP-40407
AC Input level		(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)	0.77 mV	
AC Output level		(1 mV)		
		40 Hz ~ 20 kHz	17 μ V	
		20 kHz ~ 50 kHz	29 μ V	
		50 kHz ~ 100 kHz	66 μ V	
		(1 mV ~ 10 mV)		
		40 Hz ~ 20 kHz	17 μ V	
		20 kHz ~ 50 kHz	30 μ V	
		50 kHz ~ 100 kHz	67 μ V	
		(10 mV ~ 100 mV)		
		40 Hz ~ 1 kHz	0.021 mV	
		1 kHz ~ 20 kHz	0.038 mV	
		20 kHz ~ 50 kHz	0.085 mV	
		50 kHz ~ 100 kHz	0.10 mV	
		(100 mV ~ 1 V)		
		40 Hz ~ 1 kHz	0.59 mV	
		1 kHz ~ 20 kHz	0.62 mV	
		20 kHz ~ 50 kHz	0.84 mV	
		50 kHz ~ 100 kHz	0.85 mV	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Audio distortion analyzers/meters AC Output level	40407	(1 V ~ 6 V)		CP-40407
		40 Hz ~ 1 kHz	1.1 mV	
		1 kHz ~ 20 kHz	1.7 mV	
		20 kHz ~ 50 kHz	3.8 mV	
		50 kHz ~ 100 kHz	3.9 mV	
AC Output level flatness		1 V (40 Hz ~ 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		
Input Frequency	10 Hz ~ 100 kHz	9.6×10^{-6}		
Output Frequency	10 Hz ~ 100 kHz	7.6×10^{-6}		
Distortion	400 Hz ~ 1 kHz (0.1 ~ 31.6) %	1.3×10^{-2}		
	400 Hz ~ 1 kHz (-10 ~ -60) dB	0.59 dB		
LF filters	40408	10 Hz ~ 100 kHz	0.16 dB	CP-40408
Filter		100 kHz ~ 10 MHz	0.19 dB	
LF/Audio signal analyzers AC Input level	40409	(1 mV)		CP-40409
		40 Hz ~ 10 kHz	10 μ V	
		10 kHz ~ 100 kHz	20 μ V	
		(1 mV ~ 10 mV)		
		40 Hz ~ 10 kHz	11 μ V	
		10 kHz ~ 100 kHz	24 μ V	
		(10 mV ~ 100 mV)		
		40 Hz ~ 10 kHz	71 μ V	
		10 kHz ~ 100 kHz	73 μ V	
		(100 mV ~ 1 V)		
		40 Hz ~ 10 kHz	0.71 mV	
		10 kHz ~ 100 kHz	0.73 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		

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
LF/Audio signal analyzers AC Input level	40409	(100 V ~ 300 V) 50 Hz	0.12 V	CP-40409
		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	17 μV	
		20 kHz ~ 50 kHz	29 μV	
		50 kHz ~ 100 kHz	66 μV	
		(1 mV ~ 10 mV) 40 Hz ~ 20 kHz	17 μV	
		20 kHz ~ 50 kHz	30 μV	
		50 kHz ~ 100 kHz	67 μV	
		(10 mV ~ 100 mV) 40 Hz ~ 1 kHz	0.021 mV	
		1 kHz ~ 20 kHz	0.038 mV	
		20 kHz ~ 50 kHz	0.085 mV	
		50 kHz ~ 100 kHz	0.10 mV	
		(100 mV ~ 1 V) 40 Hz ~ 1 kHz	0.59 mV	
	1 kHz ~ 20 kHz	0.62 mV		
	20 kHz ~ 50 kHz	0.84 mV		
	50 kHz ~ 100 kHz	0.85 mV		
	(1 V ~ 10 V) 40 Hz ~ 1 kHz	1.2 mV		
	1 kHz ~ 20 kHz	2.4 mV		
	20 kHz ~ 50 kHz	6.1 mV		
	50 kHz ~ 100 kHz	6.2 mV		
AC output level flatness	1 V (40 Hz ~ 100 kHz)	0.94 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		
Input frequency	10 Hz ~ 100 kHz	9.6×10^{-6}		
Output frequency	10 Hz ~ 100 kHz	7.6×10^{-6}		
Linr frequency meters Frequency	40410	120 V (20 ~ 100) Hz (0.1 ~ 1) kHz	2.5×10^{-3} 2.5×10^{-3}	CP-40410
		240 V (20 ~ 100) Hz (0.1 ~ 1) kHz	2.5×10^{-3} 2.5×10^{-3}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments	
Function generators	40411	Output Frequency	1 Hz ~ 1 GHz	5.8×10^{-6}	CP-40411
AC Output Level		(40 Hz ~ 1 kHz)	10 mV	1.8×10^{-3}	
		10 mV ~ 100 mV		9.3×10^{-4}	
		0.1 V ~ 10 V		3.9×10^{-4}	
		(1 kHz ~ 10 kHz)	10 mV	2.1×10^{-3}	
		10 mV ~ 100 mV		1.1×10^{-3}	
		0.1 V ~ 10 V		5.3×10^{-4}	
AC Output Level Flatness		(10 Hz ~ 60 Hz)	0.0 dB	0.42 dB	
		(60 Hz ~ 100 kHz)	0.0 dB	0.14 dB	
		(100 kHz ~ 1 MHz)	0.0 dB	0.19 dB	
		(100 Hz ~ 100 kHz)	100 mV	0.6 mV	
		(100 Hz ~ 100 kHz)	100 mV ~ 1 V	1.0 mV	
		(100 Hz ~ 1 kHz)	1 V ~ 10 V	1.3 mV	
		(1 kHz ~ 10 kHz)	1 V ~ 10 V	2.6 mV	
		(10 kHz ~ 100 kHz)	1 V ~ 10 V	7.2 mV	
Attenuation		1 kHz	10 dB ~ -20 dB	0.14 dB	
			-20 dB ~ -60 dB	0.19 dB	
DC Offset		(-20 ~ 20) V	1.1 mV		
Rise/fall Time		1 ns	1.6×10^{-2}		
		1 ns ~ 100 μ s	1.3×10^{-3}		
AC/DC high voltages volt meters	40413	DC Voltage	(0.1 ~ 0.2) kV	1.0×10^{-2}	CP-40413
		(0.2 ~ 0.3) kV	6.0×10^{-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 ~ 1) kV	3.3×10^{-3}		
		(1 ~ 2) kV	3.2×10^{-3}		
		(2 ~ 3) kV	3.1×10^{-3}		
		(3 ~ 4) kV	3.0×10^{-3}		
		(4 ~ 6) kV	3.2×10^{-3}		
	(6 ~ 9) kV	3.1×10^{-3}			

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
AC/DC high voltages volt meters AC Voltage	40413	60 Hz (0.1 ~ 0.2) kV (0.2 ~ 0.3) kV (0.3 ~ 0.4) kV (0.4 ~ 0.5) kV (0.5 ~ 0.6) kV (0.6 ~ 0.7) kV (0.7 ~ 0.8) kV (0.8 ~ 0.9) kV (0.9 ~ 1) kV (1 ~ 2) kV (2 ~ 3) kV (3 ~ 4) kV (4 ~ 5) kV (5 ~ 6) kV	2.4×10^{-1} 1.2×10^{-1} 8.3×10^{-2} 6.5×10^{-2} 5.2×10^{-2} 4.3×10^{-2} 3.7×10^{-2} 3.3×10^{-2} 2.9×10^{-2} 2.6×10^{-2} 1.5×10^{-2} 1.1×10^{-2} 8.5×10^{-3} 7.2×10^{-3}	CP-40413
LF impulse generators Output Voltage Pulse Width Rising Time	40414	(0.1 ~ 20) kV 100 ns ~ 100 ms 100 ns ~ 100 ms	1.5×10^{-2} 1.8×10^{-3} 1.7×10^{-3}	CP-40414
Leakage current testers DC Current AC Current AC Voltage	40416	(10 ~ 100) μ A (0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA 40 Hz ~ 1 kHz (10 ~ 100) μ A (0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V	59 nA 0.58 μ A 0.77 μ A 8.5 μ A 0.10 μ A 0.60 μ A 2 μ A 26 μ A 0.6 mV 6 mV 0.06 V 0.6 V	CP-40416
Electronic AC/DC loads DC Voltage DC Current AC Voltage AC Current	40417	(0 ~ 1 000) V (0.1 ~ 1) A (1 ~ 10) A (10 ~ 100) A 50 Hz ~ 400 Hz (0.1 ~ 100) V (0.1 ~ 1 000) V 50 Hz ~ 400 Hz (0.1 ~ 1) A (1 ~ 10) A (10 ~ 100) A	1.3×10^{-5} 1.7×10^{-4} 2.4×10^{-4} 2.0×10^{-4} 2.2×10^{-4} 4.3×10^{-4} 8.0×10^{-4} 1.7×10^{-3} 1.2×10^{-3}	CP-40417

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Modulation meters	40418			CP-40418
Frequency Modulation		(1 ~ 400) kHz	3.0×10^{-2}	
Amplitude Modulation		(5 ~ 99) %	2.5×10^{-2}	
Phase Modulation		(1 ~ 10) rad	2.6×10^{-2}	
Distortion of Modulation		0 % ~ 10 %	1.5×10^{-2}	
Analoque/Digital multimeters	40419			CP-40419
DC Voltage		0.1 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		40 Hz		
		0.1 mV ~ 100 mV	1.7×10^{-4}	
		100 mV ~ 1 V	1.2×10^{-4}	
		1 V ~ 10 V	1.2×10^{-4}	
		10 V ~ 100 V	1.2×10^{-4}	
		40 Hz ~ 1 kHz		
		0.1 mV ~ 100 mV	1.6×10^{-4}	
		100 mV ~ 1 V	7.0×10^{-5}	
		1 V ~ 10 V	7.0×10^{-5}	
		10 V ~ 100 V	8.0×10^{-5}	
		1 kHz ~ 20 kHz		
		0.1 mV ~ 100 mV	1.6×10^{-4}	
		100 mV ~ 1 V	7.0×10^{-5}	
		1 V ~ 10 V	7.0×10^{-5}	
		10 V ~ 100 V	8.0×10^{-5}	
		20 kHz ~ 50 kHz		
		0.1 mV ~ 100 mV	2.8×10^{-4}	
		100 mV ~ 1 V	1.0×10^{-4}	
		1 V ~ 10 V	1.0×10^{-4}	
		10 V ~ 100 V	1.1×10^{-4}	
		50 kHz ~ 100 kHz		
	0.1 mV ~ 100 mV	6.4×10^{-4}		
	100 mV ~ 1 V	1.5×10^{-4}		
	1 V ~ 10 V	1.4×10^{-4}		
	10 V ~ 100 V	1.9×10^{-4}		
	50 Hz			
	100 V ~ 1 000 V	3.2×10^{-4}		
	50 Hz ~ 1 kHz			
	100 V ~ 1 000 V	9.0×10^{-5}		

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Analoque/Digital multimeters	40419			CP-40419
DC Current		0.1 μ A ~ 100 μ A 100 μ A ~ 1 mA 1 mA ~ 10 mA 10 mA ~ 100 mA 100 mA ~ 1 A 1 A ~ 10 A	1.1×10^{-4} 4.4×10^{-5} 4.1×10^{-5} 5.3×10^{-5} 9.3×10^{-5} 4.8×10^{-4}	
AC Current		40 Hz 0.1 μ A ~ 100 μ A 100 μ A ~ 1 mA 1 mA ~ 10 mA 10 mA ~ 100 mA 100 mA ~ 1 A 1 A ~ 10 A 40 Hz ~ 1 kHz 0.1 μ A ~ 100 μ A 100 μ A ~ 1 mA 1 mA ~ 10 mA 10 mA ~ 100 mA 100 mA ~ 1 A 1 A ~ 10 A 1 kHz ~ 10 kHz 0.1 μ A ~ 100 μ A 100 μ A ~ 1 mA 1 mA ~ 10 mA 10 mA ~ 100 mA 100 mA ~ 1 A 1 A ~ 10 A	9.0×10^{-4} 2.1×10^{-4} 2.1×10^{-4} 2.2×10^{-4} 3.3×10^{-4} 6.0×10^{-4} 9.0×10^{-4} 1.8×10^{-4} 1.8×10^{-4} 2.5×10^{-4} 3.3×10^{-4} 6.0×10^{-4} 7.7×10^{-3} 1.8×10^{-3} 1.6×10^{-3} 1.3×10^{-3} 7.2×10^{-3} 6.0×10^{-4}	
Resistance		0.1 Ω ~ 10 Ω 10 Ω ~ 100 Ω 100 Ω ~ 1 k Ω 1 k Ω ~ 10 k Ω 10 k Ω ~ 100 k Ω 100 k Ω ~ 1 M Ω 1 M Ω ~ 10 M Ω 10 M Ω ~ 100 M Ω	3.0×10^{-5} 1.2×10^{-5} 1.0×10^{-5} 1.0×10^{-5} 1.5×10^{-5} 2.3×10^{-5} 4.5×10^{-5} 1.1×10^{-4}	
Noise meters	40420			CP-40420
Input Level		10 Hz ~ 40 Hz (1 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V	9.9×10^{-3} 1.9×10^{-4} 1.4×10^{-4} 1.4×10^{-4} 1.4×10^{-4}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Noise meters	40420			CP-40420
Input Level		40 Hz ~ 20 kHz		
		(1 ~ 10) mV	8.1×10^{-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}	
Input Level		20 kHz ~ 50 kHz		
		(1 ~ 10) mV	9.9×10^{-3}	
		(10 ~ 100) mV	2.9×10^{-4}	
		(0.1 ~ 1) V	2.4×10^{-4}	
		(1 ~ 10) V	1.3×10^{-4}	
		(10 ~ 100) V	1.4×10^{-4}	
		50 kHz ~ 100 kHz		
		(1 ~ 10) mV	1.8×10^{-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	6.0×10^{-2}	
		(10 ~ 100) mV	3.2×10^{-3}	
		(0.1 ~ 1) V	2.0×10^{-3}	
		(1 ~ 10) V	1.8×10^{-3}	
		200 kHz ~ 500 kHz		
		(1 ~ 10) mV	6.0×10^{-2}	
		(10 ~ 100) mV	3.2×10^{-3}	
		(0.1 ~ 1) V	2.0×10^{-3}	
		(1 ~ 10) V	1.8×10^{-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}	
		10 Hz ~ 40 Hz		
		(100 ~ 300) V	1.1×10^{-3}	
		40 Hz ~ 1 kHz		
		(100 ~ 300) V	4.1×10^{-4}	
Weighting		CCTIC	0.19 dB	
		CCIR/ARM	0.19 dB	
		DIN	0.19 dB	
		JIS	0.19 dB	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Noise meters Frequency Response	40420	1 V 40 Hz 40 Hz ~ 20 kHz 20 kHz ~ 50 kHz 50 kHz ~ 100 kHz 100 kHz ~ 1 MHz	1.4×10^{-4} 1.1×10^{-4} 1.3×10^{-4} 1.7×10^{-4} 2.0×10^{-3}	CP-40420
Oscilloscopes DC Voltage Square Wave Voltage Time Marker Bandwidth (at 600 mV)	40421	1 mV ~ 5 mV 5 mV ~ 10 mV 10 mV ~ 20 mV 20 mV ~ 50 mV 50 mV ~ 100 mV 100 mV ~ 200 mV 200 mV ~ 500 mV 500 mV ~ 1 V 1 V ~ 2 V 2 V ~ 5 V 5 V ~ 10 V 10 V ~ 20 V 20 V ~ 50 V 1 mV ~ 5 mV 5 mV ~ 10 mV 10 mV ~ 20 mV 20 mV ~ 50 mV 50 mV ~ 100 mV 100 mV ~ 200 mV 200 mV ~ 500 mV 500 mV ~ 1 V 1 V ~ 2 V 2 V ~ 5 V 5 V ~ 10 V 10 V ~ 20 V 20 V ~ 50 V 1 ns ~ 5 ns 5 ns ~ 50 ns 50 ns ~ 500 ns 500 ns ~ 5 μs 5 μs ~ 50 μs 50 μs ~ 500 μs 500 μs ~ 5 ms 5 ms ~ 50 ms 50 ms ~ 500 ms 500 ms ~ 5 s 50 kHz ~ 100 kHz 100 kHz ~ 100 MHz 100 MHz ~ 500 MHz 500 MHz ~ 1 100 MHz	0.030 mV 0.033 mV 0.036 mV 0.048 mV 0.093 mV 0.13 mV 0.34 mV 0.80 mV 1.2 mV 2.6 mV 7.9 mV 12 mV 25 mV 0.023 mV 0.031 mV 0.043 mV 0.063 mV 0.14 mV 0.32 mV 0.65 mV 0.96 mV 3.4 mV 4.7 mV 9.6 mV 16 mV 36 mV 0.000 7 ns 0.007 ns 0.07 ns 0.000 7 μs 0.007 μs 0.07 μs 0.000 7 ms 0.007 ms 0.07 ms 0.000 7 s 11 mV 11 mV 21 mV 28 mV	CP-40421

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Oscilloscopes Bandwidth (at 600 mV)	40421	1 100 MHz ~ 2 GHz 2 GHz ~ 12 GHz 12 GHz ~ 18 GHz	47 mV 54 mV 64 mV	CP-40421
Calout Signal Volt		10 mV ~ 100 mV 100 mV ~ 200 mV 200 mV ~ 500 mV	0.36 mV 0.71 mV 1.6 mV	
Calout Signal Volt		500 mV ~ 1 V 1 V ~ 2 V 2V ~ 5 V 5 V ~10 V	3.2 mV 7.1 mV 15 mV 36 mV	
Calout Signal Frequency		100 Hz ~ 500 Hz 500 Hz ~ 5 kHz 5 kHz ~ 20 kHz	0.07 Hz 0.7 Hz 7 Hz	
LF phase meters Phase	40422	(50 ~ 60) Hz (-180 ~ 180) °	0.059 °	CP-40422
Random wave generators Output Frequency	40423	1 Hz ~ 1 GHz	5.8×10^{-6}	CP-40423
Output Level		(40 Hz ~ 1 kHz) 10 mV 10 mV ~ 100 mV 0.1 V ~ 10 V	1.8×10^{-3} 9.3×10^{-4} 3.9×10^{-4}	
		(1 kHz ~ 10 kHz) 10 mV 10 mV ~ 100 mV 0.1 V ~ 10 V	2.1×10^{-3} 1.1×10^{-3} 5.3×10^{-4}	
AC Output Level Flatness		(10 Hz ~ 60 Hz) 0.0 dB (60 Hz ~ 100 kHz) 0.0 dB (100 kHz ~ 1 MHz) 0.0 dB	0.42 dB 0.14 dB 0.19 dB	
		(100 Hz ~ 100 kHz) 100 mV (100 Hz ~ 100 kHz) 100 mV ~ 1 V (100 Hz ~ 1 kHz) 1 V ~ 10 V (1 kHz ~ 10 kHz) 1 V ~ 10 V (10 kHz ~ 100 kHz) 1 V ~ 10 V	0.6 mV 1.0 mV 1.3 mV 2.6 mV 7.2 mV	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Random wave generators Attenuation DC offset Rise/fall Time	40423	1 kHz 10 dB ~ -20 dB -20 dB ~ -60 dB (-20 ~ 20) V 1 ns 1 ns ~ 100 μs	 0.14 dB 0.19 dB 1.1 mV 1.6×10^{-2} 1.3×10^{-3}	CP-40423
Volt/Current recorders DC Voltage DC Current	40424	(1 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (0.1 ~ 1) kV (10 ~ 100) μA (0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A	 4.6×10^{-4} 2.9×10^{-5} 1.0×10^{-5} 8.2×10^{-5} 1.3×10^{-5} 1.4×10^{-5} 6.5×10^{-4} 8.4×10^{-5} 7.2×10^{-5} 9.2×10^{-5} 1.5×10^{-5} 7.1×10^{-4}	CP-40424
Relay test sets DC Voltage DC Current AC Voltage AC Current	40425	(0 ~ 700) V 1 mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 100) A (50 Hz ~ 1 kHz) (0.1 ~ 750) V (50 Hz ~ 1 kHz) 1 mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 100) A	 3.0×10^{-5} 5.8×10^{-4} 3.1×10^{-4} 3.1×10^{-4} 1.7×10^{-4} 1.8×10^{-4} 2.0×10^{-4} 9.7×10^{-5} 8.0×10^{-4} 1.2×10^{-3} 1.1×10^{-3} 1.9×10^{-3} 1.5×10^{-3} 1.2×10^{-3}	CP-40425
LF signal generators Output Frequency Output Voltage	40426	1 Hz ~ 100 MHz (40 Hz ~ 1 kHz) 10 mV 10 mV ~ 100 mV 0.1 V ~ 20 V	 5.8×10^{-6} 1.8×10^{-3} 9.3×10^{-4} 3.9×10^{-4}	CP-40426

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
LF signal generators Output Voltage AC Output Level Flatness Attenuation DC offset	40426	(1 kHz ~ 10 kHz)		CP-40426
		10 mV	2.1×10^{-3}	
		10 mV ~ 100 mV	1.1×10^{-3}	
		0.1 V ~ 20 V	5.3×10^{-4}	
		(10 Hz ~ 60 Hz)		
		0.0 dB	0.42 dB	
		(60 Hz ~ 100 kHz)		
		0.0 dB	0.14 dB	
		(100 kHz ~ 1 MHz)		
		0.0 dB	0.19 dB	
		(100 Hz ~ 100 kHz)		
		100 mV	0.6 mV	
		100 mV ~ 1 V	1.0 mV	
		(100 Hz ~ 1 kHz)		
1 V ~ 10 V	1.3 mV			
(1 kHz ~ 10 kHz)				
1 V ~ 10 V	2.6 mV			
(10 kHz ~ 100 kHz)				
1 V ~ 10 V	7.2 mV			
1 kHz				
10 dB ~ -20 dB	0.14 dB			
-20 dB ~ -60 dB	0.19 dB			
(-20 ~ 20) V				
1.1 mV				
LF spectrum analyzers Time Base Center Frequency If Frequency Gain Scale Fidelity Frequency Span Frequency Resonse Output Frequency Output Level	40427	10 MHz	5.8×10^{-9}	CP-40427
		9 kHz ~ 1 GHz	4.7×10^{-6}	
		(0 ~ 100) dB	0.30 dB	
		(0 ~ 100) dB	0.50 dB	
		1 kHz ~ 1 GHz	3.6×10^{-3}	
		9 kHz ~ 500 MHz	0.15 dB	
		500 MHz ~ 1 GHz	0.16 dB	
		1 MHz ~ 300 MHz	5.8×10^{-8}	
(0 ~ -30) dBm	0.09 dB			

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Sweep generators	40429			CP-40429
Output Frequency		1 Hz ~ 100 MHz	5.8×10^{-6}	
Output Voltage		(40 Hz ~ 1 kHz)		
		10 mV	1.8×10^{-3}	
		10 mV ~ 100 mV	9.3×10^{-4}	
		0.1 V ~ 10 V	3.9×10^{-4}	
		(1 kHz ~ 10 kHz)		
		10 mV	2.1×10^{-3}	
		10 mV ~ 100 mV	1.1×10^{-3}	
		0.1 V ~ 10 V	5.3×10^{-4}	
AC Output Level Flatness		(10 Hz ~ 60 Hz)		
		0.0 dB	0.42 dB	
		(60 Hz ~ 100 kHz)		
		0.0 dB	0.14 dB	
		(100 kHz ~ 1 MHz)		
		0.0 dB	0.19 dB	
		(100 Hz ~ 100 kHz)		
	100 mV	0.6 mV		
	(100 Hz ~ 100 kHz)			
	100 mV ~ 1 V	1.0 mV		
	(100 Hz ~ 1 kHz)			
	1 V ~ 10 V	1.3 mV		
	(1 kHz ~ 10 kHz)			
	1 V ~ 10 V	2.6 mV		
	(10 kHz ~ 100 kHz)			
	1 V ~ 10 V	7.2 mV		
Attenuation	1 kHz			
	10 dB ~ -20 dB	0.14 dB		
	-20 dB ~ -60 dB	0.19 dB		
DC offset	(-20 ~ 20) V	1.1 mV		
Signal transducers	40430			CP-40430
DC Voltage		(1 ~ 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		(0.1 ~ 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}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Waveform analyzers	40433	(1 mV ~ 10 mV)		CP-40433
AC Input Voltage		40 Hz ~ 10 kHz	11 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 ~ 100 kHz	0.071 V	
		10 kHz ~ 100 kHz	0.073 V	
AC Output Voltage		(1 mV ~ 10 mV)		
		100 Hz ~ 20 kHz	17 μV	
		20 kHz ~ 50 kHz	30 μV	
		50 kHz ~ 100 kHz	67 μV	
		(10 mV ~ 100 mV)		
		100 Hz ~ 1 kHz	0.021 mV	
	1 kHz ~ 20 kHz	0.038 mV		
	20 kHz ~ 50 kHz	0.085 mV		
	50 kHz ~ 100 kHz	0.10 mV		
	(100 mV ~ 1 V)			
	100 Hz ~ 1 kHz	0.59 mV		
	1 kHz ~ 20 kHz	0.62 mV		
	20 kHz ~ 50 kHz	0.84 mV		
	50 kHz ~ 100 kHz	0.85 mV		
	(1 V ~ 10 V)			
	100 Hz ~ 1 kHz	1.2 mV		
	1 kHz ~ 20 kHz	2.4 mV		
	20 kHz ~ 50 kHz	6.1 mV		
	50 kHz ~ 100 kHz	6.2 mV		
	(10 V ~ 100 V)			
	100 Hz ~ 1 kHz	12 mV		
	1 kHz ~ 20 kHz	24 mV		
	20 kHz ~ 50 kHz	61 mV		
	50 kHz ~ 100 kHz	63 mV		
Input Frequency		10 Hz ~ 100 kHz	9.6×10^{-6}	
Output Frequency		10 Hz ~ 100 kHz	7.6×10^{-6}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
AC/DC high voltage generators DC Voltage	40434	(0.1 ~ 0.2) kV	6.0×10^{-2}	CP-40434
		(0.2 ~ 0.5) kV	3.0×10^{-2}	
AC Voltage	40434	(0.5 ~ 1) kV	1.2×10^{-2}	CP-40434
		(1 ~ 3) kV	6.0×10^{-3}	
AC Voltage	40434	(3 ~ 5) kV	2.7×10^{-3}	CP-40434
		(5 ~ 7) kV	2.0×10^{-3}	
AC Voltage	40434	(7 ~ 9) kV	1.9×10^{-3}	CP-40434
		(9 ~ 10) kV	1.8×10^{-3}	
AC Voltage	40434	(10 ~ 30) kV	7.0×10^{-3}	CP-40434
		(30 ~ 40) kV	4.7×10^{-3}	
AC Voltage	40434	(40 ~ 50) kV	3.5×10^{-3}	CP-40434
		(50 ~ 60) kV	3.0×10^{-3}	
AC Voltage	40434	(60 ~ 70) kV	2.5×10^{-3}	CP-40434
		(70 ~ 80) kV	2.3×10^{-3}	
AC Voltage	40434	(80 ~ 90) kV	2.0×10^{-3}	CP-40434
		(90 ~ 95) kV	1.9×10^{-3}	
AC Voltage	40434	60 Hz (0.1 ~ 0.2) kV	2.4×10^{-1}	CP-40434
		(0.2 ~ 0.5) kV	1.2×10^{-1}	
AC Voltage	40434	(0.5 ~ 1) kV	5.1×10^{-2}	CP-40434
		(1 ~ 3) kV	2.6×10^{-2}	
AC Voltage	40434	(3 ~ 5) kV	1.1×10^{-2}	CP-40434
		(5 ~ 7) kV	7.2×10^{-3}	
AC Voltage	40434	(7 ~ 9) kV	6.0×10^{-3}	CP-40434
		(9 ~ 10) kV	1.2×10^{-2}	
AC Voltage	40434	(10 ~ 30) kV	1.6×10^{-2}	CP-40434
		(30 ~ 40) kV	1.4×10^{-2}	
AC Voltage	40434	(40 ~ 50) kV	1.3×10^{-2}	CP-40434
		(50 ~ 80) kV	1.2×10^{-2}	
AC Voltage	40434	(80 ~ 100) kV	1.1×10^{-2}	CP-40434
AC/DC high voltage probes DC Voltage	40435	(0.1 ~ 0.2) kV	1.0×10^{-3}	CP-40435
		(0.2 ~ 0.3) kV	5.0×10^{-4}	
AC Voltage	40435	(0.3 ~ 0.4) kV	3.3×10^{-4}	CP-40435
		(0.4 ~ 0.5) kV	2.5×10^{-4}	
AC Voltage	40435	(0.5 ~ 0.6) kV	2.0×10^{-4}	CP-40435
		(0.6 ~ 0.7) kV	1.7×10^{-4}	
AC Voltage	40435	(0.7 ~ 0.8) kV	1.4×10^{-4}	CP-40435
		(0.8 ~ 0.9) kV	1.3×10^{-4}	
AC Voltage	40435	(0.9 ~ 1) kV	1.0×10^{-3}	CP-40435
		(1 ~ 3) kV	3.5×10^{-3}	
AC Voltage	40435	(3 ~ 9) kV	3.0×10^{-3}	CP-40435
AC Voltage	40435	60 Hz ~ 1 kHz (0.1 ~ 0.2) kV	2.0×10^{-3}	CP-40435
		(0.2 ~ 0.3) kV	1.0×10^{-3}	
AC Voltage	40435	(0.3 ~ 0.4) kV	6.7×10^{-4}	CP-40435
		(0.4 ~ 0.5) kV	5.0×10^{-4}	
AC Voltage	40435	(0.5 ~ 0.6) kV	4.0×10^{-4}	CP-40435
		(0.6 ~ 0.7) kV	3.3×10^{-4}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
AC/DC high voltage probes AC Voltage	40435	(0.7 ~ 0.8) kV (0.8 ~ 0.8) kV (0.9 ~ 1) kV 60 Hz (1 ~ 3) kV (3 ~ 4) kV (4 ~ 5) kV (5 ~ 6) kV	2.9×10^{-4} 2.5×10^{-4} 9.0×10^{-4} 1.5×10^{-2} 1.1×10^{-2} 8.5×10^{-3} 7.4×10^{-3}	CP-40435
Logic analyzers DC Voltage	40436	(- 10 ~ 10) V	7.0×10^{-4}	CP-40436
Telephone testers Bell Frequency Bell Voltage Tone Frequency Tone Level Power Of Local Line	40437	(1 ~ 100) Hz (1 ~ 100) V (100 ~ 150) V (1 209, 1 336) Hz (1 477) Hz (697, 770) Hz (852, 941) Hz (- 20 ~ 0) dBm (16 ~ 96) V	0.58 Hz 0.58 V 0.59 V 0.8 Hz 0.9 Hz 0.5 Hz 0.6 Hz 0.3 dB 0.6 V	CP-40437
Video signal analyzers Square Level (NTSC/PAL) Color Bar Level (NTSC)	40438	100 mV 200 mV 300 mV 400 mV 500 mV 600 mV 700 mV 800 mV 900 mV 999.9 mV YL 62.2 IRE 444.1 mV CY 88.2 IRE 629.7 mV G 82.4 IRE 588.3 mV MG 82.4 IRE 588.3 mV R 88.2 IRE 629.7 mV B 62.2 IRE 444.1 mV	0.22 mV 0.52 mV 0.57 mV 0.63 mV 0.68 mV 0.75 mV 0.81 mV 0.87 mV 0.00 mV 1.0 mV 7.2 mV 7.9 mV 7.9 mV 7.9 mV 7.9 mV 6.5 mV	CP-40438

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Video signal analyzers	40438			CP-40438
Color Bar Level (PAL)		YL 470.5 mV CY 663.8 mV G 620.1 mV MG 620.1 mV R 663.8 mV B 470.5 mV	3.7 mV 7.6 mV 6.6 mV 6.6 mV 7.6 mV 5.5 mV	
Phase (NTSC/PAL)		YL 167.1 ° CY 283.4 ° G 240.8 ° MG 60.8 ° R 103.8 ° B 347.1 °	1.3 ° 1.3 ° 1.3 ° 1.3 ° 1.3 ° 1.3 °	
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	2.0 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	CMC (The Confidence Level is about 95 %)	Comments
Coaxial attenuators attenuator	40602	(80 ~ 90) dB 5 Hz ~ 100 kHz 100 kHz ~ 18 GHz 18 GHz ~ 40 GHz (90 ~ 100) dB 5 Hz ~ 100 kHz 100 kHz ~ 18 GHz (100 ~ 110) dB 50 MHz ~ 18 GHz	1.1 dB 0.52 dB 1.3 dB 2.5 dB 0.71 dB 1.3 dB	CP-40602
Burst Pulse generators Output Voltage Pulse Width Rise time Burst Duration Time Burst period Repetition Frequency	40605	(0.1 ~ 4) kV (10 ~ 100) ns 5 ns (10 ~ 20) ns (20 ~ 400) ms (1 ~ 100) kHz	2.8×10^{-2} 1.4×10^{-3} 2.7×10^{-3} 1.5×10^{-3} 1.5×10^{-3} 1.2×10^{-3}	CP-40605
RF power meter calibrators Power Range	40607	100 mW 30 mW 10 mW 3 mW 1 mW 300 μ W 100 μ W 30 μ W 10 μ W 3 μ W	82 μ W 0.84 μ W 0.89 μ W 87 nW 62 nW 13 nW 1.6 nW 1.3 nW 0.16 nW 0.13 nW	CP-40607
EMC transducers ; current probes, Current Probe Transfer impedance Absorbing Clamp Insertion loss	40608	5 Hz ~ 1 000 MHz (30 ~ 1 000) MHz	1.8 dB 2.2 dB	CP-40608
Coaxial directional couplers/ splitters Coupling Factor	40610	(0 ~ 20) dB 9 kHz ~ 100 MHz 100 MHz ~ 20 GHz 20 GHz ~ 40 GHz (20 ~ 30) dB 9 kHz ~ 100 MHz 100 MHz ~ 18 GHz	0.20 dB 0.33 dB 1.0 dB 0.21 dB 0.32 dB	CP-40610

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Coaxial directional couplers/ splitters	40610	(30 ~ 40) dB 9 kHz ~ 100 MHz 100 MHz ~ 1 GHz (40 ~ 60) dB 9 kHz ~ 50 MHz 50 MHz ~ 100 MHz (60 ~ 70) dB 9 kHz ~ 100 MHz	0.23 dB 0.31 dB 0.27 dB 0.35 dB 0.38 dB	CP-40610
Electrostatic discharge generators Peak Current T1 Current (30 ns) T1 Current (60 ns) Time HV	40613	± (0 A ~ 112.5 A) ± (0 A ~ 60 A) ± (0 A ~ 30 A) (0.6 ~ 0.7) ns (0.7 ~ 1.0) ns ± (1 ~ 2) kV ± (2 ~ 4) kV ± (4 ~ 5) kV ± (5 ~ 7) kV ± (7 ~ 9) kV ± (9 ~ 15) kV ± (15 ~ 30) kV	2.7×10^{-2} 2.7×10^{-2} 2.7×10^{-2} 0.022 ns 0.018 ns 1.3×10^{-2} 8.5×10^{-3} 7.2×10^{-3} 8.0×10^{-3} 7.6×10^{-3} 7.3×10^{-3} 7.5×10^{-3}	CP-40613
EMC receivers Time Base RBW RBW Selectivity RBW Swiching Center Frequency Frequency Counter If Frequency Gain Scale Fidelity Frequency Span	40614	10 MHz 10 Hz ~ 3 MHz 10 Hz ~ 3 MHz 10 Hz ~ 3 MHz 10 Hz ~ 40 GHz 10 Hz ~ 40 GHz (0 ~ 100) dB (0 ~ 100) dB 1 kHz ~ 10 GHz	5.8×10^{-9} 1.9×10^{-3} 4.7×10^{-3} 0.29 dB 4.7×10^{-6} 5.8×10^{-8} 0.30 dB 0.50 dB 3.6×10^{-3}	CP-40614

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
EMC receivers Frequency Resonse Average Noise Level Output Frequency Output Level	40614	9 kHz ~ 500 MHz 500 MHz ~ 2 GHz 2 GHz ~ 8 GHz 8 GHz ~ 16 GHz 16 GHz ~ 26 GHz 26 GHz ~ 40 GHz 10 MHz 40 GHz 1 MHz ~ 300 MHz (0 ~ -30) dBm	0.15 dB 0.16 dB 0.19 dB 0.23 dB 0.25 dB 0.27 dB 1.0 dB 5.8×10^{-8} 0.09 dB	CP-40614
RF filters Filter Linearity	40615	10 MHz ~ 1 GHz 1 GHz ~ 4 GHz 4 GHz ~ 10 GHz 10 GHz ~ 12 GHz 12 GHz ~ 20 GHz 20 GHz ~ 40 GHz	0.16 dB 0.18 dB 0.22 dB 0.23 dB 0.27 dB 0.30 dB	CP-40615
Line impedance stabilization networks ; LISN, CDN, ISN, etc. LISN Impedance Insertion Loss Phase CDN Impedance Insertion Loss Phase	40618	9 kHz ~ 1 GHz 9 kHz ~ 1 GHz 9 kHz ~ 1 GHz 9 kHz ~ 230 MHz 9 kHz ~ 230 MHz 9 kHz ~ 230 MHz	0.78 Ω 0.16 dB 0.6 ° 5.0 Ω 0.16 dB 0.6 °	CP-40618
Mobile communication test sets Time Base Output Freqeuncy Frequeuncy Modulation Amplitude Modulation Phase Modulation Distortion of Mudulation Output Level	40621	10 MHz 20 Hz ~ 3 GHz 0 kHz ~ 400 kHz 0 % ~ 100 % 0 rad ~ 400 rad 0 % ~ 10 % 1 MHz ~ 1 GHz (20 ~ -20) dBm (-20 ~ -50) dBm (-50 ~ -120) dBm	0.007 1 Hz 7.0×10^{-9} 3.0×10^{-2} 2.5×10^{-2} 2.6×10^{-2} 1.5×10^{-2} 0.23 dB 0.27 dB 0.60 dB	CP-40621

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Mobile communication test sets	40621			CP-40621
Output Level		1 GHz ~ 3 GHz		
		(20 ~ -60) dBm	0.32 dB	
		(-60 ~ -120) dBm	0.62 dB	
Flatness of Output Level		9 kHz ~ 50 MHz	0.17 dB	
		50 MHz ~ 3 GHz	0.24 dB	
Harmonics		9 kHz ~ 26.5 GHz	2.0 dB	
Input Frequency		9 kHz ~ 3 GHz	5.8×10^{-5}	
Linearity of Input Level		1 MHz ~ 3 GHz		
		(0 ~ 100) dB	0.30 dB	
Frequency Response		9 kHz ~ 500 MHz	0.15 dB	
		500 MHz ~ 2 GHz	0.16 dB	
		2 GHz ~ 3 GHz	0.19 dB	
AC Input Level		10 mV		
		40 Hz ~ 10 kHz	11 μ V	
		10 kHz ~ 20 kHz	24 μ V	
		(10 mV ~ 100 mV)		
		40 Hz ~ 10 kHz	71 μ V	
		10 kHz ~ 20 kHz	73 μ V	
		(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 ~ 30 V)			
	40 Hz ~ 10 kHz	0.071 V		
	10 kHz ~ 100 kHz	0.073 V		
Flatness of AC Input Level	(40 Hz ~ 20 kHz)			
	1 V	0.77 mV		
AC Output Level	10 mV			
	40 Hz ~ 20 kHz	17 μ V		
	(10 mV ~ 100 mV)			
	40 Hz ~ 1 kHz	0.021 mV		
	1 kHz ~ 20 kHz	0.038 mV		
	(100 mV ~ 1 V)			
	40 Hz ~ 1 kHz	0.59 mV		
	1 kHz ~ 20 kHz	0.62 mV		

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Mobile communication test sets AC Output Level	40621	(1 V ~ 6 V) 40 Hz ~ 1 kHz	1.2 mV	CP-40621
		1 kHz ~ 20 kHz	2.2 mV	
Flatness of AC Output Level		(40 Hz ~ 100 kHz) 1 V	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 ~ 30 V	70 mV		
Input Frequency		10 Hz ~ 20 kHz	9.6×10^{-6}	
Output Frequency		10 Hz ~ 20 kHz	7.6×10^{-6}	
Modulation meters Frequency Modulation	40622	(0 ~ 400) kHz	3.0×10^{-2}	CP-40622
Amplitude Modulation		(0 ~ 100) %	2.5×10^{-2}	
Phase Modulation		(0 ~ 400) rad	2.6×10^{-2}	
Distortion of Modulation		(0 ~ 10) %	1.5×10^{-2}	
Network Analyzer Time base	40623	10 MHz	0.007 1 Hz	CP-40623
Output Frequency		5 Hz ~ 40 GHz	2.0×10^{-8}	
Output Level		9 kHz ~ 1 MHz		
		(20 ~ 0) dBm	0.24 dB	
		(0 ~ -10) dBm	0.27 dB	
		(-10 ~ -60) dBm	0.31 dB	
		1 MHz ~ 1 GHz		
		(20 ~ -20) dBm	0.23 dB	
		(-20 ~ -50) dBm	0.27 dB	
		(-50 ~ -120) dBm	0.60 dB	
		1 GHz ~ 18 GHz		
		(20 ~ -60) dBm	0.32 dB	
		(-60 ~ -120) dBm	0.62 dB	
		18 GHz ~ 26 GHz		
	(20 ~ -30) dBm	0.29 dB		
	26 GHz ~ 40 GHz			
	(20 ~ -30) dBm	0.44 dB		
Flatness of Output Level	9 kHz ~ 50 MHz	0.17 dB		
	50 MHz ~ 6 GHz	0.19 dB		
	6 GHz ~ 18 GHz	0.24 dB		
	18 GHz ~ 26 GHz	0.29 dB		
	26 GHz ~ 40 GHz	0.44 dB		

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Network Analyzer Dinamic Attenuation	40623	50 MHz (0 ~ 20) dB (20 ~ 40) dB (40 ~ 60) dB (60 ~ 70) dB (70 ~ 80) dB 100 MHz ~ 9 GHz (0 ~ 20) dB (20 ~ 40) dB (40 ~ 60) dB (60 ~ 70) dB (70 ~ 80) dB 9 GHz ~ 18 GHz (0 ~ 70) dB (70 ~ 80) dB	0.21 dB 0.24 dB 0.28 dB 0.36 dB 0.45 dB 0.34 dB 0.35 dB 0.39 dB 0.42 dB 0.45 dB 0.42 dB 0.45 dB	CP-40623
Noise impulse simulators Peak Voltage Pulse Width	40626	$\pm (0.1 \sim 4)$ kV 50 ns ~ 1 μ s	3.0×10^{-2} 1.3×10^{-3}	CP-40626
RF power meters Power Range Ref. Power Output High Power Range	40635	3 μ W ~ 100 mW 1 mW 25 MHz ~ 80 MHz 0.3 W (0.3 ~ 1) W (1 ~ 10) W (10 ~ 30) W (30 ~ 50) W 80 MHz ~ 1 000 MHz 0.3 W (0.3 ~ 1) W (1 ~ 10) W (10 ~ 30) W (30 ~ 50) W (50 ~ 80) W (80 ~ 100) W	3.1×10^{-3} 5.7 μ W 0.018 W 0.06 W 0.6 W 1.3 W 2.4 W 0.018 W 0.06 W 0.6 W 1.3 W 2.4 W 4.1 W 4.6 W	CP-40635
Diode power sensors Cal Factor	40636	1 μ W ~ 100 mW 9 kHz ~ 10 MHz 10 MHz ~ 10 GHz 10 GHz ~ 18 GHz 18 GHz ~ 26 GHz 26 GHz ~ 40 GHz	2.6×10^{-2} 2.8×10^{-2} 3.4×10^{-2} 4.7×10^{-2} 5.0×10^{-2}	CP-40636

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Thermocouple power sensors Cal Factor	40637	1 μ W ~ 100 mW 100 kHz ~ 10 MHz 10 MHz ~ 10 GHz 10 GHz ~ 18 GHz 18 GHz ~ 26 GHz 26 GHz ~ 40 GHz	2.6×10^{-2} 2.8×10^{-2} 3.4×10^{-2} 4.7×10^{-2} 5.0×10^{-2}	CP-40637
Pulse generators Output Level	40638	40 Hz 10 mV (10 ~ 20) mV (20 ~ 50) mV (50 ~ 100) mV (100 ~ 200) mV (200 ~ 500) mV (0.5 ~ 1) V (1 ~ 2) V (2 ~ 5) V (5 ~ 10) V (10 ~ 20) V 40 Hz ~ 1 kHz 10 mV (10 ~ 20) mV (20 ~ 50) mV (50 ~ 100) mV (100 ~ 200) mV (200 ~ 500) mV (0.5 ~ 1) V (1 ~ 2) V (2 ~ 5) V (5 ~ 10) V (10 ~ 20) V 1 kHz ~ 10 kHz 10 mV (10 ~ 20) mV (20 ~ 50) mV (50 ~ 100) mV (100 ~ 200) mV (200 ~ 500) mV (0.5 ~ 1) V (1 ~ 2) V (2 ~ 5) V (5 ~ 10) V (10 ~ 20) V	1.9×10^{-3} 9.5×10^{-4} 4.0×10^{-4} 2.4×10^{-4} 4.1×10^{-4} 2.0×10^{-4} 1.6×10^{-4} 4.1×10^{-4} 2.0×10^{-4} 1.6×10^{-4} 4.1×10^{-4} 1.8×10^{-3} 9.0×10^{-4} 3.8×10^{-4} 2.2×10^{-4} 3.9×10^{-4} 1.7×10^{-4} 1.3×10^{-4} 3.9×10^{-4} 1.7×10^{-4} 1.3×10^{-4} 3.9×10^{-4} 1.8×10^{-3} 9.5×10^{-4} 4.0×10^{-4} 2.3×10^{-4} 4.0×10^{-4} 1.9×10^{-4} 1.4×10^{-4} 4.0×10^{-4} 1.9×10^{-4} 1.4×10^{-4} 4.0×10^{-4}	CP-40638

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Pulse generators Output Level	40638	10 kHz ~ 20 kHz		CP-40638
		10 mV	2.1×10^{-3}	
		(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	3.2×10^{-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	4.0×10^{-3}	
		(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}	
		50 kHz ~ 100 kHz		
		10 mV	7.2×10^{-3}	
		(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		10 ns ~ 20 ns	1.2×10^{-3}	
		20 ns ~ 50 ns	6.2×10^{-4}	
		50 ns ~ 0.2 μs	1.2×10^{-3}	
		0.2 μs ~ 0.5 μs	6.2×10^{-4}	
		0.5 μs ~ 2 μs	1.2×10^{-3}	
		2 μs ~ 5 μs	6.2×10^{-4}	
		5 μs ~ 20 μs	1.2×10^{-3}	
		20 μs ~ 50 μs	6.2×10^{-4}	
		50 μs ~ 0.2 ms	1.2×10^{-3}	
		0.2 ms ~ 0.5 ms	6.2×10^{-4}	
		0.5 ms ~ 2 ms	1.2×10^{-3}	
		2 ms ~ 5 ms	6.2×10^{-4}	

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments		
Pulse generators	40638	Period	5 ms ~ 20 ms	1.2×10^{-3}	CP-40638	
			20 ms ~ 50 ms	6.2×10^{-4}		
			50 ms ~ 0.2 s	1.2×10^{-3}		
			0.2 s ~ 0.5 s	6.2×10^{-4}		
			0.5 s ~ 1 s	1.2×10^{-3}		
		Pulse Width	0.1 μs ~ 0.2 μs	1.2×10^{-3}		
			0.2 μs ~ 0.5 μs	6.2×10^{-4}		
			0.5 μs ~ 2 μs	1.2×10^{-3}		
			2 μs ~ 5 μs	6.2×10^{-4}		
			5 μs ~ 20 μs	1.2×10^{-3}		
			20 μs ~ 50 μs	6.2×10^{-4}		
			50 μs ~ 0.2 ms	1.2×10^{-3}		
			0.2 ms ~ 0.5 ms	6.2×10^{-4}		
			0.5 ms ~ 2 ms	1.2×10^{-3}		
			2 ms ~ 5 ms	6.2×10^{-4}		
			5 ms ~ 20 ms	1.2×10^{-3}		
			20 ms ~ 50 ms	6.2×10^{-4}		
			50 ms ~ 0.2 s	1.2×10^{-3}		
			0.2 s ~ 0.5 s	6.2×10^{-4}		
			Delay Time	0.1 μs ~ 0.2 μs		1.2×10^{-3}
				0.2 μs ~ 0.5 μs		6.2×10^{-4}
				0.5 μs ~ 2 μs		1.2×10^{-3}
		2 μs ~ 5 μs		6.2×10^{-4}		
		5 μs ~ 20 μs		1.2×10^{-3}		
		20 μs ~ 50 μs		6.2×10^{-4}		
		50 μs ~ 0.2 ms		1.2×10^{-3}		
		0.2 ms ~ 0.5 ms		6.2×10^{-4}		
		0.5 ms ~ 2 ms		1.2×10^{-3}		
		2 ms ~ 5 ms		6.2×10^{-4}		
		5 ms ~ 20 ms		1.2×10^{-3}		
		20 ms ~ 50 ms		6.2×10^{-4}		
		50 ms ~ 0.2 s		1.2×10^{-3}		
		0.2 s ~ 0.5 s		6.2×10^{-4}		
		Double Pulse		0.1 μs ~ 0.2 μs		1.2×10^{-3}
				0.2 μs ~ 0.5 μs		6.2×10^{-4}
				0.5 μs ~ 2 μs		1.2×10^{-3}
			2 μs ~ 5 μs	6.2×10^{-4}		
			5 μs ~ 20 μs	1.2×10^{-3}		
			20 μs ~ 50 μs	6.2×10^{-4}		
			50 μs ~ 0.2 ms	1.2×10^{-3}		
			0.2 ms ~ 0.5 ms	6.2×10^{-4}		
			0.5 ms ~ 2 ms	1.2×10^{-3}		
2 ms ~ 5 ms	6.2×10^{-4}					
5 ms ~ 20 ms	1.2×10^{-3}					
20 ms ~ 50 ms	6.2×10^{-4}					
50 ms ~ 0.2 s	1.2×10^{-3}					
0.2 s ~ 0.5 s	6.2×10^{-4}					

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Radar test sets	40639			CP-40639
Frequency		100 kHz ~ 40 GHz	1.0×10^{-8}	
Frequency Modulation		0 kHz ~ 400 kHz	3.0×10^{-2}	
Amplitude Modulation		0 % ~ 100 %	2.5×10^{-2}	
Distortion of Modulation		0 % ~ 10 %	1.5×10^{-2}	
Output Level		9 kHz ~ 1 MHz		
		(20 ~ 0) dBm	0.24 dB	
		(0 ~ -10) dBm	0.27 dB	
		(-10 ~ -60) dBm	0.31 dB	
		1 MHz ~ 1 GHz		
		(20 ~ -20) dBm	0.23 dB	
		(-20 ~ -50) dBm	0.27 dB	
		(-50 ~ -120) dBm	0.60 dB	
		1 GHz ~ 18 GHz		
		(20 ~ -60) dBm	0.32 dB	
		(-60 ~ -120) dBm	0.62 dB	
Pulse Width		10 ns ~ 10 ms	1.3×10^{-3}	
Input Frequency		100 kHz ~ 18 GHz	8.8×10^{-7}	
Input Level		(0 ~ -80) dB	0.50 dB	
High power		25 MHz ~ 1 000 MHz		
		(0 ~ 5) W	1.0 W	
		(5 ~ 20) W	1.2 W	
		(20 ~ 40) W	2.4 W	
		(40 ~ 60) W	2.9 W	
		(60 ~ 80) W	4.1 W	
		(80 ~ 100) W	5.3 W	
RF signal generators	40640			CP-40640
Time Base		10 MHz	0.007 1 Hz	
Frequency		20 Hz ~ 40 GHz	1.0×10^{-8}	
Frequency Modulation		0 kHz ~ 400 kHz	3.0×10^{-2}	
Amplitude Modulation		0 % ~ 100 %	2.5×10^{-2}	
Phase Modulation		0 rad ~ 400 rad	2.6×10^{-2}	
Distortion of Modulation		0 % ~ 10 %	1.5×10^{-2}	
Output Level		9 kHz ~ 1 MHz		
		(20 ~ 0) dBm	0.24 dB	
		(0 ~ -10) dBm	0.27 dB	
		(-10 ~ -60) dBm	0.31 dB	

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments	
RF signal generators Output Level	40640	1 MHz ~ 1 GHz (20 ~ -20) dBm (-20 ~ -50) dBm (-50 ~ -120) dBm	0.23 dB 0.27 dB 0.60 dB	CP-40640	
		1 GHz ~ 18 GHz (20 ~ -60) dBm (-60 ~ -120) dBm	0.32 dB 0.62 dB		
		18 GHz ~ 26 GHz (20 ~ -30) dBm	0.29 dB		
		26 GHz ~ 40 GHz (20 ~ -30) dBm	0.44 dB		
Frequency Response		9 kHz ~ 50 MHz 50 MHz ~ 6 GHz 6 GHz ~ 18 GHz 18 GHz ~ 26 GHz 26 GHz ~ 40 GHz	0.17 dB 0.19 dB 0.24 dB 0.29 dB 0.44 dB		
Hamonics		9 kHz ~ 26.5 GHz	2.0 dB		
RF spectrum analyzers Time Base	40641	10 MHz	5.8×10^{-9}		CP-40641
RBW		10 Hz ~ 3 MHz	1.9×10^{-3}		
RBW Selectivity		10 Hz ~ 3 MHz	4.7×10^{-3}		
RBW Switching		10 Hz ~ 3 MHz	0.29 dB		
Center Frequency		10 Hz ~ 40 GHz	4.7×10^{-6}		
Frequency Counter		10 Hz ~ 40 GHz	5.8×10^{-8}		
If Frequency Gain		(0 ~ 100) dB	0.30 dB		
Scale Fidelity		(0 ~ 100) dB	0.50 dB		
Frequency Span		1 kHz ~ 10 GHz	3.6×10^{-3}		
Frequency Response		9 kHz ~ 500 MHz 500 MHz ~ 2 GHz 2 GHz ~ 8 GHz 8 GHz ~ 16 GHz 16 GHz ~ 26 GHz 26 GHz ~ 40 GHz	0.15 dB 0.16 dB 0.19 dB 0.23 dB 0.25 dB 0.27 dB		
Average Noise Level		10 MHz ~ 40 GHz	1.0 dB		
Output Frequency		1 MHz ~ 300 MHz	5.8×10^{-8}		
Output Level		(0 ~ -30)dBm	0.09 dB		

406. Radio frequency measurements

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Coaxial thermistor mounts Cal Factor	40646	1 μ W ~ 100 mW 10 MHz ~ 10 GHz 10 GHz ~ 18 GHz	2.7×10^{-2} 3.3×10^{-2}	CP-40646
RF voltmeters Voltage	40650	100 kHz 3 mV (3 ~ 30) mV (30 ~ 300) mV (0.3 ~ 3) V (3 ~ 30) V (30 ~ 100) V 1 MHz 3 mV (3 ~ 30) mV (30 ~ 300) mV (0.3 ~ 3) V (3 ~ 10) V	1.6×10^{-2} 2.7×10^{-3} 5.3×10^{-3} 1.1×10^{-3} 1.6×10^{-3} 2.3×10^{-3} 9.6×10^{-2} 1.2×10^{-2} 8.5×10^{-3} 9.0×10^{-3} 4.5×10^{-3}	CP-40650
Field strength meters Input Frequency If Frequency Gain Scale Fidelity Frequency Response	40652	 10 Hz ~ 4 GHz (0 ~ 100) dB (0 ~ 100) dB 9 kHz ~ 500 MHz 500 MHz ~ 2 GHz 2 GHz ~ 4 GHz	 5.8×10^{-5} 0.30 dB 0.50 dB 0.15 dB 0.16 dB 0.19 dB	CP-40652
Dip simulators AC Voltage Dip up AC Voltage (0 ~ 120) V (120 ~ 240) V Duration Time	40654	(0 ~ 50) V (50 ~ 100) V (100 ~ 200) V (200 ~ 300) V (0 ~ 120) % (0 ~ 120) % (1 ~ 1 000) ms	1.2×10^{-3} 5.8×10^{-4} 3.8×10^{-4} 2.7×10^{-4} 3.0×10^{-2} 2.8×10^{-2} 1.4×10^{-3}	CP-40654

407. Field strength & antennas

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Loop antennas Antenna factor	40704	30 Hz ~ 30 MHz	2.0 dB	CP-40704
molopole antennas Antenna factor	40705	9 kHz ~ 30 MHz	1.8 dB	CP-40705

501. Contact thermometry

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Temperature generators ; ovens, furnaces, isothermal liquid baths, ice-point baths, dry-block calibrators	50101			
ovens		(-80 ~ 250) °C	0.64 °C	CP-50101-1
Dry-Block Calibrators		(-80 ~ 550) °C (550 ~ 1 100) °C	0.02 °C 0.76 °C	CP-50101-2
Furnace		(100 °C ~ 550) °C (550 ~ 1 100) °C	0.02 °C 0.76 °C	CP-50101-3
Isothermal liquid baths		(-80 ~ 550) °C	0.02 °C	CP-50101-4
Temperature indicators/recorders /controllers, temperature calibrators Include Sensor	50102	(-80 ~ 550) °C (550 ~ 1 100) °C	0.08 °C 0.84 °C	CP-50102
Exclude Sensor(Resistance) (Thermocouple)		(-80 ~ 550) °C (-80 ~ 1 100) °C	0.12 °C 0.25 °C	
Temperature Calibrators Resistance(Source)				
TC E		(-40 ~ 250) °C	0.08 °C	
J		(-40 ~ 800) °C	0.68 °C	
K		(-40 ~ 750) °C	0.47 °C	
N		(-40 ~ 1 100) °C	0.59 °C	
R		(-40 ~ 1 100) °C	0.59 °C	
S		(0 ~ 1 100) °C	0.75 °C	
B		(0 ~ 1 100) °C	0.74 °C	
T		(0 ~ 1 100) °C	0.64 °C	
Resistance(Input)		(-40 ~ 350) °C	0.81 °C	
TC E		(-40 ~ 250) °C	0.12 °C	
J		(-40 ~ 800) °C	0.57 °C	
K	(-40 ~ 750) °C	0.43 °C		
N	(-40 ~ 1 100) °C	0.50 °C		
R	(-40 ~ 1 100) °C	0.53 °C		
S	(0 ~ 1 100) °C	0.76 °C		
B	(0 ~ 1 100) °C	0.74 °C		
T	(0 ~ 1 100) °C	0.63 °C		
Resistance(Input)	(-40 ~ 350) °C	0.69 °C		
Glass thermometers ; liquid- in-glass, Beckmann liquid-in-glass	50103	(-80 ~ 550) °C	0.09 °C	CP-50103
Resistance thermometers ; SPRT, IPRT, thermistors, etc IPRT(Temperature)	50104	(-80 ~ 550) °C	0.06 °C	CP-50104

501. Contact thermometry

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Thermal expansion thermometers ; bimetal, gas or liquid type bimetal	50105	(-80 ~ 100) °C (100 ~ 250) °C (250 ~ 550) °C	0.36 °C 0.61 °C 1.48 °C	CP-50105
Thermocouples ; noble metal, base metal, pure metal, special type, etc. Base metal	50106	(-80 ~ 550) °C (550 ~ 1 100) °C	0.60 °C 0.93 °C	CP-50106-1
Noble metal		(0 ~ 550) °C (550 ~ 1 100) °C	0.59 °C 0.94 °C	CP-50106-2
Temperature transducers Temperature	50107	(-80 ~ 550) °C (550 ~ 1 100) °C	0.18 °C 1.20 °C	CP-50107

502. non contact thermometry

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Standard radiation thermometers Temperature	50204	(0 ~ 100) °C (100 ~ 200) °C (200 ~ 500) °C (500 ~ 1 000) °C	1.5 °C 1.6 °C 1.9 °C 3.4 °C	CP-50204
Blackbody Furnaces	50206	(0 ~ 100) °C (100 ~ 200) °C (200 ~ 500) °C (500 ~ 1 000) °C	1.5 °C 1.7 °C 1.8 °C 2.7 °C	CP-50206

503. Humidity

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Dew-point hygrometers: chilled mirror, alumina thin film, etc. Dew-point	50301	(-75 ~ -60) °Cdp (-60 ~ 20) °Cdp	0.62 °Cdp 0.40 °Cdp	CP-50301
Relative humidity hygrometers ; polimer thinfilm, hair, etc. Hair (Relative Humidity)	50302	(5 ~ 20) % R.H. (20 ~ 50) % R.H. (50 ~ 70) % R.H. (70 ~ 90) % R.H. (90 ~ 95) % R.H.	2.0 % R.H. 2.4 % R.H. 2.6 % R.H. 3.1 % R.H. 3.3 % R.H.	CP-50302-1

503. Humidity

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Relative humidity hygrometers ; polimer thinfilm, hair, etc. Polimer thinfilm(Digital hygro meter) (Relative humidity) (Temperature)	50302	(5 ~ 20) % R.H. (20 ~ 50) % R.H. (50 ~ 70) % R.H. (70 ~ 90) % R.H. (90 ~ 95) % R.H. (-40 ~ 120) °C	2.0 % R.H. 2.4 % R.H. 2.6 % R.H. 3.1 % R.H. 3.3 % R.H. 0.46 °C	CP-50302-2
Psychrometers ; assmann ventilated, PRT type, etc. PRT type(Relative humidity)	50303	(5 ~ 20) % R.H. (20 ~ 50) % R.H. (50 ~ 70) % R.H. (70 ~ 90) % R.H. (90 ~ 95) % R.H.	2.0 % R.H. 2.2 % R.H. 2.3 % R.H. 2.9 % R.H. 3.2 % R.H.	CP-50303
Temperature humidity recorders ; Hygrothermograph, etc. Relative humidity Temperature	50304	(10 ~ 20) % R.H. (20 ~ 50) % R.H. (50 ~ 70) % R.H. (70 ~ 90) % R.H. (90 ~ 95) % R.H. (-20 ~ 100) °C	2.0 % R.H. 2.4 % R.H. 2.6 % R.H. 3.1 % R.H. 3.3 % R.H. 0.46 °C	CP-50304
Transducers ; dew-point/ relative humidity Relative humidity	50305	(5 ~ 20) % R.H. (20 ~ 50) % R.H. (50 ~ 70) % R.H. (70 ~ 90) % R.H. (90 ~ 95) % R.H.	1.5 % R.H. 1.7 % R.H. 1.9 % R.H. 2.6 % R.H. 2.9 % R.H.	CP-50305
Humidity generators ; two-pressure, two-temperature, flow mixing humidity generator, constant temperature and humidity chamber, etc. Constant Temperature and humidity chamber (Relative humidity) (Temperature)	50306	(5 ~ 50) % R.H. (50 ~ 70) % R.H. (70 ~ 95) % R.H. (-80 ~ 250) °C	2.6 % R.H. 3.4 % R.H. 4.4 % R.H. 0.64 °C	CP-50306

504. Moisture

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
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	CMC (The Confidence Level is about 95 %)	Comments
Sound level meters	60106	125 Hz	0.3 dB	CP-60107
		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	

603. Vibration

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Vibration Calibrators	60301	(20 ~ 1 250) Hz	1.9 %	CP-60301
Vibration transducers acceleration	60302	10 Hz	1.9 %	CP-60302
		(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 acceleration velocity displacement	60303	10 Hz	2.4 %	CP-60303
		(10 ~ 20) Hz	1.8 %	
		(20 ~ 630) Hz	1.6 %	
		(630 ~ 1 250) Hz	2.3 %	
		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 %	
		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

Measured Quantity Instrument or Gauge	Field code	Range	CMC (The Confidence Level is about 95 %)	Comments
Illuminance meters	70101	(10 ~ 3 000) lx	3.3 %	CP-70101