

# CERTIFICATE OF ACCREDITATION

## Korea Testing Instrument Calibration Center

**Accreditation No. :** KC00-005

**Corporation Registration No. :** 110111-2326216

**Address of Laboratory :** (Guro-dong, Samsung IT-valy), 708, 27, Digital-ro 33-gil,  
Guro-gu, Seoul, Republic of Korea

**date of Initial Accreditation :** Oct. 5, 2000.

**Duration :** Oct. 28, 2017. ~ Oct. 27, 2021.

**Scope of Accreditation :** Attached Annex

**Date of issue :** Jan. 10, 2019.

**This Calibration laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025 : 2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated 8 January 2009).**



*LEE Seung Woo*

**Administrator**

**Korea Laboratory Accreditation Scheme**

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

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CALIBRATION

Valid No : Oct. 27, 2021

Accreditation No. : KC00-005(1/131)

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			10525	Thread plug gauges	N	30104	Frequency meters/ counters	Y
10206	Dial/ cylinder gauge testers	N	10527	Thread ring gauges	N	30105 Time interval sources Y		
10207	Doctor blades	Y	106. Various dimensional			30106	Time interval meters/ stop watches/timers	Y
10209	End bars	N	10601	Inside/ outside/ gear tooth calipers, caliper gauges	Y	302. Velocity & revolution		
10210	Extensometers, linear displacement transducers	Y	10603	Cylinder/bore gauges	Y	30201	Standard RPM generators	Y
10211	Filler gauges	Y	10604	Depth gauges, depth micrometers	Y	30202	Contact type tachometers	Y
10212	Film applicators	Y	10605	Dial/digital gauges	Y	30203	Photo tachometers/ stroboscopes	Y
10213	Gap gauges	Y	10608	Grind gauges	Y	401. DC voltage & current		
10216	Height gauges /measuring machines	Y	10609	Micro indicators, test indicators	Y	40101	DC ammeters	Y
10220	Standard measuring machines	Y	10610	Micrometer heads	Y	40102	Transconductance amplifiers	Y
10223	Electronic micrometers	N	10611	3-points micrometers	Y	40103	DC voltage/current calibrators	Y
10224	Height micrometers, riser blocks	N	10612	Inside micrometers	Y	40104	Electrical temperature calibrators	Y
10227	Standard tape rules, peripheral gauges	N	10613	Outside micrometers	Y	40105	DC current shunts	Y
10228	Cylindrical plug/ pin gauges, thread measuring wire gauges	N	10617	Standard sieves	N	40106	Galvanometers null detectors	Y
10229	Radius gauges	N	10620	Welding gauges	N	40107	Potentiometers	Y
10230	Cylindrical ring gauges	N	201. Mass			40108	DC power supplies	Y
10232	Step gauges	N	20106	Dial platform scale balances	Y	40112	DC voltmeters	Y
10233	Taper thickness gauges	N	20109	Electric balances	Y	40113	Static/ionic voltmeters	N
10234	Ultrasonic thickness gauges	Y	20112	Platform scale balances	Y	402. Resistance, capacitance and inductance		
10235	Ultrasonic/ coating thickness specimens	Y	20113	Spring scale balances	Y	40201	Capacitance bridges/ indicators	Y
10236	Coating thickness testers	Y	20116	Weights	N	40202	Decade capacitors	Y
104. Form			202. Force			40204	Standard capacitors	Y
10404	Optical flats	N	20203	Tension/compression testing machines	N	40205	Earth testers	Y
10406	Parallel blocks	Y	20204	Push-pull gauges	N	40206	Inductance bridges/ indicators	Y
10407	Precision surface plates	Y	203. Torque			40208	Inductors	Y
10412	Straight edges	Y	20302	Torque measuring devices	N	40210	Insulation testers	Y
10413	Straight rules	N	20303	Torque wrenches/drivers	N	40213	Resistance bridges & similar instruments	Y
105. Complex geometry			204. Pressure			40214	Resistance meters	Y
10503	Contact coordinate measuring machines	Y	20402	Manometers	Y	40215	Resistors	Y
10504	Non-contact coordinate measuring machines	Y	20406	Absolute pressure gauges	Y	40217	Impedance bridges/ LCR meters	Y
10511	Measuring microscopes, Profile projectors	Y	20407	Blood pressure gauges	Y	403. AC voltage, current & power		
10512	Micro measuring microscopes	Y	20408	Compound pressure gauges	Y	40301	AC ammeters	Y
			20409	Differential pressure gauges	Y	40302	Clamp ammeters/ voltmeters	Y
			20411	Gauge pressure gauges	Y	40303	AC voltage/ current calibrators	Y
			20412	Pressure transducers /transmitters	Y			
			20413	Dial type vacuum gauges	Y			
			20414	Water depth meters	Y			
			301. Time/frequency					
			30102	Frequency standards	N			
			30103	General frequency sources	Y			

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	
40305	AC current shunts	Y	40613	Electrostatic discharge generators	N	50106	Thermocouples; noble metal, base metal pure metal, special type, etc.	N	
40307	Voltage/current phase angle meters /synchro resolve meters	Y	40614	EMC receivers	Y	50107	Temperature transducers	Y	
			40615	RF filters	Y				
40310	Power factor meters	Y	40616	RF impedance meters	Y				
40311	AC power meters	Y	40617	RF impulse generators	Y	50109	Others; quartz, semiconductivity, optical fiber, etc.	Y	
40312	AC power supplies	Y	40618	Line impedance stabilization networks; LISN, CDN, ISN, etc.	Y				
40313	Puncture/safety testers	Y							
40314	Power recorders	Y	40619	Coaxial standard mismatches	Y	502. Non contact thermometry			
40318	AC voltmeters	Y				40621	Mobile communication test sets	Y	50204
404. Other DC & LF measurements			40622	Modulation meters	Y				50205
40401	LF amplifiers	Y				40623	Network analyzers	Y	50206
40402	DC/LF attenuators	Y	40624	Noise figure meters	Y				50207
40403	Multimeter calibrators	Y				40625	Noise generators	Y	
40404	Oscilloscope calibrators	Y	40626	Noise impulse simulators	Y				503. Humidity
40406	Video signal generators	Y				40631	RF phase meters	Y	50302
40407	Audio distortion analyzers/meters	Y	40635	RF power meters	Y				
40408	LF filters	Y				40636	Diode power sensors	Y	50304
40409	LF/audio signal analyzers	Y	40637	Thermocouple power sensors	Y				
40410	Line frequency meters	Y				40638	Pulse generators	Y	50305
40411	Function generators	Y	40639	Radar test sets	Y				
40413	AC/DC high voltage voltmeters	Y				40640	RF signal generators	Y	50306
40414	LF impulse generators	Y	40641	RF spectrum analyzers	Y				
40416	Leakage current testers	Y	40643	Surge generators	Y	601. Sound in air	60106	Sound level meters	Y
40417	Electronic AC/DC loads	Y	40644	SWR meters	Y				
40418	Modulation meters	Y	40645	RF terminations	Y	603. Vibration			
40419	Analogue/digital multimeters	Y				40646	Coaxial thermistor mounts	Y	60301
40420	Noise meters	Y	40648	Transmission trouble testers	Y				60302
40421	Oscilloscopes	Y				40650	RF voltmeters	Y	60303
40422	LF phase meters	Y	40651	Vector voltmeters	Y				701. Photometry
40423	Random wave generators	Y				40652	Field strength meters	Y	70101
40424	Voltage/current recorders	Y	40653	AM/FM test sources	Y				704. Fiber optics
40425	Relay test sets	Y				40654	Dip simulators	Y	70402
40426	LF signal generators	Y	407. Field strength & antenna						70410
40427	LF spectrum analyzers	Y	40704	Loop antennas	N	70411	Optical couplers	Y	
40429	Sweep generators	Y	501. Contact thermometry			70413	Optical loss testers	Y	
40432	Transistor curve tracers	Y	50101	Temperature generators; ovens, furnaces, isothermal liquid baths, ice-point baths, dry-block calibrators	Y	70415	Optical multimeters	Y	
40433	Waveform analyzers	Y				50102	Temperature indicators/ recorders/ controllers, temperature calibrators	Y	70416
40434	AC/DC high voltage generators	Y	50103	Glass thermometers; liquid-in-glass, Beckmann	N				70417
40435	AC/DC high voltage probes	Y				50104	Resistance thermometers; SPRT, IPRT, thermistors, etc.	Y	70418
40436	Logic analyzers	Y	50105	Thermal expansion thermometers; bimetal, gas or liquid type	Y				70419
40437	Telephone testers	Y				406. Radio frequency measurement			70423
40438	Video signal analyzers	Y	40601	RF amplifiers	Y	70424	SDH/SONET analyzers	Y	
40601	RF amplifiers	Y	40602	Coaxial attenuators	Y				
40602	Coaxial attenuators	Y	40604	BER(Bit Error Rate) testers	Y				
40604	BER(Bit Error Rate) testers	Y	40605	Burst pulse generators	Y				
40605	Burst pulse generators	Y	40607	RF power meter calibrators	Y				
40607	RF power meter calibrators	Y	40608	EMC transduces; current probes, absorbing clamps, etc.	Y				
40608	EMC transduces; current probes, absorbing clamps, etc.	Y	40610	Coaxial directional couplers/splitters	Y				
40610	Coaxial directional couplers/splitters	Y	40612	DS1/DS3 communications systems	Y				
40612	DS1/DS3 communications systems	Y							



102. Linear dimension

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Dial/cylinder gauge testers	10206	(0 ~ 100) mm	$\sqrt{0.62^2 + (0.002 \times l)^2} \mu\text{m}$ (l unit : mm)	Gauge block /KTICC-CI-10206
Doctor blades	10207	(0 ~ 10) mm	2.6 $\mu\text{m}$	Electronic micrometer /KTICC-CI-10207
End bars	10209	(0 ~ 100) mm	$\sqrt{0.78^2 + (0.002 \times l)^2} \mu\text{m}$ (l unit : mm)	Gauge block/KTICC-CI-10209
Extensometers, linear displacement transducers	10210	(0 ~ 500) mm	$\sqrt{1.3^2 + (0.002 \times l)^2} \mu\text{m}$ (l unit : mm)	Gauge block/KTICC-CI-10210
Filler gauges	10211	(0 ~ 5) mm	1.4 $\mu\text{m}$	Outside micrometer /KTICC-CI-10211
Film applicators	10212	(0 ~ 1) mm	2.6 $\mu\text{m}$	Electronic micrometer /KTICC-CI-10212
Gap gauges	10213	(1 ~ 150) mm	$\sqrt{2.6^2 + (0.002 \times l)^2} \mu\text{m}$ (l unit : mm)	Height micrometer /KTICC-CI-10213
Height gauges/ measuring machines	10216	(0 ~ 1 000) mm	$\sqrt{1.4^2 + (0.003 \times l)^2} \mu\text{m}$ (l unit : mm)	Gauge block /KTICC-CI-10216
Standard measuring machines	10220	(0 ~ 300) mm	$\sqrt{0.4^2 + (0.002 \times l)^2} \mu\text{m}$ (l unit : mm)	Gauge block/KTICC-CI-10220
Electronic micrometers	10223	(0 ~ 10) mm	0.15 $\mu\text{m}$	Gauge block/KTICC-CI-10223
Height micrometers, riser blocks Height micrometers Block Head Riser blocks	10224	(0 ~ 610) mm (0 ~ 25) mm (0 ~ 600) mm	$\sqrt{1.0^2 + (0.003 \times l)^2} \mu\text{m}$ $\sqrt{0.68^2 + (0.002 \times l)^2} \mu\text{m}$ $\sqrt{1.0^2 + (0.003 \times l)^2} \mu\text{m}$ (l unit : mm)	Gauge block /KTICC-CI-10224
Standard tape rules, peripheral gauges	10227	(0 ~ 5) m (5 ~ 20) m (20 ~ 50) m	$\sqrt{0.07^2 + (0.010 \times l)^2} \text{mm}$ $\sqrt{0.22^2 + (0.010 \times l)^2} \text{mm}$ $\sqrt{0.62^2 + (0.011 \times l)^2} \text{mm}$ (l unit : m)	Standard rules /KTICC-CI-10227
Cylindrical plug/pin gauges, thread measuring wire gauges	10228	(0 ~ 25) mm (0 ~ 10) mm	1.2 $\mu\text{m}$ 0.4 $\mu\text{m}$	Laserscan micrometer Standard measuring machine /KTICC-CI-10228
Radius gauges	10229	(0.4 ~ 100) mm	1.9 $\mu\text{m}$	Non-contact coordinate measuring machine /KTICC-CI-10229
Cylindrical ring gauges	10230	(5 ~ 200) mm	$\sqrt{0.6^2 + (0.006 \times D)^2} \mu\text{m}$ (D unit : mm)	Standard measuring machines /KTICC-CI-10230
Step gauges	10232	(0 ~ 670) mm	$\sqrt{1.0^2 + (0.003 \times l)^2} \mu\text{m}$ (l unit : mm)	Gauge block/KTICC-CI-10232
Taper thickness gauges	10233	(0 ~ 90) mm	2.1 $\mu\text{m}$	Non-contact coordinate measuring machine /KTICC-CI-10233
Ultrasonic thickness gauges	10234	(0 ~ 300) mm	1.9 $\mu\text{m}$	Ultrasonic test block /KTICC-CI-10234
Ultrasonic/ coating thickness specimens Ultrasonic test blocks	10235	(0 ~ 25) mm (0 ~ 500) mm	0.8 $\mu\text{m}$ $\sqrt{1.4^2 + (0.002 \times l)^2} \text{mm}$ (l unit : mm)	Outside micrometer, Gauge block KTICC-CI-10235
Coating thickness testers	10236	(0 ~ 1.5) mm (1.5 ~ 7.8) mm	1.7 $\mu\text{m}$ 2.0 $\mu\text{m}$	Coating standard specimens /KTICC-CI-10236

104. Form

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Optical flats	10404	(0 ~ 60) mm	0.11 μm	Optical flats /KTICC-CI-10404
Parallel blocks Parallelism Flates	10406	(0 ~ 300) mm (0 ~ 300) mm	1.1 μm 1.1 μm	Electronic micrometer /KTICC-CI-10406
Precision surface plates Diagonal length	10407	(0 ~ 5 000) mm	5.2 μm	Electronic levels /KTICC-CI-10407
Straight edges Straightness Parallelism	10412	(0 ~ 2 500) mm (0 ~ 2 500) mm	4.2 μm 4.2 μm	Electronic levels /KTICC-CI-10412
Straight rules	10413	(0 ~ 2 000) mm	$\sqrt{0.06^2 + (0.010 \times l)^2}$ mm (l unit : m)	Standard rules /KTICC-CI-10413

105. Complex geometry

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Contact coordinate measuring machines Axis accuracy	10503	(0 ~ 1 000) mm	$\sqrt{0.8^2 + (0.003 \times l)^2}$ μm (l unit : mm)	Step gauge /KTICC-CI-10503
Non-contact coordinate measuring machines Axis accuracy Squreness	10504	(0 ~ 500) mm (0 ~ 490) mm	$\sqrt{0.5^2 + (0.002 \times l)^2}$ μm 4.1 μm (l unit : mm)	Standard scales /KTICC-CI-10504
Measuring microscopes, Profile projectors Axis accuracy Squreness	10511	(0 ~ 500) mm (0 ~ 490) mm	$\sqrt{0.86^2 + (0.003 \times l)^2}$ μm 4.1 μm (l unit : mm)	Standard scales /KTICC-CI-10511
Micro measuring microscopes	10512	(0 ~ 30) mm	$\sqrt{5^2 + (0.002 \times l)^2}$ μm (l unit : mm)	Standard scales /KTICC-CI-10512
Thread plug gauges Outside diameter Effective diameter Pitch Half angle	10525	(0 ~ 200) mm (0 ~ 200) mm (0.2 ~ 5) mm (0 ~ 45)°	1.8 μm 2.1 μm 1.3 μm 2'	Standard measuring machine /KTICC-CI-10525
Thread ring gauges Bore diameter Effective diameter Pitch	10527	(5 ~ 100) mm (5 ~ 100) mm (0.5 ~ 5) mm	2.1 μm 1.7 μm 0.7 μm	Standard measuring machine /KTICC-CI-10527

106. Various dimensional

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Inside/outside/gear tooth calipers, Caliper gauges	10601	(0 ~ 1 000) mm (0 ~ 120) mm	$\sqrt{9.2^2 + (0.002 \times l)^2} \mu\text{m}$ $\sqrt{5.8^2 + (0.002 \times l)^2} \mu\text{m}$ (l unit : mm)	Caliper checker, Gauge block /KTICC-CI-10601
Cylinder/bore gauges	10603	(0 ~ 500) mm	0.4 $\mu\text{m}$	Dial gage tester /KTICC-CI-10603
Depth gauges, depth micrometers	10604	(0 ~ 600) mm (0 ~ 300) mm	$\sqrt{7.4^2 + (0.003 \times l)^2} \mu\text{m}$ $\sqrt{1.4^2 + (0.002 \times l)^2} \mu\text{m}$ (l unit : mm)	Gauge block/KTICC-CI-10604
Dial/digital gauges	10605	(0 ~ 100) mm	0.58 $\mu\text{m}$	Dial gage tester /KTICC-CI-10605
Grind gauges Slope depth Scraper straightness	10608	(0 ~ 1) mm (0 ~ 1) mm	2.6 $\mu\text{m}$ 1.3 $\mu\text{m}$	Electronic micrometer /KTICC-CI-10608
Micro indicators, Test indicators	10609	(0 ~ 2) mm (0 ~ 2) mm	0.74 $\mu\text{m}$ 0.74 $\mu\text{m}$	Dial gage tester /KTICC-CI-10609
Micrometer heads	10610	(0 ~ 50) mm	$\sqrt{1.0^2 + (0.002 \times l)^2} \mu\text{m}$ (l unit : mm)	Gauge block /KTICC-CI-10610
3-points micrometers	10611	$\varnothing$ (2 ~ 100) mm	1.2 $\mu\text{m}$	Ring gauge /KTICC-CI-10611
Inside micrometers Bar type micrometers	10612	(0 ~ 300) mm (0 ~ 300) mm	$\sqrt{1.2^2 + (0.002 \times l)^2} \mu\text{m}$ $\sqrt{1.2^2 + (0.002 \times l)^2} \mu\text{m}$ (l unit : mm)	Gauge block /KTICC-CI-10612
Outside micrometers V-anvil micrometers	10613	(0 ~ 300) mm (300 ~ 1 000) mm (1 ~ 25) mm	$\sqrt{0.9^2 + (0.002 \times l)^2} \mu\text{m}$ $\sqrt{2.3^2 + (0.002 \times l)^2} \mu\text{m}$ 1.2 $\mu\text{m}$ (l unit : mm)	Gauge block, Pluge gauge /KTICC-CI-10613
Standard sieves Wire rod diameter Sieve opening	10617	(0 ~ 10) mm (0 ~ 150) mm	2.4 $\mu\text{m}$ 3.4 $\mu\text{m}$	Non-contact coordinate measuring machine /KTICC-CI-10617
Welding gauges Length Angle	10620	(0 ~ 90) mm (0 ~ 180)°	6.1 $\mu\text{m}$ 4.8 ′	Non-contact coordinate measuring machine /KTICC-CI-10620

201. MASS

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Dial platform scale balances	20106	(0 ~ 1) kg (1 ~ 10) kg (10 ~ 50) kg (50 ~ 100) kg (100 ~ 200) kg	2.9 g 15 g 62 g 0.15 kg 0.29 kg	Weight/KTICC-CI-20106
Electric balances	20109	(0 ~ 5) g (5 ~ 101) g (101 ~ 230) g (230 ~ 410) g (0.41 ~ 1.2) kg (1.2 ~ 10.1) kg (10.1 ~ 21) kg (21 ~ 31) kg (31 ~ 41) kg (41 ~ 101) kg (101 ~ 300) kg (300 ~ 500) kg	36 µg 0.11 mg 0.32 mg 0.32 mg 1.5 mg 9.5 mg 18 mg 30 mg 68 mg 1.1 g 10 g 12 g	Weight/KTICC-CI-20109
Platform scale balances	20112	(0 ~ 50) kg (50 ~ 100) kg (100 ~ 200) kg	8 g 18 g 35 g	Weight/KTICC-CI-20112
Spring scale balances	20113	(0 ~ 1) kg (1 ~ 10) kg (10 ~ 50) kg (50 ~ 100) kg	2.9 g 15 g 62 g 0.15 kg	Weight/KTICC-CI-20113
Weights	20116	1 mg ~ 20 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 10 kg 20 kg	Class F1 4.6 µg 4.6 µg 4.6 µg 4.6 µg 5.2 µg 6.6 µg 6.6 µg 7.4 µg 9.2 µg 17 µg 18 µg 21 µg 24 µg 28 µg 33 µg 0.12 mg 0.15 mg 0.27 mg 0.51 mg 1.0 mg 2.7 mg 5.1 mg 10 mg	Weight/KTICC-CI-20116



202. Force

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Tension/compression testing machines	20203	Tension (30 ~ 300) N (0.3 ~ 1) kN (1 ~ 3) kN (3 ~ 20) kN	$1.1 \times 10^{-3}$ $1.0 \times 10^{-3}$ $1.1 \times 10^{-3}$ $1.0 \times 10^{-3}$	Load Cell /KTICC-CI-20203
Compression		(30 ~ 300) N (0.3 ~ 1) kN (1 ~ 3) kN (3 ~ 5) kN (5 ~ 10) kN (10 ~ 50) kN (50 ~ 2 000) kN	$1.1 \times 10^{-3}$ $1.0 \times 10^{-3}$ $1.1 \times 10^{-3}$ $1.0 \times 10^{-3}$ $1.1 \times 10^{-3}$ $1.2 \times 10^{-3}$ $1.3 \times 10^{-3}$	
Push-pull gauges Push, Pull	20204	(1 ~ 500) N	$1.3 \times 10^{-3}$	Weight/KTICC-CI-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 ~ 20) N·m (20 ~ 200) N·m	$1.1 \times 10^{-3}$ $5.3 \times 10^{-4}$ $2.6 \times 10^{-4}$ $5.9 \times 10^{-4}$ $1.6 \times 10^{-4}$	Torque calibration system /KTICC-CI-20302
Torque wrenches/drivers	20303	(0.1 ~ 1.0) N·m (1 ~ 5) N·m (5 ~ 10) N·m (10 ~ 25) N·m (25 ~ 50) N·m (50 ~ 100) N·m (100 ~ 250) N·m (250 ~ 500) N·m (500 ~ 1 000) N·m	$3.1 \times 10^{-2}$ $6.9 \times 10^{-3}$ $8.1 \times 10^{-3}$ $3.0 \times 10^{-3}$ $4.8 \times 10^{-3}$ $4.3 \times 10^{-3}$ $1.9 \times 10^{-3}$ $4.7 \times 10^{-3}$ $3.7 \times 10^{-3}$	Torque calibration system Standard weights, Torque cell /KTICC-CI-20303

204. Pressure

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Manometers Well, U type Inclined tube	20402	(0 ~ 200) kPa (0 ~ 10) kPa	$8.1 \times 10^{-4}$ $3.8 \times 10^{-4}$	Pressure generator & controller /KTICC-CI-20402
Absolute pressure gauges	20406	(75 ~ 135) kPa abs. (0.135 ~ 7)Mpa abs.	$6.8 \times 10^{-5}$ $5.0 \times 10^{-5}$	Pressure generator & controller /KTICC-CI-20406
Blood pressure gauges	20407	(0 ~ 40) kPa	$2.3 \times 10^{-4}$	Pressure generator & controller /KTICC-CI-20407
Compound pressure gauges	20408	(-0.095 ~ 7 ) MPa	$1.3 \times 10^{-4}$	Deadweight tester Pressure generator & controller /KTICC-CI-20408
Differential pressure gauges Air	20409	(0 ~ 3) MPa	$2.9 \times 10^{-4}$	Pressure generator & controller /KTICC-CI-20409
Gauge pressure gauges Gauge pressure gauges Air Oil	20411	(0 ~ 40) kPa (0.04 ~ 10) MPa (0.1 ~ 110) MPa	$1.7 \times 10^{-4}$ $1.0 \times 10^{-4}$ $1.1 \times 10^{-4}$	Deadweight tester /KTICC-CI-20411
Pressure transducers/transmitters Air Oil	20412	(-95 ~ 0) kPa (0 ~ 40) kPa (0.04 ~ 10) MPa (0.1 ~ 110) MPa	$1.2 \times 10^{-4}$ $1.7 \times 10^{-4}$ $1.2 \times 10^{-4}$ $1.2 \times 10^{-4}$	Deadweight tester /KTICC-CI-20412
Dial type vacuum gauges	20413	(-95 ~ 0) kPa	$4.9 \times 10^{-4}$	Pressure generator & controller /KTICC-CI-20413
Water depth meters	20414	(0 ~ 100) m	$1.4 \times 10^{-4}$	Pressure generator & controller /KTICC-CI-20414

301. Time/frequency

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Frequency standards	30102	(1 ~ 10) MHz	$4.1 \times 10^{-13}$	Frequency standard /KTICC-CI-30102
General frequency sources	30103	(1 ~ 10) MHz	$4.1 \times 10^{-13}$	Frequency standard /KTICC-CI-30103
Frequency meters/counters Compared to the frequency standard Input Frequency Reference Output	30104	10 MHz 1 Hz ~ 5 GHz (5 ~ 40) GHz (1 ~ 10) MHz	$7.6 \times 10^{-12}$ $1.2 \times 10^{-10}$ 1.3 Hz $4.1 \times 10^{-13}$	Frequency Standard /KTICC-CI-30104
Time interval sources	30105	1 ns ~ 1 s (1 ~ 5) s	$6.1 \times 10^{-6}$ $1.2 \times 10^{-6}$	Frequency Counter /KTICC-CI-30105
Time interval meters/stop watches/timers Stop watches Time interval meters/timers	30106	(0.1 ~ 86 400) s (1 ~ 10 000) s	$1.4 \times 10^{-7}$ $6.1 \times 10^{-5}$	Watch test equipment, Oscilloscope /KTICC-CI-30106

302. Velocity & revolution

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Standard RPM generators	30201	(30 ~ 600) min <sup>-1</sup> (600 ~ 6 000) min <sup>-1</sup> (6 000 ~ 60 000) min <sup>-1</sup>	0.3 min <sup>-1</sup> 0.9 min <sup>-1</sup> 9 min <sup>-1</sup>	Frequency Counter /KTICC-CI-30201
Contact type tachometers	30202	(6 ~ 600) min <sup>-1</sup> (600 ~ 4 000) min <sup>-1</sup>	0.058 min <sup>-1</sup> 0.06 min <sup>-1</sup>	RPM Calibration system /KTICC-CI-30202
Photo tachometers/storoboscopes Photo tachometers  Stroboscope	30203	(6 ~ 60) min <sup>-1</sup> (60 ~ 600) min <sup>-1</sup> (600 ~ 6 000) min <sup>-1</sup> (6 000 ~ 540 000) min <sup>-1</sup>  (30 ~ 300 000) min <sup>-1</sup>	0.007 min <sup>-1</sup> 0.009 min <sup>-1</sup> 0.06 min <sup>-1</sup> 0.6 min <sup>-1</sup>  0.01 min <sup>-1</sup>	RPM Calibration system /KTICC-CI-30203

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
DC ammeters DC Current	40101	(±) (0 ~ 19) nA (19 ~ 190) nA (0.19 ~ 1.9) μA (1.9 ~ 19) μA (19 ~ 190) μA (0.19 ~ 1) mA (1 ~ 10) mA (10 ~ 19) mA (19 ~ 100) mA (100 ~ 190) mA (0.19 ~ 1) A (1 ~ 1.9) A (1.9 ~ 2) A (2 ~ 10) A (10 ~ 20) A (20 ~ 100) A	$2.3 \times 10^{-4}$ $1.2 \times 10^{-4}$ $5.2 \times 10^{-5}$ $3.2 \times 10^{-5}$ $1.8 \times 10^{-5}$ $4.3 \times 10^{-5}$ $4.0 \times 10^{-5}$ $3.8 \times 10^{-5}$ $5.3 \times 10^{-5}$ $5.0 \times 10^{-5}$ $9.4 \times 10^{-5}$ $8.9 \times 10^{-5}$ $9.0 \times 10^{-5}$ $7.0 \times 10^{-4}$ $5.5 \times 10^{-4}$ $7.0 \times 10^{-4}$	Meter calibrator /KTICC-CI-40101
Transconductance amplifiers DC Current  AC Current	40102	(±) (0 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 100) A  (0.04 ~ 1) kHz (0.009 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 100) A	$1.4 \times 10^{-5}$ $1.5 \times 10^{-5}$ $1.8 \times 10^{-5}$ $6.0 \times 10^{-5}$ $8.9 \times 10^{-5}$ $5.8 \times 10^{-4}$  $4.5 \times 10^{-4}$ $8.8 \times 10^{-4}$ $1.1 \times 10^{-3}$ $1.2 \times 10^{-3}$	DMM, Current shunt Meter calibrator /KTICC-CI-40102
DC voltage/current calibrators DC Voltage  DC Current	40103	(±) (0 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V (±) (0 ~ 1) nA (1 ~ 10) nA (10 ~ 100) nA (0.1 ~ 1) μA (1 ~ 10) μA (0.01 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 20) A (20 ~ 100) A	$8.9 \times 10^{-6}$ $3.8 \times 10^{-6}$ $3.8 \times 10^{-6}$ $6.0 \times 10^{-6}$ $6.1 \times 10^{-6}$  $2.3 \times 10^{-4}$ $1.2 \times 10^{-4}$ $5.1 \times 10^{-5}$ $2.6 \times 10^{-5}$ $1.0 \times 10^{-5}$ $6.5 \times 10^{-6}$ $8.3 \times 10^{-6}$ $1.3 \times 10^{-5}$ $5.9 \times 10^{-5}$ $8.8 \times 10^{-5}$ $1.2 \times 10^{-4}$ $5.8 \times 10^{-4}$	DMM, Current shunt /KTICC-CI-40103

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Electrical temperature calibrators (Sensor not included) Output DC Voltage	40104	(±)		Meter calibrator, DMM /KTICC-CI-40104
		(0 ~ 1) mV	$8.1 \times 10^{-5}$	
		(1 ~ 10) mV	$1.6 \times 10^{-5}$	
		(10 ~ 100) mV	$8.9 \times 10^{-6}$	
		(0.1 ~ 1) V	$3.8 \times 10^{-6}$	
		(1 ~ 10) V	$3.5 \times 10^{-6}$	
		(10 ~ 100) V	$4.6 \times 10^{-6}$	
Output DC Current		(±)		
		(0 ~ 1) mA	$2.5 \times 10^{-6}$	
		(1 ~ 10) mA	$2.5 \times 10^{-6}$	
		(10 ~ 110) mA	$8.1 \times 10^{-6}$	
Output Resistance		(0 ~ 1) Ω	$1.6 \times 10^{-5}$	
		(1 ~ 10) Ω	$1.1 \times 10^{-5}$	
		(10 ~ 100) Ω	$8.7 \times 10^{-6}$	
		(0.1 ~ 10) kΩ	$7.4 \times 10^{-6}$	
Input DC Voltage		(±)		
		(0 ~ 10) mV	$4.8 \times 10^{-5}$	
		(10 ~ 100) mV	$1.1 \times 10^{-5}$	
		(0.1 ~ 1) V	$5.9 \times 10^{-6}$	
		(1 ~ 10) V	$4.0 \times 10^{-6}$	
	(10 ~ 100) V	$5.9 \times 10^{-6}$		
	(100 ~ 300) V	$8.3 \times 10^{-6}$		
Input DC Current	(±)			
	(0 ~ 1) mA	$4.3 \times 10^{-5}$		
	(1 ~ 10) mA	$4.0 \times 10^{-5}$		
	(10 ~ 110) mA	$5.3 \times 10^{-5}$		
Input Resistance	(0 ~ 1) Ω	$1.1 \times 10^{-5}$		
	(1 ~ 10) Ω	$2.4 \times 10^{-5}$		
	(10 ~ 100) Ω	$8.0 \times 10^{-6}$		
	(0.1 ~ 1) kΩ	$1.0 \times 10^{-5}$		
	(1 ~ 10) kΩ	$6.9 \times 10^{-6}$		
DC current shunts Resistance	40105	(0.1 ~ 10) kΩ	$7.4 \times 10^{-6}$	Meter calibrator, DMM /KTICC-CI-40105
		(10 ~ 100) Ω	$8.7 \times 10^{-6}$	
		(1 ~ 10) Ω	$1.1 \times 10^{-5}$	
		(0.1 ~ 1) Ω	$1.6 \times 10^{-5}$	
		(0.01 ~ 0.1) Ω	$9.5 \times 10^{-5}$	
		(0.001 ~ 0.01) Ω	$7.7 \times 10^{-4}$	
		(0 ~ 0.001) Ω	$6.9 \times 10^{-4}$	
Galvanometers/null detectors DC Voltage	40106	(±)		Meter calibrator /KTICC-CI-40106
		(0 ~ 1) μV	$5.8 \times 10^{-3}$	
		(1 ~ 3) μV	$9.7 \times 10^{-3}$	
		(3 ~ 10) μV	$5.8 \times 10^{-3}$	
		(10 ~ 30) μV	$9.7 \times 10^{-3}$	
		(30 ~ 100) μV	$5.8 \times 10^{-3}$	
		(100 ~ 300) μV	$9.7 \times 10^{-3}$	
		(0.3 ~ 1) mV	$5.8 \times 10^{-3}$	
		(1 ~ 3) mV	$9.7 \times 10^{-3}$	
		(3 ~ 10) mV	$5.8 \times 10^{-3}$	
		(10 ~ 30) mV	$9.7 \times 10^{-3}$	
		(30 ~ 100) mV	$5.8 \times 10^{-3}$	

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	(±) (100 ~ 300) mV (0.3 ~ 1) V (1 ~ 3) V (3 ~ 10) V (10 ~ 30) V (30 ~ 100) V (100 ~ 300) V (300 ~ 1 000) V	$9.7 \times 10^{-3}$ $5.8 \times 10^{-3}$ $9.7 \times 10^{-3}$ $5.8 \times 10^{-3}$ $9.7 \times 10^{-3}$ $5.8 \times 10^{-3}$ $9.7 \times 10^{-3}$ $5.8 \times 10^{-3}$	Meter calibrator /KTICC-CI-40106
Potentiometers DC Voltage	40107	(±) (0 ~ 1) mV (1 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1000) V	$4.7 \times 10^{-4}$ $5.3 \times 10^{-5}$ $1.3 \times 10^{-5}$ $8.5 \times 10^{-6}$ $7.3 \times 10^{-6}$ $8.5 \times 10^{-6}$ $9.5 \times 10^{-6}$	Meter calibrator /KTICC-CI-40107
DC power supplies DC Voltage  DC Current	40108	(±) (0 ~ 0.1) V (0.1 ~ 1) V (1 ~ 10) V (10 ~ 20) V (20 ~ 30) V (30 ~ 40) V (40 ~ 100) V (100 ~ 1 000) V (±) (0 ~ 0.1) A (0.1 ~ 1) A (1 ~ 1.5) A (1.5 ~ 1.9) A (1.9 ~ 15) A (15 ~ 20) A (20 ~ 100) A	$1.1 \times 10^{-5}$ $7.2 \times 10^{-6}$ $7.2 \times 10^{-6}$ $8.0 \times 10^{-6}$ $7.0 \times 10^{-6}$ $6.8 \times 10^{-6}$ $8.6 \times 10^{-6}$ $8.6 \times 10^{-6}$ $7.7 \times 10^{-5}$ $2.0 \times 10^{-4}$ $1.9 \times 10^{-4}$ $1.8 \times 10^{-4}$ $2.4 \times 10^{-4}$ $2.5 \times 10^{-4}$ $5.9 \times 10^{-4}$	DMM, Current shunt /KTICC-CI-40108
DC voltmeters DC Voltage	40112	(±) (0 ~ 1) mV (1 ~ 1.9) mV (1.9 ~ 10) mV (10 ~ 19) mV (19 ~ 100) mV (100 ~ 190) mV (0.19 ~ 1) V (1 ~ 1.9) V (1.9 ~ 10) V (10 ~ 19) V (19 ~ 100) V (100 ~ 190) V (190 ~ 1 000) V	$4.2 \times 10^{-4}$ $2.2 \times 10^{-4}$ $4.9 \times 10^{-5}$ $2.9 \times 10^{-5}$ $1.2 \times 10^{-5}$ $1.0 \times 10^{-5}$ $5.9 \times 10^{-6}$ $5.8 \times 10^{-6}$ $4.0 \times 10^{-6}$ $3.8 \times 10^{-6}$ $5.9 \times 10^{-6}$ $5.8 \times 10^{-6}$ $7.3 \times 10^{-6}$	Meter calibrator /KTICC-CI-40112



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	10 Hz ~ 100 MHz	$6.1 \times 10^{-7}$	Standard Capacitor, DMM, Frequency Counter  /KTICC-CI-40201
		Voltage		
		1 mV		
		(0.04 ~ 10) kHz	$1.1 \times 10^{-3}$	
		(10 ~ 50) kHz	$1.6 \times 10^{-3}$	
		(50 ~ 100) kHz	$2.0 \times 10^{-3}$	
		(0.1 ~ 1) MHz	$9.7 \times 10^{-3}$	
		(1 ~ 10) mV		
		40 Hz	$1.6 \times 10^{-4}$	
		(0.04 ~ 10) kHz	$1.5 \times 10^{-4}$	
		(10 ~ 50) kHz	$2.2 \times 10^{-4}$	
		(50 ~ 100) kHz	$2.7 \times 10^{-4}$	
		(0.10 ~ 1) MHz	$2.6 \times 10^{-3}$	
		(10 ~ 100) mV		
		40 Hz	$7.4 \times 10^{-5}$	
		(0.04 ~ 10) kHz	$7.2 \times 10^{-5}$	
		(10 ~ 50) kHz	$7.7 \times 10^{-5}$	
		(50 ~ 100) kHz	$1.0 \times 10^{-4}$	
		(0.10 ~ 1) MHz	$1.0 \times 10^{-3}$	
		(0.1 ~ 1) V		
		40 Hz	$6.7 \times 10^{-5}$	
		(0.04 ~ 10) kHz	$6.5 \times 10^{-5}$	
		(10 ~ 50) kHz	$6.7 \times 10^{-5}$	
		(50 ~ 100) kHz	$7.7 \times 10^{-5}$	
		(0.1 ~ 1) MHz	$9.6 \times 10^{-4}$	
		(1 ~ 2) V		
		40 Hz	$4.1 \times 10^{-5}$	
		(0.04 ~ 10) kHz	$3.8 \times 10^{-5}$	
		(10 ~ 50) kHz	$4.1 \times 10^{-5}$	
		(50 ~ 100) kHz	$5.5 \times 10^{-5}$	
		(0.10 ~ 1) MHz	$9.5 \times 10^{-4}$	
		(2 ~ 5) V		
		40 Hz	$3.2 \times 10^{-5}$	
		(0.04 ~ 1) kHz	$2.4 \times 10^{-5}$	
		(1 ~ 10) kHz	$2.6 \times 10^{-5}$	
		(10 ~ 50) kHz	$3.0 \times 10^{-5}$	
		(50 ~ 100) kHz	$5.8 \times 10^{-5}$	
		(0.10 ~ 1) MHz	$1.2 \times 10^{-3}$	
Capacitance		1 pF		
		1 kHz	$4.2 \times 10^{-4}$	
		(0.001 ~ 1) MHz	$4.3 \times 10^{-4}$	
		(1 ~ 2) MHz	$4.8 \times 10^{-4}$	
		(2 ~ 3) MHz	$5.8 \times 10^{-4}$	
		(3 ~ 4) MHz	$7.6 \times 10^{-4}$	
		(4 ~ 5) MHz	$9.7 \times 10^{-4}$	
		(5 ~ 10) MHz	$3.4 \times 10^{-3}$	
		(10 ~ 13) MHz	$4.4 \times 10^{-3}$	



402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Capacitance bridges/indicators Capacitance	40201	(1 ~ 10) pF 1 kHz (0.001 ~ 5) MHz (5 ~ 13) MHz (10 ~ 100) pF 1 kHz (0.001 ~ 2) MHz (2 ~ 4) MHz (4 ~ 5) MHz (5 ~13) MHz (0.1 ~ 1) nF 1 kHz (0.001 ~ 1) MHz (1 ~ 2) MHz (2 ~ 3) MHz (3 ~ 4) MHz (4 ~ 5) MHz (5 ~ 10) MHz (10 ~ 13) MHz (1 ~ 10) nF 120 Hz (0.12 ~ 1) kHz (1 ~ 100) kHz (10 ~ 100) nF 120 Hz (0.12 ~ 1) kHz (1 ~ 100) kHz (0.1 ~ 1) μF 120 Hz (0.12 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) kHz (1 ~ 10) μF (0.12 ~ 1) kHz (10 ~ 100) μF 120 Hz (0.12 ~ 1) kHz	$3.4 \times 10^{-5}$ $4.2 \times 10^{-4}$ $2.4 \times 10^{-3}$ $3.4 \times 10^{-5}$ $4.2 \times 10^{-4}$ $4.3 \times 10^{-4}$ $4.4 \times 10^{-4}$ $2.4 \times 10^{-3}$ $3.4 \times 10^{-5}$ $4.2 \times 10^{-4}$ $4.5 \times 10^{-4}$ $5.1 \times 10^{-4}$ $6.1 \times 10^{-4}$ $7.5 \times 10^{-4}$ $3.1 \times 10^{-3}$ $3.8 \times 10^{-3}$ $2.5 \times 10^{-4}$ $2.4 \times 10^{-4}$ $2.5 \times 10^{-4}$ $2.5 \times 10^{-4}$ $1.1 \times 10^{-4}$ $2.5 \times 10^{-4}$ $2.5 \times 10^{-4}$ $2.6 \times 10^{-4}$ $5.9 \times 10^{-4}$ $6.1 \times 10^{-4}$ $6.0 \times 10^{-4}$	Standard Capacitor, DMM, Frequency Counter  /KTICC-CI-40201
Decade capacitors Capacitance	40202	1 kHz (1 ~ 100) pF (0.1 ~ 1) nF (1 ~ 10) nF (10 ~ 100) nF (0.1 ~ 1) μF (1 ~ 10) μF (10 ~ 100) μF	$3.5 \times 10^{-4}$ $2.7 \times 10^{-4}$ $3.6 \times 10^{-4}$ $3.5 \times 10^{-4}$ $3.1 \times 10^{-4}$ $6.6 \times 10^{-4}$ $7.0 \times 10^{-4}$	LCR Meter  /KTICC-CI-40202

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Standard capacitors Capacitance	40204	1 pF 1 kHz (0.001 ~ 1) MHz (1 ~ 3) MHz (3 ~ 4) MHz (4 ~ 5) MHz (5 ~10) MHz (10 ~ 13) MHz  (1 ~ 10) pF 1 kHz (0.001 ~ 5) MHz (5 ~ 13) MHz  (10 ~ 100) pF 1 kHz (0.001 ~ 2) MHz (2 ~ 5) MHz (5 ~ 13) MHz  (0.1 ~ 1) nF 1 kHz (0.001 ~ 1) MHz (1 ~ 2) MHz (2 ~ 3) MHz (3 ~ 4) MHz (4 ~ 5) MHz (5 ~ 10) MHz (10 ~ 13) MHz  (1 ~ 10) nF (0.12 ~ 100) kHz  (10 ~ 100) nF 120 Hz (0.12 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) kHz  (0.1 ~ 1) μF 120 Hz (0.12 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) kHz  (1 ~ 10) μF (0.12 ~ 1) kHz  (10 ~ 100) μF 1 kHz	 $5.4 \times 10^{-4}$ $5.5 \times 10^{-4}$ $1.1 \times 10^{-3}$ $1.2 \times 10^{-3}$ $1.4 \times 10^{-3}$ $3.4 \times 10^{-3}$ $4.5 \times 10^{-3}$  $3.5 \times 10^{-4}$ $5.0 \times 10^{-4}$ $2.4 \times 10^{-3}$  $3.5 \times 10^{-4}$ $5.0 \times 10^{-4}$ $5.1 \times 10^{-4}$ $2.4 \times 10^{-3}$  $2.7 \times 10^{-4}$ $5.0 \times 10^{-4}$ $5.2 \times 10^{-4}$ $5.8 \times 10^{-4}$ $6.7 \times 10^{-4}$ $8.0 \times 10^{-4}$ $3.1 \times 10^{-3}$ $3.9 \times 10^{-3}$  $3.6 \times 10^{-4}$  $3.6 \times 10^{-4}$ $3.5 \times 10^{-4}$ $3.6 \times 10^{-4}$ $3.7 \times 10^{-4}$  $3.6 \times 10^{-4}$ $3.1 \times 10^{-4}$ $3.9 \times 10^{-4}$ $6.9 \times 10^{-4}$  $6.6 \times 10^{-4}$  $6.9 \times 10^{-4}$	LCR Meter  /KTICC-CI-40204

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Earth testers	40205			Meter calibrator, DMM Current shunt /KTICC-CI-40205
Input AC Voltage		(50 ~ 60) Hz 0.22 mV ~ 1 V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V	$9.1 \times 10^{-5}$ $8.9 \times 10^{-5}$ $9.4 \times 10^{-5}$ $1.0 \times 10^{-4}$	
Input DC Voltage		(±) (0 ~ 100) V (100 ~ 1 000) V	$6.1 \times 10^{-5}$ $6.2 \times 10^{-5}$	
Input DC Resistance		(0.1 ~ 1) mΩ (1 ~ 10) mΩ (10 ~ 100) mΩ (0.1 ~ 1) Ω (1 ~ 10) Ω (0.01 ~ 1) kΩ (1 ~ 10) kΩ (10 ~ 100) kΩ (0.1 ~ 1) MΩ (1 ~ 10) MΩ	$1.3 \times 10^{-4}$ $1.1 \times 10^{-4}$ $8.5 \times 10^{-5}$ $6.2 \times 10^{-5}$ $6.6 \times 10^{-5}$ $6.2 \times 10^{-5}$ $6.1 \times 10^{-5}$ $6.3 \times 10^{-5}$ $6.5 \times 10^{-5}$ $7.6 \times 10^{-5}$	
Output AC Voltage		(50 ~ 60) Hz (0.22 ~ 100) mV (0.1 ~ 10) V	$6.5 \times 10^{-4}$ $6.2 \times 10^{-4}$	
Output AC Current		(50 ~ 60) Hz 9 μA ~ 100 A	$1.4 \times 10^{-3}$	
Output DC Current		(±) (0 ~ 0.1) A (0.1 ~ 1) A (1 ~ 2) A (2 ~ 5) A (5 ~ 10) A (10 ~ 20) A (20 ~ 60) A (60 ~ 80) A (80 ~ 100) A	$6.2 \times 10^{-4}$ $6.5 \times 10^{-4}$ $3.9 \times 10^{-4}$ $2.8 \times 10^{-4}$ $6.6 \times 10^{-4}$ $3.9 \times 10^{-4}$ $6.0 \times 10^{-4}$ $5.9 \times 10^{-4}$ $8.4 \times 10^{-4}$	
Input AC Current		(50 ~ 60) Hz (0.009 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 20) A (20 ~ 50) A	$6.4 \times 10^{-4}$ $6.9 \times 10^{-4}$ $1.6 \times 10^{-3}$ $4.1 \times 10^{-3}$ $2.4 \times 10^{-3}$	
Input AC Resistance		(50 ~ 60) Hz (0.5 ~ 10) mΩ (0.01 ~ 100) Ω	$1.4 \times 10^{-3}$ $1.3 \times 10^{-3}$	
Timer		(1 ~ 1 000) s	$6.1 \times 10^{-5}$	



402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Insulation testers Resistance	40210	(0 ~ 1) MΩ	$1.3 \times 10^{-4}$	Decade resistance, DMM, Meter calibrator /KTICC-CI-40210
		(1 ~ 10) MΩ	$3.5 \times 10^{-4}$	
		(10 ~ 100) MΩ	$3.8 \times 10^{-4}$	
		(0.1 ~ 10) GΩ	$8.4 \times 10^{-4}$	
		(10 ~ 100) GΩ	$1.3 \times 10^{-3}$	
		(0.1 ~ 1) TΩ	$2.4 \times 10^{-3}$	
Output DC Voltage		(±)		
		(0.1 ~ 100) V	$6.1 \times 10^{-4}$	
		(100 ~ 500) V	$1.2 \times 10^{-4}$	
		(0.5 ~ 1) kV	$6.1 \times 10^{-4}$	
		(1 ~ 2) kV	$7.5 \times 10^{-3}$	
		(2 ~ 3) kV	$7.0 \times 10^{-3}$	
		(3 ~ 4) kV	$6.8 \times 10^{-3}$	
		(4 ~ 5) kV	$6.6 \times 10^{-3}$	
		(5 ~ 10) kV	$6.2 \times 10^{-3}$	
Input AC Voltage		(50 ~ 60) Hz		
		0.22 mV ~ 100 V	$6.1 \times 10^{-4}$	
	(100 ~ 1 000) V	$6.2 \times 10^{-4}$		
Input DC Voltage	(±)			
	(0 ~ 1 000) V	$6.1 \times 10^{-4}$		
Timer	(1 ~ 1 000) s	$6.1 \times 10^{-5}$		
Resistance bridges & similar instruments Resistance ARM	40213	(1 ~ 10) mΩ	$7.4 \times 10^{-1}$	DMM, Decade resistance, Standard resistance /KTICC-CI-40213
		(10 ~ 100) mΩ	$8.0 \times 10^{-2}$	
		(0.1 ~ 1) Ω	$1.7 \times 10^{-5}$	
		(1 ~ 10) Ω	$1.0 \times 10^{-5}$	
		(10 ~ 100) Ω	$8.7 \times 10^{-6}$	
		(0.1 ~ 100) kΩ	$7.4 \times 10^{-6}$	
		(0.1 ~ 1) MΩ	$9.6 \times 10^{-6}$	
		(1 ~ 10) MΩ	$2.1 \times 10^{-5}$	
Ratio ARM		0.001	$2.6 \times 10^{-5}$	
		(0.001 ~ 0.01)	$1.2 \times 10^{-5}$	
		(0.01 ~ 0.1)	$1.4 \times 10^{-5}$	
		(0.1 ~ 1)	$1.1 \times 10^{-5}$	
		(1 ~ 10)	$1.8 \times 10^{-5}$	
		(10 ~ 100)	$2.5 \times 10^{-5}$	
		(100 ~ 1 000)	$4.7 \times 10^{-5}$	
Resistance Measured		0.5 mΩ ~ 1 Ω	$1.1 \times 10^{-5}$	
		(1 ~ 10) Ω	$2.5 \times 10^{-5}$	
	(10 ~ 100) Ω	$9.6 \times 10^{-6}$		
	(0.1 ~ 1) kΩ	$1.2 \times 10^{-5}$		
	(1 ~ 10) kΩ	$8.1 \times 10^{-6}$		
	(10 ~ 100) kΩ	$1.6 \times 10^{-5}$		
	(0.1 ~ 1) MΩ	$2.4 \times 10^{-5}$		
	(1 ~ 10) MΩ	$4.6 \times 10^{-5}$		
	(10 ~ 100) MΩ	$1.1 \times 10^{-4}$		

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Resistance meters	40214	(±)		DMM, Decade resistance, High resistance, Standara resistance, Frequency counter  /KTICC-CI-40214
DC Voltage		(0.1 ~ 10) V	$6.4 \times 10^{-5}$	
		(10 ~ 25) V	$2.6 \times 10^{-5}$	
		(25 ~ 50) V	$1.3 \times 10^{-5}$	
		(50 ~ 100) V	$6.4 \times 10^{-5}$	
		(100 ~ 250) V	$2.6 \times 10^{-5}$	
		(250 ~ 500) V	$1.3 \times 10^{-5}$	
		(500 ~ 1 000) V	$6.4 \times 10^{-5}$	
DC Resistance		(0.5 ~ 1) mΩ	$1.2 \times 10^{-4}$	
		(1 ~ 10) mΩ	$8.8 \times 10^{-5}$	
		(10 ~ 100) mΩ	$5.8 \times 10^{-5}$	
		(0.1 ~ 1) Ω	$9.6 \times 10^{-6}$	
		(1 ~ 10) Ω	$2.4 \times 10^{-5}$	
		(10 ~ 100) Ω	$7.4 \times 10^{-6}$	
		(0.1 ~ 1) kΩ	$1.0 \times 10^{-5}$	
		(1 ~ 10) kΩ	$5.4 \times 10^{-6}$	
		(10 ~ 100) kΩ	$1.5 \times 10^{-5}$	
		(0.1 ~ 1) MΩ	$2.3 \times 10^{-5}$	
		(1 ~ 10) MΩ	$3.1 \times 10^{-5}$	
		(10 ~ 100) MΩ	$1.0 \times 10^{-4}$	
		(0.1 ~ 1) GΩ	$6.2 \times 10^{-4}$	
		(1 ~ 10) GΩ	$6.3 \times 10^{-4}$	
		(10 ~ 100) GΩ	$1.2 \times 10^{-3}$	
		(0.1 ~ 1) TΩ	$2.3 \times 10^{-3}$	
Output Frequency		50 Hz	$1.2 \times 10^{-6}$	
		(50 ~ 60) Hz	$1.0 \times 10^{-6}$	
		(0.06 ~ 1) kHz	$6.1 \times 10^{-7}$	
Output AC Voltage		(0.04 ~ 1) kHz		
		10 mV	$3.5 \times 10^{-4}$	
		(10 ~ 100) mV	$2.1 \times 10^{-4}$	
		(0.1 ~ 1) V	$1.2 \times 10^{-4}$	
		(1 ~ 100) V	$1.1 \times 10^{-4}$	
AC Resistance		(0.04 ~ 1) kHz		
		(0.5 ~ 100) mΩ	$1.2 \times 10^{-3}$	
		(0.1 ~ 1) Ω	$7.1 \times 10^{-4}$	
		(1 ~ 10) Ω	$4.2 \times 10^{-4}$	
		(0.01 ~ 1) kΩ	$3.7 \times 10^{-4}$	
		(1 ~ 100) kΩ	$2.6 \times 10^{-4}$	
		(0.1 ~ 1) MΩ	$3.3 \times 10^{-4}$	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Resistors	40215			DMM, Megohmmeter, Meter calibrator, Standard resistance /KTICC-CI-40215
Decade Resistance		(1 ~ 10) mΩ (10 ~ 100) mΩ (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω (0.1 ~ 100) kΩ (0.1 ~ 1) MΩ (1 ~ 10) MΩ (10 ~ 100) MΩ (0.1 ~ 1) GΩ (1 ~ 100) GΩ (0.1 ~ 1) TΩ	$7.4 \times 10^{-4}$ $8.0 \times 10^{-5}$ $1.7 \times 10^{-5}$ $1.1 \times 10^{-5}$ $8.7 \times 10^{-6}$ $7.4 \times 10^{-6}$ $9.6 \times 10^{-6}$ $1.1 \times 10^{-5}$ $3.6 \times 10^{-5}$ $1.4 \times 10^{-4}$ $5.2 \times 10^{-3}$ $6.0 \times 10^{-3}$	
DC Resistance		(0.5 ~ 1) mΩ (1 ~ 10) mΩ (10 ~ 100) mΩ (0.1 ~ 1) Ω (1 ~ 1.9) Ω (1.9 ~ 10) Ω (10 ~ 19) Ω (19 ~ 100) Ω (100 ~ 190) Ω (0.19 ~ 19) kΩ (19 ~ 100) kΩ (100 ~ 190) kΩ (0.19 ~ 1) MΩ (1 ~ 1.9) MΩ (1.9 ~ 10) MΩ (10 ~ 19) MΩ (19 ~ 100) MΩ (0.1 ~ 1) GΩ (1 ~ 100) GΩ (0.1 ~ 1) TΩ	$1.2 \times 10^{-4}$ $8.9 \times 10^{-5}$ $6.0 \times 10^{-5}$ $1.6 \times 10^{-5}$ $1.4 \times 10^{-5}$ $1.1 \times 10^{-5}$ $1.0 \times 10^{-5}$ $8.7 \times 10^{-6}$ $8.4 \times 10^{-6}$ $7.4 \times 10^{-6}$ $7.5 \times 10^{-6}$ $7.4 \times 10^{-6}$ $9.6 \times 10^{-6}$ $8.9 \times 10^{-6}$ $2.1 \times 10^{-5}$ $1.7 \times 10^{-5}$ $3.6 \times 10^{-5}$ $1.4 \times 10^{-4}$ $5.2 \times 10^{-3}$ $6.0 \times 10^{-3}$	
AC Resistance		(0.04 ~ 1) kHz (0.5 ~ 10) mΩ (10 ~ 100) mΩ (0.1 ~ 1) Ω  (1 ~ 10) Ω (0.04 ~ 1) kHz (0.001 ~ 1) MHz (1 ~ 2) MHz (2 ~ 3) MHz (3 ~ 4) MHz (4 ~ 5) MHz (5 ~ 10) MHz (10 ~ 13) MHz	 $1.3 \times 10^{-3}$ $3.9 \times 10^{-4}$ $2.8 \times 10^{-4}$  $2.8 \times 10^{-4}$ $4.8 \times 10^{-4}$ $6.6 \times 10^{-4}$ $7.5 \times 10^{-4}$ $8.4 \times 10^{-4}$ $1.0 \times 10^{-3}$ $4.0 \times 10^{-3}$ $6.0 \times 10^{-3}$	

402. Resistance, capacitance and inductance

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Resistors AC Resistance	40215	(10 ~ 100) Ω (0.04 ~ 1) kHz (0.001 ~ 1) MHz (1 ~ 2) MHz (2 ~ 5) MHz (5 ~ 10) MHz (10 ~ 13) MHz  (0.1 ~ 1) kΩ (0.04 ~ 1) kHz (0.001 ~ 3) MHz (3 ~ 5) MHz (5 ~ 10) MHz (10 ~ 13) MHz  (1 ~ 10) kΩ 1 kHz (1 ~ 100) kHz (0.1 ~ 1) MHz  (10 ~ 100) kΩ 1 kHz (0.001 ~ 1) MHz  (0.1 ~ 1) MΩ 1 kHz	 $2.8 \times 10^{-4}$ $4.8 \times 10^{-4}$ $5.7 \times 10^{-4}$ $6.6 \times 10^{-4}$ $2.0 \times 10^{-3}$ $3.0 \times 10^{-3}$  $3.0 \times 10^{-4}$ $4.8 \times 10^{-4}$ $5.7 \times 10^{-4}$ $2.0 \times 10^{-3}$ $3.0 \times 10^{-3}$  $3.7 \times 10^{-4}$ $4.1 \times 10^{-4}$ $4.8 \times 10^{-4}$  $3.7 \times 10^{-4}$ $4.8 \times 10^{-4}$  $4.8 \times 10^{-4}$	DMM, Megohmmeter, Meter calibrator, Standard resistance /KTICC-CI-40215
Impedance bridges/LCR meters Frequency Voltage	40217	10 Hz ~ 100 MHz  (0 ~ 1) mV (0.04 ~ 10) kHz (10 ~ 50) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz (1 ~ 10) mV 40 Hz (0.04 ~ 10) kHz (10 ~ 50) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz (10 ~ 100) mV 40 Hz (0.04 ~ 10) kHz (10 ~ 50) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz	$6.1 \times 10^{-7}$  $1.1 \times 10^{-3}$ $1.6 \times 10^{-3}$ $2.0 \times 10^{-3}$ $9.7 \times 10^{-3}$  $1.6 \times 10^{-4}$ $1.5 \times 10^{-4}$ $2.2 \times 10^{-4}$ $2.7 \times 10^{-4}$ $2.6 \times 10^{-3}$  $7.4 \times 10^{-5}$ $7.2 \times 10^{-5}$ $7.7 \times 10^{-5}$ $1.0 \times 10^{-4}$ $1.0 \times 10^{-3}$	Standard Capacitors, Standrd Inductors, Standard Resistors, Frequency Counter, DMM /KTICC-CI-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 Voltage	40217	(0.1 ~ 1) V 40 Hz	$6.7 \times 10^{-5}$	Standard Capacitors, Standrd Inductors, Standard Resistors, Frequency Counter, DMM /KTICC-CI-40217
		(0.04 ~ 10) kHz (10 ~ 50) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz	$6.5 \times 10^{-5}$ $6.7 \times 10^{-5}$ $7.7 \times 10^{-5}$ $9.6 \times 10^{-4}$	
DC Bias Voltage	40217	(1 ~ 2) V 40 Hz	$4.1 \times 10^{-5}$	
		(0.04 ~ 10) kHz (10 ~ 50) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz	$3.7 \times 10^{-5}$ $4.0 \times 10^{-5}$ $5.5 \times 10^{-5}$ $9.5 \times 10^{-4}$	
		(2 ~ 5) V 40 Hz	$3.2 \times 10^{-5}$	
		(0.04 ~ 1) kHz (1 ~ 10) kHz (10 ~ 50) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz	$2.4 \times 10^{-5}$ $2.6 \times 10^{-5}$ $3.0 \times 10^{-5}$ $5.8 \times 10^{-5}$ $1.2 \times 10^{-3}$	
		(5 ~ 10) V 40 Hz	$3.0 \times 10^{-5}$	
		(0.04 ~ 10) kHz (10 ~ 50) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz	$2.3 \times 10^{-5}$ $2.9 \times 10^{-5}$ $5.5 \times 10^{-5}$ $1.2 \times 10^{-3}$	
		(10 ~ 20) V 40 Hz	$3.2 \times 10^{-5}$	
		(0.04 ~ 10) kHz (10 ~ 50) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz	$2.4 \times 10^{-5}$ $3.0 \times 10^{-5}$ $5.5 \times 10^{-5}$ $1.2 \times 10^{-3}$	
		(±) (0 ~ 0.1) V	$1.1 \times 10^{-5}$	
		(0.1 ~ 0.5) V (0.5 ~ 1) V (1 ~ 5) V (5 ~ 10) V (10 ~ 20) V (20 ~ 40) V	$1.3 \times 10^{-5}$ $7.2 \times 10^{-6}$ $1.3 \times 10^{-5}$ $7.2 \times 10^{-6}$ $7.0 \times 10^{-6}$ $5.7 \times 10^{-6}$	
		(±) (0 ~ 0.1) A (0.1 ~ 1) A (1 ~ 18) A (18 ~ 40) A	$1.3 \times 10^{-4}$ $2.4 \times 10^{-4}$ $2.5 \times 10^{-4}$ $5.8 \times 10^{-4}$	
		DC Bias Current		

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	40217	1 pF		Standard Capacitors, Standrd Inductors, Standard Resistors, Frequency Counter, DMM /KTICC-CI-40217
		1 kHz	$4.2 \times 10^{-4}$	
		(0.001 ~ 1) MHz	$4.3 \times 10^{-4}$	
		(1 ~ 2) MHz	$4.8 \times 10^{-4}$	
		(2 ~ 3) MHz	$5.8 \times 10^{-4}$	
		(3 ~ 4) MHz	$7.6 \times 10^{-4}$	
		(4 ~ 5) MHz	$9.7 \times 10^{-4}$	
		(5 ~ 10) MHz	$3.4 \times 10^{-3}$	
		(10 ~ 13) MHz	$4.4 \times 10^{-3}$	
		(1 ~ 10) pF		
		1 kHz	$3.4 \times 10^{-5}$	
		(0.001 ~ 5) MHz	$4.2 \times 10^{-4}$	
		(5 ~ 13) MHz	$2.4 \times 10^{-3}$	
		(10 ~ 100) pF		
		1 kHz	$3.4 \times 10^{-5}$	
		(0.001 ~ 2) MHz	$4.2 \times 10^{-4}$	
		(2 ~ 4) MHz	$4.3 \times 10^{-4}$	
		(4 ~ 5) MHz	$4.4 \times 10^{-4}$	
		(5 ~ 13) MHz	$2.4 \times 10^{-3}$	
		(0.1 ~ 1) nF		
		1 kHz	$3.4 \times 10^{-5}$	
		(0.001 ~ 1) MHz	$4.2 \times 10^{-4}$	
		(1 ~ 2) MHz	$4.5 \times 10^{-4}$	
		(2 ~ 3) MHz	$5.1 \times 10^{-4}$	
		(3 ~ 4) MHz	$6.1 \times 10^{-4}$	
		(4 ~ 5) MHz	$7.5 \times 10^{-4}$	
		(5 ~ 10) MHz	$3.1 \times 10^{-3}$	
		(10 ~ 13) MHz	$3.8 \times 10^{-3}$	
		(1 ~ 10) nF		
		120 Hz	$2.5 \times 10^{-4}$	
		(0.12 ~ 1) kHz	$2.4 \times 10^{-4}$	
		(1 ~ 100) kHz	$2.5 \times 10^{-4}$	
		(10 ~ 100) nF		
		120 Hz	$2.5 \times 10^{-4}$	
		(0.12 ~ 1) kHz	$1.1 \times 10^{-4}$	
		(1 ~ 100) kHz	$2.5 \times 10^{-4}$	
		(0.1 ~ 1) μF		
		120 Hz	$2.5 \times 10^{-4}$	
		(0.12 ~ 1) kHz	$1.5 \times 10^{-4}$	
		(1 ~ 10) kHz	$2.5 \times 10^{-4}$	
		(10 ~ 100) kHz	$2.6 \times 10^{-4}$	
		(1 ~ 10) μF		
		(0.12 ~ 1) kHz	$5.9 \times 10^{-4}$	
		(10 ~ 100) μF		
		120 Hz	$6.1 \times 10^{-4}$	
		(0.12 ~ 1) kHz	$6.0 \times 10^{-4}$	
Inductance		(1 kHz)		
		(0.1 ~ 100) μH	$4.5 \times 10^{-4}$	
		(0.1 ~ 10) mH	$3.2 \times 10^{-4}$	
		(0.01 ~ 1) H	$2.7 \times 10^{-4}$	
		(1 ~ 10) H	$9.3 \times 10^{-3}$	

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 AC Resistance	40217	1 mΩ		Standard Capacitors, Standrd Inductors, Standard Resistors, Frequency Counter, DMM /KTICC-CI-40217
		1 kHz (1 ~ 10) mΩ	$3.6 \times 10^{-3}$	
		1 kHz (10 ~ 100) mΩ	$8.1 \times 10^{-4}$	
		1 kHz (0.1 ~ 1) Ω	$1.0 \times 10^{-3}$	
		1 kHz (1 ~ 10) Ω	$7.1 \times 10^{-4}$	
		1 kHz (0.001 ~ 1) MHz	$4.2 \times 10^{-4}$	
		(1 ~ 2) MHz	$3.3 \times 10^{-4}$	
		(2 ~ 3) MHz	$5.2 \times 10^{-4}$	
		(3 ~ 4) MHz	$6.1 \times 10^{-4}$	
		(4 ~ 5) MHz	$7.1 \times 10^{-4}$	
		(5 ~ 10) MHz	$1.0 \times 10^{-3}$	
		(10 ~ 13) MHz	$4.0 \times 10^{-3}$	
		(10 ~ 100) Ω	$6.0 \times 10^{-3}$	
		1 kHz (0.001 ~ 1) MHz	$3.7 \times 10^{-4}$	
		(1 ~ 2) MHz	$3.3 \times 10^{-4}$	
		(2 ~ 5) MHz	$4.2 \times 10^{-4}$	
		(5 ~ 10) MHz	$5.2 \times 10^{-4}$	
		(10 ~ 13) MHz	$2.0 \times 10^{-3}$	
		(0.1 ~ 1) kΩ	$3.0 \times 10^{-3}$	
		1 kHz (0.001 ~ 3) MHz	$3.7 \times 10^{-4}$	
		(3 ~ 4) MHz	$3.3 \times 10^{-4}$	
		(4 ~ 5) MHz	$4.2 \times 10^{-4}$	
		(5 ~ 10) MHz	$5.2 \times 10^{-4}$	
		(10 ~ 13) MHz	$2.0 \times 10^{-3}$	
		(1 ~ 10) kΩ	$3.0 \times 10^{-3}$	
		1 kHz (1 ~ 100) kHz	$2.6 \times 10^{-4}$	
		(0.1 ~ 1) MHz	$2.4 \times 10^{-4}$	
		(10 ~ 100) kΩ	$3.3 \times 10^{-4}$	
		1 kHz (0.001 ~ 1) MHz	$2.6 \times 10^{-4}$	
		(0.1 ~ 1) MΩ	$3.3 \times 10^{-4}$	
		1 kHz	$3.3 \times 10^{-4}$	
DC Resistance		(0 ~ 1) Ω	$1.1 \times 10^{-5}$	
		(1 ~ 10) Ω	$2.5 \times 10^{-5}$	
		(10 ~ 100) Ω	$9.3 \times 10^{-6}$	
		(0.1 ~ 1) kΩ	$1.2 \times 10^{-5}$	
		(1 ~ 10) kΩ	$7.8 \times 10^{-6}$	
		(10 ~ 100) kΩ	$1.6 \times 10^{-5}$	
		(0.1 ~ 1) MΩ	$2.4 \times 10^{-5}$	
		(1 ~ 10) MΩ	$4.6 \times 10^{-5}$	

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	9 $\mu$ A ~ 190 mA 10 Hz (10 ~ 40) Hz (0.04 ~ 1) kHz (1 ~ 10) kHz (0.19 ~ 1) A (0.01 ~ 1) kHz (1 ~ 10) kHz (1 ~ 1.9) A (0.01 ~ 1) kHz (1 ~ 10) kHz (1.9 ~ 10) A (45 ~ 100) Hz (0.1 ~ 1) kHz (10 ~ 20) A (45 ~ 100) Hz (0.1 ~ 1) kHz (20 ~ 100) A (45 ~ 60) Hz	$3.1 \times 10^{-4}$ $2.1 \times 10^{-4}$ $1.7 \times 10^{-4}$ $1.9 \times 10^{-3}$ $3.3 \times 10^{-4}$ $7.3 \times 10^{-3}$ $3.1 \times 10^{-4}$ $7.4 \times 10^{-3}$ $1.4 \times 10^{-3}$ $1.8 \times 10^{-3}$ $2.4 \times 10^{-3}$ $2.6 \times 10^{-3}$ $4.9 \times 10^{-3}$	Meter calibrator, Current calibrator /KTICC-CI-40301
Clamp ammeters/voltmeters DC Voltage AC Voltage	40302	( $\pm$ ) (0 ~ 10) mV (0.01 ~ 1 000) V (0.22 ~ 10) mV 10 Hz (10 ~ 40) Hz (0.04 ~ 1) kHz (10 ~ 100) mV 10 Hz (10 ~ 40) Hz (0.04 ~ 1) kHz (0.1 ~ 1) V 10 Hz (10 ~ 40) Hz (0.04 ~ 1) kHz (1 ~ 10) V 10 Hz (10 ~ 40) Hz (0.04 ~ 1) kHz (10 ~ 100) V 10 Hz (10 ~ 40) Hz (0.04 ~ 1) kHz (100 ~ 1 000) V 50 Hz (0.05 ~ 1) kHz	$7.8 \times 10^{-5}$ $6.2 \times 10^{-5}$ $6.6 \times 10^{-4}$ $5.1 \times 10^{-4}$ $5.0 \times 10^{-4}$ $3.8 \times 10^{-4}$ $1.8 \times 10^{-4}$ $1.7 \times 10^{-4}$ $3.0 \times 10^{-4}$ $1.3 \times 10^{-4}$ $9.1 \times 10^{-5}$ $3.0 \times 10^{-4}$ $1.3 \times 10^{-4}$ $8.9 \times 10^{-5}$ $3.0 \times 10^{-4}$ $1.3 \times 10^{-4}$ $9.4 \times 10^{-5}$ $3.3 \times 10^{-4}$ $1.0 \times 10^{-4}$	Meter calibrator, Turn coil, Current calibrator /KTICC-CI-40302

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Clamp ammeters/voltmeters	40302	(±)		Meter calibrator, Turn coil, Current calibrator /KTICC-CI-40302
		DC Current	(0 ~ 1) A 6.2 × 10 <sup>-4</sup> (1 ~ 10) A 9.9 × 10 <sup>-4</sup> (10 ~ 20) A 1.1 × 10 <sup>-3</sup> (20 ~ 100) A 1.6 × 10 <sup>-3</sup> (100 ~ 200) A 1.7 × 10 <sup>-3</sup> (200 ~ 500) A 1.5 × 10 <sup>-3</sup> (500 ~ 1 000) A 1.7 × 10 <sup>-3</sup>	
AC Current		9 μA ~ 100 mA		
		(0.01 ~ 1) kHz 6.8 × 10 <sup>-4</sup> (1 ~ 10) kHz 1.9 × 10 <sup>-3</sup> (0.1 ~ 1) A 6.9 × 10 <sup>-4</sup> (0.01 ~ 1) kHz 7.3 × 10 <sup>-3</sup> (1 ~ 10) A 3.0 × 10 <sup>-3</sup> (0.01 ~ 1) kHz 3.1 × 10 <sup>-3</sup> (10 ~ 20) A 4.0 × 10 <sup>-3</sup> (40 ~ 60) Hz 3.7 × 10 <sup>-3</sup> (100 ~ 200) A 4.7 × 10 <sup>-3</sup> (40 ~ 60) Hz 4.3 × 10 <sup>-3</sup> (200 ~ 300) A 4.0 × 10 <sup>-3</sup> (40 ~ 60) Hz 4.0 × 10 <sup>-3</sup> (300 ~ 400) A 4.0 × 10 <sup>-3</sup> (40 ~ 60) Hz 3.7 × 10 <sup>-3</sup> (400 ~ 500) A 3.7 × 10 <sup>-3</sup> (40 ~ 60) Hz		
Resistance		(0 ~ 10) MΩ	6.1 × 10 <sup>-4</sup>	
Turn Current Coil				
DC Ratio		2 (2 ~ 10) (10 ~ 25) (25 ~ 50)	9.5 × 10 <sup>-4</sup> 1.4 × 10 <sup>-3</sup> 1.5 × 10 <sup>-3</sup> 1.4 × 10 <sup>-3</sup>	
AC Ratio		(60 Hz) 2 (2 ~ 10) (10 ~ 25) (25 ~ 50)	1.2 × 10 <sup>-3</sup> 2.2 × 10 <sup>-3</sup> 2.4 × 10 <sup>-3</sup> 2.2 × 10 <sup>-3</sup>	

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	(0.5 ~ 2) mV 10 Hz (0.01 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (100 ~ 300) kHz (300 ~ 500) kHz (0.5 ~ 1) MHz (2 ~ 20) mV 10 Hz (0.01 ~ 0.02) kHz (0.02 ~ 0.04) kHz (0.04 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (100 ~ 300) kHz (300 ~ 500) kHz (0.5 ~ 1) MHz (20 ~ 200) mV 10 Hz (0.01 ~ 0.02) kHz (0.02 ~ 0.04) kHz (0.04 ~ 1) kHz (1 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (100 ~ 300) kHz (300 ~ 500) kHz (0.5 ~ 1) MHz (0.2 ~ 2) V 10 Hz (0.01 ~ 0.02) kHz (0.02 ~ 0.04) kHz (0.04 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (100 ~ 300) kHz (300 ~ 500) kHz (0.5 ~ 1) MHz (2 ~ 20) V 10 Hz (0.01 ~ 0.02) kHz (0.02 ~ 0.04) kHz (0.04 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (100 ~ 300) kHz (300 ~ 500) kHz (0.5 ~ 1) MHz	$6.0 \times 10^{-4}$ $6.0 \times 10^{-4}$ $9.0 \times 10^{-4}$ $1.1 \times 10^{-3}$ $1.9 \times 10^{-3}$ $4.1 \times 10^{-3}$ $6.5 \times 10^{-3}$ $1.3 \times 10^{-4}$ $1.3 \times 10^{-4}$ $1.0 \times 10^{-4}$ $9.5 \times 10^{-5}$ $1.4 \times 10^{-4}$ $1.8 \times 10^{-4}$ $3.5 \times 10^{-4}$ $8.5 \times 10^{-4}$ $2.3 \times 10^{-3}$ $6.5 \times 10^{-5}$ $6.0 \times 10^{-5}$ $3.6 \times 10^{-5}$ $3.3 \times 10^{-5}$ $3.4 \times 10^{-5}$ $4.1 \times 10^{-5}$ $7.5 \times 10^{-5}$ $1.7 \times 10^{-4}$ $3.0 \times 10^{-4}$ $1.0 \times 10^{-3}$ $5.5 \times 10^{-5}$ $5.0 \times 10^{-5}$ $2.8 \times 10^{-5}$ $2.2 \times 10^{-5}$ $2.7 \times 10^{-5}$ $4.7 \times 10^{-5}$ $1.3 \times 10^{-4}$ $2.2 \times 10^{-4}$ $9.5 \times 10^{-4}$ $5.5 \times 10^{-5}$ $5.0 \times 10^{-5}$ $3.0 \times 10^{-5}$ $2.3 \times 10^{-5}$ $2.9 \times 10^{-5}$ $5.5 \times 10^{-5}$ $1.4 \times 10^{-4}$ $3.5 \times 10^{-4}$ $1.2 \times 10^{-3}$	DMM, Current shunt /KTICC-CI-40303

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 ~ 200) V 10 Hz (0.01 ~ 0.02) kHz (0.02 ~ 0.04) kHz (0.04 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz	$6.5 \times 10^{-5}$ $5.5 \times 10^{-5}$ $3.3 \times 10^{-5}$ $2.8 \times 10^{-5}$ $4.0 \times 10^{-5}$ $6.5 \times 10^{-5}$	DMM, Current shunt /KTICC-CI-40303
		(200 ~ 700) V 20 Hz (0.02 ~ 0.04) kHz (0.04 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz	$5.3 \times 10^{-5}$ $3.4 \times 10^{-5}$ $2.9 \times 10^{-5}$ $1.1 \times 10^{-4}$ $6.6 \times 10^{-4}$	
AC Current		(700 ~ 1 000) V 40 Hz (0.04 ~ 1) kHz (1 ~ 20) kHz (20 ~ 30) kHz	$3.6 \times 10^{-5}$ $2.9 \times 10^{-5}$ $3.0 \times 10^{-5}$ $1.1 \times 10^{-4}$	
		(0.009 ~ 1) mA 20 Hz (0.02 ~ 1) kHz (1 ~ 10) kHz	$4.4 \times 10^{-4}$ $4.4 \times 10^{-4}$ $1.7 \times 10^{-3}$	
		(1 ~ 1.9) mA 20 Hz (0.02 ~ 1) kHz (1 ~ 10) kHz	$3.6 \times 10^{-4}$ $3.6 \times 10^{-4}$ $1.6 \times 10^{-3}$	
		(1.9 ~ 10) mA 20 Hz (0.02 ~ 1) kHz (1 ~ 10) kHz	$4.4 \times 10^{-4}$ $4.4 \times 10^{-4}$ $1.5 \times 10^{-3}$	
		(10 ~ 19) mA 20 Hz (0.02 ~ 1) kHz (1 ~ 10) kHz	$3.6 \times 10^{-4}$ $3.6 \times 10^{-4}$ $1.4 \times 10^{-3}$	
		(19 ~ 100) mA 20 Hz (0.02 ~ 1) kHz (1 ~ 10) kHz	$4.4 \times 10^{-4}$ $4.4 \times 10^{-4}$ $1.2 \times 10^{-3}$	
		(100 ~ 190) mA 20 Hz (0.02 ~ 1) kHz (1 ~ 10) kHz	$3.6 \times 10^{-4}$ $3.6 \times 10^{-4}$ $1.2 \times 10^{-3}$	
		(0.19 ~ 1) A 20 Hz (0.02 ~ 1) kHz (1 ~ 10) kHz	$8.7 \times 10^{-4}$ $8.7 \times 10^{-4}$ $6.3 \times 10^{-3}$	
		(1 ~ 1.9) A 20 Hz (0.02 ~ 1) kHz (1 ~ 10) kHz	$7.9 \times 10^{-4}$ $7.9 \times 10^{-4}$ $6.3 \times 10^{-3}$	

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 Current	40303	(1.9 ~ 10) A 40 Hz (0.04 ~ 1) kHz	$1.0 \times 10^{-3}$ $1.0 \times 10^{-3}$	DMM, Current shunt /KTICC-CI-40303		
		(10 ~ 30) A 40 Hz (0.04 ~ 1) kHz	$1.3 \times 10^{-3}$ $1.3 \times 10^{-3}$			
		(30 ~ 100) A 40 Hz (0.04 ~ 1) kHz	$1.2 \times 10^{-3}$ $1.2 \times 10^{-3}$			
Frequency		10 Hz ~ 1 MHz	$6.1 \times 10^{-7}$			
AC current shunts AC Resistance	40305	(100 ~ 1 000) Ω 10 Hz (10 ~ 40) Hz (0.04 ~ 1) kHz (1 ~ 10) kHz	$4.3 \times 10^{-4}$ $2.4 \times 10^{-4}$ $2.2 \times 10^{-4}$ $1.8 \times 10^{-3}$	DMM, Meter calibrator Current calibrator /KTICC-CI-40305		
		(10 ~ 100) Ω 10 Hz (10 ~ 40) Hz (0.04 ~ 1) kHz (1 ~ 10) kHz	$3.2 \times 10^{-4}$ $2.2 \times 10^{-4}$ $1.8 \times 10^{-4}$ $1.8 \times 10^{-3}$			
		(1 ~ 10) Ω 10 Hz (10 ~ 40) Hz (0.04 ~ 1) kHz (1 ~ 10) kHz	$3.2 \times 10^{-4}$ $2.2 \times 10^{-4}$ $1.8 \times 10^{-4}$ $1.6 \times 10^{-3}$			
		(0.1 ~ 1) Ω 10 Hz (10 ~ 40) Hz (0.04 ~ 1) kHz (1 ~ 10) kHz	$3.2 \times 10^{-4}$ $2.3 \times 10^{-4}$ $1.8 \times 10^{-4}$ $1.2 \times 10^{-3}$			
		(0.01 ~ 0.1) Ω 10 Hz (0.01 ~ 1) kHz (1 ~ 10) kHz	$3.4 \times 10^{-4}$ $3.3 \times 10^{-4}$ $7.3 \times 10^{-3}$			
		(0.001 ~ 0.01) Ω 45 Hz (45 ~ 100) Hz (0.1 ~ 1) kHz	$1.4 \times 10^{-3}$ $1.4 \times 10^{-3}$ $1.8 \times 10^{-3}$			
		(0.000 5 ~ 0.001) Ω 60 Hz 0.000 5 Ω 60 Hz	$4.8 \times 10^{-3}$ $4.8 \times 10^{-3}$			
Voltage/current phase angle meters /synchro resolve meters Phase		40307	(50 ~ 60) Hz (0 ~ 45)° (45 ~ 90)° (90 ~ 135)° (135 ~ 180)°		$0.024^\circ$ $0.026^\circ$ $0.027^\circ$ $0.030^\circ$	Power calibrator /KTICC-CI-40307



403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Power factor meters Power Factor	40310	(50 ~ 60) Hz 1 (1 ~ 0.9) (0.9 ~ 0.8) (0.8 ~ 0.7) (0.7 ~ 0.6) (0.6 ~ 0.5) (0.5 ~ 0.4) (0.4 ~ 0.3) (0.3 ~ 0.2) (0.2 ~ 0.1) (0.1 ~ 0)	(Absolute) $1.6 \times 10^{-4}$ $1.5 \times 10^{-4}$ $1.4 \times 10^{-4}$ $1.2 \times 10^{-4}$ $1.1 \times 10^{-4}$ $9.8 \times 10^{-5}$ $8.6 \times 10^{-5}$ $7.6 \times 10^{-5}$ $6.8 \times 10^{-5}$ $6.3 \times 10^{-5}$ $6.1 \times 10^{-5}$	Power calibrator /KTICC-CI-40310
AC power meters DC Voltage AC Voltage DC Current AC Current	40311	(±) (0.1 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V (0.04 ~ 1) kHz (0.22 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V (±) 1 μA ~ 1 mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 2) A (2 ~ 10) A (10 ~ 100) A (100 ~ 500) A (500 ~ 800) A (800 ~ 1 000) A (0.04 ~ 1) kHz 9 μA ~ 100 mA (0.1 ~ 1) A (1 ~ 2) A (2 ~ 10) A (10 ~ 20) A 60 Hz (20 ~ 100) A (100 ~ 200) A (200 ~ 300) A (300 ~ 400) A (400 ~ 500) A (500 ~ 800) A (800 ~ 1 000) A	$1.3 \times 10^{-5}$ $8.5 \times 10^{-6}$ $7.3 \times 10^{-6}$ $8.5 \times 10^{-6}$ $9.5 \times 10^{-6}$ $1.6 \times 10^{-4}$ $6.8 \times 10^{-5}$ $6.5 \times 10^{-5}$ $7.2 \times 10^{-5}$ $8.5 \times 10^{-5}$ $4.4 \times 10^{-5}$ $4.1 \times 10^{-5}$ $5.4 \times 10^{-5}$ $9.4 \times 10^{-5}$ $9.0 \times 10^{-5}$ $7.8 \times 10^{-4}$ $7.0 \times 10^{-4}$ $1.5 \times 10^{-3}$ $1.6 \times 10^{-3}$ $1.7 \times 10^{-3}$ $1.8 \times 10^{-4}$ $3.3 \times 10^{-4}$ $3.1 \times 10^{-4}$ $2.9 \times 10^{-3}$ $3.1 \times 10^{-3}$ $4.0 \times 10^{-3}$ $3.7 \times 10^{-3}$ $4.7 \times 10^{-3}$ $4.3 \times 10^{-3}$ $4.0 \times 10^{-3}$ $3.8 \times 10^{-3}$ $3.7 \times 10^{-3}$	Meter calibrator, Power calibrator /KTICC-CI-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	40311	(50 ~ 60) Hz		Meter calibrator, Power calibrator /KTICC-CI-40311
AC Power		(0.06 ~ 60) W	$1.7 \times 10^{-4}$	
		(60 ~ 120) W	$1.8 \times 10^{-4}$	
		(120 ~ 240) W	$1.7 \times 10^{-4}$	
		(240 ~ 600) W	$1.8 \times 10^{-4}$	
		(0.6 ~ 1.2) kW	$3.3 \times 10^{-4}$	
		(1.2 ~ 2.4) kW	$6.3 \times 10^{-4}$	
		(2.4 ~ 3.6) kW	$5.8 \times 10^{-4}$	
		(3.6 ~ 4.8) kW	$6.3 \times 10^{-4}$	
		(4.8 ~ 6.0) kW	$5.3 \times 10^{-4}$	
		(6.0 ~ 7.2) kW	$5.7 \times 10^{-4}$	
		(7.2 ~ 9.6) kW	$5.4 \times 10^{-4}$	
		(9.6 ~ 12) kW	$5.3 \times 10^{-4}$	
Power Factor	(50 ~ 60) Hz	(absolute)		
	1	$1.6 \times 10^{-4}$		
	(1 ~ 0.9)	$1.5 \times 10^{-4}$		
	(0.9 ~ 0.8)	$1.4 \times 10^{-4}$		
	(0.8 ~ 0.7)	$1.2 \times 10^{-4}$		
	(0.7 ~ 0.6)	$1.1 \times 10^{-4}$		
	(0.6 ~ 0.5)	$9.8 \times 10^{-5}$		
	(0.5 ~ 0.4)	$8.6 \times 10^{-5}$		
	(0.4 ~ 0.3)	$7.6 \times 10^{-5}$		
	(0.3 ~ 0.2)	$6.8 \times 10^{-5}$		
	(0.2 ~ 0.1)	$6.3 \times 10^{-5}$		
	(0.1 ~ 0)	$6.1 \times 10^{-5}$		
Frequency		10 Hz ~ 1 MHz	$6.1 \times 10^{-5}$	
Harmonic Voltage		(50 ~ 3000) Hz		
		0.5 %	$8.2 \times 10^{-2}$	
		(0.5 ~ 1) %	$4.1 \times 10^{-2}$	
		(1 ~ 3) %	$1.4 \times 10^{-2}$	
		(3 ~ 5) %	$8.2 \times 10^{-3}$	
		(5 ~ 10) %	$4.2 \times 10^{-3}$	
		(10 ~ 20) %	$2.2 \times 10^{-3}$	
Harmonic Current		(50 ~ 3000) Hz		
		0.5 %	$8.4 \times 10^{-2}$	
		(0.5 ~ 1) %	$4.2 \times 10^{-2}$	
		(1 ~ 3) %	$1.4 \times 10^{-2}$	
		(3 ~ 5) %	$8.4 \times 10^{-3}$	
		(5 ~ 10) %	$4.2 \times 10^{-3}$	
		(10 ~ 20) %	$2.1 \times 10^{-3}$	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
AC power supplies	40312	(45 ~ 100) Hz		DMM, Current shunt
AC Voltage		(0 ~ 10) V	$1.4 \times 10^{-4}$	/KTICC-CI-40312
		(10 ~ 20) V	$2.0 \times 10^{-4}$	
		(20 ~ 40) V	$1.5 \times 10^{-4}$	
		(40 ~ 150) V	$1.4 \times 10^{-4}$	
		(0.1 ~ 5) kHz		
		(0 ~ 10) V	$1.2 \times 10^{-4}$	
		(10 ~ 20) V	$1.8 \times 10^{-4}$	
		(20 ~ 40) V	$1.3 \times 10^{-4}$	
		(40 ~ 150) V	$1.2 \times 10^{-4}$	
		(0.045 ~ 5) kHz		
		(150 ~ 200) V	$2.1 \times 10^{-4}$	
		(200 ~ 250) V	$1.8 \times 10^{-4}$	
		(250 ~ 300) V	$1.7 \times 10^{-4}$	
		(300 ~ 350) V	$2.4 \times 10^{-4}$	
		(350 ~ 400) V	$2.2 \times 10^{-4}$	
		(400 ~ 500) V	$2.0 \times 10^{-4}$	
AC Current		(0.045 ~ 1) kHz		
		9 $\mu$ A ~ 100 mA	$4.6 \times 10^{-4}$	
		(0.1 ~ 1) A	$9.7 \times 10^{-4}$	
		(1 ~ 100) A	$1.2 \times 10^{-3}$	
Frequency		(10 ~ 5 000) Hz	$6.1 \times 10^{-5}$	

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 AC Voltage DC Cutoff Current AC Cutoff Current Timer	40313	(±) 1 V ~ 100 kV  (50 ~ 60) Hz 1 V ~ 100 kV (±) (0.01 ~ 0.5) mA (0.5 ~ 1) mA (1 ~ 2) mA (2 ~ 5) mA (5 ~ 10) mA (10 ~ 20) mA  (50 ~ 60) Hz (0.01 ~ 0.5) mA (0.5 ~ 1) mA (1 ~ 2) mA (2 ~ 5) mA (5 ~ 10) mA (10 ~ 20) mA (20 ~ 50) mA (50 ~ 100) mA  (1 ~ 1 000) s	$1.2 \times 10^{-3}$  $1.5 \times 10^{-2}$  $9.6 \times 10^{-3}$ $7.3 \times 10^{-3}$ $6.5 \times 10^{-3}$ $6.0 \times 10^{-3}$ $6.1 \times 10^{-3}$ $6.0 \times 10^{-3}$  $3.0 \times 10^{-2}$ $1.8 \times 10^{-2}$ $1.3 \times 10^{-2}$ $1.0 \times 10^{-2}$ $9.2 \times 10^{-3}$ $8.5 \times 10^{-3}$ $1.2 \times 10^{-2}$ $1.1 \times 10^{-2}$  $6.1 \times 10^{-5}$	High voltage meter, DMM High voltage test equipment / KTICC-CI-40313
Power recorders AC Voltage AC Current AC Power	40314	(0.04 ~ 1) kHz (0.22 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V  (0.04 ~ 1) kHz 9 μA ~ 100 mA (0.1 ~ 1) A (1 ~ 2) A (2 ~ 10) A (10 ~ 20) A 60 Hz (20 ~ 100) A  (50 ~ 60) Hz, 120 V (0.06 ~ 600) W (0.6 ~ 1.2) kW (1.2 ~ 2.4) kW (2.4 ~ 3.6) kW (3.6 ~ 4.8) kW (4.8 ~ 6.0) kW	$1.6 \times 10^{-4}$ $6.8 \times 10^{-5}$ $6.5 \times 10^{-5}$ $7.2 \times 10^{-5}$ $8.5 \times 10^{-5}$  $1.8 \times 10^{-4}$ $3.3 \times 10^{-4}$ $3.1 \times 10^{-4}$ $2.9 \times 10^{-3}$ $3.1 \times 10^{-3}$  $4.8 \times 10^{-3}$  $1.8 \times 10^{-4}$ $3.3 \times 10^{-4}$ $6.3 \times 10^{-4}$ $5.8 \times 10^{-4}$ $5.4 \times 10^{-4}$ $5.3 \times 10^{-4}$	Meter calibrator, Power calibrator /KTICC-CI-40314

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Power recorders AC Power	40314	(50 ~ 60) Hz, 240 V 0.06 W ~ 1.2 kW (1.2 ~ 2.4) kW (2.4 ~ 4.8) kW (4.8 ~ 7.2) kW (7.2 ~ 9.6) kW (9.6 ~ 12) kW	$1.8 \times 10^{-4}$ $3.2 \times 10^{-4}$ $6.3 \times 10^{-4}$ $5.7 \times 10^{-4}$ $5.4 \times 10^{-4}$ $5.3 \times 10^{-4}$	Meter calibrator, Power calibrator /KTICC-CI-40314
AC voltmeters AC Voltage	40318	(0.1 ~ 1) mV (10 ~ 20) Hz (0.02 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (100 ~ 200) kHz (200 ~ 500) kHz (0.5 ~ 1) MHz (1 ~ 10) mV (10 ~ 20) Hz (20 ~ 40) Hz (0.04 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (100 ~ 200) kHz (200 ~ 500) kHz (0.5 ~ 1) MHz (10 ~ 100) mV (10 ~ 20) Hz (20 ~ 40) Hz (0.04 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (100 ~ 200) kHz (200 ~ 500) kHz (0.5 ~ 1) MHz (0.1 ~ 1) V (10 ~ 20) Hz (20 ~ 40) Hz (0.04 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (100 ~ 200) kHz (200 ~ 500) kHz (0.5 ~ 1) MHz	$4.3 \times 10^{-3}$ $4.2 \times 10^{-3}$ $4.3 \times 10^{-3}$ $5.6 \times 10^{-3}$ $1.1 \times 10^{-2}$ $2.2 \times 10^{-2}$ $2.3 \times 10^{-2}$ $6.6 \times 10^{-4}$ $5.1 \times 10^{-4}$ $5.0 \times 10^{-4}$ $6.2 \times 10^{-4}$ $1.0 \times 10^{-3}$ $2.1 \times 10^{-3}$ $3.5 \times 10^{-3}$ $4.8 \times 10^{-3}$ $3.8 \times 10^{-4}$ $1.8 \times 10^{-4}$ $1.7 \times 10^{-4}$ $2.9 \times 10^{-4}$ $6.5 \times 10^{-4}$ $1.1 \times 10^{-3}$ $1.7 \times 10^{-3}$ $3.2 \times 10^{-3}$ $3.0 \times 10^{-4}$ $1.3 \times 10^{-4}$ $9.1 \times 10^{-5}$ $1.1 \times 10^{-4}$ $1.6 \times 10^{-4}$ $5.2 \times 10^{-4}$ $1.2 \times 10^{-3}$ $2.0 \times 10^{-3}$	Meter calibrator /KTICC-CI-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	(1 ~ 10) V (10 ~ 20) Hz (20 ~ 40) Hz (0.04 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (100 ~ 200) kHz (200 ~ 500) kHz (0.5 ~ 1) MHz (10 ~ 100) V (20 ~ 40) Hz (0.04 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (100 ~ 1 000) V (15 ~ 50) Hz (0.05 ~ 1) kHz (0.000 1 ~ 0.33) V (1 ~ 30) MHz (0.33 ~ 3.5) V (1 ~ 30) MHz	$3.0 \times 10^{-4}$ $1.3 \times 10^{-4}$ $8.9 \times 10^{-5}$ $1.1 \times 10^{-4}$ $1.4 \times 10^{-4}$ $3.6 \times 10^{-4}$ $1.2 \times 10^{-3}$ $1.9 \times 10^{-3}$ $1.3 \times 10^{-4}$ $9.4 \times 10^{-5}$ $1.2 \times 10^{-4}$ $2.0 \times 10^{-4}$ $3.3 \times 10^{-4}$ $1.0 \times 10^{-4}$ $1.3 \times 10^{-2}$ $1.4 \times 10^{-2}$	Meter calibrator /KTICC-CI-40318

404. Other DC & LF measurement

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
LF amplifiers DC Gain LF Gain	40401	1 (1 ~ 3.162 3) (3.162 3 ~ 10) (10 ~ 50) (50 ~ 1 000) 10 Hz 1 (1 ~ 31.623) (31.623 ~ 40) (40 ~ 50) (50 ~ 100) (100 ~ 1 000)	$1.4 \times 10^{-5}$ $5.7 \times 10^{-5}$ $1.4 \times 10^{-5}$ $6.3 \times 10^{-5}$ $6.3 \times 10^{-5}$ $2.6 \times 10^{-4}$ $3.8 \times 10^{-4}$ $4.3 \times 10^{-4}$ $2.8 \times 10^{-4}$ $3.0 \times 10^{-4}$ $3.8 \times 10^{-4}$	Meter calibrator, DMM /KTICC-CI-40401



404. Other DC & LF measurement

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
DC/LF attenuators LF Attenuator	40402	(0.01 ~ 100) kHz (0 ~ 70) dB (70 ~ 80) dB (100 ~ 300) kHz (0 ~ 60) dB (60 ~ 70) dB (70 ~ 80) dB (300 ~ 500) kHz (0 ~ 50) dB (50 ~ 60) dB (60 ~ 70) dB (70 ~ 80) dB (0.5 ~ 1) MHz (0 ~ 50) dB (50 ~ 60) dB (60 ~ 70) dB (70 ~ 80) dB	0.008 dB 0.014 dB 0.008 dB 0.014 dB 0.038 dB 0.008 dB 0.013 dB 0.028 dB 0.078 dB 0.013 dB 0.025 dB 0.045 dB 0.099 dB	Audio analyzer, DMM Meter calibrator /KTICC-CI-40402
Multimeter calibrators DC Voltage  Resistance  DC Current	40403	(±) (0 ~ 100) mV (100 ~ 190) mV (0.19 ~ 1) V (1 ~ 10) V (10 ~ 19) V (19 ~ 100) V (100 ~ 190) V (190 ~ 1 000) V (0 ~ 1) Ω (1 ~ 1.9) Ω (1.9 ~ 10) Ω (10 ~ 19) Ω (19 ~ 100) Ω (100 ~ 190) Ω (0.19 ~ 19) kΩ (19 ~ 100) kΩ (100 ~ 190) kΩ (0.19 ~ 1) MΩ (1 ~ 1.9) MΩ (1.9 ~ 10) MΩ (10 ~ 19) MΩ (19 ~ 100) MΩ (±) (0 ~ 19) μA (19 ~ 100) μA (100 ~ 190) μA (0.19 ~ 1) mA (1 ~ 1.9) mA (1.9 ~ 10) mA (10 ~ 19) mA (19 ~ 190) mA (0.19 ~ 1) A (1 ~ 1.9) A (1.9 ~ 10) A (10 ~ 30) A	8.9 × 10 <sup>-6</sup> 8.4 × 10 <sup>-6</sup> 3.8 × 10 <sup>-6</sup> 3.8 × 10 <sup>-6</sup> 3.6 × 10 <sup>-6</sup> 6.0 × 10 <sup>-6</sup> 5.8 × 10 <sup>-6</sup> 6.1 × 10 <sup>-6</sup> 1.6 × 10 <sup>-5</sup> 1.4 × 10 <sup>-5</sup> 1.1 × 10 <sup>-5</sup> 1.0 × 10 <sup>-5</sup> 8.7 × 10 <sup>-6</sup> 8.4 × 10 <sup>-6</sup> 7.4 × 10 <sup>-6</sup> 7.5 × 10 <sup>-6</sup> 7.4 × 10 <sup>-6</sup> 9.6 × 10 <sup>-6</sup> 8.9 × 10 <sup>-6</sup> 2.1 × 10 <sup>-5</sup> 1.7 × 10 <sup>-5</sup> 1.4 × 10 <sup>-4</sup> 1.0 × 10 <sup>-5</sup> 6.5 × 10 <sup>-6</sup> 6.3 × 10 <sup>-6</sup> 6.5 × 10 <sup>-6</sup> 6.3 × 10 <sup>-6</sup> 8.3 × 10 <sup>-6</sup> 8.4 × 10 <sup>-6</sup> 1.3 × 10 <sup>-5</sup> 5.9 × 10 <sup>-5</sup> 5.8 × 10 <sup>-5</sup> 8.9 × 10 <sup>-5</sup> 1.2 × 10 <sup>-4</sup>	DC standard, DMM AC/DC transfer standard, Current shunt Standard resistance Meter calibrator /KTICC-CI-40403



404. Other DC & LF measurement

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Multimeter calibrators AC Voltage	40403	(0.5 ~ 2) mV 10 Hz (0.01 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (100 ~ 300) kHz (300 ~ 500) kHz (0.5 ~ 1) MHz (2 ~ 20) mV 10 Hz (0.01 ~ 0.02) kHz (0.02 ~ 0.04) kHz (0.04 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (100 ~ 300) kHz (100 ~ 500) kHz (0.5 ~ 1) MHz (20 ~ 200) mV 10 Hz (0.01 ~ 0.02) kHz (0.02 ~ 0.04) kHz (0.04 ~ 1) kHz (1 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (100 ~ 300) kHz (300 ~ 500) kHz (0.5 ~ 1) MHz (0.2 ~ 2) V 10 Hz (0.01 ~ 0.02) (0.02 ~ 0.04) (0.04 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (100 ~ 300) kHz (300 ~ 500) kHz (0.5 ~ 1) MHz (2 ~ 20) V 10 Hz (0.01 ~ 0.02) kHz (0.02 ~ 0.04) kHz (0.04 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (100 ~ 300) kHz (300 ~ 500) kHz (0.5 ~ 1) MHz	$6.0 \times 10^{-4}$ $6.0 \times 10^{-4}$ $9.0 \times 10^{-4}$ $1.1 \times 10^{-3}$ $1.9 \times 10^{-3}$ $4.1 \times 10^{-3}$ $6.5 \times 10^{-3}$ $1.3 \times 10^{-4}$ $1.3 \times 10^{-4}$ $1.0 \times 10^{-4}$ $9.5 \times 10^{-5}$ $1.4 \times 10^{-4}$ $1.8 \times 10^{-4}$ $3.5 \times 10^{-4}$ $8.5 \times 10^{-4}$ $2.3 \times 10^{-3}$ $6.5 \times 10^{-5}$ $6.0 \times 10^{-5}$ $3.6 \times 10^{-5}$ $3.3 \times 10^{-5}$ $3.4 \times 10^{-5}$ $4.1 \times 10^{-5}$ $7.5 \times 10^{-5}$ $1.7 \times 10^{-4}$ $3.0 \times 10^{-4}$ $1.0 \times 10^{-3}$ $5.5 \times 10^{-5}$ $5.0 \times 10^{-5}$ $2.8 \times 10^{-5}$ $2.2 \times 10^{-5}$ $2.7 \times 10^{-5}$ $4.7 \times 10^{-5}$ $1.3 \times 10^{-4}$ $2.2 \times 10^{-4}$ $9.5 \times 10^{-4}$ $5.5 \times 10^{-5}$ $5.0 \times 10^{-5}$ $3.0 \times 10^{-5}$ $2.3 \times 10^{-5}$ $2.9 \times 10^{-5}$ $5.5 \times 10^{-5}$ $1.4 \times 10^{-4}$ $3.5 \times 10^{-4}$ $1.2 \times 10^{-3}$	DC standard, DMM AC/DC transfer standard, Current shunt Standard resistance Meter calibrator /KTICC-CI-40403

404. Other DC & LF measurement

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Multimeter calibrators AC Voltage	40403	(20 ~ 200) V 10 Hz (0.01 ~ 0.02) kHz (0.02 ~ 0.04) kHz (0.04 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (200 ~ 700) V 20 Hz (0.02 ~ 0.04) kHz (0.04 ~ 20) kHz (20 ~ 50) kHz (50 ~ 100) kHz (700 ~ 1 000) V 40 Hz (0.04 ~ 1) kHz (1 ~ 20) kHz (20 ~ 30) kHz	$6.5 \times 10^{-5}$ $5.5 \times 10^{-5}$ $3.3 \times 10^{-5}$ $2.8 \times 10^{-5}$ $4.0 \times 10^{-5}$ $6.5 \times 10^{-5}$ $5.3 \times 10^{-5}$ $3.4 \times 10^{-5}$ $2.9 \times 10^{-5}$ $1.1 \times 10^{-4}$ $6.6 \times 10^{-4}$ $3.6 \times 10^{-5}$ $2.9 \times 10^{-5}$ $3.0 \times 10^{-5}$ $1.1 \times 10^{-4}$	DC standard, DMM AC/DC transfer standard, Current shunt Standard resistance Meter calibrator /KTICC-CI-40403
AC Current		(0.009 ~ 1) mA 20 Hz (0.02 ~ 1) kHz (1 ~ 10) kHz (1 ~ 1.9) mA 20 Hz (0.02 ~ 1) kHz (1 ~ 10) kHz (1.9 ~ 10) mA 20 Hz (0.02 ~ 1) kHz (1 ~ 10) kHz (10 ~ 19) mA 20 Hz (0.02 ~ 1) kHz (1 ~ 10) kHz (19 ~ 100) mA 20 Hz (0.02 ~ 1) kHz (1 ~ 10) kHz (100 ~ 190) mA 20 Hz (0.02 ~ 1) kHz (1 ~ 10) kHz (0.19 ~ 1) A 20 Hz (0.02 ~ 1) kHz (1 ~ 10) kHz (1 ~ 1.9) A 20 Hz (0.02 ~ 1) kHz (1 ~ 10) kHz	$4.4 \times 10^{-4}$ $4.4 \times 10^{-4}$ $1.7 \times 10^{-3}$ $3.6 \times 10^{-4}$ $3.6 \times 10^{-4}$ $1.6 \times 10^{-3}$ $4.4 \times 10^{-4}$ $4.4 \times 10^{-4}$ $1.5 \times 10^{-3}$ $3.6 \times 10^{-4}$ $3.6 \times 10^{-4}$ $1.4 \times 10^{-3}$ $4.4 \times 10^{-4}$ $4.4 \times 10^{-4}$ $1.2 \times 10^{-3}$ $3.6 \times 10^{-4}$ $3.6 \times 10^{-4}$ $1.2 \times 10^{-3}$ $8.7 \times 10^{-4}$ $8.7 \times 10^{-4}$ $6.3 \times 10^{-3}$ $7.9 \times 10^{-4}$ $7.9 \times 10^{-4}$ $6.3 \times 10^{-3}$	

404. Other DC & LF measurement

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Multimeter calibrators	40403			DC standard, DMM
AC Current		(1.9 ~ 10) A		AC/DC transfer standard,
		40 Hz	$1.1 \times 10^{-3}$	Current shunt
		(0.04 ~ 1) kHz	$1.1 \times 10^{-3}$	Standard resistance
		(10 ~ 30) A		Meter calibrator
		40 Hz	$1.3 \times 10^{-3}$	/KTICC-CI-40403
		(0.04 ~ 1) kHz	$1.3 \times 10^{-3}$	
Frequency		10 Hz ~ 1 MHz	$6.1 \times 10^{-7}$	
Widband Voltage		(0.5 ~ 1) mV		
		10 Hz	$9.0 \times 10^{-4}$	
		(10 ~ 30) Hz	$8.0 \times 10^{-4}$	
		(0.03 ~ 2) kHz	$5.5 \times 10^{-4}$	
		(2 ~ 10) kHz	$4.6 \times 10^{-4}$	
		(10 ~ 100) kHz	$4.5 \times 10^{-4}$	
		(0.1 ~ 2) MHz	$1.3 \times 10^{-3}$	
		(2 ~ 10) MHz	$2.1 \times 10^{-3}$	
		(10 ~ 20) MHz	$3.2 \times 10^{-3}$	
		(20 ~ 30) MHz	$7.1 \times 10^{-3}$	
		(30 ~ 50) MHz	$1.0 \times 10^{-2}$	
		(1 ~ 3.2) mV		
		10 Hz	$8.1 \times 10^{-4}$	
		(10 ~ 30) Hz	$7.8 \times 10^{-4}$	
		(0.03 ~ 100) kHz	$4.1 \times 10^{-4}$	
		(0.1 ~ 2) MHz	$8.1 \times 10^{-4}$	
		(2 ~ 10) MHz	$1.1 \times 10^{-3}$	
		(10 ~ 20) MHz	$1.7 \times 10^{-3}$	
		(20 ~ 30) MHz	$3.4 \times 10^{-3}$	
		(30 ~ 50) MHz	$4.7 \times 10^{-3}$	
		(3.2 ~ 32) mV		
		10 Hz	$8.1 \times 10^{-4}$	
		(10 ~ 30) Hz	$8.0 \times 10^{-4}$	
		(0.03 ~ 100) kHz	$4.1 \times 10^{-4}$	
		(0.1 ~ 2) MHz	$5.6 \times 10^{-4}$	
		(2 ~ 10) MHz	$8.4 \times 10^{-4}$	
		(10 ~ 20) MHz	$1.5 \times 10^{-3}$	
		(20 ~ 30) MHz	$3.2 \times 10^{-3}$	
		(30 ~ 50) MHz	$5.1 \times 10^{-3}$	
		(0.032 ~ 3.5) V		
		10 Hz	$8.5 \times 10^{-4}$	
		(10 ~ 30) Hz	$8.0 \times 10^{-4}$	
		(0.03 ~ 100) kHz	$3.2 \times 10^{-4}$	
		(0.1 ~ 2) MHz	$4.1 \times 10^{-4}$	
		(2 ~ 10) MHz	$8.5 \times 10^{-4}$	
		(10 ~ 20) MHz	$1.3 \times 10^{-3}$	
		(20 ~ 30) MHz	$3.1 \times 10^{-3}$	
		(30 ~ 50) MHz	$5.1 \times 10^{-3}$	

404. Other DC & LF measurement

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Oscilloscope calibrators Output DC Voltage	40404	(±) (0 ~ 1) mV (1 ~ 10) mV (10 ~ 100) mV (100 ~ 300) mV (300 ~ 500) mV (0.5 ~ 1) V (1 ~ 3) V (3 ~ 5) V (5 ~ 10) V (10 ~ 30) V (30 ~ 50) V (50 ~ 100) V (100 ~ 130) V (130 ~ 200) V	$1.2 \times 10^{-4}$ $1.6 \times 10^{-5}$ $1.1 \times 10^{-5}$ $5.0 \times 10^{-6}$ $4.2 \times 10^{-6}$ $7.2 \times 10^{-6}$ $5.3 \times 10^{-6}$ $5.0 \times 10^{-6}$ $7.2 \times 10^{-6}$ $7.0 \times 10^{-6}$ $6.4 \times 10^{-6}$ $8.6 \times 10^{-6}$ $7.6 \times 10^{-6}$ $8.5 \times 10^{-6}$	DMM, Frequency counter, RF power meter / KTICC-CI-40404
Output AC Voltage		(0.05 ~ 10) kHz (0.5 ~ 1) mV (1 ~ 3) mV (3 ~ 5) mV (5 ~ 10) mV (10 ~ 30) mV (30 ~ 50) mV (50 ~ 100) mV (100 ~ 300) mV (300 ~ 500) mV (0.5 ~ 1) V (1 ~ 5) V (5 ~ 10) V (10 ~ 30) V (30 ~ 50) V (50 ~ 100) V (100 ~ 200) V	$1.1 \times 10^{-3}$ $3.7 \times 10^{-4}$ $2.4 \times 10^{-4}$ $1.4 \times 10^{-4}$ $7.3 \times 10^{-5}$ $6.2 \times 10^{-5}$ $3.8 \times 10^{-5}$ $2.9 \times 10^{-5}$ $2.8 \times 10^{-5}$ $2.3 \times 10^{-5}$ $2.2 \times 10^{-5}$ $2.3 \times 10^{-5}$ $2.7 \times 10^{-5}$ $2.8 \times 10^{-5}$ $2.9 \times 10^{-5}$ $2.8 \times 10^{-5}$	



404. Other DC & LF measurement

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Video signal generators	40406			Video signal analyzers /KTICC-CI-40406
Frequency		10 Hz ~ 5 GHz	$3.7 \times 10^{-10}$	
Luminance Level		NTSC, PAL (1 ~ 100) mV (100 ~ 200) mV (200 ~ 300) mV (300 ~ 400) mV (400 ~ 500) mV (500 ~ 600) mV (600 ~ 714.3) mV	0.70 mV 0.92 mV 1.2 mV 1.5 mV 1.8 mV 2.5 mV 2.5 mV	
Chrominance Level		NTSC, PAL (100 ~ 714.3) mV	$8.4 \times 10^{-3}$	
Phase		NTSC, PAL (0 ~ 360) °	1.4 °	
H Timing		H Blanking, Sync to Setup (8.8 ~ 13) μs Sync to Burst Start / End (4 ~ 10) μs Sync Width (1 ~ 8) μs Burst Width (1.4 ~ 3) μs Front Proch (0.1 ~ 3.5) μs Rise Time, Fall Time 80 ns ~ 1 μs	0.024 μs 0.036 μs 0.024 μs 0.036 μs 0.024 μs 0.036 μs 0.024 μs 12 ns	
Audio distortion analyzers/meters	40407			Meter calibrator, Frequency counter, Audio analyzer /KTICC-CI-40407
Frequency		(0.01 ~ 100) kHz (100 ~ 200) kHz	$6.1 \times 10^{-6}$ $3.1 \times 10^{-6}$	
AC Voltage		(0.22 ~ 1) mV 10 Hz (10 ~ 40) Hz (0.04 ~ 10) kHz (10 ~ 100) kHz (100 ~ 200) kHz (1 ~ 10) mV 10 Hz (0.01 ~ 10) kHz (10 ~ 100) kHz (100 ~ 200) kHz (10 ~ 100) mV 10 Hz (0.01 ~ 10) kHz (10 ~ 100) kHz (100 ~ 200) kHz	$4.4 \times 10^{-3}$ $5.0 \times 10^{-3}$ $4.2 \times 10^{-3}$ $5.6 \times 10^{-3}$ $1.1 \times 10^{-2}$ $6.6 \times 10^{-4}$ $5.1 \times 10^{-4}$ $1.0 \times 10^{-3}$ $2.1 \times 10^{-3}$ $3.8 \times 10^{-4}$ $1.8 \times 10^{-4}$ $6.5 \times 10^{-4}$ $1.1 \times 10^{-3}$	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments	
Audio distortion analyzers/meters AC Voltage	40407	(0.1 ~ 1) V		Meter calibrator, Frequency counter, Audio analyzer /KTICC-CI-40407	
		10 Hz	$3.0 \times 10^{-4}$		
		(10 ~ 40) Hz	$1.3 \times 10^{-4}$		
		(0.04 ~ 10) kHz	$9.1 \times 10^{-5}$		
		(10 ~ 100) kHz	$1.6 \times 10^{-4}$		
		(100 ~ 200) kHz	$5.2 \times 10^{-4}$		
		(1 ~ 10) V			
		10 Hz	$3.0 \times 10^{-4}$		
		(10 ~ 40) Hz	$1.3 \times 10^{-4}$		
		(0.04 ~ 10) kHz	$8.9 \times 10^{-5}$		
		(10 ~ 100) kHz	$1.5 \times 10^{-4}$		
		(100 ~ 200) kHz	$3.6 \times 10^{-4}$		
		(10 ~ 100) V			
		10 Hz	$3.0 \times 10^{-4}$		
		(10 ~ 40) Hz	$1.3 \times 10^{-4}$		
		(0.04 ~ 10) kHz	$9.4 \times 10^{-5}$		
		(10 ~ 100) kHz	$2.0 \times 10^{-4}$		
		(100 ~ 200) V			
		10 Hz	$2.7 \times 10^{-4}$		
		(10 ~ 40) Hz	$1.1 \times 10^{-4}$		
		(0.04 ~ 10) kHz	$7.5 \times 10^{-5}$		
		(10 ~ 100) kHz	$1.9 \times 10^{-4}$		
		(200 ~ 300) V			
		50 Hz	$3.7 \times 10^{-4}$		
		(0.05 ~ 1) kHz	$9.3 \times 10^{-5}$		
DC Voltage		(±)			
		(0 ~ 100) mV	$6.2 \times 10^{-5}$		
		(0.1 ~ 100) V	$6.1 \times 10^{-5}$		
		(100 ~ 300) V	$2.2 \times 10^{-5}$		
Level		10 Hz			
		(40 ~ -40) dBm	0.009 dB		
		(-40 ~ -50) dBm	0.018 dB		
		(-50 ~ -60) dBm	0.048 dB		
		(-60 ~ -70) dBm	0.15 dB		
		(0.01 ~ 1) kHz			
		(50 ~ -40) dBm	0.009 dB		
	(-40 ~ -50) dBm	0.016 dB			
	(-50 ~ -60) dBm	0.047 dB			
	(-60 ~ -70) dBm	0.14 dB			
	(1 ~ 10) kHz				
	(40 ~ -40) dBm	0.008 dB			
	(-40 ~ -50) dBm	0.016 dB			
	(-50 ~ -60) dBm	0.047 dB			
	(-60 ~ -70) dBm	0.14 dB			

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Audio distortion analyzers/meters Level	40407	(10 ~ 100) kHz (40 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (-60 ~ -70) dBm	0.009 dB 0.012 dB 0.023 dB 0.062 dB 0.18 dB	Meter calibrator, Frequency counter, Audio analyzer /KTICC-CI-40407
		(100 ~ 200) kHz (20 ~ -10) dBm (-10 ~ -20) dBm (-20 ~ -30) dBm (-30 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (-60 ~ -70) dBm	0.009 dB 0.012 dB 0.017 dB 0.022 dB 0.046 dB 0.12 dB 0.36 dB	
Frequency Responses (Voltage)		100 mV (10 ~ 20) Hz (20 ~ 40) Hz (0.04 ~ 10) kHz (10 ~ 100) kHz (100 ~ 200) kHz	$3.8 \times 10^{-4}$ $1.8 \times 10^{-4}$ $1.7 \times 10^{-4}$ $6.5 \times 10^{-4}$ $1.1 \times 10^{-3}$	
		(0.1 ~ 1) V (10 ~ 20) Hz (20 ~ 40) Hz (0.04 ~ 10) kHz (10 ~ 100) kHz (100 ~ 200) kHz	$3.0 \times 10^{-4}$ $1.3 \times 10^{-4}$ $9.1 \times 10^{-5}$ $1.6 \times 10^{-4}$ $5.2 \times 10^{-4}$	
		(1 ~ 10) V (10 ~ 20) Hz (20 ~ 40) Hz (0.04 ~ 10) kHz (10 ~ 100) kHz (100 ~ 200) kHz	$3.0 \times 10^{-4}$ $1.3 \times 10^{-4}$ $8.9 \times 10^{-5}$ $1.5 \times 10^{-4}$ $3.6 \times 10^{-4}$	
Frequency Responses (Level)		(10 ~ -10) dBm (10 ~ 40) Hz (0.04 ~ 100) kHz (100 ~ 200) kHz	0.008 dB 0.007 dB 0.010 dB	
Distortion		(0.02 ~ 100) kHz (0 ~ -60) dB (-60 ~ -80) dB	0.19 dB 0.50 dB	
Filter(Frequency) (Weight, Low, High Pass)		(0.01 ~ 100) kHz	$6.1 \times 10^{-6}$	
Filter(Level) (Weight, Low, High Pass)		(0.01 ~ 100) kHz (20 ~ -63) dB	0.007 dB	





Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
LF/audio signal analyzers Input AC Voltage	40409	(10 ~ 100) V		Meter calibrator, DMM Frequency counter, Audio analyzer /KTICC-CI-40409
		10 Hz	$3.0 \times 10^{-4}$	
		(10 ~ 40) Hz	$1.3 \times 10^{-4}$	
		(0.04 ~ 10) kHz	$9.4 \times 10^{-5}$	
		(10 ~ 100) kHz	$2.0 \times 10^{-4}$	
		(100 ~ 200) V		
		10 Hz	$2.7 \times 10^{-4}$	
		(10 ~ 40) Hz	$1.1 \times 10^{-4}$	
		(0.04 ~ 10) kHz	$7.5 \times 10^{-5}$	
		(10 ~ 100) kHz	$1.9 \times 10^{-4}$	
		(200 ~ 300) V		
		50 Hz	$3.7 \times 10^{-4}$	
		(0.05 ~ 1) kHz	$9.3 \times 10^{-5}$	
Input DC Voltage		(±)		
		(0 ~ 100) mV	$6.2 \times 10^{-5}$	
		(0.1 ~ 100) V	$6.1 \times 10^{-5}$	
		(100 ~ 300) V	$2.2 \times 10^{-5}$	
Input Level		10 Hz		
		(40 ~ -40) dBm	0.009 dB	
		(-40 ~ -50) dBm	0.018 dB	
		(-50 ~ -60) dBm	0.048 dB	
		(-60 ~ -70) dBm	0.15 dB	
		(0.01 ~ 1) kHz		
		(50 ~ -40) dBm	0.009 dB	
		(-40 ~ -50) dBm	0.016 dB	
		(-50 ~ -60) dBm	0.047 dB	
		(-60 ~ -70) dBm	0.14 dB	
		(1 ~ 10) kHz		
	(40 ~ -40) dBm	0.008 dB		
	(-40 ~ -50) dBm	0.016 dB		
	(-50 ~ -60) dBm	0.047 dB		
	(-60 ~ -70) dBm	0.14 dB		
	(10 ~ 100) kHz			
	(40 ~ -20) dBm	0.009 dB		
	(-20 ~ -40) dBm	0.012 dB		
	(-40 ~ -50) dBm	0.023 dB		
	(-50 ~ -60) dBm	0.062 dB		
	(-60 ~ -70) dBm	0.18 dB		
	(100 ~ 200) kHz			
	(20 ~ -10) dBm	0.009 dB		
	(-10 ~ -20) dBm	0.012 dB		
	(-20 ~ -30) dBm	0.017 dB		
	(-30 ~ -40) dBm	0.022 dB		
	(-40 ~ -50) dBm	0.046 dB		
	(-50 ~ -60) dBm	0.12 dB		
	(-60 ~ -70) dBm	0.36 dB		

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
LF/audio signal analyzers Frequency Responses (Voltage)	40409	100 mV (10 ~ 20) Hz (20 ~ 40) Hz (0.04 ~ 10) kHz (10 ~ 100) kHz (100 ~ 200) kHz (0.1 ~ 1) V (10 ~ 20) Hz (20 ~ 40) Hz (0.04 ~ 10) kHz (10 ~ 100) kHz (100 ~ 200) kHz (1 ~ 10) V (10 ~ 20) Hz (20 ~ 40) Hz (0.04 ~ 10) kHz (10 ~ 100) kHz (100 ~ 200) kHz	$3.8 \times 10^{-4}$ $1.8 \times 10^{-4}$ $1.7 \times 10^{-4}$ $6.5 \times 10^{-4}$ $1.1 \times 10^{-3}$ $3.0 \times 10^{-4}$ $1.3 \times 10^{-4}$ $9.1 \times 10^{-5}$ $1.6 \times 10^{-4}$ $5.2 \times 10^{-4}$ $3.0 \times 10^{-4}$ $1.3 \times 10^{-4}$ $8.9 \times 10^{-5}$ $1.5 \times 10^{-4}$ $3.6 \times 10^{-4}$	Meter calibrator, DMM Frequency counter, Audio analyzer /KTICC-CI-40409
Frequency Responses (Level)		(10 ~ -10) dBm (10 ~ 40) Hz (0.04 ~ 100) kHz (100 ~ 200) kHz	0.008 dB 0.007 dB 0.010 dB	
Distortion		(0.02 ~ 100) kHz (0 ~ -60) dB (-60 ~ -80) dB	0.19 dB 0.50 dB	
Filter(Frequency) (Weight, Low, High Pass)		(0.01 ~ 100) kHz	$6.1 \times 10^{-6}$	
Filter(Level) (Weight, Low, High Pass)		(0.01 ~ 100) kHz (20 ~ -63) dB	0.007 dB	
Output Frequency		(0.001 ~ 100) kHz (100 ~ 200) kHz	$6.1 \times 10^{-7}$ $1.0 \times 10^{-7}$	





Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Function generators AC Voltage	40411	(1 ~ 10) V 10 Hz (0.01 ~ 10) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz (10 ~ 100) V 10 Hz (0.01 ~ 10) kHz (10 ~ 50) kHz (50 ~ 100) kHz	$8.2 \times 10^{-5}$ $6.8 \times 10^{-5}$ $8.2 \times 10^{-5}$ $1.2 \times 10^{-3}$ $8.8 \times 10^{-5}$ $6.9 \times 10^{-5}$ $7.3 \times 10^{-5}$ $9.1 \times 10^{-5}$	DMM, Frequency counter, Measuring receiver, Oscilloscope /KTICC-CI-40411
Level		10 Hz (20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (10 ~ 40) Hz (20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (0.04 ~ 10) kHz (20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (0.01 ~ 10) MHz (20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (10 ~ 50) MHz (20 ~ -50) dBm (-50 ~ -60) dBm (50 ~ 400) MHz (20 ~ -30) dBm (-30 ~ -60) dBm	0.008 dB 0.010 dB 0.49 dB 0.007 dB 0.010 dB 0.30 dB 0.007 dB 0.010 dB 0.21 dB 0.008 dB 0.011 dB 0.14 dB 0.024 dB 0.14 dB 0.12 dB 0.14 dB	
Flatness (Voltage)		100 mV 10 Hz (0.01 ~ 100) kHz (0.1 ~ 1) MHz (1 ~ 10) MHz (10 ~ 30) MHz (30 ~ 50) MHz (50 ~ 400) MHz (0.1 ~ 1) V 10 Hz (0.01 ~ 100) kHz (0.1 ~ 1) MHz (1 ~ 10) MHz (10 ~ 30) MHz (30 ~ 50) MHz (50 ~ 400) MHz	$8.7 \times 10^{-4}$ $4.5 \times 10^{-4}$ $5.1 \times 10^{-4}$ $8.9 \times 10^{-4}$ $3.0 \times 10^{-3}$ $5.1 \times 10^{-3}$ $2.6 \times 10^{-2}$ $8.9 \times 10^{-4}$ $4.0 \times 10^{-4}$ $5.1 \times 10^{-4}$ $8.9 \times 10^{-4}$ $3.0 \times 10^{-3}$ $5.0 \times 10^{-3}$ $2.7 \times 10^{-2}$	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Function generators	40411	(1 ~ 3) V		DMM, Frequency counter, Measuring receiver, Oscilloscope  /KTICC-CI-40411
Flatness (Voltage)		10 Hz	$9.0 \times 10^{-4}$	
		(0.01 ~ 100) kHz	$4.3 \times 10^{-4}$	
		(0.1 ~ 1) MHz	$5.3 \times 10^{-4}$	
		(1 ~ 10) MHz	$9.0 \times 10^{-4}$	
		(10 ~ 30) MHz	$3.0 \times 10^{-3}$	
		(30 ~ 50) MHz	$5.0 \times 10^{-3}$	
		(50 ~ 400) MHz	$2.8 \times 10^{-2}$	
Flatness (Level)		(10 ~ -10) dBm		
		10 Hz ~ 10 MHz	0.008 dB	
		(10 ~ 30) MHz	0.015 dB	
		(30 ~ 50) MHz	0.023 dB	
		(50 ~ 400) MHz	0.11 dB	
DC Offset Voltage		(±)		
		(0 ~ 1) V	$6.2 \times 10^{-5}$	
		(1 ~ 5) V	$1.3 \times 10^{-5}$	
		(5 ~ 10) V	$7.2 \times 10^{-6}$	
Attenuator		(0.04 ~ 100) kHz		
		(30 ~ -40) dB	0.054 dB	
		(-40 ~ -60) dB	0.10 dB	
		(-60 ~ -70) dB	0.20 dB	
		(-70 ~ -80) dB	0.30 dB	
		(0.1 ~ 400) MHz		
		(30 ~ -40) dB	0.061 dB	
		(-40 ~ -50) dB	0.068 dB	
		(-50 ~ -60) dB	0.072 dB	
		(-60 ~ -70) dB	0.076 dB	
		(-70 ~ -80) dB	0.081 dB	
Frequency Modulation		(0 ~ 400) kHz	$2.8 \times 10^{-2}$	
Amplitude Modulation		(0 ~ 99) %	$2.7 \times 10^{-2}$	
Phase		(0 ~ 360)°	0.061°	
Duty cycle		(1 ~ 99) %	0.006 1 %	
Rise/Fall Time		0.4 ns	$4.8 \times 10^{-1}$	
		(0.4 ~ 1) ns	$9.0 \times 10^{-2}$	
		1 ns ~ 1 ms	$8.2 \times 10^{-3}$	
AC/DC high voltage voltmeters	40413	(±)		High voltage supply High volt meter, DMM High voltage test equipment  /KTICC-CI-40413
DC Voltage		(0 ~ 1) kV	$1.3 \times 10^{-3}$	
		(1 ~ 50) kV	$1.2 \times 10^{-3}$	
AC Voltage		(50 ~ 60) Hz		
		(0.1 ~ 10) kV	$1.5 \times 10^{-2}$	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
LF impulse generators Output Voltage	40414	(±) (0.001 ~ 20) kV	$1.3 \times 10^{-2}$	Oscilloscope, High voltage probe /KTICC-CI-40414
Pulse Width		1 ns	$9.0 \times 10^{-2}$	
		(1 ~ 10) ns	$3.6 \times 10^{-3}$	
		10 ns ~ 100 ms	$3.4 \times 10^{-3}$	
Frequency		100 Hz	$3.4 \times 10^{-3}$	
		(100 ~ 200) Hz	$3.9 \times 10^{-3}$	
		(200 ~ 500) Hz	$5.6 \times 10^{-3}$	
		(0.5 ~ 1) kHz	$3.4 \times 10^{-3}$	
		(1 ~ 2) kHz	$3.9 \times 10^{-3}$	
		(2 ~ 5) kHz	$5.6 \times 10^{-3}$	
	(5 ~ 10) kHz	$3.4 \times 10^{-3}$		
	(10 ~ 20) kHz	$3.9 \times 10^{-3}$		
Leakage current testers DC Voltage	40416	(±) (0 ~ 0.1) V	$6.2 \times 10^{-5}$	Meter calibrator, DMM /KTICC-CI-40416
AC Voltage		(0.1 ~ 100) V	$6.1 \times 10^{-5}$	
		(100 ~ 1 000) V	$6.2 \times 10^{-5}$	
		(0.02 ~ 1) kHz		
DC Current		(0.22 ~ 100) mV	$1.7 \times 10^{-4}$	
		(0.1 ~ 1) V	$9.1 \times 10^{-5}$	
		(1 ~ 10) V	$8.9 \times 10^{-5}$	
		(10 ~ 100) V	$9.4 \times 10^{-5}$	
		(100 ~ 1 000) V	$1.0 \times 10^{-4}$	
		(±) (0 ~ 10) μA	$8.9 \times 10^{-4}$	
	(10 ~ 100) μA	$6.2 \times 10^{-4}$		
	(100 ~ 500) μA	$1.3 \times 10^{-4}$		
AC Current	(0.5 ~ 1) mA	$6.1 \times 10^{-4}$		
	(1 ~ 5) mA	$1.3 \times 10^{-4}$		
	(5 ~ 10) mA	$6.2 \times 10^{-4}$		
	(10 ~ 50) mA	$1.4 \times 10^{-4}$		
	(50 ~ 100) mA	$6.2 \times 10^{-4}$		
	(0.04 ~ 1) kHz			
	(0.009 ~ 1) mA	$6.4 \times 10^{-4}$		
	(1 ~ 5) mA	$2.4 \times 10^{-4}$		
(5 ~ 10) mA	$7.6 \times 10^{-4}$			
(10 ~ 50) mA	$6.4 \times 10^{-4}$			
(50 ~ 100) mA	$7.6 \times 10^{-4}$			



Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Leakage current testers Output voltage to input voltage ratios	40416	Unweighted touch current measuring network ratio (1 ~ 4) 0.02 kHz 0.05 kHz 0.06 kHz 0.1 kHz 0.2 kHz 0.5 kHz 1 kHz 2 kHz 5 kHz 10 kHz 20 kHz 50 kHz 100 kHz 200 kHz 500 kHz 1 000 kHz Perception or reaction measuring network ratio (3.43 ~ 1 382) 0.02 kHz 0.05 kHz 0.06 kHz 0.1 kHz 0.2 kHz 0.5 kHz 1 kHz 2 kHz 5 kHz 10 kHz 20 kHz 50 kHz 100 kHz 200 kHz 500 kHz 1 000 kHz Foil around lamp network ratio (1 000 ~ 5 503) 0.06 kHz 0.1 kHz 0.2 kHz 0.5 kHz 1 kHz 2 kHz 5 kHz 10 kHz 20 kHz 50 kHz 100 kHz	$3.0 \times 10^{-4}$ $1.4 \times 10^{-4}$ $1.4 \times 10^{-4}$ $1.4 \times 10^{-4}$ $1.3 \times 10^{-4}$ $1.1 \times 10^{-4}$ $9.2 \times 10^{-5}$ $8.1 \times 10^{-5}$ $7.4 \times 10^{-5}$ $7.4 \times 10^{-5}$ $7.3 \times 10^{-5}$ $1.0 \times 10^{-4}$ $1.4 \times 10^{-4}$ $3.5 \times 10^{-4}$ $1.2 \times 10^{-3}$ $2.1 \times 10^{-3}$ $3.0 \times 10^{-4}$ $1.4 \times 10^{-4}$ $1.4 \times 10^{-4}$ $1.4 \times 10^{-4}$ $1.3 \times 10^{-4}$ $1.2 \times 10^{-4}$ $1.1 \times 10^{-4}$ $1.3 \times 10^{-4}$ $7.9 \times 10^{-5}$ $4.3 \times 10^{-5}$ $8.6 \times 10^{-5}$ $2.2 \times 10^{-4}$ $4.2 \times 10^{-4}$ $2.9 \times 10^{-4}$ $7.2 \times 10^{-4}$ $1.4 \times 10^{-3}$ $3.2 \times 10^{-4}$ $3.3 \times 10^{-4}$ $3.9 \times 10^{-4}$ $4.3 \times 10^{-4}$ $5.3 \times 10^{-4}$ $8.4 \times 10^{-4}$ $1.4 \times 10^{-3}$ $1.6 \times 10^{-3}$ $1.7 \times 10^{-3}$ $1.7 \times 10^{-3}$ $1.8 \times 10^{-3}$	Meter calibrator, DMM /KTICC-CI-40416



Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Analogue/digital multimeters AC Voltage	40419	(100 ~ 190) mV		Meter calibrator, Frequency generator, Standard resistance, DC reference standard /KTICC-CI-40419
		(10 ~ 20) Hz	$3.2 \times 10^{-4}$	
		(20 ~ 40) Hz	$1.4 \times 10^{-4}$	
		(0.04 ~ 20) kHz	$1.3 \times 10^{-4}$	
		(20 ~ 50) kHz	$2.5 \times 10^{-4}$	
		(50 ~ 100) kHz	$5.8 \times 10^{-4}$	
		(100 ~ 200) kHz	$1.1 \times 10^{-3}$	
		(200 ~ 500) kHz	$1.6 \times 10^{-3}$	
		(0.5 ~ 1) MHz	$3.0 \times 10^{-3}$	
		(0.19 ~ 1) V		
		(10 ~ 20) Hz	$2.9 \times 10^{-4}$	
		(20 ~ 40) Hz	$1.1 \times 10^{-4}$	
		(0.04 ~ 20) kHz	$6.8 \times 10^{-5}$	
		(20 ~ 50) kHz	$9.6 \times 10^{-5}$	
		(50 ~ 100) kHz	$1.5 \times 10^{-4}$	
		(100 ~ 200) kHz	$5.2 \times 10^{-4}$	
		(200 ~ 500) kHz	$1.2 \times 10^{-3}$	
		(0.5 ~ 1) MHz	$2.0 \times 10^{-3}$	
		(1 ~ 1.9) V		
		(10 ~ 20) Hz	$2.7 \times 10^{-4}$	
		(20 ~ 40) Hz	$1.1 \times 10^{-4}$	
		(0.04 ~ 20) kHz	$6.3 \times 10^{-5}$	
		(20 ~ 50) kHz	$8.9 \times 10^{-5}$	
		(50 ~ 100) kHz	$1.4 \times 10^{-4}$	
		(100 ~ 200) kHz	$4.8 \times 10^{-4}$	
		(200 ~ 500) kHz	$1.2 \times 10^{-3}$	
		(0.5 ~ 1) MHz	$1.9 \times 10^{-3}$	
		(1.9 ~ 10) V		
		(10 ~ 20) Hz	$2.9 \times 10^{-4}$	
		(20 ~ 40) Hz	$1.1 \times 10^{-4}$	
		(0.04 ~ 20) kHz	$6.5 \times 10^{-5}$	
		(20 ~ 50) kHz	$1.0 \times 10^{-4}$	
		(50 ~ 100) kHz	$1.3 \times 10^{-4}$	
		(100 ~ 200) kHz	$3.5 \times 10^{-4}$	
		(200 ~ 500) kHz	$1.2 \times 10^{-3}$	
		(0.5 ~ 1) MHz	$1.9 \times 10^{-3}$	
		(10 ~ 19) V		
		(10 ~ 20) Hz	$2.7 \times 10^{-4}$	
		(20 ~ 40) Hz	$1.1 \times 10^{-4}$	
		(0.04 ~ 20) kHz	$6.3 \times 10^{-5}$	
(20 ~ 50) kHz	$8.9 \times 10^{-5}$			
(50 ~ 100) kHz	$1.2 \times 10^{-4}$			
(100 ~ 200) kHz	$3.3 \times 10^{-4}$			
(200 ~ 500) kHz	$1.2 \times 10^{-3}$			
(0.5 ~ 1) MHz	$1.7 \times 10^{-3}$			
(19 ~ 100) V				
(20 ~ 40) Hz	$1.1 \times 10^{-4}$			
(0.04 ~ 20) kHz	$7.2 \times 10^{-5}$			
(20 ~ 50) kHz	$1.0 \times 10^{-4}$			
(50 ~ 100) kHz	$1.9 \times 10^{-4}$			

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Analogue/digital multimeters AC Voltage	40419	(100 ~ 190) V		Meter calibrator, Frequency generator, Standard resistance, DC reference standard /KTICC-CI-40419
		(20 ~ 40) Hz	$1.1 \times 10^{-4}$	
		(0.04 ~ 20) kHz	$6.8 \times 10^{-5}$	
		(20 ~ 50) kHz	$1.0 \times 10^{-4}$	
		(50 ~ 100) kHz	$1.8 \times 10^{-4}$	
		(190 ~ 1 000) V		
		(15 ~ 50) Hz	$3.2 \times 10^{-4}$	
		(50 ~ 500) Hz	$8.5 \times 10^{-5}$	
		(0.5 ~ 1) kHz	$8.5 \times 10^{-5}$	
DC Current		(±)		
		(0 ~ 100) µA	$1.0 \times 10^{-4}$	
		(100 ~ 190) µA	$7.4 \times 10^{-5}$	
		(0.19 ~ 1) mA	$4.3 \times 10^{-5}$	
		(1 ~ 10) mA	$4.0 \times 10^{-5}$	
		(10 ~ 19) mA	$3.8 \times 10^{-5}$	
		(19 ~ 100) mA	$5.4 \times 10^{-5}$	
		(100 ~ 190) mA	$5.0 \times 10^{-5}$	
		(0.19 ~ 1) A	$9.4 \times 10^{-5}$	
		(1 ~ 1.9) A	$8.9 \times 10^{-5}$	
		(1.9 ~ 2) A	$9.0 \times 10^{-5}$	
		(2 ~ 10) A	$8.6 \times 10^{-4}$	
		(10 ~ 20) A	$7.0 \times 10^{-4}$	
AC Current		(0.009 ~ 1) mA		
		(10 ~ 20) Hz	$3.1 \times 10^{-4}$	
		(20 ~ 40) Hz	$2.1 \times 10^{-4}$	
		(0.04 ~ 1) kHz	$1.7 \times 10^{-4}$	
		(1 ~ 10) kHz	$1.9 \times 10^{-3}$	
		(1 ~ 1.9) mA		
		(10 ~ 20) Hz	$5.5 \times 10^{-4}$	
		(20 ~ 40) Hz	$1.9 \times 10^{-4}$	
		(0.04 ~ 1) kHz	$1.6 \times 10^{-4}$	
		(1 ~ 10) kHz	$1.5 \times 10^{-3}$	
		(1.9 ~ 10) mA		
	(10 ~ 20) Hz	$3.1 \times 10^{-4}$		
	(20 ~ 40) Hz	$2.1 \times 10^{-4}$		
	(0.04 ~ 1) kHz	$1.7 \times 10^{-4}$		
	(1 ~ 10) kHz	$1.6 \times 10^{-3}$		
	(10 ~ 19) mA			
	(10 ~ 20) Hz	$2.9 \times 10^{-4}$		
	(20 ~ 40) Hz	$1.9 \times 10^{-4}$		
	(0.04 ~ 1) kHz	$1.6 \times 10^{-4}$		
	(1 ~ 10) kHz	$1.4 \times 10^{-3}$		
	(19 ~ 100) mA			
	(10 ~ 20) Hz	$3.1 \times 10^{-4}$		
	(20 ~ 40) Hz	$2.2 \times 10^{-4}$		
	(0.04 ~ 1) kHz	$1.7 \times 10^{-4}$		
	(1 ~ 10) kHz	$1.2 \times 10^{-3}$		

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Analogue/digital multimeters AC Current	40419	(100 ~ 190) mA		Meter calibrator, Frequency generator, Standard resistance, DC reference standard /KTICC-CI-40419
		(10 ~ 20) Hz	$2.9 \times 10^{-4}$	
		(20 ~ 40) Hz	$2.1 \times 10^{-4}$	
		(0.04 ~ 1) kHz	$1.6 \times 10^{-4}$	
		(1 ~ 10) kHz	$1.2 \times 10^{-3}$	
		(0.19 ~ 1) A		
		(0.01 ~ 1) kHz	$3.3 \times 10^{-4}$	
		(1 ~ 10) kHz	$7.3 \times 10^{-3}$	
		(1 ~ 1.9) A		
		(0.01 ~ 1) kHz	$3.1 \times 10^{-4}$	
		(1 ~ 10) kHz	$7.4 \times 10^{-3}$	
		(1.9 ~ 2) A		
		(0.01 ~ 1) kHz	$3.2 \times 10^{-4}$	
		(1 ~ 10) kHz	$7.0 \times 10^{-3}$	
		(2 ~ 10) A		
		(45 ~ 100) Hz	$1.4 \times 10^{-3}$	
		(0.1 ~ 1) kHz	$1.8 \times 10^{-3}$	
		(10 ~ 20) A		
		(45 ~ 100) Hz	$2.0 \times 10^{-3}$	
		(0.1 ~ 1) kHz	$2.3 \times 10^{-3}$	
Resistance		(0 ~ 1) Ω	$9.6 \times 10^{-6}$	
		(1 ~ 10) Ω	$2.4 \times 10^{-5}$	
		(10 ~ 100) Ω	$7.4 \times 10^{-6}$	
		(0.1 ~ 1) kΩ	$1.0 \times 10^{-5}$	
		(1 ~ 10) kΩ	$5.4 \times 10^{-6}$	
		(10 ~ 100) kΩ	$1.5 \times 10^{-5}$	
		(0.1 ~ 1) MΩ	$2.3 \times 10^{-5}$	
		(1 ~ 10) MΩ	$4.6 \times 10^{-5}$	
		(10 ~ 100) MΩ	$1.0 \times 10^{-4}$	
		(0.1 ~ 1) GΩ	$6.2 \times 10^{-4}$	
Frequency		1 Hz ~ 10 MHz	$6.1 \times 10^{-7}$	
Noise meters AC Voltage	40420	(0.22 ~ 0.3) mV		Meter calibrator /KTICC-CI-40420
		(0.01 ~ 20) kHz	$1.5 \times 10^{-2}$	
		(20 ~ 100) kHz	$1.8 \times 10^{-2}$	
		(100 ~ 500) kHz	$7.0 \times 10^{-2}$	
		(0.3 ~ 1) mV		
		(10 ~ 20) Hz	$5.2 \times 10^{-3}$	
		(0.02 ~ 20) kHz	$5.1 \times 10^{-3}$	
		(20 ~ 100) kHz	$6.3 \times 10^{-3}$	
		(100 ~ 500) kHz	$2.2 \times 10^{-2}$	
		(1 ~ 3) mV		
		(0.01 ~ 20) kHz	$5.0 \times 10^{-3}$	
		(20 ~ 100) kHz	$5.3 \times 10^{-3}$	
	(100 ~ 500) kHz	$9.7 \times 10^{-3}$		

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Noise meters AC Voltage	40420	(3 ~ 10) mV (10 ~ 20) Hz (0.02 ~ 20) kHz (20 ~ 100) kHz (100 ~ 500) kHz (10 ~ 30) mV (10 ~ 20) Hz (0.02 ~ 20) kHz (20 ~ 100) kHz (100 ~ 500) kHz (30 ~ 100) mV (0.01 ~ 20) kHz (20 ~ 100) kHz (100 ~ 500) kHz (100 ~ 300) mV (0.01 ~ 100) kHz (100 ~ 500) kHz (0.3 ~ 1) V (0.01 ~ 100) kHz (100 ~ 500) kHz (1 ~ 3) V (0.01 ~ 100) kHz (100 ~ 500) kHz (3 ~ 10) V (0.01 ~ 100) kHz (100 ~ 500) kHz (10 ~ 30) V (0.01 ~ 100) kHz (30 ~ 100) V (0.01 ~ 100) kHz (100 ~ 300) V (0.015 ~ 1) kHz	$3.0 \times 10^{-3}$ $2.9 \times 10^{-3}$ $3.1 \times 10^{-3}$ $4.5 \times 10^{-3}$ $5.0 \times 10^{-3}$ $4.7 \times 10^{-3}$ $5.0 \times 10^{-3}$ $5.3 \times 10^{-3}$ $2.9 \times 10^{-3}$ $3.0 \times 10^{-3}$ $3.4 \times 10^{-3}$ $4.7 \times 10^{-3}$ $5.0 \times 10^{-3}$ $2.9 \times 10^{-3}$ $3.1 \times 10^{-3}$ $4.7 \times 10^{-3}$ $5.0 \times 10^{-3}$ $2.9 \times 10^{-3}$ $3.1 \times 10^{-3}$ $4.7 \times 10^{-3}$ $2.9 \times 10^{-3}$ $4.7 \times 10^{-3}$	Meter calibrator /KTICC-CI-40420
Level		(0.01 ~ 1) kHz (40 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (-60 ~ -70) dBm (1 ~ 20) kHz (40 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (-60 ~ -70) dBm (20 ~ 100) kHz (40 ~ -10) dBm (-10 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (-60 ~ -70) dBm	0.036 dB 0.039 dB 0.059 dB 0.15 dB 0.035 dB 0.038 dB 0.058 dB 0.15 dB 0.035 dB 0.036 dB 0.037 dB 0.042 dB 0.071 dB 0.19 dB	







Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Oscilloscopes	40421	600 mV ( $\geq 2$ GHz) (0.01 ~ 2) GHz (2 ~ 10) GHz (10 ~ 18) GHz	$4.7 \times 10^{-2}$ $5.0 \times 10^{-2}$ $5.5 \times 10^{-2}$	Scope calibrator, DMM, Frequency counter, RF signal generator /KTICC-CI-40421
Bandwidth		3 V ( $\leq 2$ GHz) 50 kHz (0.05 ~ 100) MHz (100 ~ 300) MHz (300 ~ 500) MHz (500 ~ 600) MHz (0.6 ~ 1) GHz (1 ~ 2) GHz	$1.5 \times 10^{-2}$ $2.0 \times 10^{-2}$ $2.5 \times 10^{-2}$ $4.0 \times 10^{-2}$ $4.7 \times 10^{-2}$ $6.0 \times 10^{-2}$ $7.0 \times 10^{-2}$	
		3 V ( $\geq 2$ GHz) (0.01 ~ 2) GHz (2 ~ 10) GHz (10 ~ 18) GHz	$4.7 \times 10^{-2}$ $5.0 \times 10^{-2}$ $5.3 \times 10^{-2}$	
CAL Output (DC Voltage)		(0 ~ 1) mV (1 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 2) V	$1.2 \times 10^{-4}$ $6.3 \times 10^{-5}$ $6.2 \times 10^{-5}$ $6.1 \times 10^{-5}$ $3.2 \times 10^{-5}$	
CAL Output (AC Voltage)		0.22 mV ~ 0.1 V 100 Hz (0.1 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) kHz	$2.2 \times 10^{-4}$ $2.1 \times 10^{-4}$ $2.2 \times 10^{-4}$ $1.1 \times 10^{-3}$	
		(0.1 ~ 0.5) V 100 Hz (0.1 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) kHz	$1.9 \times 10^{-4}$ $1.7 \times 10^{-4}$ $1.9 \times 10^{-4}$ $9.4 \times 10^{-4}$	
		(0.5 ~ 1) V 100 Hz (0.1 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) kHz	$1.4 \times 10^{-4}$ $1.2 \times 10^{-4}$ $1.4 \times 10^{-4}$ $7.3 \times 10^{-4}$	
		(1 ~ 5) V 100 Hz (0.1 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) kHz	$1.4 \times 10^{-4}$ $1.2 \times 10^{-4}$ $1.4 \times 10^{-4}$ $9.3 \times 10^{-4}$	
CAL Output (Frequency)		(0.1 ~ 100) kHz	$6.1 \times 10^{-6}$	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
LF phase meters	40422	(0.01 ~ 10) kHz (0 ~ 360)° (10 ~ 100) kHz (0 ~ 360)° (0.1 ~ 1) MHz (0 ~ 360)° (1 ~ 10) MHz (0 ~ 360)°	0.061° 0.064° 0.19° 1.8°	Function generator, Frequency counter /KTICC-CI-40422
Random wave generators Frequency  AC Voltage	40423	1 Hz ~ 100 MHz (100 ~ 400) MHz  (0.22 ~ 1) mV 10 Hz (0.01 ~ 10) kHz (10 ~ 100) kHz (0.1 ~ 1) MHz (1 ~ 10) mV 10 Hz (0.01 ~ 10) kHz (10 ~ 50) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz (10 ~ 100) mV 10 Hz (0.01 ~ 10) kHz (10 ~ 50) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz (0.1 ~ 1) V 10 Hz (0.01 ~ 50) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz (1 ~ 10) V 10 Hz (0.01 ~ 50) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz (10 ~ 100) V 10 Hz (0.01 ~ 10) kHz (10 ~ 50) kHz (50 ~ 100) kHz	$6.1 \times 10^{-9}$ $2.6 \times 10^{-9}$  $1.3 \times 10^{-3}$ $1.2 \times 10^{-3}$ $2.1 \times 10^{-3}$ $1.0 \times 10^{-2}$ $1.8 \times 10^{-4}$ $1.6 \times 10^{-4}$ $2.2 \times 10^{-4}$ $2.7 \times 10^{-4}$ $2.7 \times 10^{-3}$ $9.3 \times 10^{-5}$ $7.4 \times 10^{-5}$ $7.7 \times 10^{-5}$ $1.0 \times 10^{-4}$ $1.0 \times 10^{-3}$ $8.3 \times 10^{-5}$ $6.7 \times 10^{-5}$ $7.7 \times 10^{-5}$ $9.6 \times 10^{-4}$ $8.2 \times 10^{-5}$ $6.8 \times 10^{-5}$ $8.2 \times 10^{-5}$ $1.2 \times 10^{-3}$ $8.8 \times 10^{-5}$ $6.9 \times 10^{-5}$ $7.3 \times 10^{-5}$ $9.1 \times 10^{-5}$	DMM, Frequency counter, Measuring receiver, Oscilloscope /KTICC-CI-40423

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Random wave generators Level	40423	10 Hz (20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (10 ~ 40) Hz (20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (0.04 ~ 10) kHz (20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (0.01 ~ 10) MHz (20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (10 ~ 50) MHz (20 ~ -50) dBm (-50 ~ -60) dBm (50 ~ 400) MHz (20 ~ -30) dBm (-30 ~ -60) dBm	0.008 dB 0.010 dB 0.49 dB 0.007 dB 0.010 dB 0.30 dB 0.007 dB 0.010 dB 0.21 dB 0.008 dB 0.011 dB 0.14 dB 0.024 dB 0.14 dB 0.12 dB 0.14 dB	DMM, Frequency counter, Measuring receiver, Oscilloscope  /KTICC-CI-40423
Flatness (Voltage)		100 mV 10 Hz (0.01 ~ 100) kHz (0.1 ~ 1) MHz (1 ~ 10) MHz (10 ~ 30) MHz (30 ~ 50) MHz (50 ~ 400) MHz (0.1 ~ 1) V 10 Hz (0.01 ~ 100) kHz (0.1 ~ 1) MHz (1 ~ 10) MHz (10 ~ 30) MHz (30 ~ 50) MHz (50 ~ 400) MHz (1 ~ 3) V 10 Hz (0.01 ~ 100) kHz (0.1 ~ 1) MHz (1 ~ 10) MHz (10 ~ 30) MHz (30 ~ 50) MHz (50 ~ 400) MHz	8.7 × 10 <sup>-4</sup> 4.5 × 10 <sup>-4</sup> 5.1 × 10 <sup>-4</sup> 8.9 × 10 <sup>-4</sup> 3.0 × 10 <sup>-3</sup> 5.1 × 10 <sup>-3</sup> 2.6 × 10 <sup>-2</sup> 8.9 × 10 <sup>-4</sup> 4.0 × 10 <sup>-4</sup> 5.1 × 10 <sup>-4</sup> 8.9 × 10 <sup>-4</sup> 3.0 × 10 <sup>-3</sup> 5.0 × 10 <sup>-3</sup> 2.7 × 10 <sup>-2</sup> 9.0 × 10 <sup>-4</sup> 4.3 × 10 <sup>-4</sup> 5.3 × 10 <sup>-4</sup> 9.0 × 10 <sup>-4</sup> 3.0 × 10 <sup>-3</sup> 5.0 × 10 <sup>-3</sup> 2.8 × 10 <sup>-2</sup>	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Random wave generators	40423	(10 ~ -10) dBm		DMM, Frequency counter, Measuring receiver, Oscilloscope  /KTICC-CI-40423
Flatness (Level)		10 Hz ~ 10 MHz	0.008 dB	
		(10 ~ 30) MHz	0.015 dB	
		(30 ~ 50) MHz	0.023 dB	
		(50 ~ 400) MHz	0.11 dB	
DC Offset Voltage		(±)		
		(0 ~ 1) V	$6.2 \times 10^{-5}$	
		(1 ~ 5) V	$1.3 \times 10^{-5}$	
		(5 ~ 10) V	$7.2 \times 10^{-6}$	
Attenuator		(0.04 ~ 100) kHz		
		(30 ~ -40) dB	0.054 dB	
		(-40 ~ -60) dB	0.10 dB	
		(-60 ~ -70) dB	0.20 dB	
		(-70 ~ -80) dB	0.30 dB	
		(0.1 ~ 400) MHz		
		(30 ~ -40) dB	0.061 dB	
		(-40 ~ -50) dB	0.068 dB	
		(-50 ~ -60) dB	0.072 dB	
		(-60 ~ -70) dB	0.076 dB	
		(-70 ~ -80) dB	0.081 dB	
Frequency Modulation	(0 ~ 400) kHz	$2.8 \times 10^{-2}$		
Amplitude Modulation	(0 ~ 99) %	$2.7 \times 10^{-2}$		
Phase	(0 ~ 360)°	0.061°		
Duty cycle	(1 ~ 99) %	0.006 1 %		
Rise/Fall Time	0.4 ns	$4.8 \times 10^{-1}$		
	(0.4 ~ 1) ns	$9.0 \times 10^{-2}$		
	1 ns ~ 1 ms	$8.2 \times 10^{-3}$		

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Voltage/current recorders	40424	(±)		Meter calibrator
DC Voltage		(0 ~ 10) mV	$4.9 \times 10^{-5}$	/KTICC-CI-40424
		(10 ~ 100) mV	$1.2 \times 10^{-5}$	
		(0.1 ~ 1) V	$5.9 \times 10^{-6}$	
		(1 ~ 10) V	$4.0 \times 10^{-6}$	
		(10 ~ 100) V	$5.9 \times 10^{-6}$	
		(100 ~ 1 000) V	$7.3 \times 10^{-6}$	
AC Voltage		(0.22 ~ 100) mV		
		(20 ~ 40) Hz	$1.7 \times 10^{-4}$	
		(0.04 ~ 20) kHz	$1.6 \times 10^{-4}$	
		(20 ~ 50) kHz	$2.8 \times 10^{-4}$	
		(50 ~ 100) kHz	$6.5 \times 10^{-4}$	
		(100 ~ 300) kHz	$1.1 \times 10^{-3}$	
		(0.1 ~ 1) V		
		(20 ~ 40) Hz	$1.1 \times 10^{-4}$	
		(0.04 ~ 20) kHz	$6.8 \times 10^{-5}$	
		(20 ~ 50) kHz	$9.6 \times 10^{-5}$	
		(50 ~ 100) kHz	$1.5 \times 10^{-4}$	
		(100 ~ 300) kHz	$5.2 \times 10^{-4}$	
		(1 ~ 10) V		
		(20 ~ 40) Hz	$1.1 \times 10^{-4}$	
		(0.04 ~ 20) kHz	$6.5 \times 10^{-5}$	
		(20 ~ 50) kHz	$1.0 \times 10^{-4}$	
		(50 ~ 100) kHz	$1.3 \times 10^{-4}$	
		(100 ~ 200) kHz	$3.5 \times 10^{-4}$	
		(200 ~ 300) kHz	$3.6 \times 10^{-4}$	
		(10 ~ 100) V		
		(20 ~ 40) Hz	$1.1 \times 10^{-4}$	
		(0.04 ~ 20) kHz	$7.2 \times 10^{-5}$	
		(20 ~ 50) kHz	$1.0 \times 10^{-4}$	
		(50 ~ 100) kHz	$1.9 \times 10^{-4}$	
		(100 ~ 1 000) V		
		(15 ~ 50) Hz	$3.2 \times 10^{-4}$	
		(0.5 ~ 1) kHz	$8.5 \times 10^{-5}$	
DC Current		(±)		
		(0 ~ 100) μA	$1.0 \times 10^{-4}$	
		(0.1 ~ 1) mA	$4.3 \times 10^{-5}$	
		(1 ~ 10) mA	$4.0 \times 10^{-5}$	
		(10 ~ 100) mA	$5.4 \times 10^{-5}$	
		(0.1 ~ 1) A	$9.4 \times 10^{-5}$	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Voltage/current recorders AC Current	40424	(0.009 ~ 1) mA (20 ~ 40) Hz (0.04 ~ 1) kHz (1 ~ 10) kHz (1 ~ 10) mA (20 ~ 40) Hz (0.04 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) mA (20 ~ 40) Hz (0.04 ~ 1) kHz (1 ~ 10) kHz (0.1 ~ 1) A (0.02 ~ 1) kHz (1 ~ 10) kHz	$2.1 \times 10^{-4}$ $1.7 \times 10^{-4}$ $1.9 \times 10^{-3}$ $2.1 \times 10^{-4}$ $1.7 \times 10^{-4}$ $1.6 \times 10^{-3}$ $2.2 \times 10^{-4}$ $1.7 \times 10^{-4}$ $1.2 \times 10^{-3}$ $3.3 \times 10^{-4}$ $7.3 \times 10^{-3}$	Meter calibrator /KTICC-CI-40424
Resistance		(0 ~ 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	$9.6 \times 10^{-6}$ $2.4 \times 10^{-5}$ $7.4 \times 10^{-6}$ $1.0 \times 10^{-5}$ $5.4 \times 10^{-6}$ $1.5 \times 10^{-5}$ $2.3 \times 10^{-5}$ $4.6 \times 10^{-5}$ $1.0 \times 10^{-4}$	
Frequency		(0.001 ~ 100) kHz	$6.1 \times 10^{-7}$	
Relay test sets DC Voltage	40425	(±) (0 ~ 100) mV (100 ~ 190) mV (0.19 ~ 1) V (1 ~ 1.9) V (1.9 ~ 10) V (10 ~ 19) V (19 ~ 100) V (100 ~ 190) V (190 ~ 1 000) V	$1.1 \times 10^{-5}$ $9.5 \times 10^{-6}$ $7.2 \times 10^{-6}$ $4.8 \times 10^{-6}$ $7.2 \times 10^{-6}$ $4.8 \times 10^{-6}$ $8.6 \times 10^{-6}$ $6.8 \times 10^{-6}$ $8.6 \times 10^{-6}$	DMM, Current shunt, Function generator, Oscilloscope /KTICC-CI-40425

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Relay test sets DC Current	40425	(±) (0 ~ 1) mA (1 ~ 1.9) mA (1.9 ~ 10) mA (10 ~ 19) mA (19 ~ 100) mA (100 ~ 190) mA (0.19 ~ 1) A (1 ~ 1.9) A (1.9 ~ 10) A (10 ~ 30) A (30 ~ 50) A (50 ~ 100) A	$8.9 \times 10^{-6}$ $7.4 \times 10^{-6}$ $1.0 \times 10^{-5}$ $8.9 \times 10^{-6}$ $1.4 \times 10^{-5}$ $1.3 \times 10^{-5}$ $5.9 \times 10^{-5}$ $5.8 \times 10^{-5}$ $8.9 \times 10^{-5}$ $1.2 \times 10^{-4}$ $2.4 \times 10^{-4}$ $5.8 \times 10^{-4}$	DMM, Current shunt, Function generator, Oscilloscope  /KTICC-CI-40425
AC Voltage		(0.04 ~ 1) kHz (0.22 ~ 190) mV (0.19 ~ 1) V (1 ~ 1.9) V (1.9 ~ 19) V (19 ~ 190) V (190 ~ 1 000) V	$4.0 \times 10^{-5}$ $2.3 \times 10^{-5}$ $2.2 \times 10^{-5}$ $2.2 \times 10^{-5}$ $2.6 \times 10^{-5}$ $2.9 \times 10^{-5}$	
AC Current		(0.04 ~ 1) kHz (0.009 ~ 1) mA (1 ~ 1.9) mA (1.9 ~ 10) mA (10 ~ 19) mA (19 ~ 100) mA (100 ~ 190) mA (0.19 ~ 1) A (1 ~ 1.9) A (1.9 ~ 10) A (10 ~ 100) A	$4.4 \times 10^{-4}$ $3.6 \times 10^{-4}$ $4.4 \times 10^{-4}$ $3.6 \times 10^{-4}$ $4.4 \times 10^{-4}$ $3.6 \times 10^{-4}$ $8.7 \times 10^{-4}$ $8.9 \times 10^{-4}$ $1.1 \times 10^{-3}$ $1.2 \times 10^{-3}$	
Output Time Interval		(0 ~ 100) s	$6.1 \times 10^{-4}$	
Input Time Interval		(0 ~ 100) s	$6.1 \times 10^{-4}$	
LF signal generators Frequency	40426	1 Hz ~ 10 MHz	$6.1 \times 10^{-7}$	DMM, Frequency counter, Audio analyzer  /KTICC-CI-40426
AC Voltage		(0.22 ~ 1) mV (0.04 ~ 10) kHz (10 ~ 100) kHz (0.1 ~ 1) MHz (1 ~ 10) mV 40 Hz (0.04 ~ 10) kHz (10 ~ 50) kHz (0.05 ~ 1) MHz	$1.2 \times 10^{-3}$ $2.1 \times 10^{-3}$ $9.7 \times 10^{-3}$ $1.6 \times 10^{-4}$ $1.5 \times 10^{-4}$ $2.2 \times 10^{-4}$ $2.7 \times 10^{-3}$	







Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
LF spectrum analyzers Frequency Span	40427	8 Hz (8 ~ 16) Hz (16 ~ 40) Hz (40 ~ 80) Hz (80 ~ 160) Hz (160 ~ 400) Hz (0.4 ~ 0.8) kHz (0.8 ~ 1.6) kHz (1.6 ~ 4) kHz (4 ~ 8) kHz (8 ~ 16) kHz (16 ~ 40) kHz (40 ~ 80) kHz (80 ~ 160) kHz (160 ~ 400) kHz (0.4 ~ 0.8) MHz (0.8 ~ 1.6) MHz (1.6 ~ 4) MHz (4 ~ 8) MHz (8 ~ 16) MHz	$1.1 \times 10^{-4}$ $5.3 \times 10^{-4}$ $2.1 \times 10^{-4}$ $1.1 \times 10^{-4}$ $5.3 \times 10^{-4}$ $2.1 \times 10^{-4}$ $1.1 \times 10^{-4}$ $5.3 \times 10^{-4}$ $2.1 \times 10^{-4}$ $1.1 \times 10^{-4}$ $5.3 \times 10^{-4}$ $2.1 \times 10^{-4}$ $1.1 \times 10^{-4}$ $5.3 \times 10^{-4}$ $2.1 \times 10^{-4}$ $1.1 \times 10^{-4}$ $5.3 \times 10^{-4}$ $2.1 \times 10^{-4}$	Function generator RF signal generator, Measuring receiver, Frequency counter /KTICC-CI-40427
Resolution Bandwidth		3 Hz (3 ~ 10) Hz (10 ~ 30) Hz (30 ~ 100) Hz (100 ~ 300) Hz (0.3 ~ 1) kHz (1 ~ 3) kHz (3 ~ 10) kHz (10 ~ 30) kHz	$2.8 \times 10^{-4}$ $8.4 \times 10^{-4}$ $2.8 \times 10^{-4}$ $8.4 \times 10^{-4}$ $2.8 \times 10^{-4}$ $8.4 \times 10^{-4}$ $2.8 \times 10^{-4}$ $8.4 \times 10^{-4}$	
Output Level		(0.04 ~ 100) kHz (10 ~ -20) dBm (-20 ~ -30) dBm (0.1 ~ 100) MHz (10 ~ -30) dBm	0.059 dB 0.10 dB 0.11 dB	
Output Frequency		10 Hz ~ 100 MHz	$6.1 \times 10^{-9}$	
Sweep generators Frequency	40429	1 Hz ~ 100 MHz (100 ~ 400) MHz	$6.1 \times 10^{-9}$ $2.6 \times 10^{-9}$	DMM, Frequency counter, Measuring receiver, Oscilloscope /KTICC-CI-40429
AC Voltage		(0.22 ~ 1) mV 10 Hz (0.01 ~ 10) kHz (10 ~ 100) kHz (0.1 ~ 1) MHz	$1.3 \times 10^{-3}$ $1.2 \times 10^{-3}$ $2.1 \times 10^{-3}$ $1.0 \times 10^{-2}$	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Sweep generators AC Voltage	40429	(1 ~ 10) mV 10 Hz (0.01 ~ 10) kHz (10 ~ 50) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz (10 ~ 100) mV 10 Hz (0.01 ~ 10) kHz (10 ~ 50) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz (0.1 ~ 1) V 10 Hz (0.01 ~ 50) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz (1~ 10) V 10 Hz (0.01 ~ 50) kHz (50 ~ 100) kHz (0.1 ~ 1) MHz (10 ~ 100) V 10 Hz (0.01 ~ 10) kHz (10 ~ 50) kHz (50 ~ 100) kHz	$1.8 \times 10^{-4}$ $1.6 \times 10^{-4}$ $2.2 \times 10^{-4}$ $2.7 \times 10^{-4}$ $2.7 \times 10^{-3}$ $9.3 \times 10^{-5}$ $7.4 \times 10^{-5}$ $7.7 \times 10^{-5}$ $1.0 \times 10^{-4}$ $1.0 \times 10^{-3}$ $8.3 \times 10^{-5}$ $6.7 \times 10^{-5}$ $7.7 \times 10^{-5}$ $9.6 \times 10^{-4}$ $8.2 \times 10^{-5}$ $6.8 \times 10^{-5}$ $8.2 \times 10^{-5}$ $1.2 \times 10^{-3}$ $8.8 \times 10^{-5}$ $6.9 \times 10^{-5}$ $7.3 \times 10^{-5}$ $9.1 \times 10^{-5}$	DMM, Frequency counter, Measuring receiver, Oscilloscope /KTICC-CI-40429
Level		10 Hz (20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (10 ~ 40) Hz (20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (0.04 ~ 10) kHz (20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (0.01 ~ 10) MHz (20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -60) dBm (10 ~ 50) MHz (20 ~ -50) dBm (-50 ~ -60) dBm (50 ~ 400) MHz (20 ~ -30) dBm (-30 ~ -60) dBm	0.008 dB 0.010 dB 0.49 dB 0.007 dB 0.010 dB 0.30 dB 0.007 dB 0.010 dB 0.21 dB 0.008 dB 0.011 dB 0.14 dB 0.024 dB 0.14 dB 0.12 dB 0.14 dB	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Sweep generators	40429	100 mV		DMM, Frequency counter, Measuring receiver, Oscilloscope  /KTICC-CI-40429
Flatness (Voltage)		10 Hz	$8.7 \times 10^{-4}$	
		(0.01 ~ 100) kHz	$4.5 \times 10^{-4}$	
		(0.1 ~ 1) MHz	$5.1 \times 10^{-4}$	
		(1 ~ 10) MHz	$8.9 \times 10^{-4}$	
		(10 ~ 30) MHz	$3.0 \times 10^{-3}$	
		(30 ~ 50) MHz	$5.1 \times 10^{-3}$	
		(50 ~ 400) MHz	$2.6 \times 10^{-2}$	
		(0.1 ~ 1) V		
		10 Hz	$8.9 \times 10^{-4}$	
		(0.01 ~ 100) kHz	$4.0 \times 10^{-4}$	
		(0.1 ~ 1) MHz	$5.1 \times 10^{-4}$	
		(1 ~ 10) MHz	$8.9 \times 10^{-4}$	
		(10 ~ 30) MHz	$3.0 \times 10^{-3}$	
		(30 ~ 50) MHz	$5.0 \times 10^{-3}$	
		(50 ~ 400) MHz	$2.7 \times 10^{-2}$	
		(1 ~ 3) V		
		10 Hz	$9.0 \times 10^{-4}$	
		(0.01 ~ 100) kHz	$4.3 \times 10^{-4}$	
		(0.1 ~ 1) MHz	$5.3 \times 10^{-4}$	
		(1 ~ 10) MHz	$9.0 \times 10^{-4}$	
		(10 ~ 30) MHz	$3.0 \times 10^{-3}$	
		(30 ~ 50) MHz	$5.0 \times 10^{-3}$	
		(50 ~ 400) MHz	$2.8 \times 10^{-2}$	
Flatness (Level)	(10 ~ -10) dBm			
	10 Hz ~ 10 MHz	0.008 dB		
	(10 ~ 30) MHz	0.015 dB		
	(30 ~ 50) MHz	0.023 dB		
	(50 ~ 400) MHz	0.11 dB		
DC Offset Voltage	(±)			
	(0 ~ 1) V	$6.2 \times 10^{-5}$		
	(1 ~ 5) V	$1.3 \times 10^{-5}$		
	(5 ~ 10) V	$7.2 \times 10^{-6}$		
Attenuator	(0.04 ~ 100) kHz			
	(30 ~ -40) dB	0.054 dB		
	(-40 ~ -60) dB	0.10 dB		
	(-60 ~ -70) dB	0.20 dB		
	(-70 ~ -80) dB	0.30 dB		
	(0.1 ~ 400) MHz			
	(30 ~ -40) dB	0.061 dB		
	(-40 ~ -50) dB	0.068 dB		
	(-50 ~ -60) dB	0.072 dB		
	(-60 ~ -70) dB	0.076 dB		
	(-70 ~ -80) dB	0.081 dB		

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Sweep generators Frequency Modulation Amplitude Modulation Phase Duty cycle  Rise/Fall Time	40429	(0 ~ 400) kHz (0 ~ 99) % (0 ~ 360)° (1 ~ 99) %  0.4 ns (0.4 ~ 1) ns 1 ns ~ 1 ms	$2.8 \times 10^{-2}$ $2.7 \times 10^{-2}$ $0.061^\circ$ $0.006 \text{ 1 \%}$  $4.8 \times 10^{-1}$ $9.0 \times 10^{-2}$ $8.2 \times 10^{-3}$	DMM, Frequency counter, Measuring receiver, Oscilloscope  /KTICC-CI-40429
Transistor curve tracers Input DC Voltage  Input DC Current  Output DC Voltage  Output DC Current	40432	(±) (0 ~ 500) V (500 ~ 1 000) V (±) (0 ~ 5) mA (5 ~ 50) mA (50 ~ 500) mA (0.5 ~ 1) A (1 ~ 2) A (±) (0 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1 000) V (±) (0 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 2) A	$1.2 \times 10^{-4}$ $6.1 \times 10^{-4}$ $1.3 \times 10^{-4}$ $1.4 \times 10^{-4}$ $1.6 \times 10^{-4}$ $6.2 \times 10^{-4}$ $3.2 \times 10^{-4}$ $6.3 \times 10^{-5}$ $6.2 \times 10^{-5}$ $6.1 \times 10^{-5}$ $6.5 \times 10^{-5}$ $7.8 \times 10^{-5}$ $2.0 \times 10^{-4}$ $6.0 \times 10^{-4}$	Meter calibrator, DMM  /KTICC-CI-40432
Waveform analyzers Frequency  AC Voltage	40433	(0.01 ~ 100) kHz (100 ~ 200) kHz  (0.22 ~ 1) mV 10 Hz (10 ~ 40) Hz (0.04 ~ 10) kHz (10 ~ 100) kHz (100 ~ 200) kHz (1 ~ 10) mV 10 Hz (0.01 ~ 10) kHz (10 ~ 100) kHz (100 ~ 200) kHz (10 ~ 100) mV 10 Hz (0.01 ~ 10) kHz (10 ~ 100) kHz (100 ~ 200) kHz	$6.1 \times 10^{-6}$ $3.1 \times 10^{-6}$  $4.4 \times 10^{-3}$ $5.0 \times 10^{-3}$ $4.2 \times 10^{-3}$ $5.6 \times 10^{-3}$ $1.1 \times 10^{-2}$ $6.6 \times 10^{-4}$ $5.1 \times 10^{-4}$ $1.0 \times 10^{-3}$ $2.1 \times 10^{-3}$ $3.8 \times 10^{-4}$ $1.8 \times 10^{-4}$ $6.5 \times 10^{-4}$ $1.1 \times 10^{-3}$	Meter calibrator, Frequency counter, Audio analyzer  /KTICC-CI-40433

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Waveform analyzers AC Voltage	40433	(0.01 ~ 1) V		Meter calibrator, Frequency counter, Audio analyzer /KTICC-CI-40433
		10 Hz	$3.0 \times 10^{-4}$	
		(10 ~ 40) Hz	$1.3 \times 10^{-4}$	
		(0.04 ~ 10) kHz	$9.1 \times 10^{-5}$	
		(10 ~ 100) kHz	$1.6 \times 10^{-4}$	
		(100 ~ 200) kHz	$5.2 \times 10^{-4}$	
		(1 ~ 10) V		
		10 Hz	$3.0 \times 10^{-4}$	
		(10 ~ 40) Hz	$1.3 \times 10^{-4}$	
		(0.04 ~ 10) kHz	$8.9 \times 10^{-5}$	
		(10 ~ 100) kHz	$1.5 \times 10^{-4}$	
		(100 ~ 200) kHz	$3.6 \times 10^{-4}$	
		(10 ~ 100) V		
		10 Hz	$3.0 \times 10^{-4}$	
		(10 ~ 40) Hz	$1.3 \times 10^{-4}$	
		(0.04 ~ 10) kHz	$9.4 \times 10^{-5}$	
		(10 ~ 100) kHz	$2.0 \times 10^{-4}$	
		(100 ~ 200) V		
		10 Hz	$2.7 \times 10^{-4}$	
		(10 ~ 40) Hz	$1.1 \times 10^{-4}$	
		(0.04 ~ 10) kHz	$7.5 \times 10^{-5}$	
		(10 ~ 100) kHz	$1.9 \times 10^{-4}$	
		(200 ~ 300) V		
		50 Hz	$3.7 \times 10^{-4}$	
		(50 ~ 1) kHz	$9.3 \times 10^{-5}$	
DC Voltage		(±)		
		(0 ~ 100) mV	$6.2 \times 10^{-5}$	
		(0.1 ~ 100) V	$6.1 \times 10^{-5}$	
		(100 ~ 300) V	$2.2 \times 10^{-5}$	
Level		10 Hz		
		(40 ~ -40) dBm	0.009 dB	
		(-40 ~ -50) dBm	0.018 dB	
		(-50 ~ -60) dBm	0.048 dB	
		(-60 ~ -70) dBm	0.15 dB	
		(0.01 ~ 1) kHz		
		(50 ~ -40) dBm	0.009 dB	
	(-40 ~ -50) dBm	0.016 dB		
	(-50 ~ -60) dBm	0.047 dB		
	(-60 ~ -70) dBm	0.14 dB		
	(1 ~ 10) kHz			
	(40 ~ -40) dBm	0.008 dB		
	(-40 ~ -50) dBm	0.016 dB		
	(-50 ~ -60) dBm	0.047 dB		
	(-60 ~ -70) dBm	0.14 dB		
	(10 ~ 100) kHz			
	(40 ~ -20) dBm	0.009 dB		
	(-20 ~ -40) dBm	0.012 dB		
	(-40 ~ -50) dBm	0.023 dB		
	(-50 ~ -60) dBm	0.062 dB		
	(-60 ~ -70) dBm	0.18 dB		

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments	
Waveform analyzers Level	40433	(100 ~ 200) kHz		Meter calibrator, Frequency counter, Audio analyzer /KTICC-CI-40433	
		(20 ~ -10) dBm	0.009 dB		
		(-10 ~ -20) dBm	0.012 dB		
		(-20 ~ -30) dBm	0.017 dB		
		(-30 ~ -40) dBm	0.022 dB		
		(-40 ~ -50) dBm	0.046 dB		
		(-50 ~ -60) dBm	0.12 dB		
		(-60 ~ -70) dBm	0.36 dB		
Frequency Responses (Voltage)		100 mV			
		(10 ~ 20) Hz	$3.8 \times 10^{-4}$		
		(20 ~ 40) Hz	$1.8 \times 10^{-4}$		
		(0.04 ~ 10) kHz	$1.7 \times 10^{-4}$		
		(10 ~ 100) kHz	$6.5 \times 10^{-4}$		
	(100 ~ 200) kHz	$1.1 \times 10^{-3}$			
	(0.1 ~ 1) V				
	(10 ~ 20) Hz	$3.0 \times 10^{-4}$			
	(20 ~ 40) Hz	$1.3 \times 10^{-4}$			
	(0.04 ~ 10) kHz	$9.1 \times 10^{-5}$			
	(10 ~ 100) kHz	$1.6 \times 10^{-4}$			
	(100 ~ 200) kHz	$5.2 \times 10^{-4}$			
	(1 ~ 10) V				
	(10 ~ 20) Hz	$3.0 \times 10^{-4}$			
	(20 ~ 40) Hz	$1.3 \times 10^{-4}$			
	(0.04 ~ 10) kHz	$8.9 \times 10^{-5}$			
	(10 ~ 100) kHz	$1.5 \times 10^{-4}$			
	(100 ~ 200) kHz	$3.6 \times 10^{-4}$			
Frequency Responses (Level)	(10 ~ -10) dBm				
	(10 ~ 40) Hz	0.008 dB			
	(0.04 ~ 100) kHz	0.007 dB			
	(100 ~ 200) kHz	0.010 dB			
Distortion	(0.02 ~ 100) kHz				
	(0 ~ -60) dB	0.19 dB			
	(-60 ~ -80) dB	0.50 dB			
Filter(Frequency) (Weight, Low, High Pass etc.)	(0.01 ~ 100) kHz	$6.1 \times 10^{-6}$			
Filter(Level) (Weight, Low, High Pass etc.)	(0.01 ~ 100) kHz (20 ~ -63) dB	0.007 dB			
AC/DC high voltage generators DC Voltage	40434	(±) (0 ~ 100) kV	$1.2 \times 10^{-3}$	High voltage test equipment, High voltage meter, DMM /KTICC-CI-40434	
AC Voltage		(50 ~ 60) Hz			
		(0.001 ~ 100) kV (100 ~ 170) kV	$1.5 \times 10^{-2}$ $1.6 \times 10^{-2}$		

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
AC/DC high voltage probes DC Voltage  AC Voltage  Bandwidth	40435	(±) (1 ~ 10 000) : 1 (0 ~ 1) kV (1 ~ 50) kV  (1 ~ 10 000) : 1 (0.04 ~ 1) kHz (0.22 ~ 100) mV (0.1 ~ 100) V (0.1 ~ 1) kV 60 Hz (1 ~ 10) kV  (5 ~ 600) mV 50 kHz (0.05 ~ 100) MHz (100 ~ 300) MHz (300 ~ 500) MHz (0.5 ~ 1) GHz (0.6 ~ 3) V 50 kHz (0.05 ~ 100) MHz (100 ~ 300) MHz (300 ~ 500) MHz (0.5 ~ 1) GHz	  $6.2 \times 10^{-5}$ $1.2 \times 10^{-3}$   $3.8 \times 10^{-4}$ $2.3 \times 10^{-4}$ $7.4 \times 10^{-4}$  $1.5 \times 10^{-2}$  $3.1 \times 10^{-2}$ $3.4 \times 10^{-2}$ $5.2 \times 10^{-2}$ $6.2 \times 10^{-2}$ $8.5 \times 10^{-2}$  $5.8 \times 10^{-2}$ $6.3 \times 10^{-2}$ $7.8 \times 10^{-2}$ $9.5 \times 10^{-2}$ $1.2 \times 10^{-1}$	Meter calibrator, DMM, High voltage test equipment, Oscilloscope, High voltage power supply / KTICC-CI-4035
Logic analyzers Vertical(Square Wave)  Bandwidth	40436	1 kHz 1 mV (1 ~ 2) mV (2 ~ 5) mV (5 ~ 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 ~ 10) V (10 ~ 20) V (20 ~ 130) V  600 mV 50 kHz (0.05 ~ 100) MHz (100 ~ 300) MHz (300 ~ 500) MHz (0.5 ~ 1) GHz (1 ~ 2) GHz	  $6.4 \times 10^{-3}$ $3.5 \times 10^{-3}$ $1.7 \times 10^{-3}$ $1.2 \times 10^{-3}$ $8.5 \times 10^{-4}$ $7.0 \times 10^{-4}$ $6.4 \times 10^{-4}$ $6.0 \times 10^{-4}$ $5.8 \times 10^{-4}$ $5.9 \times 10^{-4}$ $6.0 \times 10^{-4}$ $5.8 \times 10^{-4}$ $6.0 \times 10^{-4}$ $5.8 \times 10^{-4}$  $1.5 \times 10^{-2}$ $2.0 \times 10^{-2}$ $2.5 \times 10^{-2}$ $4.2 \times 10^{-2}$ $5.8 \times 10^{-2}$ $7.0 \times 10^{-2}$	Scope calibrator Meter calibrator /KTICC-CI-40436



Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Logic analyzers Time(Period)	40436	1 ns (1 ~ 2) ns (2 ~ 5) ns (5 ~ 10) ns (10 ~ 20) ns (20 ~ 50) ns (50 ~ 100) ns (100 ~ 200) ns (200 ~ 500) ns (0.5 ~ 1) μs (1 ~ 2) μs (2 ~ 5) μs (5 ~ 10) μs (10 ~ 20) μs (20 ~ 50) μs (50 ~ 100) μs (100 ~ 200) μs (200 ~ 500) μs (0.5 ~ 1) ms (1 ~ 2) ms (2 ~ 5) ms (5 ~ 10) ms (10 ~ 20) ms (20 ~ 50) ms (50 ~ 100) ms (100 ~ 200) ms (200 ~ 500) ms (0.5 ~ 1) s (1 ~ 2) s (2 ~ 5) s	$6.1 \times 10^{-5}$ $3.1 \times 10^{-5}$ $1.2 \times 10^{-5}$ $6.1 \times 10^{-5}$ $3.1 \times 10^{-5}$ $1.2 \times 10^{-5}$ $6.1 \times 10^{-5}$ $3.1 \times 10^{-5}$ $1.2 \times 10^{-5}$ $6.1 \times 10^{-5}$ $3.1 \times 10^{-5}$ $1.2 \times 10^{-5}$ $6.1 \times 10^{-5}$ $3.1 \times 10^{-5}$ $1.2 \times 10^{-5}$ $6.1 \times 10^{-5}$ $3.1 \times 10^{-5}$ $1.3 \times 10^{-5}$ $6.1 \times 10^{-5}$ $3.1 \times 10^{-5}$ $1.3 \times 10^{-5}$	Scope calibrator Meter calibrator /KTICC-CI-40436
Threshold Voltage		(-10 ~ 10) V	$6.1 \times 10^{-4}$	
Telephone testers Line Output Voltage	40437	(±) (0 ~ 10) V (10 ~ 16) V (16 ~ 35) V (35 ~ 48) V (45 ~ 75) V (75 ~ 100) V	$6.1 \times 10^{-5}$ $3.9 \times 10^{-5}$ $1.9 \times 10^{-5}$ $1.4 \times 10^{-5}$ $1.0 \times 10^{-5}$ $6.1 \times 10^{-5}$	DMM, DTMF generator, Frequency counter /KTICC-CI-40437
Loop Current & Artificial Line		(0 ~ 10) mA (10 ~ 20) mA (20 ~ 40) mA (40 ~ 60) mA (60 ~ 80) mA (80 ~ 100) mA (100 ~ 120) mA (120 ~ 150) mA	$6.5 \times 10^{-5}$ $8.5 \times 10^{-5}$ $6.0 \times 10^{-5}$ $5.2 \times 10^{-5}$ $4.9 \times 10^{-5}$ $7.7 \times 10^{-5}$ $6.8 \times 10^{-5}$ $6.0 \times 10^{-5}$	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Telephone testers Bell Output Voltage	40437	(40 ~ 100) Hz		DMM, DTMF generator, Frequency counter /KTICC-CI-40437
		(1 ~ 10) V	$1.4 \times 10^{-4}$	
		(10 ~ 20) V	$2.0 \times 10^{-4}$	
		(20 ~ 40) V	$1.5 \times 10^{-4}$	
		(40 ~ 60) V	$1.4 \times 10^{-4}$	
		(60 ~ 80) V	$1.3 \times 10^{-4}$	
		(80 ~ 100) V	$1.4 \times 10^{-4}$	
		(100 ~ 150) V	$1.3 \times 10^{-4}$	
Bell Output Frequency		10 Hz	$6.1 \times 10^{-5}$	
		(10 ~ 20) Hz	$3.1 \times 10^{-5}$	
		(20 ~ 40) Hz	$1.6 \times 10^{-5}$	
		(40 ~ 60) Hz	$1.2 \times 10^{-5}$	
		(60 ~ 80) Hz	$9.6 \times 10^{-6}$	
		(80 ~ 100) Hz	$6.1 \times 10^{-5}$	
Receiving Frequency		400 Hz	$1.6 \times 10^{-5}$	
DTMF Level		(697 ~ 1 663) Hz		
		(0 ~ -20) dBm	0.12 dB	
		(-20 ~ -30) dBm	0.15 dB	
DTMF Frequency	697 Hz	$2.9 \times 10^{-4}$		
	(697 ~ 941) Hz	$2.7 \times 10^{-4}$		
	(941 ~ 1 336) Hz	$2.5 \times 10^{-4}$		
	(1 336 ~ 1 663) Hz	$2.4 \times 10^{-4}$		
Output Frequency	(10 ~ 1 000) Hz	$6.1 \times 10^{-7}$		
	(1 000 ~ 2 000) Hz	$3.1 \times 10^{-7}$		
	(2 000 ~ 3 000) Hz	$2.0 \times 10^{-7}$		
Output Level	(0.04 ~ 3) kHz			
	(0 ~ -30) dBm	0.051 dB		
	(-30 ~ -40) dBm	0.10 dB		
Video signal analyzers Frequency	40438	10 Hz ~ 1 GHz	$3.7 \times 10^{-10}$	Video signal analyzer Video signal generator /KTICC-CI-40438
Squarewave Amplitude		NTSC, PAL		
		(1 ~ 10) mV	$1.4 \times 10^{-2}$	
		(10 ~ 100) mV	$1.9 \times 10^{-3}$	
		(100 ~ 200) mV	$1.2 \times 10^{-3}$	
		(200 ~ 300) mV	$1.0 \times 10^{-3}$	
		(300 ~ 400) mV	$8.9 \times 10^{-4}$	
		(400 ~ 500) mV	$8.8 \times 10^{-4}$	
		(500 ~ 600) mV	$8.2 \times 10^{-4}$	
		(600 ~ 700) mV	$7.8 \times 10^{-4}$	
		(700 ~ 800) mV	$7.6 \times 10^{-4}$	
		(800 ~ 900) mV	$7.3 \times 10^{-4}$	
		(900 ~ 999.9) mV	$7.2 \times 10^{-4}$	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Video signal analyzers Sinewave Amplitude	40438	(5 ~ 600) mV		Video signal analyzer Video signal generator /KTICC-CI-40438
		50 kHz	$4.2 \times 10^{-3}$	
		50 kHz ~ 10 MHz	$8.8 \times 10^{-3}$	
Burst Frequency		(3 ~ 5) MHz	1.0 Hz	
Luminance Amplitude		NTSC, PAL		
		(1 ~ 10) mV	$1.4 \times 10^{-2}$	
		(10 ~ 100) mV	$1.9 \times 10^{-3}$	
		(100 ~ 200) mV	$1.2 \times 10^{-3}$	
		(200 ~ 300) mV	$1.0 \times 10^{-3}$	
		(300 ~ 400) mV	$8.9 \times 10^{-4}$	
		(400 ~ 500) mV	$8.8 \times 10^{-4}$	
		(500 ~ 600) mV	$8.2 \times 10^{-4}$	
		(600 ~ 700) mV	$7.8 \times 10^{-4}$	
		(700 ~ 800) mV	$7.6 \times 10^{-4}$	
		(800 ~ 900) mV	$7.3 \times 10^{-4}$	
(900 ~ 999.9) mV		$7.2 \times 10^{-4}$		
Chrominance Amplitude		NTSC, PAL		
		(1 ~ 714.3) mV	$1.9 \times 10^{-2}$	
Frequency Response		(5 ~ 600) mV		
		0.05 MHz	$2.4 \times 10^{-3}$	
	(0.05 ~ 20) MHz	$8.1 \times 10^{-3}$		
Horizontal Frequency	10 ns	$7.0 \times 10^{-4}$		
	(10 ~ 20) ns	$3.5 \times 10^{-4}$		
	(20 ~ 50) ns	$1.4 \times 10^{-4}$		
	(50 ~ 100) ns	$7.0 \times 10^{-4}$		
	(100 ~ 200) ns	$3.5 \times 10^{-4}$		
	(200 ~ 500) ns	$1.4 \times 10^{-4}$		
	(0.5 ~ 1) $\mu$ s	$7.0 \times 10^{-4}$		
	(1 ~ 2) $\mu$ s	$3.5 \times 10^{-4}$		
	(2 ~ 5) $\mu$ s	$1.4 \times 10^{-4}$		
	(5 ~ 10) $\mu$ s	$7.0 \times 10^{-4}$		
	(10 ~ 20) $\mu$ s	$3.5 \times 10^{-4}$		
	(20 ~ 50) $\mu$ s	$1.4 \times 10^{-4}$		
	(50 ~ 100) $\mu$ s	$7.0 \times 10^{-4}$		
	(100 ~ 200) $\mu$ s	$3.5 \times 10^{-4}$		
	(200 ~ 500) $\mu$ s	$1.4 \times 10^{-4}$		
	(0.5 ~ 1) ms	$7.0 \times 10^{-4}$		
Phase	NTSC, PAL (0 ~ 360)°	1.3°		

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
RF amplifiers Gain	40601	(0 ~ 10) dB (5 ~ 100) Hz 100 Hz ~ 0.3 MHz 0.3 MHz ~ 1 GHz (1 ~ 2) GHz (2 ~ 8) GHz (8 ~ 18) GHz (18 ~ 40) GHz (10 ~ 20) dB (5 ~ 100) Hz 100 Hz ~ 0.3 MHz 0.3 MHz ~ 1 GHz (1 ~ 2) GHz (2 ~ 8) GHz (8 ~ 18) GHz (18 ~ 40) GHz (20 ~ 30) dB (5 ~ 100) Hz 100 Hz ~ 0.3 MHz 0.3 MHz ~ 1 GHz (1 ~ 2) GHz (2 ~ 8) GHz (8 ~ 18) GHz (18 ~ 40) GHz (30 ~ 40) dB (5 ~ 100) Hz 100 Hz ~ 0.3 MHz 0.3 MHz ~ 1 GHz (1 ~ 2) GHz (2 ~ 8) GHz (8 ~ 18) GHz (18 ~ 40) GHz (40 ~ 50) dB (5 ~ 100) Hz 100 Hz ~ 0.3 MHz 0.3 MHz ~ 1 GHz (1 ~ 2) GHz (2 ~ 8) GHz (8 ~ 18) GHz (18 ~ 40) GHz (50 ~ 60) dB (5 ~ 100) Hz 100 Hz ~ 0.3 MHz 0.3 MHz ~ 1 GHz (1 ~ 2) GHz (2 ~ 8) GHz (8 ~ 18) GHz (18 ~ 40) GHz	0.09 dB 0.06 dB 0.05 dB 0.06 dB 0.09 dB 0.12 dB 0.17 dB 0.11 dB 0.08 dB 0.07 dB 0.08 dB 0.11 dB 0.14 dB 0.19 dB 0.13 dB 0.09 dB 0.08 dB 0.10 dB 0.12 dB 0.16 dB 0.20 dB 0.15 dB 0.11 dB 0.10 dB 0.11 dB 0.14 dB 0.18 dB 0.22 dB 0.16 dB 0.14 dB 0.13 dB 0.12 dB 0.16 dB 0.19 dB 0.24 dB 0.19 dB 0.18 dB 0.17 dB 0.25 dB 0.28 dB 0.31 dB 0.36 dB	Network Analyzer, Calibration Kit /KTICC-CI-40601

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
RF amplifiers Gain	40601	(60 ~ 70) dB (5 ~ 100) Hz 100 Hz ~ 0.3 MHz 0.3 MHz ~ 1 GHz (1 ~ 2) GHz (2 ~ 8) GHz (8 ~ 18) GHz (18 ~ 40) GHz	0.27 dB 0.25 dB 0.24 dB 0.28 dB 0.31 dB 0.35 dB 0.39 dB	Network Analyzer, Calibration Kit /KTICC-CI-40601
Coaxial attenuators Attenuation	40602	(0 ~ 10) dB (5 ~ 100) Hz 100 Hz ~ 26.5 GHz (26.5 ~ 40) GHz (10 ~ 20) dB (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 26.5 GHz (26.5 ~ 40) GHz (20 ~ 30) dB (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 26.5 GHz (26.5 ~ 40) GHz (30 ~ 40) dB (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 26.5 GHz (26.5 ~ 40) GHz (40 ~ 50) dB (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 18 GHz (18 ~ 26.5) GHz (26.5 ~ 40) GHz (50 ~ 60) dB (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 18 GHz (18 ~ 26.5) GHz (26.5 ~ 40) GHz (60 ~ 70) dB (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 18 GHz (18 ~ 26.5) GHz (26.5 ~ 40) GHz (70 ~ 80) dB 0.1 MHz ~ 18 GHz (18 ~ 26.5) GHz	0.09 dB 0.06 dB 0.18 dB 0.12 dB 0.08 dB 0.06 dB 0.21 dB 0.14 dB 0.09 dB 0.06 dB 0.28 dB 0.20 dB 0.12 dB 0.07 dB 0.46 dB 0.33 dB 0.17 dB 0.07 dB 0.08 dB 0.98 dB 0.73 dB 0.27 dB 0.08 dB 0.09 dB 2.5 dB 1.8 dB 0.55 dB 0.08 dB 0.09 dB 5.9 dB 0.09 dB 0.10 dB	Network Analyzer Sensor Module, Measuring Receiver, Signal Generator, Calibration Kit /KTICC-CI-40602

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Coaxial attenuators Attenuation	40602	(80 ~ 90) dB 0.1 MHz ~ 18 GHz (18 ~ 26.5) GHz (90 ~ 100) dB 0.1 MHz ~ 18 GHz (18 ~ 26.5) GHz (100 ~ 110) dB 0.1 MHz ~ 18 GHz (18 ~ 26.5) GHz (110 ~ 120) dB 0.1 MHz ~ 18 GHz (18 ~ 26.5) GHz	0.09 dB 0.10 dB 0.10 dB 0.11 dB 0.10 dB 0.11 dB 0.10 dB 0.11 dB	Network Analyzer Sensor Module, Measuring Receiver, Signal Generator, Calibration Kit /KTICC-CI-40602
BER(Bit Error Rate) testers Output Bit rate Input Bit rate	40604	(0.05 ~ 5) GHz (5 ~ 12.5) GHz (0.05 ~ 12.5) GHz	$1.4 \times 10^{-10}$ 1.3 Hz 0.7 Hz	Frequency counter, Frequency standard Signal generator /KTICC-CI-40604
Burst pulse generators Burst Voltage Burst Duration Burst Cycle Repetition Frequency Rise Time Pulse Width Vibration Frequency	40605	(-4 ~ 4) kV 10 μs ~ 10 ms (10 ~ 15) ms (15 ~ 20) ms (20 ~ 50) ms 100 μs 100 μs ~ 10 ms (10 ~ 50) ms (50 ~ 100) ms (100 ~ 300) ms (300 ~ 400) ms (400 ~ 1 000) ms 1 kHz (1 ~ 5) kHz (5 ~ 10) kHz (10 ~ 50) kHz (50 ~ 100) kHz 1 ns (1 ~ 5) ns (5 ~ 10) ns (10 ~ 100) ns 100 ns ~ 1 μs 10 ns (10 ~ 50) ns (50 ~ 100) ns (100 ~ 150) ns 90 kHz 90 kHz ~ 1 MHz (1 ~ 10) MHz (10 ~ 100) MHz	$1.3 \times 10^{-2}$ $3.4 \times 10^{-3}$ $5.5 \times 10^{-3}$ $4.1 \times 10^{-3}$ $3.8 \times 10^{-3}$ $3.4 \times 10^{-3}$ $4.8 \times 10^{-3}$ $3.9 \times 10^{-3}$ $3.4 \times 10^{-3}$ $5.0 \times 10^{-3}$ $4.6 \times 10^{-3}$ $3.4 \times 10^{-3}$ $3.4 \times 10^{-3}$ $4.8 \times 10^{-3}$ $3.4 \times 10^{-3}$ $4.8 \times 10^{-3}$ $3.4 \times 10^{-3}$ $9.0 \times 10^{-2}$ $7.6 \times 10^{-3}$ $9.1 \times 10^{-3}$ $4.2 \times 10^{-3}$ $3.3 \times 10^{-3}$ $3.6 \times 10^{-3}$ $4.4 \times 10^{-3}$ $4.2 \times 10^{-3}$ $2.8 \times 10^{-3}$ $1.0 \times 10^{-3}$ $1.1 \times 10^{-3}$ $8.8 \times 10^{-4}$ $1.4 \times 10^{-3}$	Oscilloscope, Attenuator /KTICC-CI-40605

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
RF power meter calibrators Range accuracy Voltage  Resistance	40607	100 mW 30 mW 10 mW 3 mW 1 mW 300 μW  300 μW 100 μW 30 μW 10 μW 3 μW	0.70 mV 73 μV 70 μV 7.3 μV 7.2 μV 0.88 μV  75 mΩ 10 mΩ 7.5 mΩ 1.2 mΩ 0.78 mΩ	Digital multimeter /KTICC-CI-40607
EMC transduces; current probes, absorbing clamps, etc. Current probes Transfer Impedance  Absorbing clamps Insertion Loss	40608	(5 ~ 100) Hz 100 Hz ~ 1 GHz  30 MHz ~ 1 GHz	2.0 dB 1.8 dB  1.8 dB	Network analyzer, Calibration kit /KTICC-CI-40608
Coaxial directional couplers /splitters Coupling Factor	40610	(0 ~ 10) dB (5 ~ 100) Hz 100 Hz ~ 0.3 MHz 0.3 MHz ~ 1 GHz (1 ~ 2) GHz (2 ~ 8) GHz (8 ~ 18) GHz (18 ~ 40) GHz (10 ~ 20) dB (5 ~ 100) Hz 100 Hz ~ 0.3 MHz 0.3 MHz ~ 1 GHz (1 ~ 2) GHz (2 ~ 8) GHz (8 ~ 18) GHz (18 ~ 40) GHz (20 ~ 30) dB (5 ~ 100) Hz 100 Hz ~ 0.3 MHz 0.3 MHz ~ 1 GHz (1 ~ 2) GHz (2 ~ 8) GHz (8 ~ 18) GHz (18 ~ 40) GHz	0.09 dB 0.06 dB 0.05 dB 0.06 dB 0.09 dB 0.13 dB 0.18 dB  0.12 dB 0.08 dB 0.07 dB 0.08 dB 0.11 dB 0.15 dB 0.21 dB  0.14 dB 0.09 dB 0.08 dB 0.11 dB 0.14 dB 0.18 dB 0.28 dB	Network Analyzer, Calibration Kit /KTICC-CI-40610

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Coaxial directional couplers /splitters  Coupling Factor	40610	(30 ~ 40) dB (5 ~ 100) Hz 100 Hz ~ 0.3 MHz 0.3 MHz ~ 1 GHz (1 ~ 2) GHz (2 ~ 8) GHz (8 ~ 18) GHz (18 ~ 40) GHz (40 ~ 50) dB (5 ~ 100) Hz 100 Hz ~ 0.3 MHz 0.3 MHz ~ 1 GHz (1 ~ 2) GHz (2 ~ 8) GHz (8 ~ 18) GHz (18 ~ 40) GHz (50 ~ 60) dB (5 ~ 100) Hz 100 Hz ~ 0.3 MHz 0.3 MHz ~ 1 GHz (1 ~ 2) GHz (2 ~ 8) GHz (8 ~ 18) GHz (18 ~ 40) GHz (60 ~ 70) dB (5 ~ 100) Hz 100 Hz ~ 0.3 MHz 0.3 MHz ~ 1 GHz (1 ~ 8) GHz (8 ~ 18) GHz (18 ~ 40) GHz	0.20 dB 0.12 dB 0.10 dB 0.16 dB 0.19 dB 0.25 dB 0.46 dB 0.33 dB 0.17 dB 0.13 dB 0.30 dB 0.33 dB 0.43 dB 0.98 dB 0.73 dB 0.27 dB 0.17 dB 0.78 dB 0.81 dB 1.0 dB 2.5 dB 1.8 dB 0.55 dB 0.27 dB 1.9 dB 2.5 dB 5.9 dB	Network Analyzer, Calibration Kit /KTICC-CI-40610



Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
DS1/DS3 communications systems	40612	50 Hz ~ 5 GHz	$1.4 \times 10^{-10}$	Frequency counter Transmission analyzer Audeo analyzer Frequency standard, Oscilloscope  /KTICC-CI-40612
Bit rate				
Level & Amplitude		50 Hz ~ 200 kHz		
		(10 ~ -30) dBm	0.051 dB	
		(-30 ~ -50) dBm	0.10 dB	
		(-50 ~ -60) dBm	0.21 dB	
Frequency Response & Flatness		(20 ~ 100) Hz	0.10 dB	
		(0.1 ~ 100) kHz	0.051 dB	
		(0.1 ~ 1) MHz	0.081 dB	
Output Jitter		DS1 (10 Hz to 40 kHz)	0.023 UIp-p	
		DS1 (8 kHz to 40 kHz)	0.023 UIp-p	
		E1 (20 Hz to 100 kHz)	0.023 UIp-p	
		E1 (18 kHz to 100 kHz)	0.023 UIp-p	
		DS3 (10 Hz to 400 kHz)	0.035 UIp-p	
		DS3 (30 kHz to 400 kHz)	0.035 UIp-p	
Jitter Generator & Analyzer		DS1(1.544 MHz), 1 kHz		
		0.77 UIp-p	0.09 UIp-p	
		1.80 UIp-p	0.26 UIp-p	
		4.80 UIp-p	0.50 UIp-p	
		8.80 UIp-p	0.83 UIp-p	
		E1(2.048 MHz), 2.4 kHz		
		0.77 UIp-p	0.09 UIp-p	
		1.80 UIp-p	0.26 UIp-p	
		4.80 UIp-p	0.50 UIp-p	
		8.80 UIp-p	0.83 UIp-p	
		DS1(44.736 MHz), 4 kHz		
		0.77 UIp-p	0.11 UIp-p	
	1.80 UIp-p	0.30 UIp-p		
	4.80 UIp-p	0.61 UIp-p		
	8.80 UIp-p	1.0 UIp-p		

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Electrostatic discharge generators	40613	(±)		Oscilloscope, Attenuator, ESD System
Output Voltage		(0 ~ 1) kV	$9.6 \times 10^{-3}$	/KTICC-CI-40613
		(1 ~ 2) kV	$1.6 \times 10^{-2}$	
		(2 ~ 10) kV	$7.0 \times 10^{-3}$	
		(10 ~ 30) kV	$6.9 \times 10^{-3}$	
Peak Current		(±)		
		(0 ~ 7.5) A	$5.1 \times 10^{-2}$	
		(7.5 ~ 15) A	$5.1 \times 10^{-2}$	
		(15 ~ 22.5) A	$5.1 \times 10^{-2}$	
		(22.5 ~ 30) A	$5.1 \times 10^{-2}$	
		(30 ~ 56) A	$5.1 \times 10^{-2}$	
		(56 ~ 112.5) A	$5.0 \times 10^{-2}$	
T1 Current(30 ns ~ 65 ns)		(±)		
		(0 ~ 4) A	$5.1 \times 10^{-2}$	
		(4 ~ 8) A	$5.1 \times 10^{-2}$	
		(8 ~ 12) A	$5.1 \times 10^{-2}$	
		(12 ~ 16) A	$5.1 \times 10^{-2}$	
		(16 ~ 30) A	$5.1 \times 10^{-2}$	
		30 A ~ 60 A	$4.9 \times 10^{-2}$	
T2 Current(60 ns ~ 130 ns)		(±)		
		(0 ~ 2) A	$5.1 \times 10^{-2}$	
		(2 ~ 4) A	$5.1 \times 10^{-2}$	
		(4 ~ 6) A	$5.1 \times 10^{-2}$	
		(6 ~ 8) A	$5.1 \times 10^{-2}$	
		(8 ~ 15) A	$5.1 \times 10^{-2}$	
		(15 ~ 30) A	$5.0 \times 10^{-2}$	
T1 Current(180 ns ~ 400 ns)		(±)		
		(0 ~ 0.55) A	$5.4 \times 10^{-2}$	
		(0.55 ~ 1.1) A	$5.2 \times 10^{-2}$	
		(1.1 ~ 1.65) A	$5.1 \times 10^{-2}$	
		(1.65 ~ 2.2) A	$5.1 \times 10^{-2}$	
		(2.2 ~ 4.125) A	$5.1 \times 10^{-2}$	
		(4.125 ~ 8.25) A	$5.1 \times 10^{-2}$	
T2 Current(360 ns ~ 800 ns)		(±)		
		(0 ~ 0.3) A	$5.9 \times 10^{-2}$	
		(0.3 ~ 0.6) A	$5.3 \times 10^{-2}$	
		(0.6 ~ 0.9) A	$5.2 \times 10^{-2}$	
		(0.9 ~ 1.2) A	$5.2 \times 10^{-2}$	
		(1.2 ~ 2.3) A	$5.1 \times 10^{-2}$	
		(2.3 ~ 4.5) A	$4.9 \times 10^{-2}$	
Rjse/Fall Time		(0.5 ~ 1) ns	0.02 ns	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
EMC receivers	40614	9 kHz ~ 5 GHz (5 ~ 40) GHz	$1.2 \times 10^{-10}$ 1.3 Hz	Power sensor, Modulation meter, Power meter, Frequency counter, Measuring receiver, Signal generator /KTICC-CI-40614
Frequency		(0.1 ~ 1 000) MHz		
Input Level		(20 ~ 10) dBm	0.21 dB	
		(10 ~ 0) dBm	0.20 dB	
		(0 ~ -40) dBm	0.21 dB	
		(-40 ~ -60) dBm	0.22 dB	
		(-60 ~ -90) dBm	0.23 dB	
		(-90 ~ -110) dBm	0.24 dB	
		(-110 ~ -120) dBm	0.25 dB	
		(1 ~ 4) GHz		
		(20 ~ -20) dBm	0.21 dB	
		(-20 ~ -40) dBm	0.22 dB	
		(-40 ~ -70) dBm	0.23 dB	
		(-70 ~ -100) dBm	0.24 dB	
		(-100 ~ -120) dBm	0.25 dB	
		(4 ~ 8) GHz		
		(20 ~ -20) dBm	0.22 dB	
		(-20 ~ -40) dBm	0.23 dB	
		(-40 ~ -70) dBm	0.24 dB	
		(-70 ~ -100) dBm	0.25 dB	
		(-100 ~ -120) dBm	0.26 dB	
		(8 ~ 10) GHz		
		(20 ~ -20) dBm	0.27 dB	
		(-20 ~ -50) dBm	0.28 dB	
		(-50 ~ -80) dBm	0.29 dB	
		(-80 ~ -110) dBm	0.30 dB	
		(-110 ~ -120) dBm	0.31 dB	
		(10 ~ 12) GHz		
		(20 ~ 10) dBm	0.28 dB	
		(-20 ~ 0) dBm	0.27 dB	
		(0 ~ -40) dBm	0.28 dB	
		(-40 ~ -60) dBm	0.29 dB	
		(-60 ~ -90) dBm	0.30 dB	
		(-90 ~ -120) dBm	0.31 dB	
		(12 ~ 18) GHz		
		(20 ~ -30) dBm	0.29 dB	
		(-30 ~ -50) dBm	0.30 dB	
		(-50 ~ -80) dBm	0.31 dB	
		(-80 ~ -100) dBm	0.32 dB	
		(-100 ~ -120) dBm	0.33 dB	
		(18 ~ 26.5) GHz		
		(20 ~ -20) dBm	0.37 dB	
		(-20 ~ -40) dBm	0.38 dB	
		(-40 ~ -50) dBm	0.39 dB	
		(-50 ~ -80) dBm	0.40 dB	
		(-80 ~ -110) dBm	0.41 dB	
		(-110 ~ -120) dBm	0.42 dB	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
EMC receivers	40614	(26.5 ~ 40) GHz (20 ~ -20) dBm	0.50 dB	Power sensor, Modulation meter, Power meter, Frequency counter, Measuring receiver, Signal generator /KTICC-CI-40614
Input Level				
Output Level		(0.1 ~ 1 000) MHz (20 ~ 10) dBm (10 ~ -10) dBm (-10 ~ -30) dBm (-30 ~ -40) dBm (-40 ~ -60) dBm (-60 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -110) dBm (-110 ~ -120) dBm	0.12 dB 0.11 dB 0.12 dB 0.13 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB	
		(1 ~ 4) GHz (20 ~ 10) dBm (10 ~ -10) dBm (-10 ~ -30) dBm (-30 ~ -40) dBm (-40 ~ -60) dBm (-60 ~ -80) dBm (-80 ~ -100) dBm (-100 ~ -120) dBm	0.13 dB 0.12 dB 0.13 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB	
		(4 ~ 8) GHz (20 ~ 10) dBm (10 ~ 0) dBm (0 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -100) dBm (-100 ~ -120) dBm	0.14 dB 0.13 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB 0.19 dB 0.20 dB	
		(8 ~ 10) GHz (20 ~ 10) dBm (10 ~ 0) dBm (0 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -110) dBm (-110 ~ -120) dBm	0.15 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB 0.19 dB 0.20 dB 0.21 dB	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
EMC receivers Output Level	40614	(10 ~ 12) GHz (20 ~ 10) dBm (10 ~ 0) dBm (0 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -110) dBm (-110 ~ -120) dBm	0.16 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB 0.19 dB 0.20 dB 0.21 dB 0.22 dB	Power sensor, Modulation meter, Power meter, Frequency counter, Measuring receiver, Signal generator /KTICC-CI-40614
		(12 ~ 18) GHz (20 ~ 10) dBm (10 ~ 0) dBm (0 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -100) dBm (-100 ~ -120) dBm	0.18 dB 0.17 dB 0.18 dB 0.19 dB 0.20 dB 0.21 dB 0.22 dB 0.23 dB 0.24 dB	
		(18 ~ 26.5) GHz (20 ~ 10) dBm (10 ~ -10) dBm (-10 ~ -30) dBm (-30 ~ -40) dBm (-40 ~ -60) dBm (-60 ~ -80) dBm (-80 ~ -100) dBm (-100 ~ -120) dBm	0.25 dB 0.24 dB 0.25 dB 0.26 dB 0.28 dB 0.29 dB 0.30 dB 0.31 dB	
		(26.5 ~ 40) GHz (20 ~ -20) dBm	0.20 dB	
Frequency Modulation		Rate (0.01 ~ 100) kHz (0 ~ 400) kHz	$2.7 \times 10^{-2}$	
Amplitude Modulation		Rate (0.01 ~ 50) kHz (0 ~ 99) %	$2.7 \times 10^{-2}$	
Phase Modulation		Rate (0.05 ~ 100) kHz (0 ~ 400) rad	$4.2 \times 10^{-2}$	
VSWR		(9 ~ 100) kHz 100 kHz ~ 2 GHz (2 ~ 26.5) GHz (26.5 ~ 40) GHz	0.014 0.015 0.019 0.030	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
EMC receivers	40614			Power sensor, Modulation meter, Power meter, Frequency counter, Measuring receiver, Signal generator /KTICC-CI-40614
Frequency Response(CW)		10 Hz ~ 100 kHz	0.18 dB	
		100 kHz ~ 1 GHz	0.20 dB	
		(1 ~ 4) GHz	0.21 dB	
		(4 ~ 8) GHz	0.22 dB	
		(8 ~ 12) GHz	0.27 dB	
		(12 ~ 18) GHz	0.29 dB	
		(18 ~ 26.5) GHz	0.37 dB	
		(26.5 ~ 40) GHz	0.50 dB	
Frequency Response(Pulse)		9 kHz ~ 1 GHz	0.75 dB	
Frequency Response, Repetition(CISPR Band)		9 kHz ~ 1 GHz	0.75 dB	
Overall Selectivity		9 kHz ~ 1 GHz	0.07 dB	
IF Rejection		9 kHz ~ 100 kHz	0.06 dB	
		100 kHz ~ 1 GHz	0.11 dB	
		(1 ~ 4) GHz	0.12 dB	
		(4 ~ 8) GHz	0.13 dB	
		(8 ~ 10) GHz	0.14 dB	
		(10 ~ 12) GHz	0.15 dB	
		(12 ~ 18) GHz	0.18 dB	
		(18 ~ 26.5) GHz	0.24 dB	
		(26.5 ~ 40) GHz	0.20 dB	
IF Image Frequency Rejection		9 kHz ~ 100 kHz	0.06 dB	
		100 kHz ~ 1 GHz	0.11 dB	
		(1 ~ 4) GHz	0.12 dB	
		(4 ~ 8) GHz	0.13 dB	
		(8 ~ 10) GHz	0.14 dB	
		(10 ~ 12) GHz	0.15 dB	
		(12 ~ 18) GHz	0.18 dB	
	(18 ~ 26.5) GHz	0.24 dB		
	(26.5 ~ 40) GHz	0.20 dB		
Other Spurious Response	9 kHz ~ 100 kHz	0.06 dB		
	100 kHz ~ 1 GHz	0.11 dB		
	(1 ~ 4) GHz	0.12 dB		
	(4 ~ 8) GHz	0.13 dB		
	(8 ~ 10) GHz	0.14 dB		
	(10 ~ 12) GHz	0.15 dB		
	(12 ~ 18) GHz	0.18 dB		
	(18 ~ 26.5) GHz	0.24 dB		
	(26.5 ~ 40) GHz	0.20 dB		

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
EMC receivers Random Noise	40614	9 kHz ~ 100 kHz 100 kHz ~ 1 GHz (1 ~ 4) GHz (4 ~ 8) GHz (8 ~ 10) GHz (10 ~ 12) GHz (12 ~ 18) GHz (18 ~ 26.5) GHz (26.5 ~ 40) GHz	0.06 dB 0.11 dB 0.12 dB 0.13 dB 0.14 dB 0.15 dB 0.18 dB 0.24 dB 0.20 dB	Power sensor, Modulation meter, Power meter, Frequency counter, Measuring receiver, Signal generator /KTICC-CI-40614
Resolution Bandwidth		10 Hz ~ 10 MHz	$1.1 \times 10^{-3}$	
RF filters Cutoff Frequency	40615	(5 ~ 100) Hz 100 Hz ~ 300 kHz 0.3 MHz ~ 1 GHz (1 ~ 2) GHz (2 ~ 8) GHz (8 ~ 18) GHz (18 ~ 40) GHz	0.60 Hz 72 Hz 72 kHz 0.12 MHz 0.16 MHz 0.31 MHz 0.42 MHz	Network analyzer Frequency standard, Calibration kit /KTICC-CI-40615
Insertion Loss		5 Hz ~ 9 kHz 9 kHz ~ 0.3 MHz 0.3 MHz ~ 1 GHz (1 ~ 2) GHz (2 ~ 8) GHz (8 ~ 18) GHz (18 ~ 26.5) GHz (26.5 ~ 40) GHz	0.047 dB 0.041 dB 0.040 dB 0.041 dB 0.075 dB 0.11 dB 0.15 dB 0.16 dB	
RF impedance meters VSWR	40616	(1.00 ~ 1.05) (0.05 ~ 2) GHz (2 ~ 7) GHz (7 ~ 9) GHz (9 ~ 11) GHz (11 ~ 12) GHz (12 ~ 18) GHz (1.05 ~ 1.20) (0.05 ~ 1) GHz (1 ~ 8) GHz (8 ~ 12) GHz (12 ~ 18) GHz (1.20 ~ 1.50) (0.05 ~ 1) GHz (1 ~ 8) GHz (8 ~ 12) GHz (12 ~ 18) GHz (1.50 ~ 2.00) (0.05 ~ 1) GHz (1 ~ 4) GHz (4 ~ 12) GHz (12 ~ 17) GHz (17 ~ 18) GHz	0.059 0.062 0.063 0.062 0.063 0.095 0.071 0.074 0.085 0.12 0.095 0.10 0.11 0.20 0.14 0.15 0.16 0.26 0.27	Standard mismatch, Power sensor, Power meter, Spectrum analyzer, Frequency standard, Frequency counter, Calibration kit /KTICC-CI-40616

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
RF impedance meters Output Power	40616	9 kHz ~ 0.1 MHz (10 ~ -30) dBm	0.06 dB	Standard mismatch, Power sensor, Power meter, Spectrum analyzer, Frequency standard, Frequency counter, Calibration kit /KTICC-CI-40616
		(0.1 ~ 1 000) MHz (10 ~ -10) dBm	0.11 dB	
		(-10 ~ -30) dBm	0.12 dB	
		(1 ~ 4) GHz (10 ~ -10) dBm	0.12 dB	
		(-10 ~ -30) dBm	0.13 dB	
		(4 ~ 8) GHz (10 ~ 0) dBm	0.14 dB	
		0 dBm	0.13 dB	
		(0 ~ -20) dBm	0.14 dB	
		(-20 ~ -30) dBm	0.15 dB	
		(8 ~ 10) GHz (10 ~ 0) dBm	0.15 dB	
		0 dBm	0.14 dB	
		(0 ~ -20) dBm	0.15 dB	
		(-20 ~ -30) dBm	0.16 dB	
		(10 ~ 12) GHz (10 ~ 0) dBm	0.16 dB	
		0 dBm	0.15 dB	
		(0 ~ -20) dBm	0.16 dB	
		(-20 ~ -30) dBm	0.17 dB	
		(12 ~ 18) GHz (10 ~ 0) dBm	0.18 dB	
		0 dBm	0.17 dB	
		(0 ~ -20) dBm	0.18 dB	
		(-20 ~ -30) dBm	0.19 dB	
Frequency		10 Hz ~ 5 GHz	$1.2 \times 10^{-10}$	
		(5 ~ 40) GHz	1.3 Hz	
Loss		(1 ~ 3) dB (0.05 ~ 3) GHz	0.039 dB	
		(3 ~ 6) GHz	0.043 dB	
		(6 ~ 10) GHz	0.048 dB	
		(10 ~ 15) GHz	0.057 dB	
		(15 ~ 18) GHz	0.062 dB	
		(3 ~ 6) dB (0.05 ~ 3) GHz	0.040 dB	
		(3 ~ 6) GHz	0.043 dB	
		(6 ~ 10) GHz	0.046 dB	
		(10 ~ 15) GHz	0.057 dB	
		(15 ~ 18) GHz	0.061 dB	
		(6 ~ 10) dB (0.05 ~ 3) GHz	0.040 dB	
		(3 ~ 6) GHz	0.043 dB	
		(6 ~ 10) GHz	0.044 dB	
		(10 ~ 15) GHz	0.050 dB	
		(15 ~ 18) GHz	0.060 dB	
Impedance		(0.05 ~ 2) GHz	0.6 Ω	
		(2 ~ 18) GHz	1.1 Ω	



Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
RF impulse generators Output Voltage  Pulse Width	40617	(-20 ~ 20) kV  10 ns (10 ~ 100) ns 100 ns ~ 100 ms	$1.3 \times 10^{-2}$  $3.6 \times 10^{-3}$ $4.2 \times 10^{-3}$ $3.4 \times 10^{-3}$	Oscilloscope, High voltage probe /KTICC-CI-40617
Line impedance stabilization networks ; LISN, CDN, ISN, etc. LISN Impedance  Insertion Loss  Phase  CDN Impedance  Insertion Loss  Phase	40618	(9 ~ 30) kHz 30 kHz ~ 0.3 MHz 0.3 MHz ~ 1 GHz (9 ~ 30) kHz (30 ~ 50) kHz 50 kHz ~ 1 GHz ( $\pm 180^\circ$ ) 9 kHz ~ 1 GHz  9 kHz ~ 10 MHz 10 MHz ~ 1 GHz  (9 ~ 300) kHz 300 kHz ~ 10 MHz 10 MHz ~ 1 GHz  ( $\pm 180^\circ$ ) 9 kHz ~ 1 GHz	0.61 $\Omega$ 0.55 $\Omega$ 0.56 $\Omega$ 0.060 dB 0.051 dB 0.041 dB 0.02°  0.61 $\Omega$ 0.83 $\Omega$  0.060 dB 0.046 dB 0.050 dB  0.02°	Network analyzer Calibration kit /KTICC-CI-40618
Coaxial standard mismatches VSWR	40619	1.00 5 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 26.5) GHz (26.5 ~ 40) GHz (1 ~ 1.05) 5 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 18) GHz (18 ~ 26.5) GHz (26.5 ~ 40) GHz (1.05 ~ 1.10) 5 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 26.5) GHz (26.5 ~ 40) GHz	0.014 0.015 0.019 0.030  0.015 0.016 0.020 0.021 0.032  0.016 0.017 0.022 0.034	Network analyzer Calibration kit /KTICC-CI-40619

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Coaxial standard mismatches VSWR	40619	(1.10 ~ 1.20) (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 26.5) GHz (26.5 ~ 40) GHz (1.20 ~ 1.30) (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 26.5) GHz (26.5 ~ 40) GHz (1.30 ~ 1.50) (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 8) GHz (8 ~ 26.5) GHz (26.5 ~ 40) GHz (1.50 ~ 1.75) (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 8) GHz (8 ~ 26.5) GHz (26.5 ~ 40) GHz (1.75 ~ 2.00) (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 8) GHz (8 ~ 26.5) GHz (26.5 ~ 40) GHz (2.00 ~ 2.50) (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 7) GHz (7 ~ 8) GHz (8 ~ 26.5) GHz (26.5 ~ 40) GHz (2.50 ~ 3.00) (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 8) GHz (8 ~ 26.5) GHz (26.5 ~ 40) GHz	0.018 0.017 0.019 0.025 0.039 0.021 0.020 0.022 0.028 0.043 0.026 0.024 0.026 0.035 0.036 0.055 0.034 0.031 0.033 0.047 0.049 0.071 0.042 0.037 0.041 0.060 0.064 0.091 0.063 0.054 0.060 0.094 0.095 0.10 0.14 0.089 0.073 0.082 0.14 0.15 0.20	Network analyzer Calibration kit /KTICC-CI-40619

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Mobile communication test sets	40621			Frequency counter, Measuring receiver, Power meter, Frequency counter, DMM, Meter calibrator, Function generator, Audio analyzer, RF spectrum analyzer /KTICC-CI-40621
Frequency		10 Hz ~ 5 GHz (5 ~ 8) GHz	$1.2 \times 10^{-10}$ 1.3 Hz	
Output level		(0.1 ~ 1 000) MHz (20 ~ 10) dBm (10 ~ -10) dBm (-10 ~ -30) dBm (-30 ~ -40) dBm (-40 ~ -60) dBm (-60 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -110) dBm (-110 ~ -120) dBm	0.12 dB 0.11 dB 0.12 dB 0.13 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB	
		(1 ~ 4) GHz (20 ~ 10) dBm (10 ~ -10) dBm (-10 ~ -30) dBm (-30 ~ -40) dBm (-40 ~ -60) dBm (-60 ~ -80) dBm (-80 ~ -100) dBm (-100 ~ -120) dBm	0.13 dB 0.12 dB 0.13 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB	
		(4 ~ 8) GHz (20 ~ 10) dBm (10 ~ 0) dBm (0 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -100) dBm (-100 ~ -120) dBm	0.14 dB 0.13 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB 0.19 dB 0.20 dB	
Frequency Modulation		Rate (0.01 ~ 100) kHz (0 ~ 400) kHz	$2.7 \times 10^{-2}$	
Amplitude Modulation		Rate (0.01 ~ 50) kHz (0 ~ 99) %	$2.7 \times 10^{-2}$	
Phase Modulation		Rate (0.05 ~ 100) kHz (0 ~ 400) rad	$4.2 \times 10^{-2}$	
Harmonics		10 MHz ~ 3 GHz (3 ~ 8) GHz (8 ~ 12) GHz (12 ~ 16) GHz	0.4 dB 0.5 dB 0.6 dB 0.7 dB	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Mobile communication test sets	40621	(0.1 ~ 1 000) MHz		Frequency counter, Measuring receiver, Power meter, Frequency counter, DMM, Meter calibrator, Function generator, Audio analyzer, RF spectrum analyzer /KTICC-CI-40621
Input Level		(20 ~ 10) dBm	0.21 dB	
		(10 ~ 0) dBm	0.20 dB	
		(0 ~ -40) dBm	0.21 dB	
		(-40 ~ -60) dBm	0.22 dB	
		(-60 ~ -90) dBm	0.23 dB	
		(-90 ~ -110) dBm	0.24 dB	
		(-110 ~ -120) dBm	0.25 dB	
		(1 ~ 4) GHz		
		(20 ~ -20) dBm	0.21 dB	
		(-20 ~ -40) dBm	0.22 dB	
		(-40 ~ -70) dBm	0.23 dB	
		(-70 ~ -100) dBm	0.24 dB	
		(-100 ~ -120) dBm	0.25 dB	
		(4 ~ 8) GHz		
		(20 ~ -20) dBm	0.22 dB	
		(-20 ~ -40) dBm	0.23 dB	
		(-40 ~ -70) dBm	0.24 dB	
		(-70 ~ -100) dBm	0.25 dB	
		(-100 ~ -120) dBm	0.26 dB	
Audio Output Level		1 mV		
	40 Hz ~ 10 kHz	$4.2 \times 10^{-3}$		
	(10 ~ 100) kHz	$2.1 \times 10^{-2}$		
	(1 ~ 10) mV			
	40 Hz ~ 10 kHz	$5.4 \times 10^{-4}$		
	(10 ~ 100) kHz	$2.8 \times 10^{-3}$		
	(10 ~ 100) mV			
	40 Hz ~ 10 kHz	$2.2 \times 10^{-4}$		
	(10 ~ 100) kHz	$1.1 \times 10^{-3}$		
	(0.1 ~ 10) V			
	(40 ~ 100) Hz	$1.4 \times 10^{-4}$		
	(0.1 ~ 1) kHz	$1.2 \times 10^{-4}$		
	(1 ~ 10) kHz	$1.4 \times 10^{-4}$		
	(10 ~ 100) kHz	$7.3 \times 10^{-4}$		
	(10 ~ 20) V			
	(40 ~ 100) Hz	$2.0 \times 10^{-4}$		
	(0.1 ~ 1) kHz	$1.8 \times 10^{-4}$		
	(1 ~ 10) kHz	$2.0 \times 10^{-4}$		
	(10 ~ 100) kHz	$1.5 \times 10^{-3}$		

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Mobile communication test sets AC Input Voltage	40621	10 mV (0.04 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) kHz (100 ~ 500) kHz (0.5 ~ 1) MHz (10 ~ 100) mV (0.04 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) kHz (100 ~ 500) kHz (0.5 ~ 1) MHz (0.1 ~ 1) V (0.04 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) kHz (100 ~ 500) kHz (0.5 ~ 1) MHz (1 ~ 10) V (0.04 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) kHz (100 ~ 500) kHz (0.5 ~ 1) MHz	$5.1 \times 10^{-4}$ $5.0 \times 10^{-4}$ $1.0 \times 10^{-3}$ $3.5 \times 10^{-3}$ $4.8 \times 10^{-3}$ $1.8 \times 10^{-4}$ $1.7 \times 10^{-4}$ $6.5 \times 10^{-4}$ $1.7 \times 10^{-3}$ $3.2 \times 10^{-3}$ $1.3 \times 10^{-4}$ $9.1 \times 10^{-5}$ $1.6 \times 10^{-4}$ $1.2 \times 10^{-3}$ $2.0 \times 10^{-3}$ $1.3 \times 10^{-4}$ $8.9 \times 10^{-5}$ $1.4 \times 10^{-4}$ $1.2 \times 10^{-3}$ $1.9 \times 10^{-3}$	Frequency counter, Measuring receiver, Power meter, Frequency counter, DMM, Meter calibrator, Function generator, Audio analyzer, RF spectrum analyzer /KTICC-CI-40621
DC Input Voltage		(0 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V	$4.9 \times 10^{-5}$ $1.3 \times 10^{-5}$ $5.9 \times 10^{-6}$ $4.0 \times 10^{-6}$	
DC Output Voltage		(0 ~ 0.1) V (0.1 ~ 0.2) V (0.2 ~ 0.5) V (0.5 ~ 1) V (1 ~ 2) V (2 ~ 5) V (5 ~ 10) V	$6.3 \times 10^{-5}$ $3.3 \times 10^{-5}$ $1.6 \times 10^{-5}$ $1.1 \times 10^{-5}$ $3.2 \times 10^{-5}$ $1.5 \times 10^{-5}$ $1.0 \times 10^{-5}$	
Modulation meters Frequency Modulation	40622	Rate (0.01 ~ 100) kHz (0 ~ 400) kHz	$2.7 \times 10^{-2}$	Measuring receiver Frequency counter RF Signal Generator /KTICC-CI-40622
Amplitude Modulation		Rate (0.01 ~ 50) kHz (0 ~ 99) %	$2.7 \times 10^{-2}$	
Phase Modulation		Rate (0.05 ~ 100) kHz (0 ~ 400) rad	$4.2 \times 10^{-2}$	
Frequency		10 Hz ~ 5 GHz (5 ~ 26.5) GHz	$1.2 \times 10^{-10}$ 1.3 Hz	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Modulation meters	40622	(0 ~ -10) dB	0.04 dB	Measuring receiver Frequency counter RF Signal Generator /KTICC-CI-40622
Tuned RF Level		(-10 ~ -120) dB	0.05 dB	
ILS/VOR Analyzer		(70 ~ 350) MHz	6.7 Hz	
Frequency(VOR/ILS)		Localizer(108 ~ 112) MHz :		
Amplitude Modulation(VOR/ILS)		(0 ~ 20) %	0.49 %	
		Glideslope(320 ~ 340) MHz :		
		(20 ~ 40) %	0.98 %	
		Marker Beacon(74.7 ~ 75.3) MHz :		
		(40 ~ 95) %	2.5 %	
Input level(VOR/ILS)		VOR(108 ~ 118) MHz :		
		(0 ~ 30) %	0.80 %	
		Localizer(108 ~ 112) MHz :		
		(10 ~ -10) dBm	0.14 dB	
		(-10 ~ -40) dBm	0.15 dB	
		(-40 ~ -50) dBm	0.16 dB	
		(-50 ~ -70) dBm	0.17 dB	
		(-70 ~ -90) dBm	0.18 dB	
	(-90 ~ -110) dBm	0.19 dB		
	(-110 ~ -120) dBm	0.20 dB		
	Glideslope(320 ~ 340) MHz :			
	(10 ~ -10) dBm	0.14 dB		
(-10 ~ -40) dBm	0.15 dB			
(-40 ~ -50) dBm	0.16 dB			
(-50 ~ -70) dBm	0.17 dB			
(-70 ~ -90) dBm	0.18 dB			
(-90 ~ -110) dBm	0.19 dB			
(-110 ~ -120) dBm	0.20 dB			
DDM(VOR/ILS)	Localizer(108 ~ 112) MHz :			
	0 %	0.000 13 %		
	(0 ~ 0.155) %	0.002 4 %		
	Glideslope(320 ~ 340) MHz :			
0 %	0.000 13 %			
(0 ~ 0.175) %	0.002 7 %			
SDM(VOR/ILS)	Localizer(108 ~ 112) MHz :			
	(0 ~ 40) %	0.60 %		
Azimuth(VOR/ILS)	Glideslope(320 ~ 340) MHz :			
	(0 ~ 80) %	1.2 %		
	VOR(108 ~ 118) MHz :			
(0 ~ 1)°	$4.8 \times 10^{-2}$			
(1 ~ 10)°	$3.8 \times 10^{-2}$			
(10 ~ 360)°	$3.7 \times 10^{-2}$			

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments	
Network analyzers	40623	10 Hz ~ 5 GHz	$1.2 \times 10^{-10}$	Frequency Standard, Frequency Counter, Power Sensor, Power Meter, Sensor Module, Measuring Receiver, Calibration Kit, Attenuator /KTICC-CI-40623	
Frequency		(5 ~ 40) GHz	1.3 Hz		
Output Level		9 kHz ~ 0.1 MHz	(20 ~ -40) dBm		0.06 dB
		(0.1 ~ 1 000) MHz	(20 ~ 10) dBm		0.12 dB
			(10 ~ -10) dBm		0.11 dB
			(-10 ~ -30) dBm		0.12 dB
			(-30 ~ -40) dBm		0.13 dB
			(-40 ~ -60) dBm		0.14 dB
			(-60 ~ -70) dBm		0.15 dB
			(-70 ~ -90) dBm		0.16 dB
			(-90 ~ -110) dBm		0.17 dB
		(1 ~ 4) GHz	(20 ~ 10) dBm		0.13 dB
			(10 ~ -10) dBm		0.12 dB
			(-10 ~ -30) dBm		0.13 dB
			(-30 ~ -40) dBm		0.14 dB
			(-40 ~ -60) dBm		0.15 dB
			(-60 ~ -80) dBm		0.16 dB
			(-80 ~ -100) dBm		0.17 dB
			(-100 ~ -110) dBm		0.18 dB
		(4 ~ 8) GHz	(20 ~ 10) dBm		0.14 dB
			(10 ~ 0) dBm		0.13 dB
			(0 ~ -20) dBm		0.14 dB
			(-20 ~ -40) dBm		0.15 dB
			(-40 ~ -50) dBm		0.16 dB
			(-50 ~ -70) dBm		0.17 dB
			(-70 ~ -90) dBm		0.18 dB
(-90 ~ -100) dBm			0.19 dB		
(8 ~ 10) GHz		(-100 ~ -110) dBm	0.20 dB		
	(20 ~ 10) dBm	0.15 dB			
	(10 ~ 0) dBm	0.14 dB			
	(0 ~ -20) dBm	0.15 dB			
	(-20 ~ -40) dBm	0.16 dB			
	(-40 ~ -50) dBm	0.17 dB			
	(-50 ~ -70) dBm	0.18 dB			
	(-70 ~ -90) dBm	0.19 dB			
(12 ~ 18) GHz	(-90 ~ -110) dBm	0.20 dB			
	(20 ~ 10) dBm	0.18 dB			
	(10 ~ 0) dBm	0.17 dB			
	(0 ~ -20) dBm	0.18 dB			
	(-20 ~ -40) dBm	0.19 dB			
	(-40 ~ -50) dBm	0.20 dB			
	(-50 ~ -70) dBm	0.21 dB			
	(-70 ~ -90) dBm	0.22 dB			
(-90 ~ -100) dBm	0.23 dB				
(-100 ~ -110) dBm	0.24 dB				

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Network analyzers Output Level	40623	(18 ~ 26.5) GHz		Frequency Standard, Frequency Counter, Power Sensor, Power Meter, Sensor Module, Measuring Receiver, Calibration Kit, Attenuator /KTICC-CI-40623
		(20 ~ 10) dBm	0.25 dB	
		(10 ~ -10) dBm	0.24 dB	
		(-10 ~ -30) dBm	0.25 dB	
		(-30 ~ -40) dBm	0.26 dB	
		(-40 ~ -60) dBm	0.28 dB	
		(-60 ~ -80) dBm	0.29 dB	
		(-80 ~ -100) dBm	0.30 dB	
		(-100 ~ -110) dBm	0.31 dB	
		(26.5 ~ 40) GHz		
		(20 ~ -30) dBm	0.20 dB	
Output Level Linearity		9 kHz ~ 0.1 MHz		
		(20 ~ -40) dBm	0.08 dB	
		(0.1 ~ 1 000) MHz		
		(20 ~ -30) dBm	0.06 dB	
		(-30 ~ -50) dBm	0.07 dB	
		(-50 ~ -70) dBm	0.08 dB	
		(-70 ~ -100) dBm	0.09 dB	
		(-100 ~ -110) dBm	0.10 dB	
	(1 ~ 10) GHz			
	(20 ~ -40) dBm	0.08 dB		
	(-40 ~ -60) dBm	0.09 dB		
	(-60 ~ -90) dBm	0.10 dB		
	(-90 ~ -110) dBm	0.11 dB		
	(10 ~ 18) GHz			
	(20 ~ -60) dBm	0.10 dB		
	(-60 ~ -90) dBm	0.11 dB		
	(-90 ~ -110) dBm	0.12 dB		
	(18 ~ 22) GHz			
	(20 ~ 10) dBm	0.15 dB		
	(10 ~ -10) dBm	0.14 dB		
	(-10 ~ -70) dBm	0.15 dB		
	(-70 ~ -110) dBm	0.16 dB		
	(22 ~ 26.5) GHz			
	(20 ~ 10) dBm	0.15 dB		
	(10 ~ -10) dBm	0.14 dB		
	(-10 ~ -50) dBm	0.15 dB		
	(-50 ~ -90) dBm	0.16 dB		
	(-90 ~ -110) dBm	0.17 dB		
	(26.5 ~ 40) GHz			
	(20 ~ -30) dBm	0.20 dB		



Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Network analyzers Frequency Response	40623	(10 ~ -10) dBm 9 kHz ~ 0.1 MHz (0.1 ~ 1 000) MHz (1 ~ 4) GHz (4 ~ 8) GHz (8 ~ 12) GHz (12 ~ 18) GHz (18 ~ 26.5) GHz (26.5 ~ 40) GHz	0.18 dB 0.20 dB 0.21 dB 0.22 dB 0.27 dB 0.29 dB 0.37 dB 0.50 dB	Frequency Standard, Frequency Counter, Power Sensor, Power Meter, Sensor Module, Measuring Receiver, Calibration Kit, Attenuator /KTICC-CI-40623
Attenuation		(0.05 ~ 3) GHz (0 ~ -80) dB (-80 ~ -90) dB (-90 ~ -100) dB  (3 ~ 8) GHz (0 ~ -40) dB (-40 ~ -70) dB (-70 ~ -80) dB (-80 ~ -90) dB (-90 ~ -100) dB  (8 ~ 10) GHz (0 ~ -40) dB (-40 ~ -60) dB (-60 ~ -80) dB (-80 ~ -90) dB (-90 ~ -100) dB  (10 ~ 15) GHz (0 ~ -20) dB (-20 ~ -50) dB (-50 ~ -70) dB (-70 ~ -80) dB (-80 ~ -90) dB (-90 ~ -100) dB  (15 ~ 18) GHz (0 ~ -10) dB (-10 ~ -20) dB (-20 ~ -40) dB (-40 ~ -50) dB (-50 ~ -60) dB (-60 ~ -70) dB (-70 ~ -80) dB (-80 ~ -100) dB	0.05 dB 0.07 dB 0.08 dB  0.05 dB 0.06 dB 0.07 dB 0.08 dB 0.09 dB  0.05 dB 0.06 dB 0.07 dB 0.09 dB 0.10 dB  0.05 dB 0.06 dB 0.07 dB 0.08 dB 0.10 dB 0.11 dB  0.07 dB 0.06 dB 0.07 dB 0.08 dB 0.07 dB 0.08 dB 0.09 dB 0.11 dB	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments	
Noise figure meters	40624			DMM, Frequency counter Attenuator, Noise source Network analyzer /KTICC-CI-40624	
Reference Frequency		10 MHz	1.2 mHz		
Frequency		10 MHz ~ 26.5 GHz	0.58 kHz		
Noise Figure Range		(0 ~ -5) dB	0.039 dB		
		(-5 ~ -11) dB	0.040 dB		
		(-11 ~ -30) dB	0.042 dB		
		(-30 ~ -60) dB	0.045 dB		
Noise Figure		Noise source (6 dB)			
		(0.01 ~ 6) GHz	0.57 dB		
		(6 ~ 7) GHz	0.58 dB		
	(7 ~ 16) GHz	0.59 dB			
	(16 ~ 17) GHz	0.60 dB			
	(17 ~ 18) GHz	0.59 dB			
	Noise source (15 dB)				
	(0.01 ~ 0.1) GHz	0.52 dB			
	(0.1 ~ 1) GHz	0.53 dB			
	(1 ~ 7) GHz	0.51 dB			
	(7 ~ 8) GHz	0.55 dB			
	(8 ~ 17) GHz	0.56 dB			
	(17 ~ 18) GHz	0.57 dB			
	(18 ~ 26.5) GHz	0.74 dB			
VSWR	(0.1 ~ 50) MHz	0.014			
	(0.05 ~ 2) GHz	0.015			
	(2 ~ 26.5) GHz	0.019			
Noise Source Voltage	(0 ~ 28) V	0.25 mV			

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Noise generators  Frequency   Output Level	40625	(0.1 ~ 5 000) MHz (5 ~ 18) GHz  (0.1 ~ 1 000) MHz (20 ~ 10) dBm (10 ~ -10) dBm (-10 ~ -30) dBm (-30 ~ -40) dBm (-40 ~ -60) dBm (-60 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -110) dBm (-110 ~ -120) dBm  (1 ~ 4) GHz (20 ~ 10) dBm (10 ~ -10) dBm (-10 ~ -30) dBm (-30 ~ -40) dBm (-40 ~ -60) dBm (-60 ~ -80) dBm (-80 ~ -100) dBm (-100 ~ -120) dBm  (4 ~ 8) GHz (20 ~ 10) dBm (10 ~ 0) dBm (0 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -100) dBm (-100 ~ -120) dBm  (8 ~ 10) GHz (20 ~ 10) dBm (10 ~ 0) dBm (0 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -110) dBm (-110 ~ -120) dBm	$1.2 \times 10^{-10}$ 1.3 Hz  0.12 dB 0.11 dB 0.12 dB 0.13 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB  0.13 dB 0.12 dB 0.13 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB  0.14 dB 0.13 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB 0.19 dB 0.20 dB  0.15 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB 0.19 dB 0.20 dB 0.21 dB	Frequency counter, Power sensor, Power meter RF spectrum analyzer Sensor module, Measuring receiver  /KTICC-CI-40625

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Noise generators Output Level	40625	(10 ~ 12) GHz (20 ~ 10) dBm (10 ~ 0) dBm (0 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -110) dBm (-110 ~ -120) dBm (12 ~ 18) GHz (20 ~ 10) dBm (10 ~ 0) dBm (0 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -100) dBm (-100 ~ -120) dBm	0.16 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB 0.19 dB 0.20 dB 0.21 dB 0.22 dB 0.18 dB 0.17 dB 0.18 dB 0.19 dB 0.20 dB 0.21 dB 0.22 dB 0.23 dB 0.24 dB	Frequency counter, Power sensor, Power meter RF spectrum analyzer Sensor module, Measuring receiver /KTICC-CI-40625
Noise impulse simulators Output Voltage  Pulse Width  Rise Time  Repetition period	40626	(-4 ~ 4) kV  10 ns (10 ~ 50) ns (50 ~ 100) ns (100 ~ 200) ns (200 ~ 250) ns (250 ~ 400) ns (400 ~ 500) ns (500 ~ 800) ns (800 ~ 1 000) ns  0.5 ns (0.5 ~ 1) ns (1 ~ 5) ns  (10 ~ 1 000) ms	$1.3 \times 10^{-2}$  $3.6 \times 10^{-3}$ $4.4 \times 10^{-3}$ $4.2 \times 10^{-3}$ $6.0 \times 10^{-3}$ $5.3 \times 10^{-3}$ $4.6 \times 10^{-3}$ $3.9 \times 10^{-3}$ $4.2 \times 10^{-3}$ $3.4 \times 10^{-3}$  $3.2 \times 10^{-1}$ $9.1 \times 10^{-2}$ $7.6 \times 10^{-3}$  $3.4 \times 10^{-3}$	Oscilloscope. Attenuator High voltage probe /KTICC-CI-40626
RF phase meters Phase	40631	(0 ~ 360)° (0.05 ~ 1) GHz (1 ~ 7) GHz (7 ~ 18) GHz	1.5° 3.8° 6.7°	RF signal generator Calibration kit Network analyzer /KTICC-CI-40631

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
RF power meters Instrument Accuracy  Power Reference Accuracy  Power Reference RF High Power	40635	3 $\mu$ W ~ 100 mW  1 mW  50 MHz (0.08 ~ 1) GHz (0 ~ 100) W	$2.9 \times 10^{-3}$  5.8 $\mu$ W  58 mHz  $2.2 \times 10^{-2}$	Range calibrator, Thermistor mount, Power meter, Frequency counter Fixed attenuator, Power sensor, RF amplifier, Signal generator /KTICC-CI-40635
Diode power sensors Calibration Factor	40636	0.1 $\mu$ W ~ 1 mW 9 kHz ~ 10 MHz (0.01 ~ 2) GHz (2 ~ 10) GHz (10 ~ 18) GHz (18 ~ 26.5) GHz (26.5 ~ 40) GHz	 $1.7 \times 10^{-2}$ $1.6 \times 10^{-2}$ $1.8 \times 10^{-2}$ $2.1 \times 10^{-2}$ $3.7 \times 10^{-2}$ $4.7 \times 10^{-2}$	Thermistor mount, Power meter, Network analyzer /KTICC-CI-40636
Thermocouple power sensors Calibration Factor	40637	10 $\mu$ W ~ 10 mW 9 kHz ~ 10 MHz (0.01 ~ 2) GHz (2 ~ 10) GHz (10 ~ 18) GHz (18 ~ 26.5) GHz (26.5 ~ 40) GHz	 $1.7 \times 10^{-2}$ $1.6 \times 10^{-2}$ $1.8 \times 10^{-2}$ $2.1 \times 10^{-2}$ $3.7 \times 10^{-2}$ $4.7 \times 10^{-2}$	Thermistor mount, Power meter, Network analyzer /KTICC-CI-40637
Pulse generators Frequency  Period  Output Voltage	40638	10 MHz  0.2 ns ~ 1 s  1 mV 20 Hz ~ 10 kHz (10 ~ 100) kHz 100 kHz ~ 1 MHz (1 ~ 10) mV 20 Hz ~ 10 kHz (10 ~ 100) kHz 100 kHz ~ 1 MHz (10 ~ 100) mV 20 Hz ~ 10 kHz (10 ~ 100) kHz 100 kHz ~ 1 MHz (0.1 ~ 10) V (40 ~ 100) Hz (0.1 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) kHz 100 kHz ~ 1 MHz (10 ~ 20) V (40 ~ 100) Hz (0.1 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) kHz 100 kHz ~ 1 MHz	 $1.4 \times 10^{-10}$  $1.4 \times 10^{-10}$  4.2 $\times 10^{-3}$ $2.1 \times 10^{-2}$ $4.5 \times 10^{-2}$  5.4 $\times 10^{-4}$ $2.8 \times 10^{-3}$ $2.3 \times 10^{-2}$  2.2 $\times 10^{-4}$ $1.1 \times 10^{-3}$ $8.1 \times 10^{-3}$  $1.4 \times 10^{-4}$ $1.2 \times 10^{-4}$ $1.4 \times 10^{-4}$ $7.3 \times 10^{-4}$ $8.1 \times 10^{-3}$  $2.0 \times 10^{-4}$ $1.8 \times 10^{-4}$ $2.0 \times 10^{-4}$ $1.5 \times 10^{-3}$ $8.6 \times 10^{-3}$	Frequency counter, DMM, Audio analyzer, Oscilloscope Measuring receiver Sensor module /KTICC-CI-40638

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Pulse generators	40638	(20 ~ 100) V		Frequency counter, DMM, Audio analyzer, Oscilloscope Measuring receiver Sensor module /KTICC-CI-40638
Output Voltage		(40 ~ 100) Hz	$1.4 \times 10^{-4}$	
		(0.1 ~ 1) kHz	$1.2 \times 10^{-4}$	
		(1 ~ 10) kHz	$1.4 \times 10^{-4}$	
		(10 ~ 100) kHz	$7.4 \times 10^{-4}$	
Output Level		(0.1 ~ 1 000) MHz		
		(20 ~ 10) dBm	0.12 dB	
		(10 ~ -10) dBm	0.11 dB	
		(-10 ~ -30) dBm	0.12 dB	
		(-30 ~ -40) dBm	0.13 dB	
		(-40 ~ -60) dBm	0.14 dB	
		(-60 ~ -70) dBm	0.15 dB	
		(-70 ~ -90) dBm	0.16 dB	
		(-90 ~ -110) dBm	0.17 dB	
		(-110 ~ -120) dBm	0.18 dB	
Level Flatness		(0.1 ~ 1 000) MHz	0.11 dB	
		(1 ~ 4) GHz	0.12 dB	
		(4 ~ 8) GHz	0.13 dB	
		(8 ~ 10) GHz	0.14 dB	
		(10 ~ 12) GHz	0.15 dB	
		(12 ~ 18) GHz	0.17 dB	
Pulse width		0.4 ns	$4.8 \times 10^{-1}$	
		(0.4 ~ 1) ns	$9.0 \times 10^{-2}$	
		(1 ~ 10) ns	$3.6 \times 10^{-3}$	
	10 ns ~ 1 ms	$3.4 \times 10^{-3}$		
	1 ms ~ 1 s	$1.3 \times 10^{-3}$		
Pulse Time	0.4 ns	$4.8 \times 10^{-1}$		
	(0.4 ~ 1) ns	$9.0 \times 10^{-2}$		
	(1 ~ 10) ns	$3.6 \times 10^{-3}$		
	10 ns ~ 1 ms	$3.4 \times 10^{-3}$		
	1 ms ~ 1 s	$1.3 \times 10^{-3}$		
Double Pulse	0.4 ns	$4.8 \times 10^{-1}$		
	(0.4 ~ 1) ns	$9.0 \times 10^{-2}$		
	(1 ~ 10) ns	$3.6 \times 10^{-3}$		
	10 ns ~ 1 ms	$3.4 \times 10^{-3}$		
	1 ms ~ 1 s	$1.3 \times 10^{-3}$		
Pulse Delay	0.4 ns	$4.8 \times 10^{-1}$		
	(0.4 ~ 1) ns	$9.0 \times 10^{-2}$		
	(1 ~ 10) ns	$3.6 \times 10^{-3}$		
	10 ns ~ 1 ms	$3.4 \times 10^{-3}$		
	1 ms ~ 1 s	$1.3 \times 10^{-3}$		

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Pulse generators Transition  Duty cycle	40638	0.4 ns (0.4 ~ 1) ns (1 ~ 10) ns 10 ns ~ 1 ms 1 ms ~ 1 s  (1 ~ 99) %	$4.8 \times 10^{-1}$ $9.0 \times 10^{-2}$ $3.6 \times 10^{-3}$ $3.4 \times 10^{-3}$ $1.3 \times 10^{-3}$  0.006 3 %	Frequency counter, DMM, Audio analyzer, Oscilloscope Measuring receiver Sensor module  /KTICC-CI-40638
Radar test sets Frequency  Output Level  Frequency Modulation  Input level  RF High Power  Pulse Time	40639	10 Hz ~ 5 GHz (5 ~ 10) GHz  (0.1 ~ 1 000) MHz (20 ~ 10) dBm (10 ~ -10) dBm (-10 ~ -30) dBm (-30 ~ -40) dBm (-40 ~ -60) dBm (-60 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -110) dBm (-110 ~ -120) dBm  Rate (0.01 ~ 100) kHz (0 ~ 400) kHz  (0.1 ~ 1 000) MHz (20 ~ 10) dBm (10 ~ 0) dBm (0 ~ -40) dBm (-40 ~ -60) dBm (-60 ~ -90) dBm (-90 ~ -110) dBm (-110 ~ -120) dBm  (0.08 ~ 1) GHz (0 ~ 100) W  0.4 ns (0.4 ~ 1) ns (1 ~ 10) ns 10 ns ~ 1 ms 1 ms ~ 1 s	$1.2 \times 10^{-10}$ 1.3 Hz  0.12 dB 0.11 dB 0.12 dB 0.13 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB  $2.7 \times 10^{-2}$  0.21 dB 0.20 dB 0.21 dB 0.22 dB 0.23 dB 0.24 dB 0.25 dB  $2.8 \times 10^{-2}$  $4.8 \times 10^{-1}$ $9.0 \times 10^{-2}$ $3.6 \times 10^{-3}$ $3.4 \times 10^{-3}$ $1.3 \times 10^{-3}$	Frequency Standard, Frequency Counter, Power Sensor, Power Meter, Signal Generator RF amplifiers attenuators  /KTICC-CI-40639

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
RF signal generators Frequency  Output Level	40640	9 kHz ~ 5 GHz (5 ~ 40) GHz  9 kHz ~ 0.1 MHz (20 ~ -40) dBm  (0.1 ~ 1 000) MHz (20 ~ 10) dBm (10 ~ -10) dBm (-10 ~ -30) dBm (-30 ~ -40) dBm (-40 ~ -60) dBm (-60 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -110) dBm (-110 ~ -120) dBm  (1 ~ 4) GHz (20 ~ 10) dBm (10 ~ -10) dBm (-10 ~ -30) dBm (-30 ~ -40) dBm (-40 ~ -60) dBm (-60 ~ -80) dBm (-80 ~ -100) dBm (-100 ~ -120) dBm  (4 ~ 8) GHz (20 ~ 10) dBm (10 ~ 0) dBm (0 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -100) dBm (-100 ~ -120) dBm  (8 ~ 10) GHz (20 ~ 10) dBm (10 ~ 0) dBm (0 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -110) dBm (-110 ~ -120) dBm	$1.2 \times 10^{-10}$ 1.3 Hz  0.06 dB  0.12 dB 0.11 dB 0.12 dB 0.13 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB  0.13 dB 0.12 dB 0.13 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB  0.14 dB 0.13 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB 0.19 dB 0.20 dB  0.15 dB 0.14 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB 0.19 dB 0.20 dB 0.21 dB	Frequency Counter, Power Meter, Power Sensor RF Spectrum Analyzer Sensor Module, Measuring Receiver  /KTICC-CI-40640



Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
RF signal generators Output Level	40640	(10 ~ 12) GHz (20 ~ 10) dBm (10 ~ 0) dBm (0 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -110) dBm (-110 ~ -120) dBm	0.16 dB 0.15 dB 0.16 dB 0.17 dB 0.18 dB 0.19 dB 0.20 dB 0.21 dB 0.22 dB	Frequency Counter, Power Meter, Power Sensor RF Spectrum Analyzer Sensor Module, Measuring Receiver /KTICC-CI-40640
		(12 ~ 18) GHz (20 ~ 10) dBm (10 ~ 0) dBm (0 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -50) dBm (-50 ~ -70) dBm (-70 ~ -90) dBm (-90 ~ -100) dBm (-100 ~ -120) dBm	0.18 dB 0.17 dB 0.18 dB 0.19 dB 0.20 dB 0.21 dB 0.22 dB 0.23 dB 0.24 dB	
		(18 ~ 26.5) GHz (20 ~ 10) dBm (10 ~ -10) dBm (-10 ~ -30) dBm (-30 ~ -40) dBm (-40 ~ -60) dBm (-60 ~ -80) dBm (-80 ~ -100) dBm (-100 ~ -120) dBm	0.25 dB 0.24 dB 0.25 dB 0.26 dB 0.28 dB 0.29 dB 0.30 dB 0.31 dB	
		(26.5 ~ 40) GHz (20 ~ -20) dBm	0.20 dB	
Frequency Modulation		Rate (0.01 ~ 100) kHz (0 ~ 400) kHz	$2.7 \times 10^{-2}$	
Amplitude Modulation		Rate (0.01 ~ 50) kHz (0 ~ 99) %	$2.7 \times 10^{-2}$	
Phase Modulation		Rate (0.05 ~ 100) kHz (0 ~ 400) rad	$4.2 \times 10^{-2}$	
Modulation Rate		10 Hz ~ 100 kHz	$6.8 \times 10^{-10}$	
Harmonics		10 MHz ~ 3 GHz (3 ~ 8) GHz (8 ~ 12) GHz (12 ~ 20) GHz (20 ~ 26) GHz	0.4 dB 0.5 dB 0.6 dB 0.8 dB 1.0 dB	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
RF spectrum analyzers	40641			Frequency standard, Frequency counter, Power sensor, Power meter, Sensor module, Attenuator, Measuring receiver, Signal generator /KTICC-CI-40641
Reference Frequency		(0.1 ~ 5 000) MHz (5 ~ 26.5) GHz	$1.2 \times 10^{-10}$ 1.3 Hz	
Input Frequency		3 Hz ~ 5 GHz (5 ~ 40) GHz	$1.2 \times 10^{-10}$ 1.3 Hz	
Calibrator Output		(0.1 MHz ~ 1 GHz) (10 ~ -10) dBm (-10 ~ -30) dBm	0.11 dB 0.12 dB	
Input Amplitude		(0 ~ -30) dB (-30 ~ -50) dB (-50 ~ -70) dB (-70 ~ -100) dB (-100 ~ -120) dB	0.06 dB 0.07 dB 0.08 dB 0.09 dB 0.10 dB	
Scale fidelity		(0 ~ -30) dB (-30 ~ -50) dB (-50 ~ -70) dB (-70 ~ -100) dB	0.06 dB 0.07 dB 0.08 dB 0.09 dB	
Scale fidelity Switching		(0.1 ~ 10) dB	0.051 dB	
Frequency Response		10 Hz ~ 100 kHz 100 kHz ~ 1 GHz (1 ~ 4) GHz (4 ~ 8) GHz (8 ~ 12) GHz (12 ~ 18) GHz (18 ~ 26.5) GHz (26.5 ~ 40) GHz	0.18 dB 0.20 dB 0.21 dB 0.22 dB 0.27 dB 0.29 dB 0.37 dB 0.53 dB	
Absolute Amplitude		(0.1 ~ 1 000) MHz (0 ~ -10) dBm (-10 ~ -40) dBm (-40 ~ -50) dBm	0.20 dB 0.21 dB 0.22 dB	
Frequency Span		1 kHz ~ 26.5 GHz	$1.3 \times 10^{-4}$	
Resolution Bandwidth Accuracy		10 Hz ~ 10 MHz	$1.1 \times 10^{-3}$	
RBW Selectivity		10 Hz ~ 10 MHz	$0.2 \times 10^{-2}$	
RBW Switching Accuracy		10 Hz ~ 10 MHz	0.06 dB	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
RF spectrum analyzers Input Attenuator and Switching	40641	(0 ~ -30) dB	0.06 dB	Frequency standard, Frequency counter, Power sensor, Power meter, Sensor module, Attenuator, Measuring receiver, Signal generator /KTICC-CI-40641
		(-30 ~ -50) dB	0.07 dB	
		(-50 ~ -70) dB	0.08 dB	
Noise Sidebands		(-70 ~ -100) dB	0.09 dB	
		0.1 kHz ~ 10 MHz	0.15 dB	
Display average noise level		30 Hz ~ 40 GHz	0.27 dB	
Surge generators Output Voltage	40643	(-20 ~ 20) kV	$1.3 \times 10^{-2}$	Oscilloscope, High voltage probe, Current sensor /KTICC-CI-40643
Front Time (Rise Time)		0.1 μs	$1.4 \times 10^{-2}$	
		(0.1 ~ 0.5) μs	$1.1 \times 10^{-2}$	
		(0.5 ~ 1.2) μs	$1.2 \times 10^{-2}$	
		(1.2 ~ 5) μs	$1.1 \times 10^{-2}$	
		(5 ~ 10) μs	$1.4 \times 10^{-2}$	
		(10 ~ 30) μs	$9.3 \times 10^{-3}$	
Duration		10 μs	$3.4 \times 10^{-3}$	
		(10 ~ 50) μs	$3.8 \times 10^{-3}$	
		(50 ~ 700) μs	$3.1 \times 10^{-3}$	
		(700 ~ 1 000) μs	$3.4 \times 10^{-3}$	
		(1 000 ~ 3 000) μs	$4.8 \times 10^{-3}$	
		(3 ~ 10) ms	$3.4 \times 10^{-3}$	
		(10 ~ 50) ms	$3.8 \times 10^{-3}$	
		(50 ~ 1 000) ms	$3.4 \times 10^{-3}$	
		(1 000 ~ 3 000) ms	$4.8 \times 10^{-3}$	
Frequency (Ring Wave)		(1 ~ 100) kHz	$1.1 \times 10^{-3}$	
		(100 ~ 200) kHz	$1.0 \times 10^{-3}$	
		200 kHz ~ 100 MHz	$1.4 \times 10^{-3}$	
Output Current		(±)		
		(50 ~ 2 500) A	$1.7 \times 10^{-2}$	
	(2 500 ~ 3 000) A	$1.8 \times 10^{-2}$		
Front Time (Rise Time)	1 μs	$1.1 \times 10^{-2}$		
	(1 ~ 5) μs	$8.2 \times 10^{-3}$		
	(5 ~ 10) μs	$1.1 \times 10^{-2}$		
Duration	10 μs	$3.4 \times 10^{-3}$		
	(10 ~ 20) μs	$6.0 \times 10^{-3}$		
	(20 ~ 100) μs	$3.4 \times 10^{-3}$		
	(100 ~ 320) μs	$5.6 \times 10^{-3}$		
	(320 ~ 400) μs	$4.6 \times 10^{-3}$		

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
SWR meters	40644	(1.00 ~ 1.05)		Standard mismatch, Power sensor, Power meter, Spectrum analyzer, Frequency standard, Frequency counter /KTICC-CI-40644
VSWR		(0.05 ~ 2) GHz	0.059	
		(2 ~ 7) GHz	0.062	
		(7 ~ 9) GHz	0.063	
		(9 ~ 11) GHz	0.062	
		(11 ~ 12) GHz	0.063	
		(12 ~ 18) GHz	0.095	
		(1.05 ~ 1.20)		
		(0.05 ~ 1) GHz	0.071	
		(1 ~ 8) GHz	0.074	
		(8 ~ 12) GHz	0.085	
		(12 ~ 18) GHz	0.12	
		(1.20 ~ 1.50)		
		(0.05 ~ 1) GHz	0.095	
		(1 ~ 8) GHz	0.10	
		(8 ~ 12) GHz	0.11	
		(12 ~ 18) GHz	0.20	
		(1.50 ~ 2.00)		
		(0.05 ~ 1) GHz	0.14	
		(1 ~ 4) GHz	0.15	
		(4 ~ 12) GHz	0.16	
		(12 ~ 17) GHz	0.26	
		(17 ~ 18) GHz	0.27	
Output Power		(0.1 ~ 1 000) MHz		
		(10 ~ -10) dBm	0.11 dB	
		(-10 ~ -30) dBm	0.12 dB	
		(1 ~ 4) GHz		
		(10 ~ -10) dBm	0.12 dB	
		(-10 ~ -30) dBm	0.13 dB	
		(4 ~ 8) GHz		
		(10 ~ 0) dBm	0.14 dB	
		0 dBm	0.13 dB	
		(0 ~ -20) dBm	0.14 dB	
		(-20 ~ -30) dBm	0.15 dB	
		(8 ~ 10) GHz		
		(10 ~ 0) dBm	0.15 dB	
		0 dBm	0.14 dB	
		(0 ~ -20) dBm	0.15 dB	
		(-20 ~ -30) dBm	0.16 dB	
		(10 ~ 12) GHz		
		(10 ~ 0) dBm	0.16 dB	
		0 dBm	0.15 dB	
		(0 ~ -20) dBm	0.16 dB	
		(-20 ~ -30) dBm	0.17 dB	
		(12 ~ 18) GHz		
		(10 ~ 0) dBm	0.18 dB	
		0 dBm	0.17 dB	
		(0 ~ -20) dBm	0.18 dB	
		(-20 ~ -30) dBm	0.19 dB	
Frequency		(0.1 ~ 5 000) MHz	$1.2 \times 10^{-10}$	
		(5 ~ 18) GHz	1.3 Hz	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
SWR meters Loss	40644	(1 ~ 3) dB (0.05 ~ 3) GHz (3 ~ 6) GHz (6 ~ 10) GHz (10 ~ 15) GHz (15 ~ 18) GHz (3 ~ 6) dB (0.05 ~ 3) GHz (3 ~ 6) GHz (6 ~ 10) GHz (10 ~ 15) GHz (15 ~ 18) GHz (6 ~ 10) dB (0.05 ~ 3) GHz (3 ~ 6) GHz (6 ~ 10) GHz (10 ~ 15) GHz (15 ~ 18) GHz	0.039 dB 0.043 dB 0.048 dB 0.057 dB 0.062 dB 0.040 dB 0.043 dB 0.046 dB 0.057 dB 0.061 dB 0.040 dB 0.043 dB 0.044 dB 0.050 dB 0.060 dB	Standard mismatch, Power sensor, Power meter, Spectrum analyzer, Frequency standard, Frequency counter /KTICC-CI-40644
RF terminations VSWR	40645	1.00 5 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 26.5) GHz (26.5 ~ 40) GHz (1 ~ 1.05) 5 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 18) GHz (18 ~ 26.5) GHz (26.5 ~ 40) GHz (1.05 ~ 1.10) 5 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 26.5) GHz (26.5 ~ 40) GHz (1.10 ~ 1.20) (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 26.5) GHz (26.5 ~ 40) GHz (1.20 ~ 1.30) (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 26.5) GHz (26.5 ~ 40) GHz	0.014 0.015 0.019 0.030 0.015 0.016 0.020 0.021 0.032 0.016 0.017 0.022 0.034 0.018 0.017 0.019 0.025 0.039 0.021 0.020 0.022 0.028 0.043	Network analyzer, Calibration kit /KTICC-CI-40645

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
RF terminations VSWR	40645	(1.30 ~ 1.50) (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 8) GHz (8 ~ 26.5) GHz (26.5 ~ 40) GHz (1.50 ~ 1.75) (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 8) GHz (8 ~ 26.5) GHz (26.5 ~ 40) GHz (1.75 ~ 2.00) (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 8) GHz (8 ~ 26.5) GHz (26.5 ~ 40) GHz (2.00 ~ 2.50) (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 7) GHz (7 ~ 8) GHz (8 ~ 26.5) GHz (26.5 ~ 40) GHz (2.50 ~ 3.00) (5 ~ 100) Hz 100 Hz ~ 0.1 MHz 0.1 MHz ~ 2 GHz (2 ~ 8) GHz (8 ~ 26.5) GHz (26.5 ~ 40) GHz	0.026 0.024 0.026 0.035 0.036 0.055 0.034 0.031 0.033 0.047 0.049 0.071 0.042 0.037 0.041 0.060 0.064 0.091 0.063 0.054 0.060 0.094 0.095 0.10 0.14 0.089 0.073 0.082 0.14 0.15 0.20	Network analyzer, Calibration kit /KTICC-CI-40645
Coaxial thermistor mounts Calibration Factor	40646	10 μW ~ 10 mW (0.01 ~ 2) GHz (2 ~ 10) GHz (10 ~ 18) GHz	$1.2 \times 10^{-2}$ $1.5 \times 10^{-2}$ $1.9 \times 10^{-2}$	Thermistor mount, Power meter, Network analyzer /KTICC-CI-40646
Transmission trouble testers Output Bit rate Input Bit rate	40648	(0.05 ~ 5) GHz (5 ~ 12.5) GHz (0.05 ~ 12.5) GHz	$1.4 \times 10^{-10}$ 1.3 Hz 0.7 Hz	Frequency counter, Transmission analyzer Frequency standard, Signal generator /KTICC-CI-40648

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
RF voltmeters Ratio of voltage and RF output voltage (F) DC Input Voltage	40650	(0.1 ~ 100) MHz (100 ~ 1 000) MHz (0 ~ 10) mV (10 ~ 100) mV (0.1 ~ 100) V (100 ~ 400) V	$2.6 \times 10^{-2}$ $1.2 \times 10^{-2}$ $7.8 \times 10^{-5}$ $6.2 \times 10^{-5}$ $6.1 \times 10^{-5}$ $1.7 \times 10^{-5}$	Signal generator, TVC, Calibrator /KTICC-CI-40650
Vector voltmeters Ratio of voltage and RF output voltage (F) Phase	40651	(0.1 ~ 100) MHz (100 ~ 1 000) MHz (0 ~ 360)°	$2.6 \times 10^{-2}$ $1.2 \times 10^{-2}$ 0.1°	Signal generator, TVC /KTICC-CI-40651
Field strength meters Frequency  Input Level	40652	(0.1 ~ 5 000) MHz (5 ~ 18) GHz  9 kHz ~ 0.1 MHz (20 ~ -40) dBm (0.1 ~ 1 000) MHz (20 ~ 10) dBm (10 ~ 0) dBm (0 ~ -40) dBm (-40 ~ -60) dBm (-60 ~ -90) dBm (-90 ~ -110) dBm (-110 ~ -120) dBm (1 ~ 4) GHz (20 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -70) dBm (-70 ~ -100) dBm (-100 ~ -120) dBm (4 ~ 8) GHz (20 ~ -20) dBm (-20 ~ -40) dBm (-40 ~ -70) dBm (-70 ~ -100) dBm (-100 ~ -120) dBm (8 ~ 10) GHz (20 ~ -20) dBm (-20 ~ -50) dBm (-50 ~ -80) dBm (-80 ~ -110) dBm (-110 ~ -120) dBm (10 ~ 12) GHz (20 ~ 10) dBm (10 ~ 0) dBm (0 ~ -40) dBm (-40 ~ -60) dBm (-60 ~ -90) dBm (-90 ~ -120) dBm	$1.2 \times 10^{-10}$ 1.3 Hz  0.08 dB 0.21 dB 0.20 dB 0.21 dB 0.22 dB 0.23 dB 0.24 dB 0.25 dB 0.21 dB 0.22 dB 0.23 dB 0.24 dB 0.25 dB 0.22 dB 0.23 dB 0.24 dB 0.25 dB 0.26 dB 0.27 dB 0.28 dB 0.29 dB 0.30 dB 0.31 dB 0.28 dB 0.27 dB 0.28 dB 0.29 dB 0.30 dB 0.31 dB	Power sensor Power meter, Frequency counter Measuring receiver, Signal generator /KTICC-CI-40652

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Field strength meters Input Level	40652	(12 ~ 18) GHz (20 ~ -30) dBm (-30 ~ -50) dBm (-50 ~ -80) dBm (-80 ~ -100) dBm (-100 ~ -120) dBm	0.29 dB 0.30 dB 0.31 dB 0.32 dB 0.33 dB	Power sensor Power meter, Frequency counter Measuring receiver, Signal generator /KTICC-CI-40652
AM/FM test sources Output Frequency Residual FM Residual AM FM Distortion	40653	1 MHz ~ 1 GHz 50 Hz ~ 3 kHz 50 Hz ~ 3 kHz (12.5 ~ 400) kHz	$1.2 \times 10^{-10}$ $5.6 \times 10^{-2}$ $4.1 \times 10^{-2}$ $2.1 \times 10^{-2}$	Frequency Counter, Measuring Receiver /KTICC-CI-40653
Dip simulators Output Frequency Dip Voltage Dip Cycle	40654	(50 ~ 60) Hz (50 ~ 60) Hz (0 ~ 120) V (0 ~ 40) % (40 ~ 80) % (80 ~ 100) % (100 ~ 120) % (120 ~ 240) V (0 ~ 40) % (40 ~ 80) % (80 ~ 100) % (100 ~ 120) % (240 ~ 380) V (0 ~ 40) % (40 ~ 70) % (70 ~ 80) % (80 ~ 120) % 60 Hz 0.833 ms (0.833 ~ 1.67) ms (1.67 ~ 5.00) ms (5.00 ~ 8.33) ms (8.33 ~ 16.7) ms (16.7 ~ 83.3) ms (83.3 ~ 166.7) ms (166.7 ~ 417) ms (417 ~ 833) ms (0.833 ~ 1.67) s (1.67 ~ 5.00) s (5.00 ~ 8.33) s	6.3 mHz   $2.1 \times 10^{-2}$ $1.5 \times 10^{-2}$ $1.8 \times 10^{-2}$ $1.7 \times 10^{-2}$  $2.1 \times 10^{-2}$ $1.5 \times 10^{-2}$ $1.8 \times 10^{-2}$ $1.6 \times 10^{-2}$  $2.2 \times 10^{-2}$ $1.7 \times 10^{-2}$ $1.6 \times 10^{-2}$ $1.4 \times 10^{-2}$  $4.1 \times 10^{-3}$ $6.7 \times 10^{-3}$ $3.8 \times 10^{-3}$ $4.1 \times 10^{-3}$ $6.7 \times 10^{-3}$ $4.1 \times 10^{-3}$ $6.7 \times 10^{-3}$ $4.6 \times 10^{-3}$ $4.1 \times 10^{-3}$ $6.7 \times 10^{-3}$ $3.8 \times 10^{-3}$ $4.1 \times 10^{-3}$	Oscilloscope, DMM, High voltage probe /KTICC-CI-40654



Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Dip simulators Dip Cycle	40654	50 Hz 1 ms (1 ~ 2) ms (2 ~ 6) ms (6 ~ 10) ms (10 ~ 20) ms (20 ~ 100) ms (100 ~ 200) ms (200 ~ 500) ms (0.5 ~ 1) s (1 ~ 2) s (2 ~ 6) s (6 ~ 10) s	$4.8 \times 10^{-3}$ $6.0 \times 10^{-3}$ $3.5 \times 10^{-3}$ $3.4 \times 10^{-3}$ $6.0 \times 10^{-3}$ $3.4 \times 10^{-3}$ $6.0 \times 10^{-3}$ $3.8 \times 10^{-3}$ $3.4 \times 10^{-3}$ $6.0 \times 10^{-3}$ $3.5 \times 10^{-3}$ $3.4 \times 10^{-3}$	Oscilloscope, DMM, High voltage probe /KTICC-CI-40654
Interval Cycle		60 Hz 8.33 ms (8.33 ~ 16.7) ms (16.7 ~ 83.3) ms (83.3 ~ 167) ms (167 ~ 417) ms (417 ~ 833) ms (0.833 ~ 1.67) s (1.67 ~ 5) s (5 ~ 8.33) s	$4.1 \times 10^{-3}$ $6.7 \times 10^{-3}$ $4.1 \times 10^{-3}$ $6.7 \times 10^{-3}$ $4.6 \times 10^{-3}$ $4.1 \times 10^{-3}$ $6.7 \times 10^{-3}$ $3.8 \times 10^{-3}$ $4.1 \times 10^{-3}$	
		50 Hz 10 ms (10 ~ 20) ms (20 ~ 100) ms (100 ~ 200) ms (200 ~ 500) ms (0.5 ~ 1) s (1 ~ 2) s (2 ~ 6) s (6 ~ 10) s	$3.4 \times 10^{-3}$ $6.0 \times 10^{-3}$ $3.4 \times 10^{-3}$ $6.0 \times 10^{-3}$ $3.8 \times 10^{-3}$ $3.4 \times 10^{-3}$ $6.0 \times 10^{-3}$ $3.5 \times 10^{-3}$ $3.4 \times 10^{-3}$	

407. Field strength & antenna

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Loop antennas Antenna factor	40704	20 Hz ~ 30 MHz	1.5 dB	Standard antenna Signal generator Spectrum analyzer, DMM /KTICC-CI-40704

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	(-80 ~ 0) °C 0 °C (0 ~ 500) °C (500 ~ 1100) °C	0.02 °C 0.009 °C 0.02 °C 1.8 °C	Digital thermometer, SPRT, Noble metal thermocouples /KTICC-CI-50101
Temperature indicators /recorders/controllers, temperature calibrators	50102	(-80 ~ 0) °C (0 ~ 500) °C (500 ~ 1100) °C	0.07 °C 0.04 °C 1.4 °C	Temperature simulation, Calibrators, SPRT Noble metal thermocouples /KTICC-CI-50102
Glass thermometers; liquid-in-glass, Beckmann Glass thermometers	50103	(-50 ~ 50) °C (50 ~ 400) °C (400 ~ 500) °C	0.07 °C 0.04 °C 0.16 °C	SPRT/KTICC-CI-50103
Resistance thermometers; SPRT, IPRT, thermistors, etc. SPRT, IPRT	50104	(-80 ~ 500) °C	0.08 °C	SPRT/KTICC-CI-50104
Thermal expansion thermometers; bimetal, gas or liquid type	50105	(-50 ~ 100) °C (100 ~ 200) °C (200 ~ 500) °C	0.3 °C 0.6 °C 1.5 °C	SPRT/KTICC-CI-50105
Thermocouples; noble metal, base metal pure metal, special type, etc. Base metal	50106	(-80 ~ 0) °C (0 ~ 200) °C (200 ~ 500) °C (500 ~ 1100) °C	0.12 °C 0.17 °C 0.41 °C 1.3 °C	SPRT, Noble metal thermocouples /KTICC-CI-50106
Temperature transducers	50107	(-80 ~ 0) °C (0 ~ 200) °C (200 ~ 500) °C (500 ~ 1100) °C	0.08 °C 0.06 °C 0.12 °C 0.85 °C	SPRT, Noble metal thermocouples /KTICC-CI-50107
Others; quartz, semiconductivity, optical fiber, etc. Thermistor thermometer	50109	(-80 ~ 500) °C	0.15 °C	SPRT/KTICC-CI-50109

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Standard radiation thermometers Infrared	50204	(0 ~ 500) °C (500 ~ 1000) °C	2.4 °C 3.5 °C	Infrared thermometer /KTICC-CI-50204
Thermal image apparatus	50205	(0 ~ 500) °C (500 ~ 1000) °C	2.8 °C 3.5 °C	Infrared thermometer /KTICC-CI-50205
Blackbody furnaces	50206	(0 ~ 500) °C (500 ~ 1000) °C	1.2 °C 1.6 °C	Infrared thermometer /KTICC-CI-50206
Others: ear thermometers, etc. Ear thermometer	50207	(20 ~ 40) °C	1.3 °C	Black Body/KTICC-CI-50207

503. Humidity

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Relative humidity hygrometers; polimer thin film, hair, etc. Humidity  Temperature	50302	(5 ~ 15) % R.H. (15 ~ 30) % R.H. (30 ~ 50) % R.H. (50 ~ 70) % R.H. (70 ~ 95) % R.H. (-40 ~ 80) °C	2.3 % R.H. 1.1 % R.H. 1.3 % R.H. 1.6 % R.H. 1.9 % R.H. 0.8 °C	Dew point hygrometer /KTICC-CI-50302
Temperature humidity recorders; Hygrothermograph, etc. Humidity  Temperature	50304	(5 ~ 15) % R.H. (15 ~ 30) % R.H. (30 ~ 50) % R.H. (50 ~ 70) % R.H. (70 ~ 90) % R.H. (90 ~ 95) % R.H. (-40 ~ 80) °C	2.7 % R.H. 1.8 % R.H. 2.0 % R.H. 2.2 % R.H. 2.5 % R.H. 2.6 % R.H. 0.8 °C	Dew point hygrometer /KTICC-CI-50304
Transducers; dew-point/relative humidity Humidity	50305	(5 ~ 15) % R.H. (15 ~ 30) % R.H. (30 ~ 50) % R.H. (50 ~ 70) % R.H. (70 ~ 90) % R.H. (90 ~ 95) % R.H.	2.6 % R.H. 1.7 % R.H. 1.9 % R.H. 2.2 % R.H. 2.4 % R.H. 2.5 % R.H.	Dew point hygrometer /KTICC-CI-50305
Humidity generators; two-pressure, two-temperature, flow mixing humidity generator, constant temperature and humidity chamber, etc. Humidity  Temperature	50306	(5 ~ 20) % R.H. (20 ~ 40) % R.H. (40 ~ 60) % R.H. (60 ~ 80) % R.H. (80 ~ 95) % R.H. (-75 ~ 100) °C (100 ~ 150) °C (150 ~ 180) °C	1.5 % R.H. 2.2 % R.H. 2.8 % R.H. 3.7 % R.H. 4.4 % R.H. 0.8 °C 1.1 °C 1.4 °C	Dew point hygrometer /KTICC-CI-50306

601. Sound in air

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Sound level meters	60106	31.5 Hz	0.4 dB	Sound calibrator /KTICC-CI-60106
		63 Hz	0.3 dB	
		125 Hz	0.3 dB	
		250 Hz	0.2 dB	
		500 Hz	0.2 dB	
		1 kHz	0.2 dB	
		2 kHz	0.2 dB	
		4 kHz	0.2 dB	
		8 kHz	0.4 dB	
		12.5 kHz	0.6 dB	

603. Vibration

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments		
Vibration calibrators Acceleration	60301	10 Hz	$2.4 \times 10^{-2}$	Accelerometer /KTICC-CI-60301		
		(10 ~ 315) Hz	$1.6 \times 10^{-2}$			
		(315 ~ 1 250) Hz	$2.0 \times 10^{-2}$			
Vibration transducers Sensitivity	60302	10 Hz	$1.7 \times 10^{-2}$	Accelerometer /KTICC-CI-60302		
		(10 ~ 20) Hz	$1.7 \times 10^{-2}$			
		(20 ~ 315) Hz	$1.6 \times 10^{-2}$			
		(315 ~ 2 500) Hz	$2.0 \times 10^{-2}$			
		(2 500 ~ 5 000) Hz	$2.1 \times 10^{-2}$			
Vibration measuring instruments	60303	Acceleration	10 Hz	$1.7 \times 10^{-2}$	Accelerometer /KTICC-CI-60303	
			(10 ~ 20) Hz	$1.7 \times 10^{-2}$		
			(20 ~ 315) Hz	$1.6 \times 10^{-2}$		
			(315 ~ 1 250) Hz	$2.0 \times 10^{-2}$		
			(1 250 ~ 5 000) Hz	$2.1 \times 10^{-2}$		
		Velocity	10 Hz	$1.7 \times 10^{-2}$		
			(10 ~ 20) Hz	$1.7 \times 10^{-2}$		
			(20 ~ 160) Hz	$1.6 \times 10^{-2}$		
			(160 ~ 315) Hz	$1.7 \times 10^{-2}$		
			(315 ~ 630) Hz	$2.3 \times 10^{-2}$		
			(630 ~ 1 250) Hz	$2.0 \times 10^{-2}$		
			Displacement	(1 250 ~ 2 500) Hz		$2.1 \times 10^{-2}$
				10 Hz		$1.6 \times 10^{-2}$
		(10 ~ 20) Hz		$1.6 \times 10^{-2}$		
		(20 ~ 80) Hz		$1.5 \times 10^{-2}$		
		(80 ~ 100) Hz		$1.6 \times 10^{-2}$		
		(100 ~ 160) Hz		$1.7 \times 10^{-2}$		
		(160 ~ 315) Hz		$1.6 \times 10^{-2}$		
		(315 ~ 630) Hz	$2.2 \times 10^{-2}$			
		(630 ~ 1 000) Hz	$3.1 \times 10^{-2}$			
(1 000 ~ 1 250) Hz	$4.2 \times 10^{-2}$					

701. Photometry

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Illuminance meters	70101	0.5 lx (0.5 ~ 5) lx (5 ~ 10) lx (10 ~ 50) lx (50 ~ 100) lx (100 ~ 500) lx (500 ~ 1 000) lx (1 000 ~ 1 500) lx (1 500 ~ 3 000) lx (3 000 ~ 20 000) lx	$3.2 \times 10^{-2}$ $2.4 \times 10^{-2}$ $2.0 \times 10^{-2}$ $2.2 \times 10^{-2}$ $1.8 \times 10^{-2}$ $2.0 \times 10^{-2}$ $2.1 \times 10^{-2}$ $2.2 \times 10^{-2}$ $2.6 \times 10^{-2}$ $2.9 \times 10^{-2}$	Luminous intensity Standard lamp /KTICC-CI-70101

704. Fiber optics

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Broadband light sources Wavelength	70402	(600 ~ 1 700) nm	0.082 nm	Optical spectrum analyzers Optical multimeters /KTICC-CI-70402
Optical power		1 310 nm, 1 550 nm (-50 ~ 0) dBm	0.05 dB	
Optical attenuators Optical attenuation	70410	1 310 nm, 1 550 nm, 1 625 nm (-60 ~ 0) dB	0.06 dB	Optical power stabilized lasers and LDs Optical multimeters /KTICC-CI-70410
Optical couplers Division Ratio	70411	1 310 nm 1 550 nm	$1.1 \times 10^{-2}$ $1.1 \times 10^{-2}$	Optical power stabilized lasers and LDs Optical multimeters /KTICC-CI-70411
Optical loss Testers Wavelength	70413	(600 ~ 1 700) nm	$2.2 \times 10^{-7}$	Optical power stabilized lasers and LDs Optical multimeters Optical attenuators Optical spectrum analyzers Multi-laser wavelength meters /KTICC-CI-70413
Output Optical Power		1 310 nm, 1 550 nm (-50 ~ 0) dBm	0.05 dB	
Input Optical Power		1 310 nm, 1 550 nm (-60 ~ 0) dBm	0.06 dB	
Linearity		1 310 nm, 1 550 nm (-60 ~ 0) dB	0.06 dB	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Optical multimeters Absolute Optical Power  Linearity	70415	1 310 nm, 1 550 nm (-60 ~ 0) dBm 1 625 nm (-60 ~ -5) dBm  1 310 nm, 1 550 nm (-60 ~ 0) dB 1 625 nm (-55 ~ 0) dB	0.06 dB  0.06 dB  0.06 dB  0.06 dB	Optical power stabilized lasers and LDs Optical multimeters Optical attenuators /KTICC-CI-70415
Optical network analyzers Optical multimeters Input Optical Power  Optical spectrum analyzers Wavelength  Resolution  Input Optical Power  Optical attenuators Level  OTDR Length  Attenuation	70416	1 310 nm, 1 550 nm (-60 ~ 0) dBm  (1 310 ~ 1 575) nm  1 310 nm, 1 550 nm (0.1 ~ 1) nm  1 310 nm, 1 550 nm (-60 ~ 0) dBm  1 310 nm, 1 550 nm (-60 ~ 0) dBm  1 310 nm 2.7 km Fiber 13 km Fiber 1 550 nm 2.7 km Fiber 13 km Fiber  1 310 nm 2.7 km Fiber 1 310 nm 13 km Fiber 1 550 nm 2.7 km Fiber 1 550 nm 13 km Fiber	0.06 dB  0.058 nm  0.058 nm  0.06 dB  0.06 dB  0.088 m 0.33 m 0.088 m 0.34 m  0.04 dB 0.08 dB 0.05 dB 0.07 dB	Optical multimeters Optical spectrum analyzers Optical attenuators OTDR Wavelength meters, Multi laser Return loss test sets /KTICC-CI-70416

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Optical network analyzers Wavelength Meters, Multi laser Wavelength	70416	1 310 nm	2.7 pm	Optical multimeters Optical spectrum analyzers Optical attenuators OTDR Wavelength meters, Multi laser Return loss test sets /KTICC-CI-70416
		1 460 nm	1.7 pm	
		1 500 nm	1.7 pm	
		1 531.591 0 nm	0.35 pm	
		1 531.587 8 nm	0.35 pm	
		1 531.584 8 nm	0.35 pm	
		1 550 nm	2.7 pm	
		1 580 nm	1.7 pm	
Input Optical Power		1 310 nm, 1 550 nm (-60 ~ 0) dBm	0.06 dB	
Return loss test Return Loss		1 310 nm, 1 550 nm (20 ~ 30) dB (30 ~ 40) dB	0.5 dB 0.6 dB	
Ethernet Tester Interface Wavelength	(1 ~ 100) MHz (600 ~ 1 640) nm	$1.3 \times 10^{-10}$ 0.082 nm		
Output Optical Power	1 310 nm, 1 550 nm (0 ~ -60) dBm	0.05 dB		
Sensitivity	1 310 nm, 1 550 nm	0.06 dB		
Optical spectrum analyzers Wavelength	70417	(600 ~ 1 640) nm	0.058 nm	Optical power stabilized lasers and LDs Optical multimeters Optical attenuators /KTICC-CI-70417
Resolution		1 310 nm, 1 550 nm (0.1 ~ 1) nm	0.058 nm	
Input Optical Power		1 310 nm, 1 550 nm (-60 ~ 0) dBm	0.06 dB	
Linearity		1 310 nm, 1 550 nm (-60 ~ 0) dB	0.06 dB	

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Optical time domain reflectometers; OTDR  Length          Attenuation	70418	1 310 nm 2.7 km Fiber 13 km Fiber 1 550 nm 2.7 km Fiber 13 km Fiber  1 310 nm 2.7 km Fiber 1 310 nm 13 km Fiber 1 550 nm 2.7 km Fiber 1 550 nm 13 km Fiber	0.066 m 0.34 m  0.072 m 0.32 m  0.10 dB 0.15 dB 0.06 dB 0.14 dB	Optical length standard Optical fiber Loss standard optical fiber /KTICC-CI-70418
PDH/SDH analyzers  Bit rate   Output Jitter          Smsr  Optical Power  Extinction Ratio  Sensitivity  Reflectance	70419	DS1 (1.544 MHz) ~ STM-64 (9.953 28 GHz)  DS1 (10 Hz to 40 kHz) DS1 (8 kHz to 40 kHz) E1 (20 Hz to 100 kHz) E1 (18 kHz to 100 kHz) DS3 (10 Hz to 400 kHz) DS3 (30 kHz to 400 kHz) STM-1 (12 kHz to 1.3 MHz) STM-4 (12 kHz to 5 MHz) STM-16 (13 kHz to 20 MHz)  STM-1 (155.52 MHz) ~ STM-64 (9.953 28 GHz)  STM-1 (155.52 MHz) ~ STM-64 (9.953 28 GHz)  STM-1 (155.52 MHz) ~ STM-64 (9.953 28 GHz)  STM-1 (155.52 MHz) ~ STM-64 (9.953 28 GHz)  STM-1 (155.52 MHz) ~ STM-16 (2.488 32 GHz)	$1.3 \times 10^{-10}$  15 ns 15 ns 11 ns 11 ns 0.78 ns 0.78 ns 0.37 ns 0.13 ns 0.032 ns  0.08 dB  0.05 dB  0.2 dB  0.05 dB  0.8 dB	Optical multimeters Optical spectrum analyzers Optical attenuators PDH/SDH analyzers General frequency sources Frequency meters/counters /KTICC-CI-70419



Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
PDH/SDH analyzers Jitter Generator & Analyzers	70419	DS1 (1.544 MHz), 1 kHz 0.77 UIp-p 1.80 UIp-p 4.80 UIp-p 8.80 UIp-p E1 (2.048 MHz), 2.4 kHz 0.77 UIp-p 1.80 UIp-p 4.80 UIp-p 8.80 UIp-p DS3 (44.736 MHz), 4 kHz 0.77 UIp-p 1.80 UIp-p 4.80 UIp-p 8.80 UIp-p STM-1 (155.52 MHz) 65 kHz / 0.20 UIp-p 650 kHz / 0.20 UIp-p 6.5 kHz / 0.91 UIp-p 4 kHz / 3.52 UIp-p 2.5 kHz / 7.52 UIp-p STM-4 (622.08 MHz) 65 kHz / 0.20 UIp-p 650 kHz / 0.20 UIp-p 6.5 kHz / 0.91 UIp-p 4 kHz / 3.52 UIp-p 2.5 kHz / 7.52 UIp-p STM-16 (2.488 32 GHz) 65 kHz / 0.20 UIp-p 650 kHz / 0.20 UIp-p 6.5 kHz / 0.91 UIp-p 4 kHz / 3.52 UIp-p 2.5 kHz / 7.52 UIp-p	56 ns 0.17 μs 0.33 μs 0.54 μs 42 ns 0.13 μs 0.25 μs 0.40 μs 2.6 ns 6.7 ns 14 ns 23 ns 0.48 ns 0.49 ns 0.85 ns 2.6 ns 4.7 ns 0.16 ns 0.17 ns 0.25 ns 0.64 ns 1.7 ns 0.042 ns 0.051 ns 0.062 ns 0.18 ns 0.38 ns	Optical multimeters Optical spectrum analyzers Optical attenuators PDH/SDH analyzers General frequency sources Frequency meters/counters /KTICC-CI-70419
Return loss meters Return Loss	70423	1 310 nm, 1 550 nm (20 ~ 30) dB (30 ~ 40) dB	0.5 dB 0.6 dB	Return loss generator /KTICC-CI-70423

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
SDH/SONET analyzers	70424	STM-1 (155.52 MHz) ~ STM-64 (9.953 28 GHz)	$1.3 \times 10^{-10}$	Optical multimeters Optical spectrum analyzers Optical attenuators PDH/SDH analyzers General frequency sources Frequency meters/counters /KTICC-CI-70424
Bit Rate				
Output Jitter		STM-1 (12 kHz to 1.3 MHz) STM-4 (12 kHz to 5 MHz) STM-16 (13 kHz to 20 MHz)	0.37 ns 0.13 ns 0.032 ns	
Smsr		STM-1 (155.52 MHz) ~ STM-64 (9.953 28 GHz)	0.08 dB	
Optical Power		STM-1 (155.52 MHz) ~ STM-64 (9.953 28 GHz)	0.05 dB	
Extinction Ratio		STM-1 (155.52 MHz) ~ STM-64 (9.953 28 GHz)	0.2 dB	
Sensitivity		STM-1 (155.52 MHz) ~ STM-16 (2.488 32 GHz)	0.05 dB	
Reflectance		STM-1 (155.52 MHz) ~ STM-16 (2.488 32 GHz)	0.8 dB	
Jitter Generator & Analyzers		STM-1 (155.52 MHz)		
		65 kHz / 0.20 UIp-p	0.48 ns	
	650 kHz / 0.20 UIp-p	0.49 ns		
	6.5 kHz / 0.91 UIp-p	0.85 ns		
	4 kHz / 3.52 UIp-p	2.6 ns		
	2.5 kHz / 7.52 UIp-p	4.7 ns		
	STM-4 (622.08 MHz)			
	65 kHz / 0.20 UIp-p	0.16 ns		
	650 kHz / 0.20 UIp-p	0.17 ns		
	6.5 kHz / 0.91 UIp-p	0.25 ns		
	4 kHz / 3.52 UIp-p	0.64 ns		
	2.5 kHz / 7.52 UIp-p	1.7 ns		
	STM-16 (2.488 32 GHz)			
	65 kHz / 0.20 UIp-p	0.042 ns		
	650 kHz / 0.20 UIp-p	0.051 ns		
	6.5 kHz / 0.91 UIp-p	0.062 ns		
	4 kHz / 3.52 UIp-p	0.18 ns		
	2.5 kHz / 7.52 UIp-p	0.38 ns		

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Multi-laser wavelength meters Wavelength  Input Optical Power	70426	1 310 nm 1 460 nm 1 500 nm 1 531.591 0 nm 1 531.587 8 nm 1 531.584 8 nm 1 550 nm 1 580 nm  1 310 nm, 1 550 nm (-60 ~ 0) dBm	2.7 pm 1.7 pm 1.7 pm 0.35 pm 0.35 pm 0.35 pm 2.7 pm 1.7 pm  0.05 dB	Frequency stabilized lasers and LDs Optical multimeters /KTICC-CI-70426
Wavelength sweep multichannel measuring systems Input Optical Power	70427	1 310 nm, 1 550 nm (-60 ~ 0) dBm	0.06 dB	Optical power stabilized lasers and LDs Optical multimeters Optical attenuators /KTICC-CI-70427
Frequency stabilized lasers and LDs Wavelength Output Optical Power Linearity	70429	(1 260 ~ 1 640) nm  1 310 nm, 1 550 nm (-50 ~ 0) dBm  1 310 nm, 1 550 nm (-50 ~ 0) dB	1.2 pm  0.05 dB  0.05 dB	Optical spectrum analyzers Optical multimeters /KTICC-CI-70429
ASE light sources Wavelength Output Optical Power	70430	(600 ~ 1 700) nm  1 310 nm, 1 550 nm (-50 ~ 0) dBm	0.082 nm  0.05 dB	Optical spectrum analyzers Optical multimeters /KTICC-CI-70430
Optical power stabilized lasers and LDs Wavelength Output Optical Power  Light sources, LED Wavelength  Output Optical Power	70433	(1 300 ~ 1 640) nm  1 310 nm, 1 550 nm (-50 ~ 0) dBm 1 625 nm (-50 ~ -5) dBm  (600 ~ 1 640) nm  1 310 nm, 1 550 nm (-50 ~ 0) dBm	$2.2 \times 10^{-7}$  0.05 dB 0.05 dB  0.082 nm  0.05 dB	Multi-laser wavelength meters Optical multimeters Optical spectrum analyzers /KTICC-CI-70433

Measured Quantity Instrument or Gauge	Field Code	Range	CMC (The Confidence Level is about 95 %)	Comments
Gas analyzers	90103			Standard gas
O <sub>2</sub>		(0 ~ 18) %mol/mol	0.37 % (mole fraction)	/KTICC-CI-90103
CO		(0 ~ 100) μmol/mol	2.1 μmol/mol	
CH <sub>4</sub>		(0 ~ 2) %mol/mol	0.03 % (mole fraction)	
H <sub>2</sub> S		(0 ~ 30) μmol/mol	0.89 μmol/mol	