Korea Laboratory Accreditation Scheme

CERTIFICATE OF ACCREDITATION

Keysight Technologies Korea Ltd.

Accreditation No. : KC01-071

Corporation Registration No. : 110111-5328623

Address of Laboratory : 15F #57 Yeouinaru-ro, Yeongdeungpo-gu, Yeouido, Seoul, Republic of Korea

Date of Initial Accreditation : November 19, 2001.

Validity of Accreditation : September 03, 2023. ~ September 02, 2027.

Scope of Accreditation : Attached Annex

Date of issue : August 16, 2023.

This calibration laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to Joint ISO-ILAC-IAF Communiqué).

CHIN CHONGWOOK

Head
Korea Laboratory Accreditation Scheme

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

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CALIBRATION

Valid To : Sep. 02, 2027.

Accreditation No : KC01-017

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

Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site
301. Time/frequency								
30104	Frequency meters/counters	N						
401. Direct Current								
40103	DC voltage/current calibrato	Y						
40108	DC Power Supplies	Y						
402. Resistance Capacitance and Inductance								
40217	Impedance bridges/LCR meters	Y						
404. Other DC & LF Measurements								
40411	Function generators	Y						
40419	Analogue/Digital multimeters	Y						
40421	Oscilloscope	Y						
406. Radio frequency measurements								
40602	Coaxial attenuators	Y						
40621	Mobile communication Test Set	Y						
40623	Network analyzers	Y						
40635	RF power meters	Y						
40637	Thermocouple power sensors	N						
40638	Pulse generators	Y						
40640	RF signal generators	Y						
40641	RF spectrum analyzers	Y						

Note

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

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301. Time/frequency

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Frequency meters/counters	30104			
Timebase Output Frequency		10 MHz	2.6×10^{-12}	GPS Receiver/CSG-CI-T002
rsight Technologies Korea Ltd.				
Input Frequency		10 MHz	6.2×10^{-11}	GPS Receiver/CSG-CI-T002

401. Direct Current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
DC voltage/ Current calibrators	40103			
DC Voltage Source		(±)		DMM/CSG-CI-E003
		(0 ~ 8)V	0.1 mV	
		(8 ~ 10)V	0.2 mV	
		(10 ~ 20)V	0.3 mV	
		(20 ~ 30)V	0.4 mV	
		(30 ~ 35)V	0.5 mV	
		(35 ~ 45)V	0.6 mV	
		(45 ~ 50)V	0.7 mV	
		(50 ~ 60)V	0.8 mV	
		(60 ~ 70)V	0.9 mV	
		(70 ~ 80)V	1.0 mV	
		(80 ~ 90)V	1.1 mV	
		(90 ~ 100)V	2 mV	
		(100 ~ 150)V	3 mV	
		(150 ~ 250)V	4 mV	
		(250 ~ 350)V	5 mV	
		(350 ~ 450)V	6 mV	
		(450 ~ 500)V	7 mV	
		(500 ~ 600)V	8 mV	
		(600 ~ 700)V	9 mV	
		(700 ~ 800)V	10 mV	
		(800 ~ 900)V	11 mV	
		(900 ~ 1 000)V	0.02 V	

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401. Direct Current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
DC voltage/ Current calibrators	40103			
DC Current Source		(±)		DMM/CSG-CI-E003
		(0 ~ 1) μA	0.1 nA	
		(1 ~ 10) μA	0.4 nA	
		(10 ~ 100) μA	4 nA	
		(0.1 ~ 1) mA	0.1 μA	
		(1 ~ 10) mA	0.3 μA	
		(10 ~ 100) mA	5 μA	
		(0.1 ~ 1) A	0.2 mA	
DC Power Supply	40108			
Output Voltage		0 V	0.58 mV	DMM/CSG-CI-E002
		(0 ~ 1) V	5.8×10^{-4}	
		(1 ~ 10) V	5.9×10^{-5}	
		(10 ~ 100) V	5.4×10^{-5}	
		(100 ~ 1 000) V	2.7×10^{-5}	
Output Current		0 A	0.58 mA	DMM,Shunt Resistor /CSG-CI-E002
		(0 ~ 1) A	5.9×10^{-4}	
		(1 ~ 10) A	9.0×10^{-5}	
		(10 ~ 100) A	7.9×10^{-5}	

402. Resistance, Capacitance and Inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Impedance bridges/LCR meters	40217			
Capacitance		1 pF		Standard Capacitance /CSG-CI-E004
		1 kHz	0.37 fF	
		1 kHz ~ 1 MHz	0.38 fF	
		1 MHz ~ 2 MHz	0.43 fF	
		2 MHz ~ 3 MHz	0.55 fF	
		3 MHz ~ 4 MHz	0.73 fF	
		4 MHz ~ 5 MHz	0.96 fF	
		5 MHz ~ 10 MHz	2.6 fF	
		10 MHz ~ 13 MHz	3.8 fF	
		10 pF		
		1 kHz	3.6 fF	
		1 kHz ~ 1 MHz	3.6 fF	
		1 MHz ~ 2 MHz	3.6 fF	
		2 MHz ~ 3 MHz	3.6 fF	
		3 MHz ~ 4 MHz	3.6 fF	
		4 MHz ~ 5 MHz	3.6 fF	
		5 MHz ~ 10 MHz	3.8 fF	
		10 MHz ~ 13 MHz	3.9 fF	

402. Resistance, Capacitance and Inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Impedance bridges/LCR meters	40217			
Capacitance		100 pF		Standard Capacitance
		1 kHz	0.036 pF	/CSG-CI-E004
		1 kHz ~ 1 MHz	0.036 pF	
		1 MHz ~ 2 MHz	0.036 pF	
		2 MHz ~ 3 MHz	0.037 pF	
		3 MHz ~ 4 MHz	0.037 pF	
		4 MHz ~ 5 MHz	0.038 pF	
		5 MHz ~ 10 MHz	0.049 pF	
		10 MHz ~ 13 MHz	0.061 pF	
		1 000 pF		
		1 kHz	0.36 pF	
		1 kHz ~ 1 MHz	0.37 pF	
		1 MHz ~ 2 MHz	0.39 pF	
		2 MHz ~ 3 MHz	0.46 pF	
		3 MHz ~ 4 MHz	0.57 pF	
		4 MHz ~ 5 MHz	0.72 pF	
		5 MHz ~ 10 MHz	1.9 pF	
		10 MHz ~ 13 MHz	2.8 pF	
		0.01 µF		
		1 kHz	1.3 pF	
		0.1 µF		
		1 kHz	13 pF	
		1 µF		
		1 kHz	0.13 nF	
Resistance		1 mΩ		Standard Resistance
		DC	0.33 µΩ	/CSG-CI-E004
		10 mΩ		
		DC	1.9 µΩ	
		100 mΩ		
		DC	29 µΩ	
		1 Ω		
		DC	0.13 mΩ	
		10 Ω		
		DC	1.3 mΩ	
		DC ~ 1 MHz	3.3 mΩ	
		1 MHz ~ 2 MHz	5.2 mΩ	
		2 MHz ~ 3 MHz	6.2 mΩ	
		3 MHz ~ 4 MHz	7.2 mΩ	
		4 MHz ~ 5 MHz	11 mΩ	

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402. Resistance, Capacitance and Inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Impedance bridges/LCR meters	40217			
		10 Ω		Standard Resistance
		5 MHz ~ 10 MHz	0.041 Ω	/CSG-CI-E004
		10 MHz ~ 13 MHz	0.061 Ω	
		100 Ω		
		DC	13 mΩ	
		DC ~ 1 MHz	0.033 Ω	
		1 MHz ~ 2 MHz	0.042 Ω	
		2 MHz ~ 3 MHz	0.052 Ω	
		3 MHz ~ 4 MHz	0.052 Ω	
		4 MHz ~ 5 MHz	0.052 Ω	
		5 MHz ~ 10 MHz	0.21 Ω	
		10 MHz ~ 13 MHz	0.31 Ω	
		1 kΩ		
		DC	0.12 Ω	
		DC ~ 100 kHz	0.33 Ω	
		100 kHz ~ 1 MHz	0.33 Ω	
		1 MHz ~ 2 MHz	0.33 Ω	
		2 MHz ~ 3 MHz	0.33 Ω	
		3 MHz ~ 4 MHz	0.42 Ω	
		4 MHz ~ 5 MHz	0.52 Ω	
		5 MHz ~ 10 MHz	2.1 Ω	
		10 MHz ~ 13 MHz	3.1 Ω	
		10 kΩ		
		DC	1.3 Ω	
		DC ~ 100 kHz	2.4 Ω	
		100 kHz ~ 1 MHz	3.3 Ω	
		100 kΩ		
		DC	13 Ω	
		DC ~ 100 kHz	0.033 kΩ	
		100 kHz ~ 1 MHz	0.033 kΩ	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Function Generators	40411			
Frequency		1 μHz ~ 1 MHz	0.01 Hz	Frequency Counter
		1 MHz ~ 10 MHz	0.1 Hz	/CSG-CI-E010
		10 MHz ~ 100 MHz	1 Hz	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Function Generators	40411			
Amplitude		1 kHz		DMM/CSG-CI-E010
		100 mV	15 μV	
		1 V	0.14 mV	
		10 V	1.4 mV	
		50 V	6.7 mV	
		1 kHz ~ 20 kHz		
		100 mV	27 μV	
		1 V	0.3 mV	
		10 V	2.7 mV	
		50 V	10 mV	
		20 kHz ~ 100 kHz		
		100 mV	97 μV	
		1 V	0.97 mV	
		10 V	9.7 mV	
		50 V	14 mV	
		100 kHz ~ 1 MHz		
		100 mV	1.4 mV	
		1 V	14 mV	
		10 V	0.14 V	
		1 MHz ~ 10 MHz		
		100 mV	0.02 V	
		1 V	0.16 V	
Flatness		Sine 0 dBm		Power Meter, Power Senosr
		9 kHz ~ 100 MHz	0.01 dB	/CSG-CI-E010
DC Offset		Sine 1 kHz		DMM/CSG-CI-E010
		0 V	0.01 mV	
		3 V	0.2 mV	
Analogue/Digital multimeters	40419			
DC Voltage		0 V	0.6 μV	Calibrator/CSG-CI-E001
		(0 ~ 100) mV	1.7×10^{-5}	
		100 mV ~ 1 V	7.9×10^{-6}	
		(1 ~ 10) V	5.2×10^{-6}	
		(10 ~ 100) V	7.6×10^{-6}	
		(100 ~ 1 000) V	9.9×10^{-6}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Analogue/Digital multimeters AC Voltage	40419	10 Hz		Calibrator/CSG-CI-E001
		1 mV	6.3 μV	
		(1 ~ 10) mV	9.6×10^{-4}	
		(10 ~ 100) mV	5.4×10^{-4}	
		100 mV ~ 1 V	4.2×10^{-4}	
		(1 ~ 10) V	4.2×10^{-4}	
		(10 ~ 100) V	3.8×10^{-4}	
		(10 ~ 20) Hz		
		1 mV	6.3 μV	
		(1 ~ 10) mV	9.5×10^{-4}	
		(10 ~ 100) mV	5.3×10^{-4}	
		100 mV ~ 1 V	4.1×10^{-4}	
		(1 ~ 10) V	4.1×10^{-4}	
		(10 ~ 100) V	3.6×10^{-4}	
		(20 ~ 40) Hz		
		1 mV	6.1 μV	
		(1 ~ 10) mV	7.4×10^{-4}	
		(10 ~ 100) mV	2.4×10^{-4}	
		100 mV ~ 1 V	1.6×10^{-4}	
		(1 ~ 10) V	1.6×10^{-4}	
		(10 ~ 100) V	1.4×10^{-4}	
		40 Hz ~ 1 kHz		
		1 mV	6.1 μV	
		(1 ~ 10) mV	7.2×10^{-4}	
		(10 ~ 100) mV	1.9×10^{-4}	
		100 mV ~ 1 V	7.0×10^{-5}	
		(1 ~ 10) V	7.4×10^{-5}	
		(10 ~ 100) V	8.7×10^{-5}	
		(1 ~ 20) kHz		
		1 mV	6.1 μV	
		(1 ~ 10) mV	7.2×10^{-4}	
		(10 ~ 100) mV	1.9×10^{-4}	
		100 mV ~ 1 V	7.0×10^{-5}	
		(1 ~ 10) V	7.5×10^{-5}	
		(10 ~ 100) V	8.8×10^{-5}	
		(20 ~ 50) kHz		
		1 mV	6.3 μV	
		(1 ~ 10) mV	9.1×10^{-4}	
		(10 ~ 100) mV	2.8×10^{-4}	
		100 mV ~ 1 V	1.2×10^{-4}	
		(1 ~ 10) V	1.2×10^{-4}	
		(10 ~ 100) V	1.3×10^{-4}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Analogue/Digital multimeters	40419			
AC Voltage		(50 ~ 100) kHz		Calibrator/CSG-CI-E001
		1 mV	8.0 μV	
		(1 ~ 10) mV	1.5×10^{-3}	
		(10 ~ 100) mV	7.1×10^{-4}	
		100 mV ~ 1 V	1.7×10^{-4}	
		(1 ~ 10) V	1.8×10^{-4}	
		(10 ~ 100) V	2.4×10^{-4}	
		50 Hz, 50 Hz ~ 1 kHz		
		(100 ~ 1 000) V	4.2×10^{-4}	
		(100 ~ 1 000) V	1.1×10^{-4}	
DC Current		0 A	7.0 nA	Calibrator/CSG-CI-E001
		(0 ~ 10) μA	7.4×10^{-4}	
		(10 ~ 100) μA	1.2×10^{-4}	
		100 μA ~ 1 mA	5.2×10^{-5}	
		(1 ~ 10) mA	4.9×10^{-5}	
		(10 ~ 100) mA	6.2×10^{-5}	
		100 mA ~ 1 A	1.1×10^{-4}	
		(1 ~ 10) A	4.8×10^{-4}	
AC Current		10 Hz		Calibrator/CSG-CI-E001
		(9 ~ 100) μA	5.7×10^{-4}	
		100 μA ~ 1 mA	4.4×10^{-4}	
		(1 ~ 10) mA	4.3×10^{-4}	
		(10 ~ 100) mA	4.3×10^{-4}	
		(10 ~ 20) Hz		
		(9 ~ 100) μA	5.3×10^{-4}	
		100 μA ~ 1 mA	3.9×10^{-4}	
		(1 ~ 10) mA	3.8×10^{-4}	
		(10 ~ 100) mA	3.8×10^{-4}	
		20 Hz		
		1 A	0.38 mA	
		(20 ~ 40) Hz		
		(9 ~ 100) μA	3.7×10^{-4}	
		100 μA ~ 1 mA	2.8×10^{-4}	
		(1 ~ 10) mA	2.7×10^{-4}	
		(10 ~ 100) mA	2.7×10^{-4}	
		100 mA ~ 1 A	3.7×10^{-4}	
		1 A	3.7×10^{-4}	
		40 Hz		
		10 A	5.6 mA	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Analogue/Digital multimeters	40419			
AC Current		40 Hz ~ 1 kHz		Calibrator/CSG-CI-E001
		(9 ~ 100) μA	3.0×10^{-4}	
		100 μA ~ 1 mA	2.2×10^{-4}	
		(1 ~ 10) mA	2.1×10^{-4}	
		(10 ~ 100) mA	2.0×10^{-4}	
		100 mA ~ 1 A	3.7×10^{-4}	
		(1 ~ 10) A	5.6×10^{-4}	
		(1 ~ 5) kHz		
		(9 ~ 100) μA	5.1×10^{-4}	
		100 μA ~ 1 mA	3.9×10^{-4}	
		(1 ~ 10) mA	3.3×10^{-4}	
		(10 ~ 100) mA	3.1×10^{-4}	
		100 mA ~ 1 A	6.4×10^{-4}	
		(1 ~ 10) A	1.2×10^{-3}	
		(5 ~ 10) kHz		
		(9 ~ 100) μA	2.1×10^{-3}	
		100 μA ~ 1 mA	2.1×10^{-3}	
		(1 ~ 10) mA	1.9×10^{-3}	
		(10 ~ 100) mA	1.4×10^{-3}	
		100 mA ~ 1 A	8.3×10^{-3}	
		(1 ~ 10) A	4.4×10^{-3}	
Resistance		1 Ω	0.13 mΩ	Calibrator/CSG-CI-E001
		(1 ~ 10) Ω	3.2×10^{-5}	
		(10 ~ 100) Ω	1.5×10^{-5}	
		100 Ω ~ 1 kΩ	9.7×10^{-6}	
		(1 ~ 10) kΩ	9.5×10^{-6}	
		(10 ~ 100) kΩ	1.2×10^{-5}	
		100 kΩ ~ 1 MΩ	1.8×10^{-5}	
		(1 ~ 10) MΩ	5.4×10^{-5}	
		(10 ~ 100) MΩ	1.5×10^{-4}	
Oscilloscope	40421			
Port Impedance		50 Ω		DMM/CSG-CI-E008
		1 mV/Div ~ 1 V/Div	17 mΩ	
		1 MΩ		
		1 mV/Div ~ 1 V/Div	0.17 kΩ	
DC Gain		50 Ω		Oscilloscope Calibrator /CSG-CI-E008
		1 mV/Div	1.3 μV	
		2 mV/Div	2.3 μV	
		5 mV/Div	5.6 μV	
		10 mV/Div	13 μV	
		20 mV/Div	23 μV	
		50 mV/Div	0.09 mV	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscope	40421			
DC Gain		50 Ω		Oscilloscope Calibrator
		100 mV/Div	0.13 mV	/CSG-CI-E008
		200 mV/Div	0.23 mV	
		500 mV/Div	0.6 mV	
		1 V/Div	1.3 mV	
		1 MΩ		
		1 mV/Div	31 μV	
		2 mV/Div	31 μV	
		5 mV/Div	35 μV	
		10 mV/Div	50 μV	
		20 mV/Div	54 μV	
		50 mV/Div	0.15 mV	
		100 mV/Div	0.18 mV	
		200 mV/Div	0.26 mV	
		500 mV/Div	0.9 mV	
		1 V/Div	2.4 mV	
Offset Gain		50 Ω		Oscilloscope Calibrator
		1 mV/Div	1.3 μV	/CSG-CI-E008
		2 mV/Div	2.3 μV	
		5 mV/Div	8.2 μV	
		10 mV/Div	62 μV	
		20 mV/Div	64 μV	
		50 mV/Div	82 μV	
		100 mV/Div	0.14 mV	
		200 mV/Div	0.64 mV	
		500 mV/Div	0.82 mV	
		1 V/Div	1.3 mV	
		1 MΩ		
		1 mV/Div	34 μV	
		2 mV/Div	37 μV	
		5 mV/Div	49 μV	
		10 mV/Div	0.14 mV	
		20 mV/Div	0.14 mV	
		50 mV/Div	0.43 mV	
		100 mV/Div	0.68 mV	
		200 mV/Div	2.1 mV	
		500 mV/Div	2.1 mV	
		1 V/Div	2.4 mV	
Time Marker		1 ns/Div	0.06 ps	Oscilloscope Calibrator
		2 ns/Div	0.06 ps	/CSG-CI-E008
		5 ns/Div	0.06 ps	
		10 ns/Div	0.6 ps	
		20 ns/Div	0.6 ps	
		50 ns/Div	0.6 ps	
		100 ns/Div	0.6 ps	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscope	40421			
Time Marker		200 ns/Div	0.6 ps	Oscilloscope Calibrator
		500 ns/Div	0.9 ps	/CSG-CI-E008
		1 µs/Div	0.9 ps	
		2 µs/Div	0.9 ps	
		5 µs/Div	0.06 ns	
		10 µs/Div	0.06 ns	
		20 µs/Div	0.06 ns	
		50 µs/Div	0.6 ns	
		100 µs/Div	0.6 ns	
		200 µs/Div	0.6 ns	
		500 µs/Div	6 ns	
		1 ms/Div	6 ns	
		2 ms/Div	6 ns	
		5 ms/Div	0.06 µs	
		10 ms/Div	0.07 µs	
		20 ms/Div	0.19 µs	
		50 ms/Div	6 µs	
		100 ms/Div	7 µs	
		200 ms/Div	10 µs	
		500 ms/Div	0.06 ms	
AUX Output Accuracy		1 V	0.06 mV	DMM/CSG-CI-E008
Analog Bandwidth		50 MHz ~ 3 GHz	0.43 dB	RF Signal Generator,
		3 GHz ~ 7 GHz	0.43 dB	Power sensor, Power meter,
		7 GHz ~ 18 GHz	0.30 dB	Power splitter
		18 GHz ~ 26.5 GHz	0.39 dB	/CSG-CI-E008
		26.5 GHz ~ 33 GHz	0.44 dB	
		33 GHz ~ 40 GHz	0.57 dB	
		40 GHz ~ 50 GHz	0.71 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Coaxial attenuators	40602			
Fixed Attenuation [TYPE N]		(DC ~ 30 MHz)		Measuring Receiver
		0 dB ~ 10 dB	0.25 dB	/CSG-CI-M001
		10 dB ~ 20 dB	0.24 dB	
		20 dB ~ 30 dB	0.24 dB	
		(30 MHz ~ 1 GHz)		
		0 dB ~ 10 dB	0.25 dB	
		10 dB ~ 20 dB	0.24 dB	
		20 dB ~ 30 dB	0.24 dB	
		(1 GHz ~ 8 GHz)		
		0 dB ~ 10 dB	0.36 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Coaxial attenuators	40602			
Fixed Attenuation		(1 GHz ~ 8 GHz)		Measuring Receiver
[TYPE N]		10 dB ~ 20 dB	0.35 dB	/CSG-CI-M001
		20 dB ~ 30 dB	0.35 dB	
		(8 GHz ~ 12.4 GHz)		
		0 dB ~ 10 dB	0.53 dB	
		10 dB ~ 20 dB	0.52 dB	
		20 dB ~ 30 dB	0.52 dB	
		(12.4 GHz ~ 18 GHz)		
		0 dB ~ 10 dB	0.53 dB	
		10 dB ~ 20 dB	0.52 dB	
		20 dB ~ 30 dB	0.52 dB	
Variable Attenuation		(DC ~ 30 MHz)		Measuring Receiver
[TYPE N]		0 dB ~ 10 dB	0.64 dB	/CSG-CI-M001
		10 dB ~ 20 dB	0.64 dB	
		20 dB ~ 30 dB	0.69 dB	
		30 dB ~ 40 dB	0.74 dB	
		40 dB ~ 50 dB	0.81 dB	
		50 dB ~ 60 dB	0.87 dB	
		60 dB ~ 70 dB	0.96 dB	
		70 dB ~ 80 dB	1.1 dB	
		80 dB ~ 90 dB	1.1 dB	
		90 dB ~ 100 dB	1.2 dB	
		100 dB ~ 110 dB	1.3 dB	
		(30 MHz ~ 1 GHz)		
		0 dB ~ 10 dB	0.64 dB	
		10 dB ~ 20 dB	0.64 dB	
		20 dB ~ 30 dB	0.69 dB	
		30 dB ~ 40 dB	0.74 dB	
		40 dB ~ 50 dB	0.81 dB	
		50 dB ~ 60 dB	0.87 dB	
		60 dB ~ 70 dB	0.96 dB	
		70 dB ~ 80 dB	1.1 dB	
		80 dB ~ 90 dB	1.1 dB	
		90 dB ~ 100 dB	1.2 dB	
		100 dB ~ 110 dB	1.3 dB	
		(1 GHz ~ 8 GHz)		
		0 dB ~ 10 dB	0.87 dB	
		10 dB ~ 20 dB	0.87 dB	
		20 dB ~ 30 dB	0.90 dB	
		30 dB ~ 40 dB	0.94 dB	
		40 dB ~ 50 dB	0.99 dB	
		50 dB ~ 60 dB	1.2 dB	
		60 dB ~ 70 dB	1.2 dB	
		70 dB ~ 80 dB	1.2 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Coaxial attenuators	40602			
Variable Attenuation		(1 GHz ~ 8 GHz)		Measuring Receiver
[TYPE N]		80 dB ~ 90 dB	1.3 dB	/CSG-CI-M001
		(8 GHz ~ 12.4 GHz)		
		0 dB ~ 10 dB	0.87 dB	
		10 dB ~ 20 dB	0.87 dB	
		20 dB ~ 30 dB	0.90 dB	
		30 dB ~ 40 dB	0.94 dB	
		40 dB ~ 50 dB	0.99 dB	
		50 dB ~ 60 dB	1.1 dB	
		60 dB ~ 70 dB	1.2 dB	
		70 dB ~ 80 dB	1.2 dB	
		80 dB ~ 90 dB	1.3 dB	
		(12.4 GHz ~ 18 GHz)		
		0 dB ~ 10 dB	0.87 dB	
		10 dB ~ 20 dB	0.87 dB	
		20 dB ~ 30 dB	0.90 dB	
		30 dB ~ 40 dB	0.94 dB	
		40 dB ~ 50 dB	0.99 dB	
		50 dB ~ 60 dB	1.1 dB	
		60 dB ~ 70 dB	1.2 dB	
		70 dB ~ 80 dB	1.2 dB	
		80 dB ~ 90 dB	1.3 dB	
Fixed Attenuation		(DC ~ 30 MHz)		Measuring Receiver
[TYPE 3.5mm]		0 dB ~ 10 dB	0.08 dB	/CSG-CI-M001
		10 dB ~ 20 dB	0.09 dB	
		20 dB ~ 30 dB	0.09 dB	
		(30 MHz ~ 1 GHz)		
		0 dB ~ 10 dB	0.08 dB	
		10 dB ~ 20 dB	0.09 dB	
		20 dB ~ 30 dB	0.09 dB	
		(1 GHz ~ 8 GHz)		
		0 dB ~ 10 dB	0.08 dB	
		10 dB ~ 20 dB	0.09 dB	
		20 dB ~ 30 dB	0.09 dB	
		(8 GHz ~ 12.4 GHz)		
		0 dB ~ 10 dB	0.12 dB	
		10 dB ~ 20 dB	0.12 dB	
		20 dB ~ 30 dB	0.12 dB	
		(12.4 GHz ~ 26.5 GHz)		
		0 dB ~ 10 dB	0.12 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Coaxial attenuators	40602			
Fixed Attenuation		(12.4 GHz ~ 26.5 GHz)		Measuring Receiver
[TYPE 3.5mm]		10 dB ~ 20 dB	0.12 dB	/CSG-CI-M001
		20 dB ~ 30 dB	0.13 dB	
Variable Attenuation		(DC ~ 30 MHz)		Measuring Receiver
[TYPE 3.5mm]		0 dB ~ 10 dB	0.49 dB	/CSG-CI-M001
		10 dB ~ 20 dB	0.50 dB	
		20 dB ~ 30 dB	0.56 dB	
		30 dB ~ 40 dB	0.63 dB	
		40 dB ~ 50 dB	0.72 dB	
		50 dB ~ 60 dB	0.78 dB	
		60 dB ~ 70 dB	0.89 dB	
		70 dB ~ 80 dB	0.95 dB	
		80 dB ~ 90 dB	1.1 dB	
		90 dB ~ 100 dB	1.1 dB	
		100 dB ~ 110 dB	1.2 dB	
		(30 MHz ~ 1 GHz)		
		0 dB ~ 10 dB	0.49 dB	
		10 dB ~ 20 dB	0.50 dB	
		20 dB ~ 30 dB	0.56 dB	
		30 dB ~ 40 dB	0.63 dB	
		40 dB ~ 50 dB	0.72 dB	
		50 dB ~ 60 dB	0.78 dB	
		60 dB ~ 70 dB	0.89 dB	
		70 dB ~ 80 dB	0.95 dB	
		80 dB ~ 90 dB	1.1 dB	
		90 dB ~ 100 dB	1.1 dB	
		100 dB ~ 110 dB	1.2 dB	
		(1 GHz ~ 8 GHz)		
		0 dB ~ 10 dB	0.61 dB	
		10 dB ~ 20 dB	0.62 dB	
		20 dB ~ 30 dB	0.67 dB	
		30 dB ~ 40 dB	0.72 dB	
		40 dB ~ 50 dB	0.80 dB	
		50 dB ~ 60 dB	0.85 dB	
		60 dB ~ 70 dB	0.95 dB	
		70 dB ~ 80 dB	1.1 dB	
		80 dB ~ 90 dB	1.1 dB	
		(8 GHz ~ 12.4 GHz)		
		0 dB ~ 10 dB	0.61 dB	
		10 dB ~ 20 dB	0.62 dB	
		20 dB ~ 30 dB	0.67 dB	
		30 dB ~ 40 dB	0.72 dB	
		40 dB ~ 50 dB	0.80 dB	
		50 dB ~ 60 dB	0.85 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Coaxial attenuators	40602			
Variable Attenuation		(8 GHz ~ 12.4 GHz)		Measuring Receiver
[TYPE 3.5mm]		60 dB ~ 70 dB	0.95 dB	/CSG-CI-M001
		70 dB ~ 80 dB	1.1 dB	
		80 dB ~ 90 dB	1.1 dB	
		(12.4 GHz ~ 26.5 GHz)		
		0 dB ~ 10 dB	0.61 dB	
		10 dB ~ 20 dB	0.62 dB	
		20 dB ~ 30 dB	0.67 dB	
		30 dB ~ 40 dB	0.72 dB	
		40 dB ~ 50 dB	0.80 dB	
		50 dB ~ 60 dB	0.85 dB	
		60 dB ~ 70 dB	0.95 dB	
		70 dB ~ 80 dB	1.1 dB	
		80 dB ~ 90 dB	1.1 dB	
Mobile communication test sets	40621			
RF Generator FM Distortion		800 MHz ~ 2 GHz		Audio Analyzer
		Deviation 4 kHz	0.12 %	/CSG-CI-M013
		Deviation 20 kHz	0.12 %	
RF Generator FM Accuracy		800 MHz ~ 2 GHz		Measuring Receiver
		Deviation 0.5 kHz	35 Hz	/CSG-CI-M013
		Deviation 5 kHz	0.30 kHz	
		Deviation 20 kHz	1.2 kHz	
RF Generator Level Accuracy		800 MHz ~ 2 GHz		Measuring Receiver
		-14 dBm ~ -19 dBm	0.38 dB	/CSG-CI-M013
		-20 dBm ~ -39 dBm	0.38 dB	
		-40 dBm ~ -49 dBm	0.38 dB	
		-50 dBm ~ -59 dBm	0.38 dB	
		-60 dBm ~ -69 dBm	0.53 dB	
		-70 dBm ~ -79 dBm	0.53 dB	
		-80 dBm ~ -99 dBm	0.53 dB	
		-100 dBm ~ -109 dBm	0.53 dB	
		2 GHz ~ 5 GHz		
		0 dBm ~ -110 dBm	0.44 dB	
		5 GHz ~ 6 GHz		
		0 dBm ~ -110 dBm	0.51 dB	
RF Generator Harmonics		2nd Harmonics		Spectrum Analyzer
Spectral Purity		-17 dBm ~ -26 dBm		/CSG-CI-M013
		800 MHz ~ 960 MHz	1.4 dB	
		1.7 GHz ~ 6 GHz	2.6 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Mobile communication test sets	40621			
RF Generator Harmonics		3nd Harmonics		Spectrum Analyzer
Spectral Purity		-17 dBm ~ -26 dBm		/CSG-CI-M013
		800 MHz ~ 960 MHz	1.4 dB	
		1.7 GHz ~ 5 GHz	2.6 dB	
		5 GHz ~ 6 GHz	3.0 dB	
RF Analyzer Level		800 MHz ~ 2 GHz		Power Sensor, Power meter
Accuracy		-14 dBm ~ 8 dBm	0.08 dB	/CSG-CI-M013
		2 GHz ~ 4 GHz		
		3.5 dBm ~ -30 dBm	0.14 dB	
		2 GHz ~ 4 GHz		
		-30 dBm ~ -53 dBm	0.15 dB	
		4 GHz ~ 5 GHz		
		3.5 dBm ~ -30 dBm	0.25 dB	
		4 GHz ~ 5 GHz		
		-30 dBm ~ -53 dBm	0.26 dB	
		5 GHz ~ 6 GHz		
		3.5 dBm ~ -30 dBm	0.34 dB	
		5 GHz ~ 6 GHz		
		-30 dBm ~ -53 dBm	0.35 dB	
RF Analyzer FM Accuracy		800 MHz ~ 2 GHz		Measuring Receiver
		-15 dBm ~ 8 dBm		/CSG-CI-M013
		Mod Rate 100 Hz		
		Deviation 5 kHz	0.31 kHz	
		Deviation 10 kHz	0.60 kHz	
		Mod Rate 1 kHz		
		Deviation 5 kHz	0.31 kHz	
		Deviation 10 kHz	0.60 kHz	
		Mod Rate 10 kHz		
		Deviation 5 kHz	0.31 kHz	
		Deviation 10 kHz	0.59 kHz	
AF Generator Level Accuracy		100 Hz ~ 5 kHz		DMM/CSG-CI-M013
		6 V	8 mV	
		2 V	5 mV	
		600 mV	0.8 mV	
		100 mV	0.12 mV	
AF Analyzer Level Accuracy		200 Hz ~ 10 kHz		DMM/CSG-CI-M013
		5 V	8 mV	
		500 mV	0.8 mV	
		50 mV	0.09 mV	
10 MHz Reference Output Accuracy		10 MHz	0.24 Hz	Frequency Counter /CSG-CI-M013

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Network analyzers	40623			
Frequency Accuracy		50 MHz	11 Hz	Frequency Counter
		134.1 MHz	28 Hz	/CSG-CI-M012
		548 MHz	0.12 kHz	
		3 GHz	0.63 kHz	
		4.5 GHz	0.94 kHz	
		8.5 GHz	1.8 kHz	
		10.5 GHz	2.2 kHz	
		14 GHz	3.0 kHz	
		20 GHz	4.2 kHz	
		30 GHz	6.3 kHz	
		40 GHz	8.4 kHz	
		46 GHz	8.4 kHz	
RF Output Level Accuracy		50 MHz	0.08 dB	Power Sensor,Power Meter
And Flatness		68 MHz	0.08 dB	/CSG-CI-M012
		550 MHz	0.06 dB	
		1 050 MHz	0.07 dB	
		1 550 MHz	0.07 dB	
		2 050 MHz	0.09 dB	
		2 550 MHz	0.09 dB	
		3 025 MHz	0.09 dB	
		3 525 MHz	0.10 dB	
		4 025 MHz	0.10 dB	
		4 500 MHz	0.10 dB	
		5 025 MHz	0.10 dB	
		5 525 MHz	0.09 dB	
		6 025 MHz	0.09 dB	
		6 525 MHz	0.09 dB	
		7 025 MHz	0.09 dB	
		7 525 MHz	0.08 dB	
		8 025 MHz	0.10 dB	
		8 500 MHz	0.10 dB	
		8 525 MHz	0.10 dB	
		9 025 MHz	0.10 dB	
		9 525 MHz	0.09 dB	
		10 025 MHz	0.09 dB	
		10 525 MHz	0.09 dB	
		11 025 MHz	0.09 dB	
		11 525 MHz	0.10 dB	
		12 025 MHz	0.10 dB	
		12 525 MHz	0.10 dB	
		13 025 MHz	0.09 dB	
		13 525 MHz	0.10 dB	
		14 000 MHz	0.10 dB	
		14 025 MHz	0.11 dB	
		14 525 MHz	0.11 dB	

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406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Network analyzers	40623			
RF Output Level Accuracy		15 025 MHz	0.11 dB	Power Sensor,Power Meter
And Flatness		15 525 MHz	0.11 dB	/CSG-CI-M012
		16 025 MHz	0.11 dB	
		16 525 MHz	0.11 dB	
		17 025 MHz	0.11 dB	
		17 525 MHz	0.11 dB	
		18 025 MHz	0.12 dB	
		18 525 MHz	0.12 dB	
		19 025 MHz	0.12 dB	
		19 525 MHz	0.13 dB	
		20 000 MHz	0.13 dB	
		21 000 MHz	0.53 dB	
		22 000 MHz	0.53 dB	
		23 000 MHz	0.53 dB	
		24 000 MHz	0.53 dB	
		25 000 MHz	0.53 dB	
		26 000 MHz	0.53 dB	
		27 000 MHz	0.53 dB	
		28 000 MHz	0.69 dB	
		29 000 MHz	0.69 dB	
		30 000 MHz	0.69 dB	
		31 000 MHz	0.69 dB	
		32 000 MHz	0.69 dB	
		33 000 MHz	0.69 dB	
		34 000 MHz	0.69 dB	
		35 000 MHz	0.69 dB	
		36 000 MHz	0.69 dB	
		37 000 MHz	0.69 dB	
		38 000 MHz	0.69 dB	
		39 000 MHz	0.69 dB	
		40 000 MHz	0.69 dB	
		41 000 MHz	0.85 dB	
		42 000 MHz	0.85 dB	
		43 000 MHz	0.85 dB	
		44 000 MHz	0.85 dB	
		45 000 MHz	0.85 dB	
		46 000 MHz	0.85 dB	
		47 000 MHz	0.85 dB	
		48 000 MHz	0.85 dB	
		49 000 MHz	0.85 dB	
		50 000 MHz	0.85 dB	
		51 000 MHz	0.62 dB	
		52 000 MHz	0.62 dB	
		53 000 MHz	0.62 dB	
		54 000 MHz	0.61 dB	
		55 000 MHz	0.61 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Network analyzers	40623			
RF Output Level Accuracy And Flatness		56 000 MHz	0.61 dB	Power Sensor,Power Meter /CSG-CI-M012
		57 000 MHz	0.61 dB	
		58 000 MHz	0.61 dB	
		59 000 MHz	0.62 dB	
		60 000 MHz	0.62 dB	
		61 000 MHz	0.62 dB	
		62 000 MHz	0.62 dB	
		63 000 MHz	0.62 dB	
		64 000 MHz	0.62 dB	
		65 000 MHz	0.61 dB	
		66 000 MHz	0.61 dB	
		67 000 MHz	0.61 dB	
RF Output Level Linearity		50 MHz		Power Sensor,Power Meter /CSG-CI-M012
		(10 dBm ~ -12.5 dBm)	0.08 dB	
		(-15 dBm ~ -25 dBm)	0.08 dB	
		3 GHz		
		(10 dBm ~ -12.5 dBm)	0.09 dB	
		(-15 dBm ~ -25 dBm)	0.08 dB	
		4.5 GHz		
		(10 dBm ~ -12.5 dBm)	0.10 dB	
		(-15 dBm ~ -25 dBm)	0.08 dB	
		5 GHz		
		(10 dBm ~ -12.5 dBm)	0.10 dB	
		(-15 dBm ~ -25 dBm)	0.08 dB	
		6 GHz		
		(10 dBm ~ -12.5 dBm)	0.09 dB	
		(-15 dBm ~ -25 dBm)	0.08 dB	
		7 GHz		
		(10 dBm ~ -12.5 dBm)	0.09 dB	
		(-15 dBm ~ -25 dBm)	0.08 dB	
		8.5 GHz		
		(9 dBm ~ -12.5 dBm)	0.10 dB	
		(-15 dBm ~ -25 dBm)	0.09 dB	
		10.5 GHz		
		(7 dBm ~ -12.5 dBm)	0.09 dB	
		(-15 dBm ~ -25 dBm)	0.09 dB	
		14 GHz		
		(3 dBm ~ -12.5 dBm)	0.10 dB	
		(-15 dBm ~ -25 dBm)	0.09 dB	
		20 GHz		
		(0 dBm ~ -12.5 dBm)	0.13 dB	
		(-15 dBm ~ -25 dBm)	0.11 dB	
		30 GHz		
		(-15 dBm ~ -25 dBm)	0.12 dB	
		40 GHz		
		(-15 dBm ~ -25 dBm)	0.14 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Network analyzers	40623			
RF Output Level Linearity		50 GHz (-15 dBm ~ -25 dBm)	0.15 dB	Power Sensor,Power Meter /CSG-CI-M012
Dynamic Accuracy		50 MHz (0 dBm ~ -20 dBm) (-30 dBm ~ -60 dBm) (-70 dBm) (-80 dBm) (-90 dBm) (-100 dBm)	 0.069 dB 0.070 dB 0.071 dB 0.072 dB 0.074 dB 0.087 dB	Power Sensor,Step Attenuator /CSG-CI-M012
RF power meters	40635			
Instrument Accuracy (Range)		3 µW 10 µW 30 µW 100 µW 300 µW 1 mW 3 mW 10 mW 30 mW 100 mW	0.43 µW 0.43 µW 0.44 µW 0.44 µW 0.73 µW 0.73 µW 5.8 µW 5.9 µW 0.058 mW 0.059 mW	DC Calibrator/CSG-CI-M006
Power Reference Level		1 mW	4.1 µW	DMM,Power Meter /CSG-CI-M006
Thermocouple power sensor	40637			
Calibration Factor		10 MHz 10 MHz ~ 30 MHz 30 MHz ~ 50 MHz 50 MHz ~ 100 MHz 100 MHz ~ 2 GHz 2 GHz ~ 4 GHz 4 GHz ~ 6 GHz 6 GHz ~ 8 GHz 8 GHz ~ 10 GHz 10 GHz ~ 11 GHz 11 GHz ~ 12 GHz 12 GHz ~ 14 GHz 14 GHz ~ 15 GHz 15 GHz ~ 16 GHz 16 GHz ~ 17 GHz 17 GHz ~ 18 GHz	3.0×10^{-2} 2.1×10^{-2} 1.7×10^{-2} 1.9×10^{-2} 2.0×10^{-2} 2.1×10^{-2} 2.2×10^{-2} 2.1×10^{-2} 2.2×10^{-2} 2.3×10^{-2} 2.2×10^{-2} 2.3×10^{-2} 2.5×10^{-2} 2.8×10^{-2} 3.1×10^{-2} 3.4×10^{-2}	Reference Power Sensors /CSG-CI-M004
Pulse generators	40638			
Periode		1 ns ~ 1 µs 1 µs ~ 1 ms 1 ms ~ 1 s	21 ps 0.58 ns 0.58 µs	Frequency Counter /CSG-CI-M002
Frequency		1 Hz ~ 1 kHz 1 kHz ~ 1 MHz 1 MHz ~ 165 MHz	1.9 mHz 0.1 Hz 0.1 kHz	Frequency Counter /CSG-CI-M002

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406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Pulse generators	40638			
Width		1 ns ~ 10 ns	1 ps	Oscilloscope
		10 ns ~ 100 ns	0.01 ns	/CSG-CI-M002
		100 ns ~ 1 µs	0.1 ns	
		1 µs ~ 1 ms	0.01 µs	
		1 ms ~ 10 ms	1 µs	
		10 ms ~ 1 s	0.1 ms	
DC Level		(0.1 ~ 10) V	0.7 mV	DMM/CSG-CI-M002
RF signal generators	40640			
10 MHz Reference Output Accuracy		10 MHz	0.24 Hz	Frequency Counter /CSG-CI-M009
Power Level Accuracy		0.3 MHz		Measuring Receiver
		(7 dBm ~ -20 dBm)	0.19 dB	/CSG-CI-M009
		1 MHz		
		(7 dBm ~ -20 dBm)	0.19 dB	
		10 MHz		
		(7 dBm ~ -20 dBm)	0.19 dB	
		30 MHz		
		(7 dBm ~ -5 dBm)	0.19 dB	
		(-10 dBm ~ -30 dBm)	0.27 dB	
		(-40 dBm ~ -70 dBm)	0.29 dB	
		(-80 dBm ~ -90 dBm)	0.48 dB	
		(-100 dBm ~ -120 dBm)	0.60 dB	
		300 MHz		
		(7 dBm ~ -5 dBm)	0.19 dB	
		(-10 dBm ~ -30 dBm)	0.27 dB	
		(-40 dBm ~ -70 dBm)	0.29 dB	
		(-80 dBm ~ -90 dBm)	0.48 dB	
		(-100 dBm ~ -120 dBm)	0.60 dB	
		500 MHz		
		(7 dBm ~ -5 dBm)	0.19 dB	
		(-10 dBm ~ -30 dBm)	0.27 dB	
		(-40 dBm ~ -70 dBm)	0.29 dB	
		(-80 dBm ~ -90 dBm)	0.48 dB	
		(-100 dBm ~ -120 dBm)	0.60 dB	
		1 000 MHz		
		(7 dBm ~ -5 dBm)	0.19 dB	
		(-10 dBm ~ -30 dBm)	0.27 dB	
		(-40 dBm ~ -70 dBm)	0.29 dB	
		(-80 dBm ~ -90 dBm)	0.48 dB	
		(-100 dBm ~ -120 dBm)	0.60 dB	
		2 000 MHz		
		(7 dBm ~ -5 dBm)	0.37 dB	
		(-10 dBm ~ -20 dBm)	0.43 dB	
		(-30 dBm ~ -60 dBm)	0.46 dB	
		(-70 dBm ~ -90 dBm)	0.51 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF signal generators	40640			
Power Level Accuracy		3 000 MHz		Measuring Receiver
		(7 dBm ~ -5 dBm)	0.38 dB	/CSG-CI-M009
		(-10 dBm ~ -20 dBm)	0.44 dB	
		(-30 dBm ~ -60 dBm)	0.47 dB	
		(-70 dBm ~ -90 dBm)	0.52 dB	
		4 000 MHz		
		(7 dBm ~ -5 dBm)	0.38 dB	
		(-10 dBm ~ -20 dBm)	0.44 dB	
		(-30 dBm ~ -60 dBm)	0.47 dB	
		(-70 dBm ~ -90 dBm)	0.52 dB	
		5 000 MHz		
		(7 dBm ~ -5 dBm)	0.38 dB	
		(-10 dBm ~ -20 dBm)	0.44 dB	
		(-30 dBm ~ -60 dBm)	0.47 dB	
		(-70 dBm ~ -90 dBm)	0.52 dB	
		6 000 MHz		
		(7 dBm ~ -5 dBm)	0.38 dB	
		(-10 dBm ~ -20 dBm)	0.44 dB	
		(-30 dBm ~ -60 dBm)	0.47 dB	
		(-70 dBm ~ -90 dBm)	0.52 dB	
		8 000 MHz		
		(7 dBm ~ -5 dBm)	0.38 dB	
		(-10 dBm ~ -20 dBm)	0.44 dB	
		(-30 dBm ~ -60 dBm)	0.47 dB	
		(-70 dBm ~ -90 dBm)	0.52 dB	
		10 000 MHz		
		(7 dBm ~ -5 dBm)	0.38 dB	
		(-10 dBm ~ -20 dBm)	0.44 dB	
		(-30 dBm ~ -60 dBm)	0.47 dB	
		(-70 dBm ~ -90 dBm)	0.52 dB	
		14 000 MHz		
		(7 dBm ~ -5 dBm)	0.39 dB	
		(-10 dBm ~ -20 dBm)	0.44 dB	
		(-30 dBm ~ -60 dBm)	0.47 dB	
		(-70 dBm ~ -90 dBm)	0.52 dB	
		18 000 MHz		
		(7 dBm ~ -5 dBm)	0.39 dB	
		(-10 dBm ~ -20 dBm)	0.44 dB	
		(-30 dBm ~ -60 dBm)	0.47 dB	
		(-70 dBm ~ -90 dBm)	0.52 dB	
		22 000 MHz		
		(7 dBm ~ -5 dBm)	0.66 dB	
		(-10 dBm ~ -20 dBm)	0.69 dB	
		(-30 dBm ~ -60 dBm)	0.71 dB	
		(-70 dBm ~ -90 dBm)	0.70 dB	
		26 500 MHz		
		(7 dBm ~ -5 dBm)	0.69 dB	
		(-10 dBm ~ -20 dBm)	0.72 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF signal generators	40640			
Power Level Accuracy		26 500 MHz		Measuring Receiver
		(-30 dBm ~ -60 dBm)	0.73 dB	/CSG-CI-M009
		(-70 dBm ~ -90 dBm)	0.73 dB	
		30 000 MHz		
		(7 dBm ~ -20 dBm)	0.85 dB	
		34 000 MHz		
		(7 dBm ~ -20 dBm)	0.85 dB	
		38 000 MHz		
		(7 dBm ~ -20 dBm)	0.85 dB	
		40 000 MHz		
		(7 dBm ~ -20 dBm)	0.86 dB	
		44 000 MHz		
		(7 dBm ~ -20 dBm)	0.86 dB	
		48 000 MHz		
		(7 dBm ~ -20 dBm)	0.86 dB	
		52 000 MHz		
		(7 dBm ~ -20 dBm)	0.49 dB	
		56 000 MHz		
		(7 dBm ~ -20 dBm)	0.48 dB	
		60 000 MHz		
		(7 dBm ~ -20 dBm)	0.48 dB	
		64 000 MHz		
		(7 dBm ~ -20 dBm)	0.49 dB	
		67 000 MHz		
		(7 dBm ~ -20 dBm)	0.44 dB	
FM Deviation Accuracy		50 kHz ~ 100 kHz	5.9 kHz	Measuring Receiver /CSG-CI-M009
AM Accuracy		300 MHz ~ 1.3 GHz		Measuring Receiver
		30 %	0.48 %	/CSG-CI-M009
		300 MHz ~ 1.3 GHz		
		90 %	1.1 %	
		1.3 GHz ~ 26.5 GHz		
		30 %	0.62 %	
		90 %	1.7 %	
FM Distortion		DC ~ 50 kHz	0.009 %	Audio Analyzer
		50 kHz ~ 100 kHz	0.009 %	/CSG-CI-M009
AM Distortion		501 kHz ~ 26.5 GHz		Audio Analyzer
		30 %	0.009 %	/CSG-CI-M009
		90 %	0.009 %	
Harmonic Spurious		0.25 MHz ~ 10 MHz	0.8 dB	Spectrum Analyzer
		10 MHz ~ 3 GHz	1.4 dB	/CSG-CI-M009
		3 GHz ~ 13.2 GHz	2.6 dB	
		13.2 GHz ~ 19 GHz	3.0 dB	
		19 GHz ~ 26.5 GHz	3.9 dB	

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406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF spectrum analyzers	40641			
10 MHz Reference Output Accuracy		10 MHz	0.23 Hz	Frequency Counter /CSG-CI-M011
Power Bandwidth Accuracy		RBW 3 Hz ~1 MHz	0.08 dB	Spectrum Analyzer /CSG-CI-M011
Resolution Bandwidth Switching Uncertainty		RBW 300 Hz ~ 8 MHz	0.08 dB	Spectrum Analyzer /CSG-CI-M011
Displayed Average Noise Level		5 MHz	0.7 dB	Spectrum Analyzer /CSG-CI-M011
		2 GHZ	1.8 dB	
		6 GHZ	2.3 dB	
		13 GHZ	2.7 dB	
		20 GHZ	2.1 dB	
		26.5 GHZ	2.7 dB	
		40 GHZ	2.7 dB	
		50 GHZ	2.7 dB	
Frequency Readout Accuracy		517.590 MHz Span 1.98 MHz	2 kHz	Spectrum Analyzer /CSG-CI-M011
		832.500 MHz Span 1.98 MHz	2 kHz	
		1 505.00 MHz Span 318 MHz	0.31 MHz	
		1 505.00 MHz Span 127.2 MHz	0.12 MHz	
		1 505.00 MHz Span 54.1 MHz	0.05 MHz	
		1 505.000 0 MHz Span 7.95 MHz	7.7 kHz	
		1 505.0 MHz Span 106 MHz	0.1 MHz	
Frequency Span Accuracy		517.590 MHz Span 1 MHz	3 kHz	Spectrum Analyzer /CSG-CI-M011
		517.590 MHz Span 1.98 MHz	6 kHz	
		628.600 MHz Span 1.98 MHz	6 kHz	
		819.600 MHz Span 1.98 MHz	6 kHz	
		832.500 MHz Span 1 MHz	3 kHz	
		832.500 MHz Span 1.98 MHz	6 kHz	
		832.500 MHz Span 2 MHz	6 kHz	

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406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF spectrum analyzers	40641			
Frequency Span Accuracy		832.500 MHz Span 100 MHz	0.3 MHz	Spectrum Analyzer /CSG-CI-M011
Count Accuracy		1 GHz	0.6 Hz	Spectrum Analyzer /CSG-CI-M011
Absolute Amplitude Accuracy		-10 dBm ~ -50 dBm	0.25 dB	Power Sensor,Step Attenuator /CSG-CI-M011
Frequency Response		50 MHz	0.08 dB	Power Sensor, Power Splitter /CSG-CI-M011
		150 MHz	0.08 dB	
		350 MHz	0.08 dB	
		550 MHz	0.08 dB	
		750 MHz	0.08 dB	
		950 MHz	0.08 dB	
		1 150 MHz	0.08 dB	
		1 350 MHz	0.08 dB	
		1 550 MHz	0.08 dB	
		1 750 MHz	0.08 dB	
		1 950 MHz	0.08 dB	
		2 150 MHz	0.08 dB	
		2 350 MHz	0.08 dB	
		2 550 MHz	0.08 dB	
		2 750 MHz	0.08 dB	
		2 950 MHz	0.08 dB	
		3 150 MHz	0.08 dB	
		3 350 MHz	0.08 dB	
		3 550 MHz	0.08 dB	
		3 650 MHz	0.08 dB	
		3 850 MHz	0.08 dB	
		4 050 MHz	0.08 dB	
		4 250 MHz	0.08 dB	
		4 450 MHz	0.08 dB	
		4 650 MHz	0.08 dB	
		4 850 MHz	0.08 dB	
		5 050 MHz	0.08 dB	
		5 250 MHz	0.08 dB	
		5 450 MHz	0.08 dB	
		5 650 MHz	0.08 dB	
		5 850 MHz	0.08 dB	
		6 050 MHz	0.09 dB	
		6 250 MHz	0.09 dB	
		6 450 MHz	0.09 dB	
		6 650 MHz	0.09 dB	
		6 850 MHz	0.09 dB	
		7 050 MHz	0.09 dB	
		7 250 MHz	0.09 dB	
		7 450 MHz	0.09 dB	
		7 650 MHz	0.09 dB	

406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF spectrum analyzers	40641			
Frequency Response		7 850 MHz	0.09 dB	Power Sensor, Power Splitter
		8 050 MHz	0.09 dB	/CSG-CI-M011
		8 250 MHz	0.09 dB	
		8 450 MHz	0.09 dB	
		8 650 MHz	0.09 dB	
		8 850 MHz	0.09 dB	
		9 050 MHz	0.09 dB	
		9 250 MHz	0.09 dB	
		9 450 MHz	0.09 dB	
		9 650 MHz	0.09 dB	
		9 850 MHz	0.09 dB	
		10 050 MHz	0.09 dB	
		11 050 MHz	0.09 dB	
		12 050 MHz	0.09 dB	
		13 050 MHz	0.09 dB	
		14 050 MHz	0.09 dB	
		15 050 MHz	0.09 dB	
		16 050 MHz	0.09 dB	
		17 050 MHz	0.09 dB	
		18 050 MHz	0.12 dB	
		19 050 MHz	0.12 dB	
		20 050 MHz	0.12 dB	
		21 050 MHz	0.12 dB	
		22 050 MHz	0.12 dB	
		23 050 MHz	0.12 dB	
		24 050 MHz	0.12 dB	
		25 050 MHz	0.12 dB	
		26 050 MHz	0.12 dB	
		26 450 MHz	0.12 dB	
		27 050 MHz	0.14 dB	
		28 050 MHz	0.14 dB	
		29 050 MHz	0.14 dB	
		30 050 MHz	0.14 dB	
		31 050 MHz	0.14 dB	
		32 050 MHz	0.14 dB	
		33 050 MHz	0.14 dB	
		34 050 MHz	0.14 dB	
		35 050 MHz	0.14 dB	
		36 050 MHz	0.14 dB	
		37 050 MHz	0.14 dB	
		38 050 MHz	0.14 dB	
		39 050 MHz	0.22 dB	
		40 050 MHz	0.19 dB	
		41 050 MHz	0.19 dB	
		42 050 MHz	0.19 dB	
		43 050 MHz	0.19 dB	
		44 050 MHz	0.19 dB	
		45 050 MHz	0.22 dB	

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406. Radio frequency measurement

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
RF spectrum analyzers	40641			
Frequency Response		46 050 MHz	0.22 dB	Power Sensor, Power Splitter
		47 050 MHz	0.22 dB	/CSG-CI-M011
		48 050 MHz	0.22 dB	
		49 050 MHz	0.22 dB	
		50 050 MHz	0.22 dB	