



Certificate of Accreditation

To Keysight Technologies Japan G.K.

IAJapan hereby accredits the following laboratory as a calibration laboratory based on the Measurement Law as it meets the requirements of relevant international standards. This laboratory also meets the requirements for Mutual Recognition Arrangements (MRA) of ILAC and APLAC.

Accreditation No. JCSS0100

Name of Laboratory

Electronic Measurements Service Center,
Keysight Technologies Japan G.K.

Address of Laboratory

9-1 Takakura-cho, Hachioji-shi, Tokyo 192-8550,
Japan

Accreditation Scope

Time & Frequency,
Electricity (Direct Current & Low Frequency),
Electricity (High Frequency) & Electromagnetic
Fields (as attached)

Accreditation Criterion ISO/IEC 17025:2005

Date of Initial Accreditation: 2001-10-23

Latest Date of Issue: 2015-12-11

Hideyuki Ota

Chief Executive, IAJapan

National Institute of Technology and Evaluation

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- International Accreditation Japan (IAJapan) is a laboratory accreditation body which has signed MRAs of ILAC (International Laboratory Accreditation Cooperation) and APLAC (Asia Pacific Laboratory Accreditation Cooperation).
 - MRA requirements are, in addition to relevant international standards and guides, requirements for participation in proficiency testing programmes, surveillance and reassessment, and the policy for the traceability of measurement for MRA purpose.
 - This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system. The management system requirements in ISO/IEC 17025:2005 meet the principles of ISO 9001:2008 and are aligned with its pertinent requirements.

General Field of Calibration : Time & Frequency

Date of Initial Accreditation of the Field : 2009-03-31

Permanent Laboratory/On-site Calibration :Permanent Laboratory

Type of Service		Calibration Scope	CMC(Level of Confidence Approximately 95 %)
Time & Frequency Counter, etc.	Frequency Standards	1 MHz, 5 MHz, 10 MHz	1.6×10^{-12}
	Frequency Generator	From 100 Hz less than 200 kHz	2.9×10^{-10}
		From 200 kHz up to 12.4 GHz	1.3×10^{-10}
		More than 12.4 GHz up to 26.5 GHz	9.8×10^{-11}
		More than 26.5 GHz up to 46 GHz	5.8×10^{-11}
	Frequency Counter	From 100 Hz less than 200 kHz	2.9×10^{-10}
		From 200 kHz up to 12.4 GHz	1.3×10^{-10}
		More than 12.4 GHz up to 26.5 GHz	9.8×10^{-11}
More than 26.5 GHz up to 46 GHz		5.8×10^{-11}	

*The values in the CMC column exclude sources of uncertainty attributed to a unit under test.

General Field of Calibration: Electricity(Direct Current & Low Frequency)

Date of Initial Accreditation of the Field : 2001-10-23

Permanent Laboratory/On-site Calibration :Permanent Laboratory

Type of Service		Calibration Scope	CMC(Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc	DC Resistance Box	10 Ω	5.0 μΩ/Ω
		100 Ω	3.9 μΩ/Ω
		1 kΩ	2.2 μΩ/Ω
		10 kΩ	2.3 μΩ/Ω
		100 kΩ	2.9 μΩ/Ω
		1 MΩ	6.0 μΩ/Ω
		10 MΩ	18 μΩ/Ω
		More than 0 Ω up to 12 Ω	$18 \mu\Omega/\Omega \times R + 68 \mu\Omega$
		More than 12 Ω less than 100 Ω	$15 \mu\Omega/\Omega \times R + 0.68 \text{ m}\Omega$
		More than 100 Ω up to 1.2 kΩ	$13 \mu\Omega/\Omega \times R + 0.68 \text{ m}\Omega$
		More than 1.2 kΩ up to 12 kΩ	$13 \mu\Omega/\Omega \times R + 6.8 \text{ m}\Omega$
		More than 12 kΩ up to 120 kΩ	$13 \mu\Omega/\Omega \times R + 0.068 \Omega$
		More than 120 kΩ up to 1.2 MΩ	$18 \mu\Omega/\Omega \times R + 2.27 \Omega$
		More than 1.2 MΩ up to 12 MΩ	$53 \mu\Omega/\Omega \times R + 104 \Omega$
	More than 12 MΩ up to 120 MΩ	$0.503 \text{ m}\Omega/\Omega \times R + 3.16 \text{ k}\Omega$	
	More than 120 MΩ up to 1.2 GΩ	$5.00 \text{ m}\Omega/\Omega \times R + 226 \text{ k}\Omega$	
	DC Resistance Measuring Equipment	10 Ω	4.6 μΩ/Ω
		100 Ω	4.1 μΩ/Ω
		1 kΩ	2.3 μΩ/Ω
		10 kΩ	2.2 μΩ/Ω
		100 kΩ	2.6 μΩ/Ω
		1 MΩ	5.7 μΩ/Ω
		10 MΩ	17 μΩ/Ω
		More than 0 Ω up to 12 Ω	$18 \mu\Omega/\Omega \times R + 68 \mu\Omega$
		More than 12 Ω less than 100 Ω	$15 \mu\Omega/\Omega \times R + 0.68 \text{ m}\Omega$
		More than 100 Ω up to 1.2 kΩ	$13 \mu\Omega/\Omega \times R + 0.68 \text{ m}\Omega$
		More than 1.2 kΩ up to 12 kΩ	$13 \mu\Omega/\Omega \times R + 6.8 \text{ m}\Omega$
		More than 12 kΩ up to 120 kΩ	$13 \mu\Omega/\Omega \times R + 0.068 \Omega$
More than 120 kΩ up to 1.2 MΩ		$18 \mu\Omega/\Omega \times R + 2.27 \Omega$	
More than 1.2 MΩ up to 12 MΩ		$53 \mu\Omega/\Omega \times R + 104 \Omega$	
More than 12 MΩ up to 120 MΩ	$0.503 \text{ m}\Omega/\Omega \times R + 3.16 \text{ k}\Omega$		
More than 120 MΩ up to 1.2 GΩ	$5.00 \text{ m}\Omega/\Omega \times R + 226 \text{ k}\Omega$		

[Note] R : Resistance [Ω], V : Voltage[V], I : Current[A]

Type of Service		Calibration Scope	CMC(Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc	DC voltage Source	0.1 V	3.5 $\mu\text{V}/\text{V}$
		1.0 V	2.1 $\mu\text{V}/\text{V}$
		10 V	0.82 $\mu\text{V}/\text{V}$
		100 V	2.2 $\mu\text{V}/\text{V}$
		1000 V	3.8 $\mu\text{V}/\text{V}$
		More than 0 V less than 0.1 V	$7.05 \mu\text{V}/\text{V} \times V + 0.36 \mu\text{V}$
		More than 0.1 V up to 1.2 V	$6.05 \mu\text{V}/\text{V} \times V + 0.36 \mu\text{V}$
		More than 1.2 V up to 12 V	$6.05 \mu\text{V}/\text{V} \times V + 0.80 \mu\text{V}$
		More than 12 V up to 120 V	$8.05 \mu\text{V}/\text{V} \times V + 36 \mu\text{V}$
		More than 120 V up to 1050 V	$\left\{ 8.05 \mu\text{V}/\text{V} + 12 \mu\text{V}/\text{V} \times \left(\frac{V}{1000 \text{ V}} \right)^2 \right\} \times V + 0.13 \text{ mV}$
	More than 1050 V up to 3000 V	46 $\mu\text{V}/\text{V}$	
	DC voltage Measuring Equipment	0.1 V	3.8 $\mu\text{V}/\text{V}$
		1.0 V	2.2 $\mu\text{V}/\text{V}$
		10 V	0.96 $\mu\text{V}/\text{V}$
		100 V	2.0 $\mu\text{V}/\text{V}$
		1000 V	3.7 $\mu\text{V}/\text{V}$
		More than 0 V less than 0.1 V	$7.05 \mu\text{V}/\text{V} \times V + 0.36 \mu\text{V}$
		More than 0.1 V up to 1.2 V	$6.05 \mu\text{V}/\text{V} \times V + 0.36 \mu\text{V}$
		More than 1.2 V up to 12 V	$6.05 \mu\text{V}/\text{V} \times V + 0.80 \mu\text{V}$
		More than 12 V up to 120 V	$8.05 \mu\text{V}/\text{V} \times V + 36 \mu\text{V}$
More than 120 V up to 1050 V		$\left\{ 8.05 \mu\text{V}/\text{V} + 12 \mu\text{V}/\text{V} \times \left(\frac{V}{1000 \text{ V}} \right)^2 \right\} \times V + 0.13 \text{ mV}$	
More than 1050 V up to 3000 V	46 $\mu\text{V}/\text{V}$		

[Note] R : Resistance [Ω], V : Voltage[V], I : Current[A]

Type of Service		Calibration Scope	CMC(Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc	Direct Current Source	10 pA	0.085 %
		100 pA	0.068 %
		1 nA	0.022 %
		10 nA	0.014 %
		100 nA	63 μ A/A
		1 μ A	73 μ A/A
		10 μ A	18 μ A/A
		100 μ A	7.2 μ A/A
		1 mA	7.1 μ A/A
		10 mA	7.4 μ A/A
		100 mA	13 μ A/A
		1 A	39 μ A/A
		More than 0 A up to 120 μ A	25 μ A/A $\times I$ + 0.95 nA
		More than 120 μ A up to 1.2 mA	25 μ A/A $\times I$ + 6.5 nA
		More than 1.2 mA up to 12 mA	25 μ A/A $\times I$ + 65 nA
		More than 12 mA up to 120 mA	40 μ A/A $\times I$ + 0.65 μ A
		More than 120 mA up to 1.0 A	115 μ A/A $\times I$ + 11.5 μ A
		More than 1.0 A less than 2 A	52 μ A/A
		From 2 A less than 3 A	37 μ A/A
		From 3 A less than 5 A	32 μ A/A
	From 5 A less than 10 A	29 μ A/A	
	From 10 A up to 15 A	28 μ A/A	
	More than 15 A up to 20 A	30 μ A/A	
	Direct Current Measuring Equipment	10 pA	0.084 %
		100 pA	0.068 %
		1 nA	0.021 %
		10 nA	0.013 %
		100 nA	42 μ A/A
		1 μ A	25 μ A/A
		10 μ A	20 μ A/A
		100 μ A	7.4 μ A/A
		1 mA	7.2 μ A/A
		10 mA	7.4 μ A/A
		100 mA	16 μ A/A
1 A		42 μ A/A	
More than 0 A up to 120 μ A		25 μ A/A $\times I$ + 0.95 nA	
More than 120 μ A up to 1.2 mA		25 μ A/A $\times I$ + 6.5 nA	
More than 1.2 mA up to 12 mA	25 μ A/A $\times I$ + 65 nA		
More than 12 mA up to 120 mA	40 μ A/A $\times I$ + 0.65 μ A		
More than 120 mA up to 1.0 A	115 μ A/A $\times I$ + 11.5 μ A		
More than 1.0 A less than 2 A	52 μ A/A		
From 2 A less than 3 A	37 μ A/A		
From 3 A less than 5 A	32 μ A/A		
From 5 A less than 10 A	29 μ A/A		
From 10 A up to 15 A	30 μ A/A		
More than 15 A up to 20 A	34 μ A/A		

[Note] R : Resistance [Ω], V : Voltage[V], I : Current[A]

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc	AC Voltage Source	10 mV	1 kHz	96 $\mu\text{V}/\text{V}$
		0.1 V	1 kHz	38 $\mu\text{V}/\text{V}$
		1.0 V	1 kHz	38 $\mu\text{V}/\text{V}$
		10 V	20 Hz	49 $\mu\text{V}/\text{V}$
		10 V	1 kHz	35 $\mu\text{V}/\text{V}$
		10 V	20 kHz	59 $\mu\text{V}/\text{V}$
		10 V	100 kHz	71 $\mu\text{V}/\text{V}$
		10 V	1 MHz	0.030 %
		100 V	1 kHz	47 $\mu\text{V}/\text{V}$
		700 V	1 kHz	69 $\mu\text{V}/\text{V}$
		From 1.2 mV up to 12 mV	From 1 Hz less than 40 Hz	$0.30 \text{ mV}/\text{V} \times V + 3.0 \mu\text{V}$
			From 40 Hz up to 1 kHz	$0.20 \text{ mV}/\text{V} \times V + 1.1 \mu\text{V}$
			More than 1 kHz up to 20 kHz	$0.30 \text{ mV}/\text{V} \times V + 1.1 \mu\text{V}$
			More than 20 kHz up to 50 kHz	$1.0 \text{ mV}/\text{V} \times V + 1.1 \mu\text{V}$
			More than 50 kHz up to 100 kHz	$1.0 \text{ mV}/\text{V} \times V + 5.0 \mu\text{V}$
			More than 100 kHz up to 1 MHz	$12 \text{ mV}/\text{V} \times V + 5.0 \mu\text{V}$
			More than 1 MHz up to 4 MHz	$70 \text{ mV}/\text{V} \times V + 7.0 \mu\text{V}$
			More than 4 MHz up to 8 MHz	$200 \text{ mV}/\text{V} \times V + 8.0 \mu\text{V}$
		More than 12 mV up to 120 mV	From 1 Hz less than 40 Hz	$72 \mu\text{V}/\text{V} \times V + 4.0 \mu\text{V}$
			From 40 Hz up to 1 kHz	$72 \mu\text{V}/\text{V} \times V + 2.0 \mu\text{V}$
			More than 1 kHz up to 20 kHz	$0.14 \text{ mV}/\text{V} \times V + 2.0 \mu\text{V}$
			More than 20 kHz up to 50 kHz	$0.30 \text{ mV}/\text{V} \times V + 2.0 \mu\text{V}$
			More than 50 kHz up to 100 kHz	$0.80 \text{ mV}/\text{V} \times V + 2.0 \mu\text{V}$
			More than 100 kHz up to 300 kHz	$3.0 \text{ mV}/\text{V} \times V + 10 \mu\text{V}$
			More than 300 kHz up to 1 MHz	$10 \text{ mV}/\text{V} \times V + 10 \mu\text{V}$
			More than 1 MHz up to 2 MHz	$15 \text{ mV}/\text{V} \times V + 10 \mu\text{V}$
			More than 2 MHz up to 4 MHz	$40 \text{ mV}/\text{V} \times V + 0.070 \text{ mV}$
			More than 4 MHz up to 8 MHz	$40 \text{ mV}/\text{V} \times V + 0.080 \text{ mV}$
		More than 8 MHz up to 10 MHz	$150 \text{ mV}/\text{V} \times V + 0.10 \text{ mV}$	
		More than 120 mV up to 1.2 V	From 1 Hz less than 40 Hz	$72 \mu\text{V}/\text{V} \times V + 40 \mu\text{V}$
			From 40 Hz up to 1 kHz	$72 \mu\text{V}/\text{V} \times V + 20 \mu\text{V}$
			More than 1 kHz up to 20 kHz	$0.14 \text{ mV}/\text{V} \times V + 20 \mu\text{V}$
			More than 20 kHz up to 50 kHz	$0.30 \text{ mV}/\text{V} \times V + 20 \mu\text{V}$
			More than 50 kHz up to 100 kHz	$0.80 \text{ mV}/\text{V} \times V + 20 \mu\text{V}$
			More than 100 kHz up to 300 kHz	$3.0 \text{ mV}/\text{V} \times V + 0.10 \text{ mV}$
			More than 300 kHz up to 1 MHz	$10 \text{ mV}/\text{V} \times V + 0.10 \text{ mV}$
			More than 1 MHz up to 2 MHz	$15 \text{ mV}/\text{V} \times V + 0.10 \text{ mV}$
			More than 2 MHz up to 4 MHz	$40 \text{ mV}/\text{V} \times V + 0.70 \text{ mV}$
			More than 4 MHz up to 8 MHz	$40 \text{ mV}/\text{V} \times V + 0.80 \text{ mV}$
		More than 8 MHz up to 10 MHz	$150 \text{ mV}/\text{V} \times V + 1.0 \text{ mV}$	
		From 200 mV up to 1.5 V	From 10 Hz up to 100 kHz	0.16 %
			More than 100 kHz up to 500 kHz	0.21 %
			More than 500 kHz up to 1 MHz	0.25 %
More than 1 MHz up to 2 MHz	0.32 %			
More than 2 MHz up to 3 MHz	0.37 %			
More than 3 MHz up to 4 MHz	0.42 %			
More than 4 MHz up to 5 MHz	0.46 %			
More than 5 MHz less than 10 MHz	0.64 %			

[Note] R : Resistance [Ω], V : Voltage[V], I : Current[A]

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc	AC Voltage Source	More than 1.5 V up to 4.5 V	From 10 Hz up to 100 kHz	0.20 %
			More than 100 kHz up to 500 kHz	0.24 %
			More than 500 kHz up to 1 MHz	0.28 %
			More than 1 MHz up to 2 MHz	0.34 %
			More than 2 MHz up to 3 MHz	0.39 %
			More than 3 MHz up to 4 MHz	0.44 %
			More than 4 MHz up to 5 MHz	0.47 %
			More than 5 MHz less than 10 MHz	0.66 %
		More than 1.2 V up to 12 V	From 1 Hz less than 40 Hz	$72 \mu\text{V}/\text{V} \times V + 0.40 \text{ mV}$
			From 40 Hz up to 1 kHz	$72 \mu\text{V}/\text{V} \times V + 0.20 \text{ mV}$
			More than 1 kHz up to 20 kHz	$0.14 \text{ mV}/\text{V} \times V + 0.20 \text{ mV}$
			More than 20 kHz up to 50 kHz	$0.30 \text{ mV}/\text{V} \times V + 0.20 \text{ mV}$
			More than 50 kHz up to 100 kHz	$0.80 \text{ mV}/\text{V} \times V + 0.20 \text{ mV}$
			More than 100 kHz up to 300 kHz	$3.0 \text{ mV}/\text{V} \times V + 1.0 \text{ mV}$
			More than 300 kHz up to 1 MHz	$10 \text{ mV}/\text{V} \times V + 1.0 \text{ mV}$
			More than 1 MHz up to 2 MHz	$15 \text{ mV}/\text{V} \times V + 1.0 \text{ mV}$
			More than 2 MHz up to 4 MHz	$40 \text{ mV}/\text{V} \times V + 7.0 \text{ mV}$
			More than 4 MHz up to 8 MHz	$40 \text{ mV}/\text{V} \times V + 8.0 \text{ mV}$
			More than 8 MHz up to 10 MHz	$150 \text{ mV}/\text{V} \times V + 10 \text{ mV}$
		More than 12 V up to 120 V	From 1 Hz less than 40 Hz	$0.20 \text{ mV}/\text{V} \times V + 4.0 \text{ mV}$
			From 40 Hz up to 1 kHz	$0.20 \text{ mV}/\text{V} \times V + 2.0 \text{ mV}$
			More than 1 kHz up to 20 kHz	$0.20 \text{ mV}/\text{V} \times V + 2.0 \text{ mV}$
			More than 20 kHz up to 50 kHz	$0.35 \text{ mV}/\text{V} \times V + 2.0 \text{ mV}$
			More than 50 kHz up to 100 kHz	$1.2 \text{ mV}/\text{V} \times V + 2.0 \text{ mV}$
			More than 100 kHz up to 300 kHz	$4.0 \text{ mV}/\text{V} \times V + 10 \text{ mV}$
			More than 300 kHz up to 1 MHz	$15 \text{ mV}/\text{V} \times V + 10 \text{ mV}$
		More than 120 V up to 700 V	From 1 Hz less than 40 Hz	$0.40 \text{ mV}/\text{V} \times V + 40 \text{ mV}$
			From 40 Hz up to 1 kHz	$0.40 \text{ mV}/\text{V} \times V + 20 \text{ mV}$
			More than 1 kHz up to 20 kHz	$0.60 \text{ mV}/\text{V} \times V + 20 \text{ mV}$
			More than 20 kHz up to 50 kHz	$1.2 \text{ mV}/\text{V} \times V + 20 \text{ mV}$
			More than 50 kHz up to 100 kHz	$3.0 \text{ mV}/\text{V} \times V + 20 \text{ mV}$

[Note] R : Resistance [Ω], V : Voltage[V], I : Current[A]

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc	AC Voltage Measuring Equipment	10 mV	1 kHz	0.010 %
		0.1 V	1 kHz	40 $\mu\text{V}/\text{V}$
		1.0 V	1 kHz	39 $\mu\text{V}/\text{V}$
		10 V	20 Hz	50 $\mu\text{V}/\text{V}$
		10 V	1 kHz	35 $\mu\text{V}/\text{V}$
		10 V	20 kHz	63 $\mu\text{V}/\text{V}$
		10 V	100 kHz	75 $\mu\text{V}/\text{V}$
		10 V	1 MHz	0.030 %
		100 V	1 kHz	44 $\mu\text{V}/\text{V}$
		700 V	1 kHz	72 $\mu\text{V}/\text{V}$
		From 1.2 mV up to 12 mV	From 1 Hz less than 40 Hz	$0.30 \text{ mV}/\text{V} \times V + 3.0 \mu\text{V}$
			From 40 Hz up to 1 kHz	$0.20 \text{ mV}/\text{V} \times V + 1.1 \mu\text{V}$
			More than 1 kHz up to 20 kHz	$0.30 \text{ mV}/\text{V} \times V + 1.1 \mu\text{V}$
			More than 20 kHz up to 50 kHz	$1.0 \text{ mV}/\text{V} \times V + 1.1 \mu\text{V}$
			More than 50 kHz up to 100 kHz	$1.0 \text{ mV}/\text{V} \times V + 5.0 \mu\text{V}$
			More than 100 kHz up to 1 MHz	$12 \text{ mV}/\text{V} \times V + 5.0 \mu\text{V}$
			More than 1 MHz up to 4 MHz	$70 \text{ mV}/\text{V} \times V + 7.0 \mu\text{V}$
			More than 4 MHz up to 8 MHz	$200 \text{ mV}/\text{V} \times V + 8.0 \mu\text{V}$
		More than 12 mV up to 120 mV	From 1 Hz less than 40 Hz	$72 \mu\text{V}/\text{V} \times V + 4.0 \mu\text{V}$
			From 40 Hz up to 1 kHz	$72 \mu\text{V}/\text{V} \times V + 2.0 \mu\text{V}$
			More than 1 kHz up to 20 kHz	$0.14 \text{ mV}/\text{V} \times V + 2.0 \mu\text{V}$
			More than 20 kHz up to 50 kHz	$0.30 \text{ mV}/\text{V} \times V + 2.0 \mu\text{V}$
			More than 50 kHz up to 100 kHz	$0.80 \text{ mV}/\text{V} \times V + 2.0 \mu\text{V}$
			More than 100 kHz up to 300 kHz	$3.0 \text{ mV}/\text{V} \times V + 10 \mu\text{V}$
			More than 300 kHz up to 1 MHz	$10 \text{ mV}/\text{V} \times V + 10 \mu\text{V}$
			More than 1 MHz up to 2 MHz	$15 \text{ mV}/\text{V} \times V + 10 \mu\text{V}$
			More than 2 MHz up to 4 MHz	$40 \text{ mV}/\text{V} \times V + 0.070 \text{ mV}$
			More than 4 MHz up to 8 MHz	$40 \text{ mV}/\text{V} \times V + 0.080 \text{ mV}$
		More than 8 MHz up to 10 MHz	$150 \text{ mV}/\text{V} \times V + 0.10 \text{ mV}$	
		More than 120 mV up to 1.2 V	From 1 Hz less than 40 Hz	$72 \mu\text{V}/\text{V} \times V + 40 \mu\text{V}$
			From 40 Hz up to 1 kHz	$72 \mu\text{V}/\text{V} \times V + 20 \mu\text{V}$
			More than 1 kHz up to 20 kHz	$0.14 \text{ mV}/\text{V} \times V + 20 \mu\text{V}$
			More than 20 kHz up to 50 kHz	$0.30 \text{ mV}/\text{V} \times V + 20 \mu\text{V}$
			More than 50 kHz up to 100 kHz	$0.80 \text{ mV}/\text{V} \times V + 20 \mu\text{V}$
			More than 100 kHz up to 300 kHz	$3.0 \text{ mV}/\text{V} \times V + 0.10 \text{ mV}$
			More than 300 kHz up to 1 MHz	$10 \text{ mV}/\text{V} \times V + 0.10 \text{ mV}$
			More than 1 MHz up to 2 MHz	$15 \text{ mV}/\text{V} \times V + 0.10 \text{ mV}$
			More than 2 MHz up to 4 MHz	$40 \text{ mV}/\text{V} \times V + 0.70 \text{ mV}$
			More than 4 MHz up to 8 MHz	$40 \text{ mV}/\text{V} \times V + 0.80 \text{ mV}$
		More than 8 MHz up to 10 MHz	$150 \text{ mV}/\text{V} \times V + 1.0 \text{ mV}$	

[Note] R : Resistance [Ω], V : Voltage[V], I : Current[A]

Type of Service		Calibration Scope	CMC(Level of Confidence Approximately 95 %)	
Direct Current & Low Frequency Measuring Equipment, etc	AC Voltage Measuring Equipment	From 200 mV up to 1.5 V	From 10 Hz up to 100 kHz	0.14 %
			More than 100 kHz up to 500 kHz	0.19 %
			More than 500 kHz up to 1 MHz	0.23 %
			More than 1 MHz up to 2 MHz	0.30 %
			More than 2 MHz up to 3 MHz	0.35 %
			More than 3 MHz up to 4 MHz	0.40 %
			More than 4 MHz up to 5 MHz	0.44 %
			More than 5 MHz less than 10 MHz	0.62 %
		223.6 mV	From 10 Hz up to 100 kHz	0.058 %
			More than 100 kHz up to 500 kHz	0.14 %
			More than 500 kHz up to 1 MHz	0.19 %
			More than 1 MHz up to 2 MHz	0.26 %
			More than 2 MHz up to 3 MHz	0.32 %
			More than 3 MHz up to 4 MHz	0.37 %
			More than 4 MHz up to 5 MHz	0.41 %
			More than 5 MHz less than 10 MHz	0.58 %
		More than 1.5 V up to 4.5 V	From 10 Hz up to 100 kHz	0.18 %
			More than 100 kHz up to 500 kHz	0.22 %
			More than 500 kHz up to 1 MHz	0.26 %
			More than 1 MHz up to 2 MHz	0.32 %
			More than 2 MHz up to 3 MHz	0.37 %
			More than 3 MHz up to 4 MHz	0.42 %
			More than 4 MHz up to 5 MHz	0.45 %
			More than 5 MHz less than 10 MHz	0.64 %
		More than 1.2 V up to 12 V	From 1 Hz less than 40 Hz	$72 \mu\text{V}/\text{V} \times V + 0.40 \text{ mV}$
			From 40 Hz up to 1 kHz	$72 \mu\text{V}/\text{V} \times V + 0.20 \text{ mV}$
			more than 1 kHz up to 20 kHz	$0.14 \text{ mV}/\text{V} \times V + 0.20 \text{ mV}$
			more than 20 kHz up to 50 kHz	$0.30 \text{ mV}/\text{V} \times V + 0.20 \text{ mV}$
			more than 50 kHz up to 100 kHz	$0.80 \text{ mV}/\text{V} \times V + 0.20 \text{ mV}$
			more than 100 kHz up to 300 kHz	$3.0 \text{ mV}/\text{V} \times V + 1.0 \text{ mV}$
			more than 300 kHz up to 1 MHz	$10 \text{ mV}/\text{V} \times V + 1.0 \text{ mV}$
			more than 1 MHz up to 2 MHz	$15 \text{ mV}/\text{V} \times V + 1.0 \text{ mV}$
			more than 2 MHz up to 4 MHz	$40 \text{ mV}/\text{V} \times V + 7.0 \text{ mV}$
			more than 4 MHz up to 8 MHz	$40 \text{ mV}/\text{V} \times V + 8.0 \text{ mV}$
		More than 12 V up to 120 V	more than 8 MHz up to 10 MHz	$150 \text{ mV}/\text{V} \times V + 10 \text{ mV}$
			From 1 Hz less than 40 Hz	$0.20 \text{ mV}/\text{V} \times V + 4.0 \text{ mV}$
			From 40 Hz up to 1 kHz	$0.20 \text{ mV}/\text{V} \times V + 2.0 \text{ mV}$
			more than 1 kHz up to 20 kHz	$0.20 \text{ mV}/\text{V} \times V + 2.0 \text{ mV}$
			more than 20 kHz up to 50 kHz	$0.35 \text{ mV}/\text{V} \times V + 2.0 \text{ mV}$
			more than 50 kHz up to 100 kHz	$1.2 \text{ mV}/\text{V} \times V + 2.0 \text{ mV}$
			more than 100 kHz up to 300 kHz	$4.0 \text{ mV}/\text{V} \times V + 10 \text{ mV}$
		More than 120 V up to 700 V	more than 300 kHz up to 1 MHz	$15 \text{ mV}/\text{V} \times V + 10 \text{ mV}$
From 1 Hz less than 40 Hz	$0.40 \text{ mV}/\text{V} \times V + 40 \text{ mV}$			
From 40 Hz up to 1 kHz	$0.40 \text{ mV}/\text{V} \times V + 20 \text{ mV}$			
more than 1 kHz up to 20 kHz	$0.60 \text{ mV}/\text{V} \times V + 20 \text{ mV}$			
more than 20 kHz up to 50 kHz	$1.2 \text{ mV}/\text{V} \times V + 20 \text{ mV}$			
	more than 50 kHz up to 100 kHz	$3.0 \text{ mV}/\text{V} \times V + 20 \text{ mV}$		

[Note] R : Resistance [Ω], V : Voltage[V], I : Current[A]

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc	Alternating Current Source	100 μ A	1 kHz	0.012 %
		1 mA	1 kHz	0.011 %
		10 mA	1 kHz	0.011 %
		100 mA	1 kHz	0.011 %
		1 A	1 kHz	0.014 %
		From 6 μ A up to 100 μ A	From 10 Hz less than 20 Hz	4.0 mA/A \times I + 30 nA
			From 20 Hz less than 45 Hz	1.5 mA/A \times I + 30 nA
			From 45 Hz up to 1 kHz	0.61 mA/A \times I + 30 nA
		More than 100 μ A up to 1.2 mA	From 10 Hz less than 20 Hz	4.0 mA/A \times I + 0.20 μ A
			From 20 Hz less than 45 Hz	1.5 mA/A \times I + 0.20 μ A
			From 45 Hz less than 100 Hz	0.61 mA/A \times I + 0.20 μ A
			From 100 Hz up to 5 kHz	0.31 mA/A \times I + 0.20 μ A
		More than 1.2 mA up to 12 mA	From 10 Hz less than 20 Hz	4.0 mA/A \times I + 2.0 μ A
			From 20 Hz less than 45 Hz	1.5 mA/A \times I + 2.0 μ A
			From 45 Hz less than 100 Hz	0.61 mA/A \times I + 2.0 μ A
			From 100 Hz up to 5 kHz	0.31 mA/A \times I + 2.0 μ A
		More than 12 mA up to 120 mA	From 10 Hz less than 20 Hz	4.0 mA/A \times I + 20 μ A
			From 20 Hz less than 45 Hz	1.5 mA/A \times I + 20 μ A
			From 45 Hz less than 100 Hz	0.61 mA/A \times I + 20 μ A
			From 100 Hz up to 5 kHz	0.31 mA/A \times I + 20 μ A
	More than 120 mA up to 1.05 A	From 10 Hz less than 20 Hz	4.0 mA/A \times I + 0.20 mA	
		From 20 Hz less than 45 Hz	1.6 mA/A \times I + 0.20 mA	
		From 45 Hz up to 100 Hz	0.81 mA/A \times I + 0.20 mA	
		More than 100 Hz up to 5 kHz	1.0 mA/A \times I + 0.20 mA	
	Alternating Current Measuring Equipment	100 μ A	1 kHz	0.013 %
		1 mA	1 kHz	0.012 %
		10 mA	1 kHz	0.012 %
		100 mA	1 kHz	0.012 %
		1 A	1 kHz	0.016 %
		From 6 μ A up to 100 μ A	From 10 Hz less than 20 Hz	4.0 mA/A \times I + 30 nA
			From 20 Hz less than 45 Hz	1.5 mA/A \times I + 30 nA
			From 45 Hz up to 1 kHz	0.61 mA/A \times I + 30 nA
		More than 100 μ A up to 1.2 mA	From 10 Hz less than 20 Hz	4.0 mA/A \times I + 0.20 μ A
			From 20 Hz less than 45 Hz	1.5 mA/A \times I + 0.20 μ A
			From 45 Hz less than 100 Hz	0.61 mA/A \times I + 0.20 μ A
			From 100 Hz up to 5 kHz	0.31 mA/A \times I + 0.20 μ A
		More than 1.2 mA up to 12 mA	From 10 Hz less than 20 Hz	4.0 mA/A \times I + 2.0 μ A
			From 20 Hz less than 45 Hz	1.5 mA/A \times I + 2.0 μ A
			From 45 Hz less than 100 Hz	0.61 mA/A \times I + 2.0 μ A
			From 100 Hz up to 5 kHz	0.31 mA/A \times I + 2.0 μ A
More than 12 mA up to 120 mA		From 10 Hz less than 20 Hz	4.0 mA/A \times I + 20 μ A	
		From 20 Hz less than 45 Hz	1.5 mA/A \times I + 20 μ A	
		From 45 Hz less than 100 Hz	0.61 mA/A \times I + 20 μ A	
		From 100 Hz up to 5 kHz	0.31 mA/A \times I + 20 μ A	
More than 120 mA up to 1.05 A	From 10 Hz less than 20 Hz	4.0 mA/A \times I + 0.20 mA		
	From 20 Hz less than 45 Hz	1.6 mA/A \times I + 0.20 mA		
	From 45 Hz up to 100 Hz	0.81 mA/A \times I + 0.20 mA		
	More than 100 Hz up to 5 kHz	1.0 mA/A \times I + 0.20 mA		

[Note] R : Resistance [Ω], V : Voltage[V], I : Current[A]

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Low Frequency Impedance Measuring Equipment, etc	Capacitor	1 pF	1 kHz	Capacitance: 0.061 % D factor: 0.00048
			1 MHz	Capacitance: 0.021 % D factor: 0.000034
		10 pF	1 kHz	Capacitance: 0.017 % D factor: 0.000059
			More than 1 kHz less than 1 MHz	Capacitance: $(-0.0010 \times f^2 + 0.017) \%$ D factor: $-0.000027 \times f^{1.5} + 0.000059$
			1 MHz	Capacitance: 0.016 % D factor: 0.000032
		100 pF	From 100 Hz up to 1 kHz	Capacitance: 0.016 % D factor: 0.000027
			More than 1 kHz less than 1 MHz	Capacitance: 0.016 % D factor: 0.000027
			1 MHz	Capacitance: 0.016 % D factor: 0.000027
		1000 pF	From 20 Hz up to 1 kHz	Capacitance: 0.016 % D factor: 0.000028
			More than 1 kHz less than 1 MHz	Capacitance: $(0.0010 \times f^2 + 0.016) \%$ D factor: $0.000010 \times f^{1.5} + 0.000028$
			1 MHz	Capacitance: 0.017 % D factor: 0.000038
		0.01 μF	From 20 Hz up to 120 Hz	Capacitance: 0.010 % D factor: 0.000023
			1 kHz	Capacitance: 96 μF/F D factor: 0.000023
			10 kHz	Capacitance: 0.010 % D factor: 0.000023
			100 kHz	Capacitance: 0.010 % D factor: 0.000050
		0.1 μF	From 20 Hz up to 120 Hz	Capacitance: 0.010 % D factor: 0.000032
			1 kHz	Capacitance: 97 μF/F D factor: 0.000023
			10 kHz	Capacitance: 0.010 % D factor: 0.000031
			100 kHz	Capacitance: 0.010 % D factor: 0.000066

[Note]f: Frequency under calibration [MHz], D factor: Dissipation factor

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Low Frequency Impedance Measuring Equipment, etc	Capacitor	1 μ F	From 20 Hz up to 120 Hz	Capacitance: 0.011 %
				D factor: 0.000047
			1 kHz	Capacitance: 97 μ F/F
				D factor: 0.000031
			10 kHz	Capacitance: 0.010 %
				D factor: 0.000066
		100 kHz	Capacitance: 0.016 %	
			D factor: 0.00058	
		10 μ F	From 20 Hz up to 120 Hz	Capacitance: 0.011 %
				D factor: 0.000047
			1 kHz	Capacitance: 0.011 %
				D factor: 0.000046
10 kHz	Capacitance: 0.019 %			
	D factor: 0.00028			
100 kHz	Capacitance: 0.075 %			
	D factor: 0.00081			

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Low Frequency Impedance Measuring Equipment, etc	Capacitance Measuring Equipment	1 pF	From 10 Hz up to 1 kHz	Capacitance: 0.017 %
				D factor: 0.000023
			More than 1 kHz less than 1 MHz	Capacitance: $(0.0030 \times f^2 + 0.017) \%$
				D factor: $0.000010 \times f^{1.5} + 0.000023$
			1 MHz	Capacitance: 0.020 %
				D factor: 0.000033
			More than 1 MHz less than 2 MHz	Capacitance: $(0.0047 \times f^2 + 0.015) \%$
				D factor: $0.000017 \times f^{1.5} + 0.000016$
			2 MHz	Capacitance: 0.034 %
				D factor: 0.000064
			More than 2 MHz less than 3 MHz	Capacitance: $(0.0044 \times f^2 + 0.016) \%$
				D factor: $0.000012 \times f^{1.5} + 0.000030$
			3 MHz	Capacitance: 0.056 %
				D factor: 0.000093
			More than 3 MHz less than 4 MHz	Capacitance: $(0.0041 \times f^2 + 0.019) \%$
				D factor: $0.000017 \times f^{1.5} + 0.000059$
			4 MHz	Capacitance: 0.085 %
				D factor: 0.00014
			More than 4 MHz less than 5 MHz	Capacitance: $(0.0039 \times f^2 + 0.023) \%$
				D factor: $0.000019 \times f^{1.5} - 0.000011$
5 MHz	Capacitance: 0.12 %			
	D factor: 0.00020			
More than 5 MHz less than 10 MHz	Capacitance: $(0.0035 \times f^2 + 0.033) \%$			
	D factor: $0.000018 \times f^{1.5} - 0.000024$			
10 MHz	Capacitance: 0.38 %			
	D factor: 0.00057			
More than 10 MHz less than 13 MHz	Capacitance: $(0.077 \times f - 0.39) \%$			
	D factor: $0.000017 \times f^{1.5} + 0.000031$			
13 MHz	Capacitance: 0.61 %			
	D factor: 0.00083			

[Note] f : Frequency under calibration [MHz], D factor: Dissipation factor

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Low Frequency Impedance Measuring Equipment, etc	Capacitance Measuring Equipment	10 pF	From 10 Hz up to 1 kHz	Capacitance: 0.016 %
				D factor: 0.000023
			More than 1 kHz less than 1 MHz	Capacitance: 0.016 %
				D factor: $0.0000010 \times f^{1.5} + 0.000023$
			1 MHz	Capacitance: 0.016 %
				D factor: 0.000024
			More than 1 MHz less than 2 MHz	Capacitance: 0.016 %
				D factor: $0.0000027 \times f^{1.5} + 0.000021$
			2 MHz	Capacitance: 0.016 %
				D factor: 0.000029
			More than 2 MHz less than 3 MHz	Capacitance: 0.016 %
				D factor: $-0.0000013 \times f^{1.5} + 0.000033$
			3 MHz	Capacitance: 0.016 %
				D factor: 0.000026
			More than 3 MHz less than 4 MHz	Capacitance: 0.016 %
				D factor: $0.0000011 \times f^{1.5} + 0.000020$
			4 MHz	Capacitance: 0.016 %
				D factor: 0.000029
			More than 4 MHz less than 5 MHz	Capacitance: 0.016 %
				D factor: $0.0000025 \times f^{1.5} + 0.0000089$
5 MHz	Capacitance: 0.016 %			
	D factor: 0.000037			
More than 5 MHz less than 10 MHz	Capacitance: $(0.000040 \times f^2 + 0.015) \%$			
	D factor: $0.0000020 \times f^{1.5} + 0.000015$			
10 MHz	Capacitance: 0.019 %			
	D factor: 0.000078			
More than 10 MHz less than 13 MHz	Capacitance: $(0.0010 \times f + 0.0089) \%$			
	D factor: $0.0000014 \times f^{1.5} + 0.000034$			
13 MHz	Capacitance: 0.022 %			
	D factor: 0.00010			

[Note]f: Frequency under calibration [MHz], D factor: Dissipation factor

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Low Frequency Impedance Measuring Equipment, etc	Capacitance Measuring Equipment	100 pF	From 10 Hz up to 1 kHz	Capacitance: 0.016 %
				D factor: 0.000023
			More than 1 kHz less than 1 MHz	Capacitance: 0.016 %
				D factor: $0.000010 \times f^{1.5} + 0.000023$
			1 MHz	Capacitance: 0.016 %
				D factor: 0.000024
			More than 1 MHz less than 2 MHz	Capacitance: 0.016 %
				D factor: $0.000027 \times f^{1.5} + 0.000021$
			2 MHz	Capacitance: 0.016 %
				D factor: 0.000029
			More than 2 MHz less than 3 MHz	Capacitance: $(0.00023 \times f^2 + 0.015) \%$
				D factor: $0.000025 \times f^{1.5} + 0.000022$
			3 MHz	Capacitance: 0.017 %
				D factor: 0.000035
			More than 3 MHz less than 4 MHz	Capacitance: $(0.00012 \times f^2 + 0.016) \%$
				D factor: $0.000071 \times f^{1.5} - 0.000021$
			4 MHz	Capacitance: 0.018 %
				D factor: 0.000055
			More than 4 MHz less than 5 MHz	Capacitance: $(0.00022 \times f^2 + 0.014) \%$
				D factor: $0.000031 \times f^{1.5} + 0.000030$
5 MHz	Capacitance: 0.020 %			
	D factor: 0.000065			
More than 5 MHz less than 10 MHz	Capacitance: $(0.00021 \times f^2 + 0.015) \%$			
	D factor: $0.000051 \times f^{1.5} + 0.000076$			
10 MHz	Capacitance: 0.036 %			
	D factor: 0.00017			
More than 10 MHz less than 13 MHz	Capacitance: $(0.0050 \times f - 0.014) \%$			
	D factor: $0.000053 \times f^{1.5} + 0.000041$			
13 MHz	Capacitance: 0.051 %			
	D factor: 0.00025			

[Note]f: Frequency under calibration [MHz], D factor: Dissipation factor

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Low Frequency Impedance Measuring Equipment, etc	Capacitance Measuring Equipment	1000 pF	From 10 Hz up to 1 kHz	Capacitance: 0.016 %
				D factor: 0.000023
			More than 1 kHz less than 1 MHz	Capacitance: $(0.0010 \times f^2 + 0.016) \%$
				D factor: $0.000012 \times f^{1.5} + 0.000023$
			1 MHz	Capacitance: 0.017 %
				D factor: 0.000035
			More than 1 MHz less than 2 MHz	Capacitance: $(0.0023 \times f^2 + 0.015) \%$
				D factor: $0.000018 \times f^{1.5} + 0.000017$
			2 MHz	Capacitance: 0.023 %
				D factor: 0.000068
			More than 2 MHz less than 3 MHz	Capacitance: $(0.0036 \times f^2 + 0.0026) \%$
				D factor: $0.000018 \times f^{1.5} + 0.000018$
			3 MHz	Capacitance: 0.034 %
				D factor: 0.00011
			More than 3 MHz less than 4 MHz	Capacitance: $(0.0021 \times f^2 + 0.016) \%$
				D factor: $0.000018 \times f^{1.5} + 0.000017$
			4 MHz	Capacitance: 0.050 %
				D factor: 0.00016
			More than 4 MHz less than 5 MHz	Capacitance: $(0.0021 \times f^2 + 0.016) \%$
				D factor: $0.000022 \times f^{1.5} - 0.000016$
5 MHz	Capacitance: 0.069 %			
	D factor: 0.00023			
More than 5 MHz less than 10 MHz	Capacitance: $(0.0019 \times f^2 + 0.022) \%$			
	D factor: $0.0000196 \times f^{1.5} + 0.000011$			
10 MHz	Capacitance: 0.21 %			
	D factor: 0.00063			
More than 10 MHz less than 13 MHz	Capacitance: $(0.034 \times f - 0.13) \%$			
	D factor: $0.000019 \times f^{1.5} + 0.000029$			
13 MHz	Capacitance: 0.31 %			
	D factor: 0.00092			

[Note] f : Frequency under calibration [MHz], D factor: Dissipation factor

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Low Frequency Impedance Measuring Equipment, etc	Capacitance Measuring Equipment	0.01 μ F	From 10 Hz up to 120 Hz	Capacitance: 0.011 %
				D factor: 0.000024
			1 kHz	Capacitance: 98 μ F/F
			D factor: 0.000025	
		10 kHz	Capacitance: 0.010 %	
		D factor: 0.000024		
		100 kHz	Capacitance: 0.010 %	
		D factor: 0.000050		
		0.1 μ F	From 10 Hz up to 120 Hz	Capacitance: 0.011 %
				D factor: 0.000033
			1 kHz	Capacitance: 97 μ F/F
			D factor: 0.000024	
		10 kHz	Capacitance: 0.010 %	
		D factor: 0.000031		
		100 kHz	Capacitance: 0.011 %	
		D factor: 0.000067		
		1 μ F	From 10 Hz up to 120 Hz	Capacitance: 0.011 %
				D factor: 0.000047
			1 kHz	Capacitance: 96 μ F/F
			D factor: 0.000031	
10 kHz	Capacitance: 0.011 %			
D factor: 0.000070				
100 kHz	Capacitance: 0.017 %			
D factor: 0.00058				
10 μ F	From 10 Hz up to 120 Hz	Capacitance: 0.011 %		
		D factor: 0.000047		
	1 kHz	Capacitance: 0.011 %		
	D factor: 0.000050			
10 kHz	Capacitance: 0.020 %			
D factor: 0.00029				
100 kHz	Capacitance: 0.075 %			
D factor: 0.00089				

[Note] D factor: Dissipation factor

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Low Frequency Impedance Measuring Equipment, etc	AC Resistance Measuring Equipment	1 Ω	From 5 Hz up to 1 kHz	Parallel Resistance: 0.035 %
		10 Ω	From 5 Hz less than 1 MHz	Parallel Resistance: 0.045 %
				Reactance: 0.0042 Ω
			1 MHz	Parallel Resistance: 0.033 %
			Reactance: 0.0042 Ω	
			2 MHz	Parallel Resistance: 0.056 %
			Reactance: 0.0052 Ω	
			3 MHz	Parallel Resistance: 0.062 %
			Reactance: 0.0051 Ω	
			4 MHz	Parallel Resistance: 0.071 %
			Reactance: 0.0061 Ω	
		5 MHz	Parallel Resistance: 0.10 %	
		Reactance: 0.0074 Ω		
		10 MHz	Parallel Resistance: 0.42 %	
		Reactance: 0.020 Ω		
		13 MHz	Parallel Resistance: 0.62 %	
		Reactance: 0.041 Ω		
		100 Ω	From 5 Hz less than 1 MHz	Parallel Resistance: 0.034 %
				Reactance: 0.042 Ω
			1 MHz	Parallel Resistance: 0.033 %
			Reactance: 0.042 Ω	
			2 MHz	Parallel Resistance: 0.042 %
			Reactance: 0.042 Ω	
			3 MHz	Parallel Resistance: 0.051 %
			Reactance: 0.042 Ω	
		4 MHz	Parallel Resistance: 0.051 %	
		Reactance: 0.042 Ω		
		5 MHz	Parallel Resistance: 0.051 %	
Reactance: 0.042 Ω				
10 MHz	Parallel Resistance: 0.20 %			
Reactance: 0.081 Ω				
13 MHz	Parallel Resistance: 0.30 %			
Reactance: 0.093 Ω				

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Low Frequency Impedance Measuring Equipment, etc	AC Resistance Measuring Equipment	1 k Ω	From 5 Hz up to 100 kHz	Parallel Resistance: 0.033 %
				Susceptance: 0.42 μ S
			More than 100 kHz less than 1 MHz	Parallel Resistance: 0.032 %
				Susceptance: 0.42 μ S
			1 MHz	Parallel Resistance: 0.032 %
				Susceptance: 0.42 μ S
			2 MHz	Parallel Resistance: 0.033 %
				Susceptance: 0.42 μ S
			3 MHz	Parallel Resistance: 0.032 %
				Susceptance: 0.42 μ S
			4 MHz	Parallel Resistance: 0.042 %
				Susceptance: 0.42 μ S
		5 MHz	Parallel Resistance: 0.051 %	
			Susceptance: 0.42 μ S	
		10 MHz	Parallel Resistance: 0.20 %	
			Susceptance: 0.71 μ S	
		13 MHz	Parallel Resistance: 0.30 %	
			Susceptance: 0.71 μ S	
		10 k Ω	From 5 Hz less than 100 kHz	Parallel Resistance: 0.026 %
				Susceptance: 0.046 μ S
			100 kHz	Parallel Resistance: 0.025 %
				Susceptance: 0.046 μ S
		More than 100 kHz less than 1 MHz	Parallel Resistance: 0.032 %	
			Susceptance: 0.046 μ S	
		1 MHz	Parallel Resistance: 0.032 %	
			Susceptance: 0.042 μ S	
		100 k Ω	From 5 Hz less than 100 kHz	Parallel Resistance: 0.033 %
				Susceptance: 0.0042 μ S
100 kHz	Parallel Resistance: 0.032 %			
	Susceptance: 0.0042 μ S			
More than 100 kHz less than 1 MHz	Parallel Resistance: 0.086 %			
	Susceptance: 0.0065 μ S			
1 MHz	Parallel Resistance: 0.032 %			
	Susceptance: 0.0065 μ S			

Permanent Laboratory/On-site Calibration :On-site Calibration

Type of Service		Calibration Scope	CMC(Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc	DC Resistance Box	More than 0 Ω up to 10 Ω	$24 \mu\Omega/\Omega \times R + 88 \mu\Omega$
		More than 10 Ω up to 100 Ω	$21 \mu\Omega/\Omega \times R + 0.88 \text{ m}\Omega$
		More than 100 Ω up to 1 kΩ	$19 \mu\Omega/\Omega \times R + 0.88 \text{ m}\Omega$
		More than 1 kΩ up to 10 kΩ	$19 \mu\Omega/\Omega \times R + 8.8 \text{ m}\Omega$
		More than 10 kΩ up to 100 kΩ	$19 \mu\Omega/\Omega \times R + 0.088 \Omega$
		More than 100 kΩ up to 1 MΩ	$24 \mu\Omega/\Omega \times R + 4.27 \Omega$
		More than 1 MΩ up to 10 MΩ	$93 \mu\Omega/\Omega \times R + 504 \Omega$
		More than 10 MΩ up to 100 MΩ	$0.703 \text{ m}\Omega/\Omega \times R + 7.16 \text{ k}\Omega$
		More than 100 MΩ up to 1 GΩ	$7.00 \text{ m}\Omega/\Omega \times R + 266 \text{ k}\Omega$
	DC Resistance Measuring Equipment	More than 0 Ω up to 10 Ω	$24 \mu\Omega/\Omega \times R + 88 \mu\Omega$
		More than 10 Ω up to 100 Ω	$21 \mu\Omega/\Omega \times R + 0.88 \text{ m}\Omega$
		More than 100 Ω up to 1 kΩ	$19 \mu\Omega/\Omega \times R + 0.88 \text{ m}\Omega$
		More than 1 kΩ up to 10 kΩ	$19 \mu\Omega/\Omega \times R + 8.8 \text{ m}\Omega$
		More than 10 kΩ up to 100 kΩ	$19 \mu\Omega/\Omega \times R + 0.088 \Omega$
		More than 100 kΩ up to 1 MΩ	$24 \mu\Omega/\Omega \times R + 4.27 \Omega$
		More than 1 MΩ up to 10 MΩ	$93 \mu\Omega/\Omega \times R + 504 \Omega$
		More than 10 MΩ up to 100 MΩ	$0.703 \text{ m}\Omega/\Omega \times R + 7.16 \text{ k}\Omega$
		More than 100 MΩ up to 1 GΩ	$7.00 \text{ m}\Omega/\Omega \times R + 266 \text{ k}\Omega$
	DC voltage Source	More than 0 V up to 0.1 V	$13.4 \mu\text{V}/\text{V} \times V + 0.56 \mu\text{V}$
		More than 0.1 V up to 1.0 V	$12.4 \mu\text{V}/\text{V} \times V + 0.56 \mu\text{V}$
		More than 1.0 V up to 10 V	$11 \mu\text{V}/\text{V} \times V + 1.0 \mu\text{V}$
		More than 10 V up to 100 V	$16 \mu\text{V}/\text{V} \times V + 116 \mu\text{V}$
		More than 100 V up to 1000 V	$\{0.016 \text{ mV}/\text{V} + 0.012 \text{ mV}/\text{V} \times \left(\frac{V}{1000 \text{ V}}\right)^2\} \times V + 0.21 \text{ mV}$
	DC voltage Measuring Equipment	More than 0 V up to 0.1 V	$13.4 \mu\text{V}/\text{V} \times V + 0.56 \mu\text{V}$
		More than 0.1 V up to 1.0 V	$12.4 \mu\text{V}/\text{V} \times V + 0.56 \mu\text{V}$
More than 1.0 V up to 10 V		$11 \mu\text{V}/\text{V} \times V + 1.0 \mu\text{V}$	
More than 10 V up to 100 V		$16 \mu\text{V}/\text{V} \times V + 116 \mu\text{V}$	
More than 100 V up to 1000 V		$\{0.016 \text{ mV}/\text{V} + 0.012 \text{ mV}/\text{V} \times \left(\frac{V}{1000 \text{ V}}\right)^2\} \times V + 0.21 \text{ mV}$	

[Note] R : Resistance [Ω], V : Voltage[V], I : Current[A]

Type of Service		Calibration Scope	CMC(Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc	Direct Current Source	10 pA	0.085 %
		100 pA	0.068 %
		1 nA	0.024 %
		10 nA	0.015 %
		100 nA	68 $\mu\text{A}/\text{A}$
		1 μA	78 $\mu\text{A}/\text{A}$
		10 μA	32 $\mu\text{A}/\text{A}$
		More than 0 A up to 100 μA	$45 \mu\text{A}/\text{A} \times I + 1.55 \text{ nA}$
		More than 100 μA up to 1 mA	$45 \mu\text{A}/\text{A} \times I + 10.5 \text{ nA}$
		More than 1 mA up to 10 mA	$45 \mu\text{A}/\text{A} \times I + 105 \text{ nA}$
	More than 10 mA up to 100 mA	$90 \mu\text{A}/\text{A} \times I + 1.05 \mu\text{A}$	
	More than 100 mA up to 1 A	$165 \mu\text{A}/\text{A} \times I + 17.5 \mu\text{A}$	
	Direct Current Measuring Equipment	10 pA	0.084 %
		100 pA	0.068 %
		1 nA	0.023 %
		10 nA	0.014 %
		100 nA	50 $\mu\text{A}/\text{A}$
		1 μA	36 $\mu\text{A}/\text{A}$
		10 μA	33 $\mu\text{A}/\text{A}$
		More than 0 A up to 100 μA	$45 \mu\text{A}/\text{A} \times I + 1.55 \text{ nA}$
More than 100 μA up to 1 mA		$45 \mu\text{A}/\text{A} \times I + 10.5 \text{ nA}$	
More than 1 mA up to 10 mA		$45 \mu\text{A}/\text{A} \times I + 105 \text{ nA}$	
More than 10 mA up to 100 mA	$90 \mu\text{A}/\text{A} \times I + 1.05 \mu\text{A}$		
More than 100 mA up to 1 A	$165 \mu\text{A}/\text{A} \times I + 17.5 \mu\text{A}$		

[Note] R : Resistance [Ω], V : Voltage[V], I : Current[A]

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc	AC voltage Source	From 0.6 mV up to 10 mV	From 10 Hz less than 20 Hz	$4.06 \text{ mV/V} \times V + 33.2 \text{ } \mu\text{V}$
			From 20 Hz less than 40 Hz	$1.56 \text{ mV/V} \times V + 26.2 \text{ } \mu\text{V}$
			From 40 Hz less than 100 Hz	$0.66 \text{ mV/V} \times V + 26.2 \text{ } \mu\text{V}$
			From 100 Hz up to 20 kHz	$0.26 \text{ mV/V} \times V + 26.2 \text{ } \mu\text{V}$
			More than 20 kHz up to 100 kHz	$1.04 \text{ mV/V} \times V + 9.0 \text{ } \mu\text{V}$
			More than 100 kHz up to 1 MHz	$12.04 \text{ mV/V} \times V + 9.0 \text{ } \mu\text{V}$
			More than 1 MHz up to 4 MHz	$70.04 \text{ mV/V} \times V + 11 \text{ } \mu\text{V}$
			More than 4 MHz up to 8 MHz	$200.04 \text{ mV/V} \times V + 12 \text{ } \mu\text{V}$
		More than 10 mV up to 100 mV	From 10 Hz less than 20 Hz	$4.04 \text{ mV/V} \times V + 20 \text{ } \mu\text{V}$
			From 20 Hz less than 40 Hz	$1.54 \text{ mV/V} \times V + 20 \text{ } \mu\text{V}$
			From 40 Hz less than 100 Hz	$0.64 \text{ mV/V} \times V + 10 \text{ } \mu\text{V}$
			From 100 Hz up to 20 kHz	$0.24 \text{ mV/V} \times V + 10 \text{ } \mu\text{V}$
			More than 20 kHz up to 100 kHz	$1.02 \text{ mV/V} \times V + 50.2 \text{ } \mu\text{V}$
			More than 100 kHz up to 1 MHz	$20.02 \text{ mV/V} \times V + 50.2 \text{ } \mu\text{V}$
			More than 1 MHz up to 4 MHz	$40.02 \text{ mV/V} \times V + 0.0702 \text{ mV}$
			More than 4 MHz up to 8 MHz	$40.02 \text{ mV/V} \times V + 0.0802 \text{ mV}$
		More than 100 mV up to 1 V	From 10 Hz less than 20 Hz	$4.04 \text{ mV/V} \times V + 0.20 \text{ mV}$
			From 20 Hz less than 40 Hz	$1.54 \text{ mV/V} \times V + 0.20 \text{ mV}$
			From 40 Hz less than 100 Hz	$0.64 \text{ mV/V} \times V + 0.10 \text{ mV}$
			From 100 Hz up to 20 kHz	$0.24 \text{ mV/V} \times V + 0.10 \text{ mV}$
			More than 20 kHz up to 100 kHz	$1.02 \text{ mV/V} \times V + 0.502 \text{ mV}$
			More than 100 kHz up to 1 MHz	$20.02 \text{ mV/V} \times V + 0.502 \text{ mV}$
			More than 1 MHz up to 4 MHz	$40.02 \text{ mV/V} \times V + 0.702 \text{ mV}$
			More than 4 MHz up to 8 MHz	$40.02 \text{ mV/V} \times V + 0.802 \text{ mV}$
		More than 1 V up to 10 V	From 10 Hz less than 20 Hz	$4.04 \text{ mV/V} \times V + 2.0 \text{ mV}$
			From 20 Hz less than 40 Hz	$1.54 \text{ mV/V} \times V + 2.0 \text{ mV}$
			From 40 Hz less than 100 Hz	$0.64 \text{ mV/V} \times V + 1.0 \text{ mV}$
			From 100 Hz up to 20 kHz	$0.24 \text{ mV/V} \times V + 1.0 \text{ mV}$
			More than 20 kHz up to 100 kHz	$1.02 \text{ mV/V} \times V + 5.02 \text{ mV}$
			More than 100 kHz up to 1 MHz	$20.02 \text{ mV/V} \times V + 5.02 \text{ mV}$
			More than 1 MHz up to 4 MHz	$40.02 \text{ mV/V} \times V + 7.02 \text{ mV}$
			More than 4 MHz up to 8 MHz	$40.02 \text{ mV/V} \times V + 8.02 \text{ mV}$
		More than 10 V up to 100 V	From 10 Hz less than 20 Hz	$4.04 \text{ mV/V} \times V + 20 \text{ mV}$
			From 20 Hz less than 40 Hz	$1.54 \text{ mV/V} \times V + 20 \text{ mV}$
			From 40 Hz less than 100 Hz	$0.64 \text{ mV/V} \times V + 10 \text{ mV}$
			From 100 Hz up to 20 kHz	$0.34 \text{ mV/V} \times V + 10 \text{ mV}$
			More than 20 kHz up to 100 kHz	$1.23 \text{ mV/V} \times V + 2 \text{ mV}$
			More than 100 kHz up to 250 kHz	$20.04 \text{ mV/V} \times V + 0.50 \text{ V}$
			More than 250 kHz up to 500 kHz	$30.04 \text{ mV/V} \times V + 0.60 \text{ V}$
			More than 500 kHz up to 1 MHz	$50.04 \text{ mV/V} \times V + 2.0 \text{ V}$
		More than 100 V up to 700 V	From 10 Hz less than 20 Hz	$4.24 \text{ mV/V} \times V + 0.30 \text{ V}$
			From 20 Hz less than 40 Hz	$1.74 \text{ mV/V} \times V + 0.30 \text{ V}$
			From 40 Hz less than 100 Hz	$0.84 \text{ mV/V} \times V + 0.20 \text{ V}$
			From 100 Hz up to 20 kHz	$0.64 \text{ mV/V} \times V + 0.20 \text{ V}$
			More than 20 kHz up to 50 kHz	$1.54 \text{ mV/V} \times V + 0.40 \text{ V}$
			More than 50 kHz up to 100 kHz	$3.02 \text{ mV/V} \times V + 0.102 \text{ V}$

[Note] R : Resistance [Ω], V : Voltage[V], I : Current[A]

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc	AC voltage Measuring Equipment	From 0.6 mV up to 10 mV	From 10 Hz less than 20 Hz	$4.06 \text{ mV/V} \times V + 33.2 \text{ } \mu\text{V}$
			From 20 Hz less than 40 Hz	$1.56 \text{ mV/V} \times V + 26.2 \text{ } \mu\text{V}$
			From 40 Hz less than 100 Hz	$0.66 \text{ mV/V} \times V + 26.2 \text{ } \mu\text{V}$
			From 100 Hz up to 20 kHz	$0.26 \text{ mV/V} \times V + 26.2 \text{ } \mu\text{V}$
			More than 20 kHz up to 100 kHz	$1.04 \text{ mV/V} \times V + 9.0 \text{ } \mu\text{V}$
			More than 100 kHz up to 1 MHz	$12.04 \text{ mV/V} \times V + 9.0 \text{ } \mu\text{V}$
			More than 1 MHz up to 4 MHz	$70.04 \text{ mV/V} \times V + 11 \text{ } \mu\text{V}$
			More than 4 MHz up to 8 MHz	$200.04 \text{ mV/V} \times V + 12 \text{ } \mu\text{V}$
		More than 10 mV up to 100 mV	From 10 Hz less than 20 Hz	$4.04 \text{ mV/V} \times V + 20 \text{ } \mu\text{V}$
			From 20 Hz less than 40 Hz	$1.54 \text{ mV/V} \times V + 20 \text{ } \mu\text{V}$
			From 40 Hz less than 100 Hz	$0.64 \text{ mV/V} \times V + 10 \text{ } \mu\text{V}$
			From 100 Hz up to 20 kHz	$0.24 \text{ mV/V} \times V + 10 \text{ } \mu\text{V}$
			More than 20 kHz up to 100 kHz	$1.02 \text{ mV/V} \times V + 50.2 \text{ } \mu\text{V}$
			More than 100 kHz up to 1 MHz	$20.02 \text{ mV/V} \times V + 50.2 \text{ } \mu\text{V}$
			More than 1 MHz up to 4 MHz	$40.02 \text{ mV/V} \times V + 0.0702 \text{ mV}$
			More than 4 MHz up to 8 MHz	$40.02 \text{ mV/V} \times V + 0.0802 \text{ mV}$
		More than 100 mV up to 1 V	From 10 Hz less than 20 Hz	$4.04 \text{ mV/V} \times V + 0.20 \text{ mV}$
			From 20 Hz less than 40 Hz	$1.54 \text{ mV/V} \times V + 0.20 \text{ mV}$
			From 40 Hz less than 100 Hz	$0.64 \text{ mV/V} \times V + 0.10 \text{ mV}$
			From 100 Hz up to 20 kHz	$0.24 \text{ mV/V} \times V + 0.10 \text{ mV}$
			More than 20 kHz up to 100 kHz	$1.02 \text{ mV/V} \times V + 0.502 \text{ mV}$
			More than 100 kHz up to 1 MHz	$20.02 \text{ mV/V} \times V + 0.502 \text{ mV}$
			More than 1 MHz up to 4 MHz	$40.02 \text{ mV/V} \times V + 0.702 \text{ mV}$
			More than 4 MHz up to 8 MHz	$40.02 \text{ mV/V} \times V + 0.802 \text{ mV}$
		More than 1 V up to 10 V	From 10 Hz less than 20 Hz	$4.04 \text{ mV/V} \times V + 2.0 \text{ mV}$
			From 20 Hz less than 40 Hz	$1.54 \text{ mV/V} \times V + 2.0 \text{ mV}$
			From 40 Hz less than 100 Hz	$0.64 \text{ mV/V} \times V + 1.0 \text{ mV}$
			From 100 Hz up to 20 kHz	$0.24 \text{ mV/V} \times V + 1.0 \text{ mV}$
			More than 20 kHz up to 100 kHz	$1.02 \text{ mV/V} \times V + 5.02 \text{ mV}$
			More than 100 kHz up to 1 MHz	$20.02 \text{ mV/V} \times V + 5.02 \text{ mV}$
			More than 1 MHz up to 4 MHz	$40.02 \text{ mV/V} \times V + 7.02 \text{ mV}$
			More than 4 MHz up to 8 MHz	$40.02 \text{ mV/V} \times V + 8.02 \text{ mV}$
		More than 10 V up to 100 V	From 10 Hz less than 20 Hz	$4.04 \text{ mV/V} \times V + 20 \text{ mV}$
			From 20 Hz less than 40 Hz	$1.54 \text{ mV/V} \times V + 20 \text{ mV}$
			From 40 Hz less than 100 Hz	$0.64 \text{ mV/V} \times V + 10 \text{ mV}$
			From 100 Hz up to 20 kHz	$0.34 \text{ mV/V} \times V + 10 \text{ mV}$
			More than 20 kHz up to 100 kHz	$1.23 \text{ mV/V} \times V + 2 \text{ mV}$
			More than 100 kHz up to 250 kHz	$20.04 \text{ mV/V} \times V + 0.50 \text{ V}$
			More than 250 kHz up to 500 kHz	$30.04 \text{ mV/V} \times V + 0.60 \text{ V}$
			More than 500 kHz up to 1 MHz	$50.04 \text{ mV/V} \times V + 2.0 \text{ V}$
		More than 100 V up to 700 V	From 10 Hz less than 20 Hz	$4.24 \text{ mV/V} \times V + 0.30 \text{ V}$
			From 20 Hz less than 40 Hz	$1.74 \text{ mV/V} \times V + 0.30 \text{ V}$
			From 40 Hz less than 100 Hz	$0.84 \text{ mV/V} \times V + 0.20 \text{ V}$
			From 100 Hz up to 20 kHz	$0.64 \text{ mV/V} \times V + 0.20 \text{ V}$
			More than 20 kHz up to 50 kHz	$1.54 \text{ mV/V} \times V + 0.40 \text{ V}$
			More than 50 kHz up to 100 kHz	$3.02 \text{ mV/V} \times V + 0.102 \text{ V}$

[Note] R : Resistance [Ω], V : Voltage[V], I : Current[A]

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc	Alternating Current Source	From 6 μ A up to 100 μ A	From 10 Hz less than 20 Hz	4.04 mA/A \times I + 30 nA
			From 20 Hz less than 45 Hz	1.54 mA/A \times I + 30 nA
			From 45 Hz up to 1 kHz	0.65 mA/A \times I + 30 nA
		More than 100 μ A up to 1 mA	From 10 Hz less than 20 Hz	4.04 mA/A \times I + 0.20 μ A
			From 20 Hz less than 45 Hz	1.54 mA/A \times I + 0.20 μ A
			From 45 Hz less than 100 Hz	0.65 mA/A \times I + 0.20 μ A
			From 100 Hz up to 5 kHz	0.35 mA/A \times I + 0.20 μ A
		More than 1 mA up to 10 mA	From 10 Hz less than 20 Hz	4.04 mA/A \times I + 2.0 μ A
			From 20 Hz less than 45 Hz	1.54 mA/A \times I + 2.0 μ A
			From 45 Hz less than 100 Hz	0.65 mA/A \times I + 2.0 μ A
			From 100 Hz up to 5 kHz	0.35 mA/A \times I + 2.0 μ A
		More than 10 mA up to 100 mA	From 10 Hz less than 20 Hz	4.04 mA/A \times I + 20 μ A
	From 20 Hz less than 45 Hz		1.54 mA/A \times I + 20 μ A	
	From 45 Hz less than 100 Hz		0.65 mA/A \times I + 20 μ A	
	From 100 Hz up to 5 kHz		0.35 mA/A \times I + 20 μ A	
	More than 100 mA up to 1 A	From 10 Hz less than 20 Hz	4.04 mA/A \times I + 200 μ A	
		From 20 Hz less than 45 Hz	1.64 mA/A \times I + 200 μ A	
		From 45 Hz up to 100 Hz	0.85 mA/A \times I + 200 μ A	
		More than 100 Hz up to 5 kHz	1.04 mA/A \times I + 200 μ A	
	Alternating Current Measuring Equipment	From 6 μ A up to 100 μ A	From 10 Hz less than 20 Hz	4.04 mA/A \times I + 30 nA
			From 20 Hz less than 45 Hz	1.54 mA/A \times I + 30 nA
			From 45 Hz up to 1 kHz	0.65 mA/A \times I + 30 nA
		More than 100 μ A up to 1 mA	From 10 Hz less than 20 Hz	4.04 mA/A \times I + 0.20 μ A
			From 20 Hz less than 45 Hz	1.54 mA/A \times I + 0.20 μ A
From 45 Hz less than 100 Hz			0.65 mA/A \times I + 0.20 μ A	
From 100 Hz up to 5 kHz			0.35 mA/A \times I + 0.20 μ A	
More than 1 mA up to 10 mA		From 10 Hz less than 20 Hz	4.04 mA/A \times I + 2.0 μ A	
		From 20 Hz less than 45 Hz	1.54 mA/A \times I + 2.0 μ A	
		From 45 Hz less than 100 Hz	0.65 mA/A \times I + 2.0 μ A	
		From 100 Hz up to 5 kHz	0.35 mA/A \times I + 2.0 μ A	
More than 10 mA up to 100 mA		From 10 Hz less than 20 Hz	4.04 mA/A \times I + 20 μ A	
		From 20 Hz less than 45 Hz	1.54 mA/A \times I + 20 μ A	
		From 45 Hz less than 100 Hz	0.65 mA/A \times I + 20 μ A	
		From 100 Hz up to 5 kHz	0.35 mA/A \times I + 20 μ A	
More than 100 mA up to 1 A		From 10 Hz less than 20 Hz	4.04 mA/A \times I + 200 μ A	
		From 20 Hz less than 45 Hz	1.64 mA/A \times I + 200 μ A	
		From 45 Hz up to 100 Hz	0.85 mA/A \times I + 200 μ A	
		More than 100 Hz up to 5 kHz	1.04 mA/A \times I + 200 μ A	

[Note] R : Resistance [Ω], V : Voltage[V], I : Current[A]

General Field of Calibration: Electricity(Direct Current & Low Frequency)

Date of Initial Accreditation of the Field : 2001-10-23

Permanent Laboratory/On-site Calibration :On-site Calibration

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
Low Frequency Impedance Measuring Equipment, etc	Capacitance Measuring Equipment	1 pF	From 10 Hz up to 1 kHz	Capacitance: 0.021 % D factor: 0.000023
			More than 1 kHz less than 1 MHz	Capacitance: $(0.0030 \times f^2 + 0.021) \%$ D factor: $0.000010 \times f^{1.5} + 0.000023$
			1 MHz	Capacitance: 0.024 % D factor: 0.000033
			More than 1 MHz less than 2 MHz	Capacitance: $(0.0040 \times f^2 + 0.020) \%$ D factor: $0.000017 \times f^{1.5} + 0.000016$
			2 MHz	Capacitance: 0.036 % D factor: 0.000064
			More than 2 MHz less than 3 MHz	Capacitance: $(0.0042 \times f^2 + 0.019) \%$ D factor: $0.000012 \times f^{1.5} + 0.000030$
			3 MHz	Capacitance: 0.057 % D factor: 0.000093
			More than 3 MHz less than 4 MHz	Capacitance: $(0.0041 \times f^2 + 0.020) \%$ D factor: $0.000017 \times f^{1.5} + 0.0000059$
			4 MHz	Capacitance: 0.086 % D factor: 0.00014
			More than 4 MHz less than 5 MHz	Capacitance: $(0.0038 \times f^2 + 0.026) \%$ D factor: $0.000019 \times f^{1.5} - 0.000011$
			5 MHz	Capacitance: 0.12 % D factor: 0.00020
			More than 5 MHz less than 10 MHz	Capacitance: $(0.0035 \times f^2 + 0.033) \%$ D factor: $0.000018 \times f^{1.5} - 0.0000024$
			10 MHz	Capacitance: 0.38 % D factor: 0.00057
			More than 10 MHz less than 13 MHz	Capacitance: $(0.077 \times f - 0.39) \%$ D factor: $0.000017 \times f^{1.5} + 0.000031$
			13 MHz	Capacitance: 0.61 % D factor: 0.00083

[Note]f: Frequency under calibration [MHz], D factor: Dissipation factor

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)	
Low Frequency Impedance Measuring Equipment, etc	Capacitance Measuring Equipment	10 pF	From 10 Hz up to 1 kHz	Capacitance: 0.020 %	D factor: 0.000023
			More than 1 kHz less than 1 MHz	Capacitance: 0.020 %	D factor: $0.0000010 \times f^{1.5} + 0.000023$
			1 MHz	Capacitance: 0.020 %	D factor: 0.000024
			More than 1 MHz less than 2 MHz	Capacitance: 0.020 %	D factor: $0.0000027 \times f^{1.5} + 0.000021$
			2 MHz	Capacitance: 0.020 %	D factor: 0.000029
			More than 2 MHz less than 3 MHz	Capacitance: 0.020 %	D factor: $-0.0000013 \times f^{1.5} + 0.000033$
			3 MHz	Capacitance: 0.020 %	D factor: 0.000026
			More than 3 MHz less than 4 MHz	Capacitance: 0.020 %	D factor: $0.0000011 \times f^{1.5} + 0.000020$
			4 MHz	Capacitance: 0.020 %	D factor: 0.000029
			More than 4 MHz less than 5 MHz	Capacitance: $(0.00012 \times f^2 + 0.018) \%$	D factor: $0.0000025 \times f^{1.5} + 0.000089$
			5 MHz	Capacitance: 0.021 %	D factor: 0.000037
			More than 5 MHz less than 10 MHz	Capacitance: $(0.000027 \times f^2 + 0.020) \%$	D factor: $0.0000020 \times f^{1.5} + 0.000015$
			10 MHz	Capacitance: 0.023 %	D factor: 0.000078
			More than 10 MHz less than 13 MHz	Capacitance: $(0.0010 \times f + 0.013) \%$	D factor: $0.0000014 \times f^{1.5} + 0.000034$
			13 MHz	Capacitance: 0.026 %	D factor: 0.00010

[Note]f: Frequency under calibration [MHz], D factor: Dissipation factor

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)	
Low Frequency Impedance Measuring Equipment, etc	Capacitance Measuring Equipment	100 pF	From 10 Hz up to 1 kHz	Capacitance: 0.020 %	D factor: 0.000023
				More than 1 kHz less than 1 MHz	Capacitance: 0.020 %
			1 MHz	Capacitance: 0.020 %	D factor: 0.000024
				More than 1 MHz less than 2 MHz	Capacitance: 0.020 %
			2 MHz	Capacitance: 0.020 %	D factor: 0.000029
				More than 2 MHz less than 3 MHz	Capacitance: $(0.00020 \times f^2 + 0.019) %$
			3 MHz	Capacitance: 0.021 %	D factor: 0.000035
				More than 3 MHz less than 4 MHz	Capacitance: $(0.00014 \times f^2 + 0.020) %$
			4 MHz	Capacitance: 0.022 %	D factor: 0.000055
				More than 4 MHz less than 5 MHz	Capacitance: $(0.00022 \times f^2 + 0.018) %$
			5 MHz	Capacitance: 0.024 %	D factor: 0.000065
				More than 5 MHz less than 10 MHz	Capacitance: $(0.00020 \times f^2 + 0.019) %$
			10 MHz	Capacitance: 0.039 %	D factor: 0.00017
				More than 10 MHz less than 13 MHz	Capacitance: $(0.0047 \times f - 0.0082) %$
			13 MHz	Capacitance: 0.053 %	D factor: 0.00025

[Note]f: Frequency under calibration [MHz], D factor: Dissipation factor

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)	
Low Frequency Impedance Measuring Equipment, etc	Capacitance Measuring Equipment	1000 pF	From 10 Hz up to 1 kHz	Capacitance: 0.020 %	D factor: 0.000023
			More than 1 kHz less than 1 MHz	Capacitance: $(0.0010 \times f^2 + 0.020) \%$	D factor: $0.000012 \times f^{1.5} + 0.000023$
			1 MHz	Capacitance: 0.021 %	D factor: 0.000035
			More than 1 MHz less than 2 MHz	Capacitance: $(0.0017 \times f^2 + 0.019) \%$	D factor: $0.000018 \times f^{1.5} + 0.000017$
			2 MHz	Capacitance: 0.026 %	D factor: 0.000068
			More than 2 MHz less than 3 MHz	Capacitance: $(0.0022 \times f^2 + 0.017) \%$	D factor: $0.000018 \times f^{1.5} + 0.000018$
			3 MHz	Capacitance: 0.037 %	D factor: 0.00011
			More than 3 MHz less than 4 MHz	Capacitance: $(0.0021 \times f^2 + 0.016) \%$	D factor: $0.000018 \times f^{1.5} + 0.000017$
			4 MHz	Capacitance: 0.052 %	D factor: 0.00016
			More than 4 MHz less than 5 MHz	Capacitance: $(0.0021 \times f^2 + 0.016) \%$	D factor: $0.000022 \times f^{1.5} - 0.000016$
			5 MHz	Capacitance: 0.070 %	D factor: 0.00023
			More than 5 MHz less than 10 MHz	Capacitance: $(0.0019 \times f^2 + 0.022) \%$	D factor: $0.0000196 \times f^{1.5} + 0.000011$
			10 MHz	Capacitance: 0.21 %	D factor: 0.00063
			More than 10 MHz less than 13 MHz	Capacitance: $(0.034 \times f - 0.13) \%$	D factor: $0.000019 \times f^{1.5} + 0.000029$
			13 MHz	Capacitance: 0.31 %	D factor: 0.00092

[Note] f : Frequency under calibration [MHz], D factor: Dissipation factor

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)	
Low Frequency Impedance Measuring Equipment, etc	Capacitance Measuring Equipment	0.01 μ F	From 10 Hz up to 120 Hz	Capacitance: 0.011 %	D factor: 0.000024
			1 kHz	Capacitance: 98 μ F/F	D factor: 0.000025
			10 kHz	Capacitance: 0.010 %	D factor: 0.000024
			100 kHz	Capacitance: 0.010 %	D factor: 0.000050
		0.1 μ F	From 10 Hz up to 120 Hz	Capacitance: 0.011 %	D factor: 0.000033
			1 kHz	Capacitance: 97 μ F/F	D factor: 0.000024
			10 kHz	Capacitance: 0.010 %	D factor: 0.000031
			100 kHz	Capacitance: 0.011 %	D factor: 0.000067
		1 μ F	From 10 Hz up to 120 Hz	Capacitance: 0.011 %	D factor: 0.000047
			1 kHz	Capacitance: 96 μ F/F	D factor: 0.000031
			10 kHz	Capacitance: 0.011 %	D factor: 0.000070
			100 kHz	Capacitance: 0.017 %	D factor: 0.00058
	AC Resistance Measuring Equipment	1 $k\Omega$	From 5 Hz up to 100 kHz	Parallel Resistance: 0.033 %	Susceptance: 0.42 μ S
			More than 100 kHz less than 1 MHz	Parallel Resistance: 0.034 %	Susceptance: 0.42 μ S
			1 MHz	Parallel Resistance: 0.032 %	Susceptance: 0.42 μ S
			2 MHz	Parallel Resistance: 0.033 %	Susceptance: 0.42 μ S
			5 MHz	Parallel Resistance: 0.051 %	Susceptance: 0.42 μ S

[Note] D factor: Dissipation factor

General Field of Calibration: Electricity(High Frequency) & Electromagnetic Fields

Date of Initial Accreditation of the Field : 2001-10-23

Permanent Laboratory/On-site Calibration :Permanent Laboratory

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
High Frequency Measuring Equipment, etc	RF Power Source	From 10 nW less than 7.943 μ W	50 MHz	1.8 %
			From 10 MHz up to 2 GHz	2.0 %
			More than 2 GHz up to 6 GHz	2.1 %
			More than 6 GHz up to 12 GHz	2.2 %
			More than 12 GHz up to 16 GHz	2.5 %
			More than 16 GHz up to 18 GHz	2.6 %
		1 mW	50 MHz	0.44 %
		From 7.943 μ W up to 10 mW	9 kHz, 30 kHz, 50 kHz	1.5 %
			100 kHz, 300 kHz, 500 kHz 1 MHz	1.4 %
			3 MHz	1.5 %
			5 MHz	1.7 %
			10 MHz	1.3 %
			30 MHz	1.3 %
			50 MHz	1.2 %
			100 MHz, 300 MHz 500 MHz, 800 MHz, 1 GHz 1.5 GHz, 2 GHz	1.3 %
			3 GHz, 4 GHz, 5 GHz, 6 GHz	1.4 %
			7 GHz, 8 GHz, 9 GHz, 10 GHz,	1.5 %
			11 GHz	1.6 %
			12 GHz, 12.4 GHz, 13 GHz	1.5 %
			14 GHz, 15 GHz, 16 GHz 17 GHz	1.7 %
			18 GHz, 18.5 GHz, 19 GHz	1.8 %
			19.5 GHz, 20 GHz, 20.5 GHz 21 GHz, 21.5 GHz, 22 GHz 22.5 GHz, 23 GHz, 23.5 GHz 24 GHz, 24.5 GHz, 25 GHz	2.1 %
			25.5 GHz, 26 GHz, 26.5 GHz	2.9 %
			More than 9 kHz less than 3 MHz	1.5 %
			More than 3 MHz less than 10 MHz	1.7 %
			More than 10 MHz less than 6 GHz	1.4 %
			More than 6 GHz less than 19 GHz	1.8 %
			More than 19 GHz less than 25 GHz	2.1 %
			More than 25 GHz less than 26.5 GHz	2.9 %

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
High Frequency Measuring Equipment, etc	RF Power Measuring Equipment	From 10 nW less than 7.943 μ W	10 MHz	0.86 % [Note 1]
			30 MHz	0.85 % [Note 1]
			50 MHz	reference [Note 1]
			100 MHz, 300 MHz, 500 MHz 800 MHz, 1 GHz, 1.2 GHz 1.5 GHz, 2 GHz	0.71 % [Note 1]
			3 GHz, 4 GHz, 5 GHz 6 GHz	0.97 % [Note 1]
			7 GHz, 8 GHz, 9 GHz, 10 GHz, 11 GHz, 12 GHz	1.3 % [Note 1]
			12.4 GHz, 13 GHz, 14 GHz 15 GHz, 16 GHz	1.8 % [Note 1]
			17 GHz, 18 GHz	1.9 % [Note 1]
			From 10 MHz less than 50 MHz	2.3 %
			50 MHz	1.9 %
			More than 50 MHz up to 1 GHz	2.0 %
			More than 1 GHz up to 6 GHz	2.2 %
			More than 6 GHz up to 12 GHz	2.3 %
			More than 12 GHz up to 16 GHz	2.8 %
		More than 16 GHz up to 18 GHz	2.9 %	
		1 mW	9 kHz	0.46 % [Note 1]
			More than 9 kHz up to 100 kHz	0.50 % [Note 1]
			More than 100 kHz up to 500 kHz	0.56 % [Note 1]
			More than 500 kHz up to 1 MHz	0.62 % [Note 1]
			More than 1 MHz up to 2 MHz	0.80 % [Note 1]
More than 2 MHz up to 3 MHz	0.88 % [Note 1]			
More than 3 MHz up to 4 MHz	0.99 % [Note 1]			
More than 4 MHz up to 5 MHz	1.1 % [Note 1]			
More than 5 MHz less than 10 MHz	1.4 % [Note 1]			

[Note1] Relative value referring to RF power at 50 MHz

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
High Frequency Measuring Equipment, etc	RF Power Measuring Equipment	From 0.631 mW up to 1.585 mW	9 kHz	0.54 % [Note 1]
			30 kHz, 50 kHz	0.57 % [Note 1]
			100 kHz	0.52 % [Note 1]
			300 kHz	0.57 % [Note 1]
			500 kHz	0.58 % [Note 1]
			1 MHz	0.63 % [Note 1]
			3 MHz	0.89 % [Note 1]
			5 MHz	1.1 % [Note 1]
			10 MHz	0.59 % [Note 1]
			30 MHz	0.45 % [Note 1]
			100 MHz, 300 MHz	0.45 % [Note 1]
			500 MHz, 800 MHz, 1 GHz 1.482 GHz, 1.5 GHz, 2 GHz	0.55 % [Note 1]
			2.5 GHz, 2.6 GHz, 3 GHz	0.63 % [Note 1]
			3.5 GHz, 3.7 GHz	0.65 % [Note 1]
			4 GHz	0.55 % [Note 1]
			4.2 GHz	0.58 % [Note 1]
			5 GHz	0.56 % [Note 1]
			6 GHz	0.55 % [Note 1]
			7 GHz	0.81 % [Note 1]
			8 GHz	0.82 % [Note 1]
			9 GHz	0.89 % [Note 1]
			10 GHz	0.86 % [Note 1]
			11 GHz	0.98 % [Note 1]
			12 GHz, 12.4 GHz, 13 GHz	0.83 % [Note 1]
14 GHz, 15 GHz, 16 GHz 17 GHz, 18 GHz	1.1 % [Note 1]			
18.5 GHz, 19 GHz	1.2 % [Note 1]			
19.5 GHz, 20 GHz, 20.5 GHz 21 GHz, 21.5 GHz, 22 GHz 22.5 GHz, 23 GHz, 23.5 GHz 24 GHz, 24.5 GHz, 25 GHz	1.5 % [Note 1]			
25.5 GHz, 26 GHz, 26.5 GHz	2.5 % [Note 1]			

[Note 1] Relative value referring to RF power at 50 MHz

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
High Frequency Measuring Equipment, etc	RF Power Measuring Equipment	From 7.943 μ W up to 4 mW	9 kHz	0.56 % [Note 1]
			30 kHz, 50 kHz	0.59 % [Note 1]
			100 kHz	0.61 % [Note 1]
			300 kHz, 500 kHz	0.66 % [Note 1]
			1 MHz	0.71 % [Note 1]
			3 MHz	0.95 % [Note 1]
			5 MHz	1.2 % [Note 1]
			10 MHz	0.67 % [Note 1]
			30 MHz	0.55 % [Note 1]
			100 MHz, 300 MHz	0.55 % [Note 1]
			500 MHz	0.63 % [Note 1]
			800 MHz	0.64 % [Note 1]
			1 GHz	0.63 % [Note 1]
			1.482 GHz, 1.5 GHz, 2 GHz	0.64 % [Note 1]
			2.5 GHz, 2.6 GHz, 3 GHz	0.70 % [Note 1]
			3.5 GHz, 3.7 GHz	0.72 % [Note 1]
			4 GHz	0.64 % [Note 1]
			4.2 GHz	0.66 % [Note 1]
			5 GHz	0.65 % [Note 1]
			6 GHz	0.64 % [Note 1]
			7 GHz	0.87 % [Note 1]
			8 GHz	0.88 % [Note 1]
			9 GHz	0.94 % [Note 1]
			10 GHz	0.92 % [Note 1]
			11 GHz	1.0 % [Note 1]
			12 GHz, 12.4 GHz, 13 GHz	0.89 % [Note 1]
			14 GHz, 15 GHz, 16 GHz 17 GHz 18 GHz	1.2 % [Note 1]
			18.5 GHz, 19 GHz	1.3 % [Note 1]
			19.5 GHz, 20 GHz, 20.5 GHz 21 GHz, 21.5 GHz, 22 GHz 22.5 GHz, 23 GHz, 23.5 GHz 24 GHz, 24.5 GHz, 25 GHz	1.6 % [Note 1]
			25.5 GHz, 26 GHz, 26.5 GHz	2.5 % [Note 1]
			From 9 kHz less than 3 MHz	1.6 %
			From 3 MHz less than 10 MHz	1.7 %
From 10 MHz up to 4 GHz	1.4 %			
More than 4 GHz up to 12 GHz	1.9 %			
More than 12 GHz up to 18 GHz	2.1 %			
More than 18 GHz up to 19 GHz	2.3 %			
More than 19 GHz up to 25 GHz	2.5 %			
More than 25 GHz up to 26.5 GHz	3.2 %			

[Note1] Relative value referring to RF power at 50 MHz

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
High Frequency Measuring Equipment, etc	RF Power Measuring Equipment	From 10 mW up to 1.0 W	10 MHz	1.3 % [Note 1]
			30 MHz	0.78 % [Note 1]
			100 MHz, 300 MHz	0.63 % [Note 1]
			500 MHz, 800 MHz, 1 GHz 1.5 GHz, 2 GHz	0.71 % [Note 1]
			2.6 GHz, 3 GHz, 4 GHz	1.2 % [Note 1]
			4.2 GHz, 5 GHz, 6 GHz	1.3 % [Note 1]
			7 GHz, 8 GHz	1.4 % [Note 1]
			9 GHz	1.5 % [Note 1]
			10 GHz	1.4 % [Note 1]
			11 GHz	1.7 % [Note 1]
			12 GHz, 12.4 GHz	1.6 % [Note 1]
			13 GHz	2.5 % [Note 1]
			14 GHz	2.6 % [Note 1]
			15 GHz, 16 GHz	3.0 % [Note 1]
17 GHz, 18 GHz	3.1 % [Note 1]			

[Note1] Relative value referring to RF power at 50 MHz

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
High Frequency Measuring Equipment, etc	RF Voltage Source	From 200 mV up to 1.5 V	10 MHz	0.45 %
			More than 10 MHz up to 20 MHz	0.68 %
			More than 20 MHz up to 30 MHz	0.68 %
			More than 30 MHz up to 40 MHz	0.75 %
			More than 40 MHz up to 50 MHz	0.84 %
			More than 50 MHz up to 60 MHz	0.96 %
			More than 60 MHz up to 70 MHz	1.1 %
			More than 70 MHz up to 80 MHz	1.2 %
		More than 1.5 V up to 4.5 V	10 MHz	0.48 %
			More than 10 MHz up to 20 MHz	0.72 %
			More than 20 MHz up to 30 MHz	0.74 %
			More than 30 MHz up to 40 MHz	0.84 %
			More than 40 MHz up to 50 MHz	0.97 %
			More than 50 MHz up to 60 MHz	1.1 %
	RF Voltage Measuring Equipment	From 200 mV up to 1.5 V	10 MHz	0.43 %
			More than 10 MHz up to 20 MHz	0.66 %
			More than 20 MHz up to 30 MHz	0.67 %
			More than 30 MHz up to 40 MHz	0.71 %
			More than 40 MHz up to 50 MHz	0.77 %
			More than 50 MHz up to 60 MHz	0.84 %
			More than 60 MHz up to 70 MHz	0.92 %
			More than 70 MHz up to 80 MHz	1.0 %
		223.6 mV	10 MHz	0.38 %
			More than 10 MHz less than 20 MHz	0.61 %
			From 20 MHz up to 50 MHz	0.59 %
			More than 50 MHz up to 70 MHz	0.60 %
		More than 1.5 V up to 4.5 V	More than 70 MHz up to 80 MHz	0.61 %
			10 MHz	0.46 %
			More than 10 MHz up to 20 MHz	0.70 %
			More than 20 MHz up to 30 MHz	0.73 %
			More than 30 MHz up to 40 MHz	0.81 %
			More than 40 MHz up to 50 MHz	0.91 %
More than 50 MHz up to 60 MHz	1.0 %			
More than 60 MHz up to 70 MHz	1.2 %			
More than 70 MHz up to 80 MHz	1.3 %			

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
High Frequency Measuring Equipment, etc	Attenuator (50 Ω)	1 dB, 2 dB	From 10 MHz up to 500 MHz	0.0084 dB
			More than 500 MHz up to 1.5 GHz	0.011 dB
		3 dB, 4 dB	More than 1.5 GHz up to 4 GHz	0.017 dB
			5 dB, 6 dB 7 dB	More than 4 GHz up to 8 GHz
		More than 8 GHz up to 14 GHz		0.057 dB
		More than 14 GHz up to 18 GHz		0.078 dB
		8 dB, 9 dB 10 dB, 11 dB	From 10 MHz up to 1.5 GHz	0.0094 dB
			More than 1.5 GHz up to 4 GHz	0.020 dB
			More than 4 GHz up to 8 GHz	0.027 dB
			More than 8 GHz up to 14 GHz	0.050 dB
		20 dB 30 dB	More than 14 GHz up to 18 GHz	0.069 dB
			From 10 MHz up to 1.5 GHz	0.0088 dB
				More than 1.5 GHz up to 4 GHz
			More than 4 GHz up to 8 GHz	0.026 dB
			More than 8 GHz up to 14 GHz	0.046 dB
		40 dB	More than 14 GHz up to 18 GHz	0.073 dB
			From 10 MHz up to 1.5 GHz	0.011 dB
			More than 1.5 GHz up to 4 GHz	0.018 dB
			More than 4 GHz up to 8 GHz	0.027 dB
			More than 8 GHz up to 14 GHz	0.054 dB
		50 dB	More than 14 GHz up to 18 GHz	0.073 dB
			From 10 MHz up to 1.5 GHz	0.014 dB
			More than 1.5 GHz up to 4 GHz	0.020 dB
			More than 4 GHz up to 8 GHz	0.027 dB
			More than 8 GHz up to 14 GHz	0.055 dB
		60 dB	More than 14 GHz up to 18 GHz	0.075 dB
			From 10 MHz up to 2 GHz	0.013 dB
			More than 2 GHz up to 4 GHz	0.017 dB
			More than 4 GHz up to 8 GHz	0.035 dB
			More than 8 GHz up to 14 GHz	0.055 dB
		70 dB	More than 14 GHz up to 18 GHz	0.080 dB
			From 10 MHz up to 2 GHz	0.016 dB
More than 2 GHz up to 4 GHz	0.021 dB			
More than 4 GHz up to 8 GHz	0.035 dB			
More than 8 GHz up to 14 GHz	0.059 dB			
		More than 14 GHz up to 18 GHz	0.081 dB	

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
High Frequency Measuring Equipment, etc	Attenuator (50 Ω)	80 dB	From 10 MHz up to 4 GHz	0.039 dB
			More than 4 GHz up to 10 GHz	0.046 dB
			More than 10 GHz up to 18 GHz	0.092 dB
		90 dB	From 10 MHz up to 10 GHz	0.10 dB
			More than 10 GHz up to 18 GHz	0.21 dB
		100 dB	From 10 MHz up to 10 GHz	0.32 dB
			More than 10 GHz up to 18 GHz	0.59 dB
		110 dB	From 10 MHz up to 10 GHz	0.91 dB
			More than 10 GHz up to 18 GHz	1.6 dB
		From 12 dB up to 69 dB	From 10 MHz up to 300 MHz	0.014 dB
			More than 300 MHz up to 1.5 GHz	0.026 dB
			More than 1.5 GHz up to 4 GHz	0.036 dB
			More than 4 GHz up to 8 GHz	0.062 dB
			More than 8 GHz up to 10 GHz	0.16 dB
			More than 10 GHz up to 14 GHz	0.18 dB
			More than 14 GHz up to 18 GHz	0.29 dB
		From 71 dB up to 79 dB	From 10 MHz up to 300 MHz	0.017 dB
			More than 300 MHz up to 1.5 GHz	0.023 dB
			More than 1.5 GHz up to 4 GHz	0.037 dB
			More than 4 GHz up to 8 GHz	0.062 dB
			More than 8 GHz up to 14 GHz	0.16 dB
		From 81 dB up to 89 dB	More than 14 GHz up to 18 GHz	0.24 dB
			From 10 MHz up to 300 MHz	0.037 dB
			More than 300 MHz up to 1.5 GHz	0.035 dB
			More than 1.5 GHz up to 4 GHz	0.048 dB
			More than 4 GHz up to 8 GHz	0.073 dB
		From 91 dB up to 99 dB	More than 8 GHz up to 10 GHz	0.089 dB
			More than 10 GHz up to 18 GHz	0.22 dB
			From 10 MHz up to 300 MHz	0.088 dB
			More than 300 MHz up to 10 GHz	0.12 dB
More than 10 GHz up to 18 GHz	0.29 dB			
From 101 dB up to 109 dB	From 10 MHz up to 4 GHz	0.32 dB		
	More than 4 GHz up to 10 GHz	0.28 dB		
	More than 10 GHz up to 18 GHz	0.62 dB		

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
High Frequency Measuring Equipment, etc	Attenuator Measuring Equipment (50 Ω)	1 dB, 2 dB 3 dB, 4 dB 5 dB, 6 dB 7 dB, 8 dB 9 dB, 10 dB 11 dB	From 10 MHz up to 300 MHz	0.0066 dB
			More than 300 MHz up to 1.5 GHz	0.010 dB
			More than 1.5 GHz up to 2 GHz	0.016 dB
			More than 2 GHz up to 4 GHz	0.019 dB
			More than 4 GHz up to 8 GHz	0.025 dB
			More than 8 GHz up to 14 GHz	0.053 dB
			More than 14 GHz up to 18 GHz	0.073 dB
		20 dB 30 dB	From 10 MHz up to 2 GHz	0.0099 dB
			More than 2 GHz up to 4 GHz	0.018 dB
			More than 4 GHz up to 8 GHz	0.025 dB
			More than 8 GHz up to 12 GHz	0.037 dB
			More than 12 GHz up to 18 GHz	0.053 dB
		40 dB	From 10 MHz up to 2 GHz	0.012 dB
			More than 2 GHz up to 4 GHz	0.018 dB
			More than 4 GHz up to 8 GHz	0.025 dB
			More than 8 GHz up to 12 GHz	0.036 dB
			More than 12 GHz up to 18 GHz	0.053 dB
		50 dB	From 10 MHz up to 2 GHz	0.012 dB
			More than 2 GHz up to 4 GHz	0.018 dB
			More than 4 GHz up to 8 GHz	0.023 dB
			More than 8 GHz up to 12 GHz	0.038 dB
			More than 12 GHz up to 18 GHz	0.057 dB
		60 dB	From 10 MHz up to 2 GHz	0.012 dB
			More than 2 GHz up to 4 GHz	0.016 dB
			More than 4 GHz up to 8 GHz	0.029 dB
			More than 8 GHz up to 12 GHz	0.051 dB
			More than 12 GHz up to 18 GHz	0.059 dB
		70 dB	From 10 MHz up to 2 GHz	0.015 dB
			More than 2 GHz up to 4 GHz	0.018 dB
			More than 4 GHz up to 8 GHz	0.029 dB
			More than 8 GHz up to 12 GHz	0.056 dB
			More than 12 GHz up to 18 GHz	0.057 dB

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
High Frequency Measuring Equipment, etc	Attenuator Measuring Equipment (50 Ω)	80 dB	From 10 MHz up to 3 GHz	0.032 dB
			More than 3 GHz up to 4 GHz	0.036 dB
			More than 4 GHz up to 10 GHz	0.041 dB
			More than 10 GHz up to 18 GHz	0.077 dB
		90 dB	From 10 MHz up to 10 GHz	0.093 dB
			More than 10 GHz up to 18 GHz	0.19 dB
		100 dB	From 10 MHz up to 10 GHz	0.28 dB
			More than 10 GHz up to 18 GHz	0.55 dB
		110 dB	From 10 MHz up to 10 GHz	0.84 dB
			More than 10 GHz up to 18 GHz	1.6 dB
		From 12 dB up to 39 dB	From 10 MHz up to 300 MHz	0.0097 dB
			More than 300 MHz up to 500 MHz	0.014 dB
			More than 500 MHz up to 1.195 GHz	0.026 dB
			More than 1.195 GHz up to 1.5 GHz	0.020 dB
			More than 1.5 GHz up to 4 GHz	0.035 dB
			More than 4 GHz up to 8 GHz	0.058 dB
			More than 8 GHz up to 14 GHz	0.16 dB
		From 41 dB up to 69 dB	More than 14 GHz up to 18 GHz	0.26 dB
			From 10 MHz up to 500 MHz	0.015 dB
			More than 500 MHz up to 1.195 GHz	0.024 dB
			More than 1.195 GHz up to 1.5 GHz	0.021 dB
			More than 1.5 GHz up to 4 GHz	0.035 dB
			More than 4 GHz up to 8 GHz	0.057 dB
			More than 8 GHz up to 14 GHz	0.18 dB
		From 71 dB up to 79 dB	More than 14 GHz up to 18 GHz	0.29 dB
			From 10 MHz up to 500 MHz	0.016 dB
			More than 500 MHz up to 1.195 GHz	0.022 dB
			More than 1.195 GHz up to 1.5 GHz	0.023 dB
			More than 1.5 GHz up to 4 GHz	0.037 dB
			More than 4 GHz up to 8 GHz	0.060 dB
		From 81 dB up to 89 dB	More than 8 GHz up to 14 GHz	0.16 dB
			More than 14 GHz up to 18 GHz	0.23 dB
			From 10 MHz up to 1.5 GHz	0.034 dB
			More than 1.5 GHz up to 4 GHz	0.046 dB
			More than 4 GHz up to 10 GHz	0.085 dB
		From 91 dB up to 99 dB	More than 10 GHz up to 12 GHz	0.12 dB
			More than 12 GHz up to 18 GHz	0.22 dB
			From 10 MHz up to 4 GHz	0.093 dB
			More than 4 GHz up to 10 GHz	0.12 dB
		From 101 dB up to 109 dB	More than 10 GHz up to 12 GHz	0.20 dB
More than 12 GHz up to 18 GHz	0.28 dB			
From 10 MHz up to 10 GHz	0.28 dB			
More than 10 GHz up to 18 GHz	0.58 dB			

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
High Frequency Measuring Equipment, etc	RF Impedance (One Port) (Type-N 50 Ω)	Reflection Coefficient up to 0.2	40 MHz	Amplitude: 0.0045 phase: arcsin(0.0045/ Reflection Coefficient)
			50 MHz, 100 MHz, 300 MHz 500 MHz, 800 MHz, 1 GHz 1.2 GHz, 1.5 GHz, 2 GHz	Amplitude: 0.0040 phase: arcsin(0.0040/ Reflection Coefficient)
			2.6 GHz, 3 GHz	Amplitude: 0.0035 phase: arcsin(0.0035/ Reflection Coefficient)
			4 GHz, 4.2 GHz, 5 GHz, 6 GHz 7 GHz, 8 GHz, 9 GHz	Amplitude: 0.0040 phase: arcsin(0.0040/ Reflection Coefficient)
			10 GHz, 11 GHz, 12 GHz	Amplitude: 0.0047 phase: arcsin(0.0047/ Reflection Coefficient)
			12.4 GHz, 13 GHz, 14 GHz 15 GHz, 16 GHz, 17 GHz 18 GHz	Amplitude: 0.0057 phase: arcsin(0.0057/ Reflection Coefficient)
	RF Impedance (One Port) (Type-3.5 mm 50 Ω)	Reflection Coefficient up to 0.2	100 MHz, 300 MHz, 500 MHz 1 GHz, 1.5 GHz, 2 GHz	Amplitude: 0.0042 phase: arcsin(0.0042/ Reflection Coefficient)
			3 GHz, 4 GHz, 5 GHz 6 GHz, 7 GHz, 8 GHz	Amplitude: 0.0048 phase: arcsin(0.0048/ Reflection Coefficient)
			9 GHz, 10 GHz, 11 GHz 12 GHz, 12.4 GHz, 13 GHz 14 GHz, 15 GHz, 16 GHz 17 GHz, 18 GHz, 18.5 GHz 19 GHz, 19.5 GHz, 20 GHz	Amplitude: 0.0057 phase: arcsin(0.0057/ Reflection Coefficient)
			20.5 GHz, 21 GHz, 21.5 GHz 22 GHz, 22.5 GHz, 23 GHz 23.5 GHz, 24 GHz, 24.5 GHz 25 GHz, 25.5 GHz, 26 GHz, 26.5 GHz	Amplitude: 0.0064 phase: arcsin(0.0064/ Reflection Coefficient)

[Note]Phase Unit: ° (If equation is undefined, Uncertainty is 180 degree.)

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
High Frequency Measuring Equipment , etc	RF Impedance (One Port) (Type-N 50 Ω)	Reflection Coefficient up to 1.0	40 MHz, 100 MHz, 250 MHz, 300 MHz, 500 MHz, 700 MHz, 750 MHz, 1.0 GHz, 1.3 GHz, 1.7 GHz, 2.0 GHz, 2.5 GHz, 3.0 GHz, 3.5 GHz, 4.0 GHz, 4.5 GHz, 5.0 GHz, 5.5 GHz, 6 GHz, 7 GHz, 8 GHz, 9 GHz, 10 GHz, 11 GHz, 12 GHz, 13 GHz, 13.5 GHz, 14 GHz, 15 GHz, 16 GHz, 17 GHz, 18 GHz	Amplitude $U(\Gamma_{DUT}) = a_4 P^4 + a_3 P^3$ $+ a_2 P^2 + a_1 P + b$ $U(\Gamma_{DUT})_{dB} = 20 \log(1 + U(\Gamma_{DUT}))$ $a_1 = c_{12} \Gamma_{DUT} ^2 + c_{11} \Gamma_{DUT} + d_1$ $a_2 = c_{22} \Gamma_{DUT} ^2 + c_{21} \Gamma_{DUT} + d_2$ $a_3 = c_{32} \Gamma_{DUT} ^2 + c_{31} \Gamma_{DUT} + d_3$ $a_4 = c_{42} \Gamma_{DUT} ^2 + c_{41} \Gamma_{DUT} + d_4$ $b = c_{02} \Gamma_{DUT} ^2 + c_{01} \Gamma_{DUT} + d_0$
	RF Impedance (One Port) (Type-3.5 mm 50 Ω)	Reflection Coefficient up to 1.0	100 MHz, 300 MHz, 500 MHz, 1.0 GHz, 1.3 GHz, 1.7 GHz, 2 GHz, 3 GHz, 4 GHz, 5 GHz, 6 GHz, 7 GHz, 8 GHz, 9 GHz, 10 GHz, 11 GHz, 12 GHz, 13 GHz, 13.5 GHz, 14 GHz, 15 GHz, 16 GHz, 17 GHz, 18 GHz, 19 GHz, 20 GHz, 22 GHz, 24 GHz, 26 GHz, 26.5 GHz	
	RF Impedance (Two Ports) (Type-N 50 Ω)	Reflection Coefficient up to 1.0	40 MHz, 100 MHz, 250 MHz, 300 MHz, 500 MHz, 700 MHz, 750 MHz, 1.0 GHz, 1.3 GHz, 1.7 GHz, 2.0 GHz, 2.5 GHz, 3.0 GHz, 3.5 GHz, 4.0 GHz, 4.5 GHz, 5.0 GHz, 5.5 GHz, 6 GHz, 7 GHz, 8 GHz, 9 GHz, 10 GHz, 11 GHz, 12 GHz, 13 GHz, 13.5 GHz, 14 GHz, 15 GHz, 16 GHz, 17 GHz, 18 GHz	phase Type-N $U(\angle \Gamma_{DUT}) = \sin^{-1}(U(\Gamma_{DUT})/ \Gamma_{DUT})$ Type-3.5mm $U(\angle \Gamma_{DUT}) = \sin^{-1}(U(\Gamma_{DUT})/ \Gamma_{DUT})$ $+ 1.41^\circ$
	RF Impedance (Two Ports) (Type-3.5 mm 50 Ω)	Reflection Coefficient up to 1.0	100 MHz, 300 MHz, 500 MHz, 1.0 GHz, 1.3 GHz, 1.7 GHz, 2 GHz, 3 GHz, 4 GHz, 5 GHz, 6 GHz, 7 GHz, 8 GHz, 9 GHz, 10 GHz, 11 GHz, 12 GHz, 13 GHz, 13.5 GHz, 14 GHz, 15 GHz, 16 GHz, 17 GHz, 18 GHz, 19 GHz, 20 GHz, 22 GHz, 24 GHz, 26 GHz, 26.5 GHz	

[Note]Phase Unit: ° (If equation is undefined, Uncertainty is 180 degree.)

Γ_{DUT} : Reflection coefficient of the DUT, P:Phase of the reflection coefficient of the DUT,

X_{DUT} : transmission coefficient of the DUT.

Type of Service		Calibration Scope		CMC(Level of Confidence Approximately 95 %)
High Frequency Measuring Equipment, etc	RF Impedance (Two Ports) (Type-N 50 Ω)	[Transmission Coefficient] From 0.001 up to 1.0 (S ₂₁ , S ₁₂) From 0 dB up to 60 dB	40 MHz, 100 MHz, 250 MHz, 300 MHz, 500 MHz, 700 MHz, 750 MHz, 1.0 GHz, 1.3 GHz, 1.7 GHz, 2.0 GHz, 2.5 GHz, 3.0 GHz, 3.5 GHz, 4.0 GHz, 4.5 GHz, 5.0 GHz, 5.5 GHz, 6 GHz, 7 GHz, 8 GHz, 9 GHz, 10 GHz, 11 GHz, 12 GHz, 13 GHz, 13.5 GHz, 14 GHz, 15 GHz, 16 GHz, 17 GHz, 18 GHz	Amplitude $U(X_{DUT}) = e_3 X_{DUT} ^3 + e_2 X_{DUT} ^2 + e_1 X_{DUT} + f$ $U(X_{DUT})_{dB} = 20 \log(1 + U(X_{DUT}))$
	RF Impedance (Two Ports) (Type-3.5 mm 50 Ω)	[Transmission Coefficient] From 0.001 up to 1.0 (S ₂₁ , S ₁₂) From 0 dB up to 60 dB	100 MHz, 300 MHz, 500 MHz, 1.0 GHz, 1.3 GHz, 1.7 GHz, 2 GHz, 3 GHz, 4 GHz, 5 GHz, 6 GHz, 7 GHz, 8 GHz, 9 GHz, 10 GHz, 11 GHz, 12 GHz, 13 GHz, 13.5 GHz, 14 GHz, 15 GHz, 16 GHz, 17 GHz, 18 GHz, 19 GHz, 20 GHz, 22 GHz, 24 GHz, 26 GHz, 26.5 GHz	phase Type-N $U(\angle X_{DUT}) = g X_{DUT} ^h$ Type-3.5mm $U(\angle X_{DUT}) = g X_{DUT} ^h + 1.41^\circ$

[Note]Phase Unit: ° (If equation is undefined, Uncertainty is 180 degree.)

Γ_{DUT} : Reflection coefficient of the DUT, P:Phase of the reflection coefficient of the DUT,

X_{DUT} : transmission coefficient of the DUT.

$c_{ij}, d_i, e_i, f, g, h$ are numerical value in the following table.

Type-N 50 Ω	40 MHz, 100 MHz, 250 MHz, 300 MHz, 500 MHz, 700 MHz, 750 MHz, 1.0 GHz, 1.3 GHz, 1.7 GHz, 2.0 GHz, 2.5 GHz, 3.0 GHz	$c_{42} = 9.47 \times 10^{-12}$, $c_{41} = 4.55 \times 10^{-11}$, $d_4 = -1.65 \times 10^{-12}$ $c_{32} = -2.33 \times 10^{-9}$, $c_{31} = -1.64 \times 10^{-8}$, $d_3 = 5.85 \times 10^{-10}$ $c_{22} = 2.34 \times 10^{-9}$, $c_{21} = 1.55 \times 10^{-6}$, $d_2 = -5.23 \times 10^{-8}$ $c_{12} = -1.03 \times 10^{-5}$, $c_{11} = -9.09 \times 10^{-6}$, $d_1 = 3.32 \times 10^{-7}$ $c_{02} = 1.11 \times 10^{-2}$, $c_{01} = -1.81 \times 10^{-3}$, $d_0 = 5.26 \times 10^{-3}$ $e_3 = -0.00491$, $e_2 = 0.0102$, $e_1 = 0.00304$, $f = 0.00178$ $g = 0.546$, $h = -0.0705$
	3.5 GHz, 4.0 GHz, 4.5 GHz, 5.0 GHz, 5.5 GHz, 6 GHz, 7 GHz, 8 GHz, 9 GHz	$c_{42} = 7.97 \times 10^{-12}$, $c_{41} = 5.20 \times 10^{-11}$, $d_4 = -1.92 \times 10^{-12}$ $c_{32} = -2.11 \times 10^{-9}$, $c_{31} = -1.88 \times 10^{-8}$, $d_3 = 6.85 \times 10^{-10}$ $c_{22} = 5.20 \times 10^{-8}$, $c_{21} = 1.78 \times 10^{-6}$, $d_2 = -6.19 \times 10^{-8}$ $c_{12} = -6.71 \times 10^{-6}$, $c_{11} = -1.06 \times 10^{-5}$, $d_1 = 3.02 \times 10^{-7}$ $c_{02} = 1.17 \times 10^{-2}$, $c_{01} = -2.29 \times 10^{-3}$, $d_0 = 6.12 \times 10^{-3}$ $e_3 = -0.00552$, $e_2 = 0.0117$, $e_1 = 0.00255$, $f = 0.00238$ $g = 0.597$, $h = -0.0624$
	10 GHz, 11 GHz, 12 GHz	$c_{42} = 1.31 \times 10^{-11}$, $c_{41} = 7.40 \times 10^{-11}$, $d_4 = -2.79 \times 10^{-12}$ $c_{32} = -3.93 \times 10^{-9}$, $c_{31} = -2.67 \times 10^{-8}$, $d_3 = 1.00 \times 10^{-9}$ $c_{22} = 1.99 \times 10^{-7}$, $c_{21} = 2.51 \times 10^{-6}$, $d_2 = -9.04 \times 10^{-8}$ $c_{12} = -1.13 \times 10^{-5}$, $c_{11} = -1.33 \times 10^{-5}$, $d_1 = 3.39 \times 10^{-7}$ $c_{02} = 1.41 \times 10^{-2}$, $c_{01} = -3.71 \times 10^{-3}$, $d_0 = 7.64 \times 10^{-3}$ $e_3 = -0.00622$, $e_2 = 0.0130$, $e_1 = 0.00351$, $f = 0.00237$ $g = 0.687$, $h = -0.0513$
	13 GHz, 13.5 GHz, 14 GHz, 15 GHz, 16 GHz, 17 GHz, 18 GHz	$c_{42} = 2.14 \times 10^{-11}$, $c_{41} = 1.10 \times 10^{-10}$, $d_4 = -4.23 \times 10^{-12}$ $c_{32} = -6.81 \times 10^{-9}$, $c_{31} = -3.97 \times 10^{-8}$, $d_3 = 1.52 \times 10^{-9}$ $c_{22} = 4.01 \times 10^{-7}$, $c_{21} = 3.70 \times 10^{-6}$, $d_2 = -1.37 \times 10^{-7}$ $c_{12} = -2.13 \times 10^{-5}$, $c_{11} = -1.74 \times 10^{-5}$, $d_1 = 4.10 \times 10^{-7}$ $c_{02} = 1.86 \times 10^{-2}$, $c_{01} = -5.95 \times 10^{-3}$, $d_0 = 1.02 \times 10^{-2}$ $e_3 = -0.00731$, $e_2 = 0.0149$, $e_1 = 0.00556$, $f = 0.00236$ $g = 0.856$, $h = -0.0366$

$c_{ij}, d_i, e_i, f, g, h$ are numerical value in the following table.

Type-3.5 mm 50 Ω	100 MHz, 300 MHz, 500 MHz, 1.0 GHz, 1.3 GHz, 1.7 GHz 2 GHz	$c_{42} = 7.87 \times 10^{-12}$, $c_{41} = 5.65 \times 10^{-11}$, $d_4 = -1.93 \times 10^{-12}$ $c_{32} = -1.71 \times 10^{-9}$, $c_{31} = -2.04 \times 10^{-8}$, $d_3 = 6.89 \times 10^{-10}$ $c_{22} = -8.31 \times 10^{-8}$, $c_{21} = 1.90 \times 10^{-6}$, $d_2 = -6.16 \times 10^{-8}$ $c_{12} = -1.33 \times 10^{-5}$, $c_{11} = -1.13 \times 10^{-5}$, $d_1 = 4.48 \times 10^{-7}$ $c_{02} = 1.21 \times 10^{-2}$, $c_{01} = -1.87 \times 10^{-3}$, $d_0 = 4.90 \times 10^{-3}$ $e_3 = -0.00199$, $e_2 = 0.00383$, $e_1 = 0.00804$, $f = 0.00387$ $g = 0.518$, $h = -0.117$
	3 GHz, 4 GHz, 5 GHz, 6 GHz, 7 GHz, 8 GHz	$c_{42} = 7.99 \times 10^{-12}$, $c_{41} = 5.77 \times 10^{-11}$, $d_4 = -1.94 \times 10^{-12}$ $c_{32} = -1.47 \times 10^{-9}$, $c_{31} = -2.08 \times 10^{-8}$, $d_3 = 6.91 \times 10^{-10}$ $c_{22} = -1.55 \times 10^{-7}$, $c_{21} = 1.94 \times 10^{-6}$, $d_2 = -6.12 \times 10^{-8}$ $c_{12} = -1.42 \times 10^{-5}$, $c_{11} = -1.21 \times 10^{-5}$, $d_1 = 5.13 \times 10^{-7}$ $c_{02} = 1.35 \times 10^{-2}$, $c_{01} = -1.75 \times 10^{-3}$, $d_0 = 5.12 \times 10^{-3}$ $e_3 = -0.00352$, $e_2 = 0.00686$, $e_1 = 0.00716$, $f = 0.000779$ $g = 0.580$, $h = -0.102$
	9 GHz, 10 GHz, 11 GHz, 12 GHz, 13 GHz, 13.5 GHz 14 GHz, 15 GHz, 16 GHz, 17 GHz, 18 GHz, 19 GHz, 20 GHz	$c_{42} = 9.57 \times 10^{-12}$, $c_{41} = 7.53 \times 10^{-11}$, $d_4 = -2.62 \times 10^{-12}$ $c_{32} = -1.84 \times 10^{-9}$, $c_{31} = -2.72 \times 10^{-8}$, $d_3 = 9.35 \times 10^{-10}$ $c_{22} = -1.61 \times 10^{-7}$, $c_{21} = 2.54 \times 10^{-6}$, $d_2 = -8.35 \times 10^{-8}$ $c_{12} = -1.76 \times 10^{-5}$, $c_{11} = -1.52 \times 10^{-5}$, $d_1 = 6.48 \times 10^{-7}$ $c_{02} = 1.67 \times 10^{-2}$, $c_{01} = -2.85 \times 10^{-3}$, $d_0 = 6.65 \times 10^{-3}$ $e_3 = -0.00293$, $e_2 = 0.00565$, $e_1 = 0.00103$, $f = 0.000581$ $g = 0.721$, $h = -0.0790$
	22 GHz, 24 GHz, 26 GHz, 26.5 GHz	$c_{42} = 9.69 \times 10^{-12}$, $c_{41} = 8.21 \times 10^{-11}$, $d_4 = -2.86 \times 10^{-12}$ $c_{32} = -1.70 \times 10^{-9}$, $c_{31} = -2.96 \times 10^{-8}$, $d_3 = 1.02 \times 10^{-9}$ $c_{22} = -2.08 \times 10^{-7}$, $c_{21} = 2.78 \times 10^{-6}$, $d_2 = -9.11 \times 10^{-8}$ $c_{12} = -1.84 \times 10^{-5}$, $c_{11} = -1.69 \times 10^{-5}$, $d_1 = 7.17 \times 10^{-7}$ $c_{02} = 1.85 \times 10^{-2}$, $c_{01} = -3.17 \times 10^{-3}$, $d_0 = 7.34 \times 10^{-3}$ $e_3 = -0.00376$, $e_2 = 0.00730$, $e_1 = 0.0107$, $f = 0.000776$ $g = 0.807$, $h = -0.0685$