

Laboratory RFCOMM Calibration Laboratory, No. 14, 1st Floor, J. C. Road, Bengaluru, Karnataka

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number CC-2801

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Validity 16.08.2018 to 15.08.2020

Last Amended on -

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (±)	Remarks
<u>ELECTRO TECHNICAL CALIBRATION</u>				
I.	SOURCE			
1.	Frequency #	1 Hz to 10 kHz 10 kHz to 10 GHz 10 GHz to 40 GHz	0.02 mHz to 0.002 Hz 0.002 Hz to 0.003 kHz 0.003 kHz to 0.006 kHz	Using Agilent 33220A, Keysight N5173B, & HP ESD3000A reference locked to E80 GPS By Direct Method
2.	RF Power #	+13 dBm to -30 dBm (10 MHz to 40 GHz)	5.98% to 6.10%	Using Keysight N5173B & HP ESD3000A with USB 2022XA and ML 4803C Power meter and Sensor MA4702A By Direct/Transfer Method
		-30 dBm to -60 dBm (10 MHz to 40 GHz)	6.10% to 6.35%	Using Keysight N5173B & HP ESD3000A and Keysight N9010 Signal Analyzer By Direct Method
3.	AC Voltage #	1kHz, 300 kHz 20 mV to 5 V	1.8 %	Using Agilent 33220A AWG By Direct /Transfer Method
4.	DC Voltage #	1 V to 650 V	0.6 %	Using TDK- Lamda Z650-1 & Aplab L6410 Power Supply By Direct Method

Shally Sharma
Convenor

Anuja Anand
Program Manager

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5.	Sine Wave Flatness #	50 MHz to 10 GHz	6.17 %	Using HP ESG D3000A & Keysight N 5173B By Direct Method
	Time Period #	10 msec to 200 psec	0.003 % to 0.06 %	Using Keysight N 5173B & ARB 33220A By Direct Method
6.	Amplitude Modulation #	10 MHz to 1.3 GHz Rate: 1 kHz, 20 kHz Depth 10% to 90%	1.98 %	Using Keysight N5173B & HP ESGD3000A with Modulation Meter 2305 By Direct /Transfer Method
7.	Frequency Modulation #	10 MHz to 1.3 GHz Rate: 1 kHz, 20 kHz Deviation 1 kHz to 200kHz	1.8 %	Using N5173B & ESGD3000A Signal Generators & Modulation Meter 2305 By Direct /Transfer Method
8.	DC Current #	100 mA to 3 A	0.22 % to 0.6 %	Using Aplab Power Supply L6410 By Direct Method
II.	MEASURE			
1.	Frequency #	10 Hz to 10 kHz	0.08 μ Hz to 5.1 μ Hz	Using Agilent 53220A Frequency Counter Locked with E80GPS By Direct Method
		10 kHz to 40 GHz	5.1 μ Hz to 6.1 Hz	Using Keysight 53152A & 5350B Frequency Counters Lock with E80GPS By Direct Method

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2.	RF Power #	50 MHz to 18GHz -60dBm to +13dBm	5 % to 5.44%	Using Keysight USB 2022XA Sensor and ML4803C Power Meter with Sensor By Direct/Transfer Method
		18GHz to 40GHz -60dBm to +13 dBm	5 % to 6.1 %	Using Keysight USB 2022XA USB Power Sensor&N9010 Signal Analyzer By Direct Method
3.	AC Voltage #	1kHz, 300kHz 20mV to 5 V	0.01 % to 0.2 %	Using Keysight 34460A DMM By Direct / Transfer Method
4.	DC Voltage #	1 V to 650 V	0.1 % to 0.01 %	Using Keysight 34460A By Direct Method
5.	DC Current #	100 mA to 3 A	0.12 % to 0.1 %	Using Keysight 34460A By Direct Method
6.	Amplitude Modulation #	10MHz to 1.3 GHz Rate: 1 kHz, 10kHz, 20 kHz Depth 10% to 90%	1.98%	Using Modulation Meter 2305 By Direct Method

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Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (\pm)	Remarks
7.	Frequency Modulation #	10MHz to 1.3 GHz Rate: 1 kHz, 10kHz, 20 kHz Deviation 1 kHz to 200 kHz	1.61 % to 1.74 %	Using Modulation Meter 2305 By Direct Method

* Measurement Capability is expressed as an uncertainty (\pm) at a confidence probability of 95%.

The laboratory is also capable for site calibration however, the uncertainty at site depends on the prevailing actual environmental conditions and master equipment used.

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