

Laboratory **Bharat Electronics Ltd. (Calibration Laboratory), Plot No. 405,
Industrial Area, Phase-III, Panchkula, Haryana**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **CC-2902** Page **1 of 3**

Validity **03.12.2018 to 02.12.2020** Last Amended on **-**

"In view of the transition for ISO/IEC 17025:2017, the validity of this accreditation certificate will cease on 30.11.2020"

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (\pm)	Remarks
<u>ELECTRO-TECHNICAL CALIBRATION</u>				
I.	SOURCE			
1.	RF Power ^s at 50 Ω	6 MHz to 4 GHz 14dBm to (-) 60dBm 25.11mW to 1nW	7.2 % to 16 %	Using RF Reference Source by Direct Method
2.	RF Frequency ^s	1 MHz to 4 GHz	0.000005 %	Using RF Reference Source by Direct Method
3.	Modulation ^s			
	AM Modulation	CW:10 MHz to 1 GHz Modulation Rate: 1 kHz to 20 kHz Modulation Depth: 10 % to 90 %	5.0 %	Using RF Reference Source by Direct Method
	FM Modulation	CW : 125 MHz to 1 GHz Modulation : 400 Hz to 100 KHz FM Deviation : 1 kHz to 100 kHz	4.0 %	
4.	Oscilloscope ^s Pulse Amplitude	Sine Wave 1 kHz to 45 kHz 2 V to 5 V p-p Square Wave 1 kHz 6 mV to 50 V	0.22 % 0.3 %	Using Scope Calibrator by Direct Method

Sangeeta Kunwar
Convenor

Avijit Das
Program Manager

Laboratory

**Bharat Electronics Ltd. (Calibration Laboratory), Plot No. 405,
Industrial Area, Phase-III, Panchkula, Haryana**

Accreditation Standard

ISO/IEC 17025: 2005

Certificate Number

CC-2902

Page

2 of 3

Validity

03.12.2018 to 02.12.2020

Last Amended on -

"In view of the transition for ISO/IEC 17025:2017, the validity of this accreditation certificate will cease on 30.11.2020"

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (\pm)	Remarks
	Bandwidth	50 kHz to 500 MHz	5.6 %	
	Time Marker	10 ns to 10 ms	0.0083 %	
5.	Inductance [§]	1 kHz 100 μ H, 1 mH, 10 mH	0.3 %	Using Standard Inductors by Direct Method
6.	Capacitance [§]	1 kHz 0.01 μ F, 0.1 μ F & 1 μ F	0.3 %	Using Standard Capacitors by Direct Method
7.	DC Voltage [§]	1 mV to 1000 V	0.7 % to 0.01 %	Using Meter Calibrator
8.	AC Voltage [§]	50 Hz to 1 kHz 10 mV to 1000 V 1 kHz to 100 kHz 10 mV to 10 V	0.4 % to 0.1 % 2 % to 0.5 %	Using Meter Calibrator
9.	DC Current [§]	100 μ A to 10 A	0.58% to 0.11%	Using Meter Calibrator by Direct Method
10.	AC Current [§]	50 Hz to 1 kHz 100 μ A to 10 A 1 kHz to 5 kHz 100 μ A to 1 A	0.7% to 0.2% 2 % to 1 %	Using Meter Calibrator by Direct Method
11.	Resistance [§]	1 Ω to 100 M Ω	1.2% to 0.6%	Using Meter Calibrator by Direct Method

Sangeeta Kunwar
Convenor

Avijit Das
Program Manager

Laboratory **Bharat Electronics Ltd. (Calibration Laboratory), Plot No. 405,
Industrial Area, Phase-III, Panchkula, Haryana**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **CC-2902** Page **3 of 3**

Validity **03.12.2018 to 02.12.2020** Last Amended on **-**

"In view of the transition for ISO/IEC 17025:2017, the validity of this accreditation certificate will cease on 30.11.2020"

Sl.	Quantity Measured / Instrument	Range/Frequency	*Calibration Measurement Capability (\pm)	Remarks
II.	MEASURE			
1.	DC Voltage [§]	1 mV to 100 mV 100 mV to 1000 V	0.09 % to 0.001 % 0.001 %	Using Reference Multimeter by Direct Method
2.	DC Current [§]	100 μ A to 10 A	0.013 % to 0.19 %	Using Reference Multimeter by Direct Method
3.	AC Voltage [§]	50 Hz to 1 kHz 10 mV to 1000 V 100 kHz 10 mV to 10 V	0.09 % to 0.077 % 0.4 % to 0.1 %	Using Reference Multimeter by Direct Method
4.	AC Current [§]	50 Hz to 1 kHz 100 μ A to 1 mA 1 mA to 10 A 5 kHz 100 μ A to 1 A	0.09 % to 0.12 % 0.12 % 0.15 % to 0.17 %	Using Reference Multimeter by Direct Method
5.	Resistance [§]	1 Ω to 100 M Ω	0.06 % to 0.17 %	Using Reference Multimeter by Direct Method

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

[§] Only in Permanent Laboratory

Sangeeta Kunwar
Convenor

Avijit Das
Program Manager