

**SCOPE OF ACCREDITATION**

**Laboratory:** BNNSPEAG TEST & CALIBRATION LABORATORY INDIA PVT LTD, Ghaziabad

**Date(s) of Visit:** 29 Jun 2019 - 30 Jun 2019

**Discipline:** Electro-technical

**Calibration and Measurement  
Capability**

Sl	Parameter*/Device under Calibration	Master Equipment used	Range(s) of Measurement	Claimed by Laboratory	Observed by Assessor	Recommended by Assessor	Remarks/Method used	Calibration Performed At
Assessed BY : UMESH SONI								
Location : Location 1								
<b>Discipline: Electro-technical</b>			<b>Group: RF/Microwave (1 GHz and Above)</b>			<b>Capability Mode: ,Measure</b>		
1	Frequency / Generators	Standard Equipment:Rubidium source FS 725, GPS E8-X , Frequency Counter CNT-90 and method : By Direct method :By TEC/SD/DD/CAL-EMF/01/FEB-19:	9 KHz to 14 GHz	1.3 Hz to 19.4 Hz	0.008Hz - 12.4 Hz	1.3 Hz to 19.4 Hz		PermanentFacility, SiteFacility
<b>Discipline: Electro-technical</b>			<b>Group: RF/Microwave (1 GHz and Above)</b>			<b>Capability Mode: Measure</b>		
2	Frequency / Generators	Standard Equipment:Rubidium source FS 725, GPS E8-X , Frequency Counter CNT-90 and method : By Direct method:	10 MHz to 10 MHz	0.081 Hz to 0.081 Hz	0.1Hz	0.081 Hz to 0.081 Hz		PermanentFacility, SiteFacility
3	Frequency / Receivers	Standard Equipment : Signal Generator R&S SMC100A / SGS100A, Reference Frequency Standard GPS E8-X, Rubidium FS725, Frequency Counter CNT-90 and Method: By Comparison Method , By TEC/SD/DD/CAL-EMF/01/FEB-19:	9 KHz to 12.75 GHz	1.3 Hz to 78 Hz	0.17mHz - 126Hz	1.3 Hz to 78 Hz		PermanentFacility, SiteFacility
4	Power / Generators 9 KHz to 18 GHz	Standard Equipment : Power sensor Z 91, Power sensor NRP18S and method : By Direct Method , By TEC/SD/DD/CAL-EMF/01/FEB-19:	13 dBm to -60 dBm	0.2 dB to 0.4 dB	0.38dB - 0.48dB	0.2 dB to 0.4 dB		PermanentFacility, SiteFacility
5	Power / Receivers 9KHz to 12.75GHz	Standard Equipment : Power sensor R&S Z 91, Signal Generator SMC	10 dBm to -110 dBm	0.3 dB to 0.6 dB	0.27dB - 0.49dB	0.3 dB to 0.6 dB		PermanentFacility, SiteFacility

		100A, Signal Generator SGS 100A, Attenuator 60dB, Power sensor NRP 18S and method : By Comparison Method , By TEC/SD/DD/CAL-EMF/01/FEB-19:						
6	RF Electric Field / Electromagnetic Field Sensors and Probes 300 MHz to 3000 MHz	Using Electric Field Isotropic Probe & Electric Field Meter by Comparison Method (IEEE-1309-2013) - Type A, By TEC/SD/DD/CAL-EMF/01/FEB-19:	10 V/m to 20 V/m	-18 % to +18 %	14.85% - 9.8%	-18 % to +18 %		PermanentFacility
<b>Discipline: Electro-technical</b>			<b>Group: RF/Microwave (1 GHz and Above)</b>			<b>Capability Mode: Source,Measure</b>		
7	Attenuation	Standard Equipment used : Power sensor Z 91, Power sensor NRP18S , Signal Generator SGS 100A, SMC 100A and method : By Substitution Method 9KHz to 12.75GHz, By TEC/SD/DD/CAL-EMF/01/FEB-19:	0 dB to 80 dB	0.1 dB to 0.5 dB	0.2dB-0.64dB	0.1 dB to 0.5 dB		PermanentFacility, SiteFacility