

## Annexure

### Specifications for 1 GHz Spectrum Analyzer and Signal Generator

Sr. No.	Parameters	Specifications
<b>A</b>	<b>Functions</b>	Spectrum Analyzer & Signal generator
<b>B</b>	<b>Frequency</b>	
1	Frequency range	5 kHz to 1 GHz
2	Frequency resolution	1 Hz
4	Temperature drift	$1 \times 10^{-6}$ ; 0 °C to +30 °C:
5	Frequency counter resolution	0.1 Hz
6	Frequency span	10 Hz to 1 GHz
7	Number of sweep (trace) points	> 1100
8	SSB phase noise	< -120 dBc (typ.) Carrier offset: 1 MHz, Carrier frequency= 500 MHz
9	Sweep time	Span = 0 Hz: 100 $\mu$ s to 100 s Span = 10 Hz to 600 MHz: 20 ms to 1000 s
<b>C</b>	<b>Bandwidth</b>	
1	Resolution bandwidths	1 Hz to 3 MHz in 1/3 sequence
2	Video bandwidths	1 Hz to 3 MHz in 1/3 sequence
<b>D</b>	<b>Level</b>	
1	Maximum rated input level	DC voltage: 50 V CW RF power: RF input:- 33 dBm RF output:- 23 dBm Maximum pulse voltage: 150 V
2	Displayed average noise level (Pre-amplifier= Off)	-150 dBm (typ.) ; 10 MHz to 1 GHz
3	Level display	
4	Logarithmic level axis	1/2/5/10/20/50/100 dB, 10 divisions
5	Linear level axis	0 % to 100 %, 10 divisions
6	Number of traces	2
7	Trace detectors	Max. peak, Min. peak, Auto peak, Sample, RMS
8	Trace functions	Clear/write, Max. hold, Min. hold, Average, View

9	Units of level axis	dBm, dBmV, dB $\mu$ V, V, W
10	Setting range of reference level	-130 dBm to +30 dBm
11	Trigger source	Free run, Video, External
12	Input attenuator	0 dB to 40 dB in 5 dB steps
<b>E</b>	<b>Signal Generator</b>	
1	Frequency range	5 kHz to 1 GHz
2	Measurements	Independent source mode
3	Output power	0 dBm to -30 dBm (nom.) 2 MHz to 1 GHz
<b>F</b>	<b>Inputs and outputs</b>	
1	RF input	N female connector
2	RF output	N female connector
3	External reference	BNC connector Required level: 0 dBm Frequency: 10 MHz
4	Remote control Interface	LAN and USB
<b>G</b>	<b>General data</b>	
1	Power supply	240 V AC, 50 Hz
2	Power consumption	< 50W
3	Display	Resolution 1366 $\times$ 768 pixel; Size 10.1"
4	Audio speaker: beep for limit line failure	Internal speakers
6	Recommended calibration interval	1 year