

Annexure – I

Technical Specifications

Item	Specification
RF-Spectrum analyzer	<ul style="list-style-type: none"> (i) Frequency range: ≤ 1 Hz to 26 GHz or above (1 Hz measurement of any waveform at ultra-low noise is crucial requirement). Frequency resolution 0.1 Hz or better. (ii) External referencing option at 5 or 10 MHz source. (iii) Aging rate $< 10^{-7}$ per year. Temperature drift $\pm 10^{-7}$ per C or better. (iv) Average amplitude noise level better than 130 dBm/Hz over entire range of operation 1 Hz - 26 GHz. Ultra-low phase noise (better than -100 dBc/Hz) over the entire range of operation. (v) Options for frequency Band selection as per operation domain. (vi) Capturing Bandwidth 25 MHz or better. (vii) spectrum refresh rate better than 3×10^5 wfm/s. (viii) Different triggering modes and triggering types with external triggering channel. (ix) Different detection modes such as Peak, -Peak, Average (VRMS), \pmPeak, Sample, CISPR (Avg, Peak, Quasi-peak average (of logs)). Peak detection, averaging, different math performance, FFT. (x) Touch screen display 10 inch or more and data storage. (xi) Windows IOS - need to be included with the system. (xii) GPIB, LABN, USB and other interfacing options. (xiii) Supply set of RF attenuators at 2 dB, 3 dB, 5 dB, 10 dB, 20 dB, 30 dB, 50 dB covering the entire frequency range 1 Hz -26 GHz. (xiv) Supply N-to-BNC adapter (gold coated best quality) quantity 10 and N-to-SMA adapter (gold coated best quality) quantity - 10. (xv) Supply good quality SMA cable 5 meter long, quantity 5 and BNC cable 5 meter long, quantity 5. (xvi) External function generator upto about 200 MHz comatiabale to this spectrum analyzer model. Atleast 2 channels and Inbuilt waveform functions: sine, square, ramp, pulse, noise. Output amplitude range 1 mV P-P to 10 V P-P at 50 Ω. Sweep, Burst, and Modulation modes. (xvii) Adequate trolley for shelving the spectrucm analyzer and function generator and to move from one place to other. (xviii) Phase noise measurement system for the spectrum analyzer at ultra noise level over its entire range of oeration. (xix) AC power as per indian standard. (xx) Supply necessary softwares, cables, probes for using this item over entire range.