

TECHNICAL SPECIFICATIONS OF STORES AND DRAWINGS.

Technical Specifications for
Supply of 42 GHz Benchtop Signal Analyzer



INSTITUTE FOR PLASMA RESEARCH

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382428

Our 2- Part E-Tender No & Date: IPR/TPT/TN/ET/F/19-20/9 Dated 24TH June, 2019 for Supply of 42 GHz Benchtop Signal Analyzer System with all required accessories

Technical Specifications for Supply of 42 GHz Benchtop Signal Analyzer System with all required accessories

Specification Sheet : 42GHz Benchtop Signal Analyser System with all required accessories		
Application Note: This instrument is intended for characterization of microwave plasma diagnostic systems with superheterodyne systems, Quadrature detection, receivers and their important parameters like phase noise, noise figure, frequency amplitude and phase etc.		
S/N	PARAMETER	IPR SPECIFICATIONS
1	Frequency Range	10 Hz to 42GHz, DC coupled DC block if external must be supplied with the instrument
2	Frequency Reference Aging Rate	± 1E-7/year
3	Frequency Marker Accuracy @ 40GHz	± 8kHz
4	Frequency span range	zero span, 10Hz to 42GHz
5	Frequency span resolution	2Hz
6	Sweep time range	span > 10Hz 1ms minimum
7	Sweep time accuracy	span > 10Hz, ± 3% nominal
8	Resolution Bandwidth (RBW)	1kHz to 8MHz
9	Resolution Bandwidth (RBW) Selectivity - 60dB/-3dB	5:1 nominal
10	Video Bandwidth (VBW)	equal to RBW
11	Amplitude Range	DANL + 20dBm
12	Input attenuator range	0 to 70dB in 2 dB steps
13	Maximum safe input level (Average total power)	+30dBm
14	Frequency response (Without Pre-Amplifier)	@ 40 GHz ± 3.2 dB
15	Total absolute amplitude accuracy	± (0.25 + frequency response)
16	Input VSWR range (95th Percentile)	@ 40 GHz 2.5
17	Reference level range	-130 to +30 dBm
18	Two tone 1dB compression at 1kHz RBW with 100kHz tone spacing	@ 40 GHz 0 dBm nominal
19	Displayed average noise level (Without Pre-Amplifier, 0dB input attenuation)	@ 40 GHz -130 dBm
20	Analysis Bandwidth	40 MHz nominal
21	Second Harmonic Distortion @15dBm	@ 20 GHz -65 dBc
22	Second Harmonic Intercept (SHI)	@ 20 GHz +75 dBm nominal
23	Third Order Intercept point (TOI)	@ 40 GHz + 10 dBm
24	Noise sidebands-Phase noise @ CF= 1GHz	@ 10kHz offset -107 dBc/Hz
25	Phase noise measurement application	Required

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26	Noise figure measurement application (Noise source is NOT to be supplied or quoted)	Required
27	Pre-Amplifier	10MHz to 42GHz, Gain: 20 dB
28	LabView Instrument IVI Drivers	Must be provided
29	Interfaces	LAN, USB, VGA
30	Display and storage	Built-in, Colour and USB 3.0 Removable HDD
31	Power Supply	230 V, 50 Hz
32	User manual	1 soft & 1 Hard copy with the instrument
33	Warranty	1 Year Standard Warranty + 4 Years Extended Warranty Total 5 years on-site comprehensive warranty.
34	Dispatch Clearance Criteria	On receipt and written approval by IPR of complete test reports containing Frequency, Max amplitude, DANL etc.
35	Acceptance Criteria	Test and compliance certificate and Full demonstration of the instrument and its features
36	Delivery Period	4 months from the PO date

Compliance Sheet

Compliance Statement for Supply of 42 GHz Benchtop Signal Analyzer System with all required accessories

Bidder must submit compliance statement dully filled with exact technical values of each specifications (Not with OK, CONFIRM, COMPLY, ACCEPTABLE) alongwith official seal and signature with their offer.

Compliance Sheet : 42GHz Benchtop Signal Analyser System with all required accessories			
S/N	PARAMETER	IPR SPECIFICATIONS	Vendor Compliance
1	Frequency Range	10 Hz to 42GHz, DC coupled DC block if external must be supplied with the instrument	
2	Frequency Reference Aging Rate	± 1E-7/year	
3	Frequency Marker Accuracy @ 40GHz	± 8kHz	
4	Frequency span range	zero span, 10Hz to 42GHz	
5	Frequency span resolution	2Hz	
6	Sweep time range	span > 10Hz 1ms minimum	
7	Sweep time accuracy	span > 10Hz, ± 3% nominal	
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23	Third Order Intercept point (TOI)	@ 40 GHz + 10 dBm	
24	Noise sidebands-Phase noise @ CF=1GHz	@ 10kHz offset -107 dBc/Hz	
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26	Noise figure measurement application (Noise source is NOT to be supplied or quoted)	Required	
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28	LabView Instrument IVI Drivers	Must be provided	
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Authorised Signatory

Official Seal

Date :-