

**INDIAN INSTITUTE OF TECHNOLOGY KANPUR**  
**DEPARTMENT OF ELECTRICAL ENGINEERING**

Date: September 11, 2013

To,

No: IITK/EE/RF-1/VNA/2013-14

Dear Sir,

Subject: **Request for quotation**

Kindly give a quotation for a Vector Network Analyzer (Qty: 1) meeting the following specifications:

Sl. No.	Parameter	Specification	Comments
1.	Frequency Range	100 MHz to 26 GHz	
2.	Number of ports	2	
3.	Test port connector	3.5 mm (male)	
4.	Maximum test port output power	12 dBm (Typ)	
5.	Power accuracy	+/- 2.5 dB	Over the entire frequency range
6.	Power sweep range	29 dB	Over the entire frequency range
7.	IF bandwidth	1 Hz to 15 MHz	
8.	Directivity	≥ 40 dB	Over the entire frequency range
9.	Source match	≥ 30 dB	Over the entire frequency range
10.	Load match	≥ 40 dB	Over the entire frequency range
11.	Transmission tracking	≤ 0.15 dB	Over the entire frequency range
12.	Reflection tracking	≤ 0.01dB	Over the entire frequency range
13.	Dynamic range	≥ 120 dB (Typ.)	
14.	Cross talk between two test ports	≤ -110 dB	Over the entire frequency range
15.	Phase noise at 10kHz offset	≤ -85 dBc/Hz	Over the entire frequency range
16.	Test port noise floor	≤ -110 dBm	Over the entire frequency range
17.	Test port input power handling level	+30 dBm, 40V DC	
18.	Interfaces	GPIB, USB and LAN	
19.	Time domain option	To be included	
20.	Cables	Flexible test port cables	
21.	Calibration kit	3.5 mm mechanical calibration kit	
22.	Warranty	3 years	
	<b>Optional Requirement</b>		
1	Material measurement capability	Complex permittivity and complex permeability measurement	Over the entire frequency range

Please send your offer for the above (original signed in sealed envelope) mentioning the following:

1. Cost of the items
2. Delivery time
3. Educational discount applicable considering end use for research and teaching
4. Payment terms
5. Proprietary Certificate, if applicable
6. Specification sheet clearly indicating the above specifications

**Please send in your quotation latest by September 23, 2013.**

Any technical queries may be directed to Dr M J Akhtar ([mjakhtar@iitk.ac.in](mailto:mjakhtar@iitk.ac.in)) / Dr A R Harish ([arh@iitk.ac.in](mailto:arh@iitk.ac.in)).

Sincerely yours,

Dr M. Jaleel Akhtar

ACES 326, Department of Electrical Engineering

Indian Institute of Technology Kanpur

Kanpur – 208 016 (U.P), India.