



# Indian Institute of Technology Kanpur

## Samtel Centre for Display Technologies

Enquiry number: SCDT/FlexE/2015-16/14

Date: 19/10/2015

Quotations from prospective vendors are invited by Samtel Center for Display Technologies; IIT Kanpur for Semiconductor Device Characterization Analyzer must have following minimum technical specifications.

Specifications		Company specifications and model number of system	Complies/Does not comply/Not applicable
<b>1. 20MHz Impedance analyzer</b>			
Frequency range	20Hz to 20 MHz future upgradeable to 30 MHz , 50 MHz , 120 MHz with Auto balancing bridge		
measurement parameters	$ Z $ , $\theta_z$ , $ Y $ , $\theta_y$ , Cp, Cs, Lp, Ls, Rp, Rs (R), D, Q, X, G, B, Complex Z, Complex Y , Vac, Iac, Vdc, Idc , Resolution 1 mHz , impedance range : 25 m $\Omega$ to 40 M $\Omega$ (10% accuracy)		
Measurement accuracy	Basic accuracy $\pm 0.045\%$ typical Should have the accuracy of at least 0.5% for 10pF at 1MHz measurement directly at the 4 port terminal		
Accuracy & Stability	1 ppm $\pm$ 1 mHz (at 5 to 40 $^{\circ}$ C) & $\pm 0.5$ ppm per year (Typical)		
Voltage signal level	5 mVrms to 1 Vrms(with 1mV resolution) at all frequencies		
DC bias function	0 to $\pm 40$ V , , 0 A to $\pm 100$ mA		
Sweep parameters	should be able to sweep Frequency, signal voltage, signal current, DC bias voltage, DC bias current		
Sweep type	should be able to Linear frequency, log frequency, OSC level (voltage, current), DC bias (voltage, current), log DC bias (voltage, current)		
Sweep direction	both up sweep and down sweep should be available		
No of sweep points	2 to 1601 points		
segment sweep	option to set sweep by segments should be available with following parameters to be configurable Sweep frequency range, Number of measurement points,number of level (voltage or current), DC bias (voltage or current), measurement time, point averaging factor, segment time, segment delay		

Number of segment	1 to 201		
Calibration	Should be able to compensate the effects of measurement fixture using appropriate open,short calibration points should be fixed or user points determined by sweep setups Should able to extend the measurement port from the port of calibration to the end of adapters/cables used		
Marker function			
Marker type and number	atleast 10 markers per trace should be available		
Marker search type	Maximum value, minimum value, multi-peak, multi-target, peak, peak left, peak right, target, target left, target right, and width parameters with userdeined bandwidth values.		
Equivalent circuit analysis			
Circuit model	3-component model with 4 models, 4-component model with 3 models should be available		
Analysis type	Equivalent circuit parameters calculation, frequency characteristics simulation should be available		
Limit Line Test			
Functions	should be able to Define the test limit lines that appear on the display for deine the test limit lines that appear on the display for pass/fail testing.		
Interface	USB, GPIB, LAN, Video Output , connectivity for remote control and easy test automation. Load measurement data from the analyzer to your PC via GPIB, LAN, or USB (type-B) interface. Digital I/O port (24 bit) is also available for data transfer with an external device, such as a handler		
Number of traces			
Data trace	4 traces per channel(>2 channels) should be available		
Memory trace	4 traces per channel should be available		
Data math function	Data + memory, data - memory, data × memory, data/memory, offset, equation editor		
Fixtures	Fixtures for direct connection and test leads to be extended up to 2m with full frequency range support , Test fixture for axial lead components 120MHz , Test leads (BNC), 2m , four alligator clips for odd-shaped components & DC		

	Bias: -35V to +35V		
Display	10.4 inch color LCD (TFT)		
Warranty	3 years		
future upgradeable :	firmware upgrades at site		
frequency upgradeable	to 30 MHz , 50 MHz , 120 MHz		
Enhance measurement speed	30 msec to 3 msec /point		
Different kind of Test Fixture like Liquid Dielectric, SMD, Dielectric Constant Measurement ,facility with Dielectric Test Fixture, Parallel Electrode, Axial Radial, Magnetic Material etc. should be available and compatible.			

Terms and Conditions:

1. Please do mention tender number clearly on envelop.
2. Supplier/Vendors should submit technical and financial bid together in separately sealed envelopes.
3. Evaluation will be done on the basis of technical specifications format provided as per our tender notice
4. Supplier who have experienced in for Semiconductor Device Characterization Analyzer and supplied in the national and international institutions will be preferred.
5. Financial bid will be open only for those, who meet tender technical specification.
6. The format for specification and complies statement is same as provided tender sheet for supplier/vendors for submitting technical specification in their own letter heads.
7. Please send the name and contact details of the person to whom company had supplied a similar systems. Committee may ask for the feedback.
8. Vendors should have to submit the detail's designed as per tender specification.
9. The supplier must have supplied systems to institutions of national and/or international repute.
10. Quotation must indicate FCA/FOB or FOR IIT Kanpur prices.
11. Payment terms & condition is 70% against delivery, 20% after installation and 10% after successful running of equipment for 3 months & approval.
12. Warranty/Guarantee should be clearly mentioned. The Warranty must start from the date of installation at IITK.
13. Installation, demonstration, and training-sessions at IIT Kanpur will have to be provided by the manufacturer or the vendor for the quoted system.
14. Quotation should carry proper certifications like proprietary certificate, authorization certificate from manufacturer, etc.
15. Validity of quotation should be at least for 60 days.
16. Maximum educational discounts should be applied.
17. Institute is exempted for partial custom duty (CD applicable to IIT Kanpur is 5.15%).
18. Institute is exempted from payment of Excise Duty under notification No. 10/97.
19. The delivery period should be specifically stated. Earlier delivery may be preferred.
20. The indenter reserves the right to withhold placement of final order. The right to reject all or any of the quotations and to split up the requirements or relax any or all of the above conditions without assigning any reason is reserved.

Kindly send the quotation in sealed envelope latest by 3:00 pm on dated 27/10/2015 to the following address:

To,  
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