



जवाहरलाल नेहरु उन्नत वैज्ञानिक अनुसंधान केन्द्र

(मान्यता प्राप्त विश्वविद्यालय)

JAWAHARLAL NEHRU CENTRE FOR ADVANCED SCIENTIFIC RESEARCH

(A Deemed University)

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JNC/DST/GUK/4286/2015-2016/FE

04/04/2016

Request for Quotation

Sub: Procurement of Clean room compatible probe stations for Electrical measurement system for integrated I-V and C-V measurements

JNCASR is interested to procure Clean room compatible probe stations for Electrical measurement system for integrated I-V and C-V measurements as per the broad specifications shown in Annexure – I. You may send the Technical specifications of the system you would be proposing and the commercial aspects of the same in two separate sealed covers on or before 4.00.P.M. on **20.04.2016**. A Technical committee of the Centre will evaluate the technical configurations and shortlist the Vendors for further considerations. If required a Techno-Commercial Meeting will be arranged with the shortlisted Vendors. For short listing the Vendor we consider both technical features and commercial advantages.

You may send the technical and commercial bids in two separately sealed covers addressed to the **Stores & Purchase Officer, JNCASR, Bangalore 560 064**. Please indicate taxes and duties, delivery schedules, after sales support and any other technical information in support of your offer.

JNCASR Payment terms:-

1. 100% Letter of Credit
2. 90% against documents through Bank
3. 10% against installation and commissioning, subject to 3(a).
- 3(a) Submission of 10% Performance Bank guarantee valid for one year from the date of installation and acceptance.
4. Warranty minimum two years from the date of supply/installation/acceptance.
5. Delivery within eight weeks from the date of LC opening.
6. Mode of shipment FCA basis under INCO Terms 2010.

(Dr. P. Chiranjeevi)
Stores & Purchase Officer.



ANNEXURE-1

1

Specifications for Cleanroom compatible Probe Station for I-V & C-V Measurement

General Description: The probe station should be capable of measuring /characterizing the I-V and C-V analysis for Device Under Tests.

Detailed Technical Specifications:

1. **Substrate Size:** 1×1 cm² to 6-inch diameter wafer.
2. **Chuck Details:**
 - (i) **Triaxial Chuck:** ≥ 6" inch diameter
 - (ii) **Chuck Triaxial cable (Force/Sense)**
 - (iii) **3 or more auxiliary chucks with planarity better than ± 3 μm**(including Vacuum chuck)
3. **X,Y, Theta stage:**
 - (i) **Range of movement:** Movement of stage to be at least 15cm × 15 cm in x-y direction
 - (ii) **Theta travel:** 360 degrees
 - (iii) **Resolution in x-y positioning:** < 5 microns or better
 - (iv) **Z travel-** adjustable up to 10mm and load stroke of up to 3mm
 - a) **Platen:** Manual. Course and fine platen lift up to 40mm with precise contact /separation stroke of 200um with a repeatability of <+/- 1um. compatible with probe card.
 - b) **Universal platen:** space for up to 16 micro-positioners.
4. **Vacuum Pump:** Suitable vacuum pump compatible to system along with necessary accessories including vacuum tubing
5. **Micropositioners:**
 - (i) Magnetic base micropositioners
 - (ii) Movement of micropositioners should be 12.5 mm in x-y-z directions
 - (iii) Resolution: 2um or better
 - (iv) Four micropositioners with 2m Triaxial cable & accessories
6. **Stereo Microscope:**

Eye-piece: min 30x
Magnification: Total magnification ≥ 320X
Camera: CCD/CMOS high-resolution digital camera with resolution ≥ 3 Mega pixel with compatible software & hardware to view and store the picture of the device in the computer.
Microscope mount: system compatible microscope mount.
Light source: LED / suitable light source and suitable power supply
Head with CMOS port.
7. **Probe Tips:** 25 nos. Tungsten tip with radius 5 microns or better

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8. Measurement capability : **Few pA of current or better**. Voltage of the order of mV. Capacitance of the order of pF or better.
9. **Vibration isolation solution** to be provided to minimize pad damage.
10. Necessary **set of tools** and tweezers for smooth handling of probe station.
11. Training has to be provided to the users and successfully demonstrate the use of probe station for electrical characterization.
12. Standard configurations will be required. **NO CUSTOM BUILT SYSTEMS WILL BE ENTERTAINED.**
13. Parent company should be an established company with good number of installations and after sales support in India as well.

Options for future upgrade path:

14. RF application for up to 67 GHz with RF positioners, probes, cables, calibration substrates and calibration software
15. Thermal system LN2 temp to 200degC
16. Advanced IV and CV measurements setup
17. Shield Enclosure and anti-vibration table

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