

दुभाषण :
TELEPHONE
नगर : बार्क-मुंबई, त्रम्बय
TELEGRAMS BARC-MUMBAI, CHEMBUR
टेलिक्स : ०११-६१०१७/०११-६१०२२ बार्क इन
TELEX 011-61017/011-61022 BARC IN
फैक्स नं. : ९१-२२-५५६०७५०
FAX NUMBER 91-22-5580750



सत्यमेव जयते

भारत सरकार
GOVERNMENT OF INDIA

भाभा परमाणु अनुसंधान केंद्र
BHABHA ATOMIC RESEARCH CENTRE

Laser & Plasma Technology Division

दुभाषण :
मुंबई-४०० ०८५
TROMBAY,
MUMBAI-400 085

Ref: LPTD/RLB/ works /2018/ **206159**
Sub: **Minor Fabrication- Invitation of quotations**
Due date: **14/11/2018**

Mod. Labs. Trombay,
Mumbai-400 085
Date: **26/10/2018**

Dear Sirs,

Quotations are invited for the **Fabrication of High voltage diode arms based on Fast Recovery Epitaxial Diodes as per technical specifications and scope of work. (02 Nos.)**

The bidder shall quote for fabrication of these components with material.

1. Taxes and excise duties shall be quoted separately. Form H/AF shall be provided wherever necessary.
2. Quotations are to be in printed letter head / quotation format which should consist of sales tax, registration number registered with the local ST authority/ CST authority. PAN number etc. Quotations that are received in computer-generated form will be construed as invalid and rejected.
3. The quotations must reach, Head, Laser & Plasma Technology Division by **14/11/2018** and must be sent in a sealed envelope super scribed with the above reference number and due date given above by **speed post or registered post** only.
4. The address on the envelope should read:
The Head,
Laser & Plasma Technology Division,
Bhabha Atomic Research Centre,
Trombay, Mumbai-400 085.
Attn: Shri R.L. Bhardwaj
5. The bidder shall have to take an insurance policy against any material issued to him by the purchaser.
6. The fabrication work shall be subject to inspection by our engineer. The finished components shall not be dispatched prior to approval by our engineer at bidder's works. Necessary inspection facilities shall be provided to our engineers during fabrication at bidder's premises.
7. The bidder shall deliver the finished components after the approval by our engineer, within **one month** from the date of our firm purchase order is issued to the bidder. The finished components and the scrap from the free issue material shall be delivered by the bidder at: Control room, Hall no.6, Laser & Plasma Technology Division, Trombay, Mumbai-400 085.
8. Head, Laser & Plasma Technology Division, BARC reserves the right to accept/reject any or all quotations without assigning any reason.

Yours sincerely,

Dr. Alok K. Ray
Project Leader, RISP, BTDG

Quotation shall be opened on dated **15/11/18** at 2.00pm

शैक्षणिक अधिकारी /SCIENTIFIC OFFICER
लेजर एवं प्लाज्मा प्रौद्योगिक प्रभाग
Laser & Plasma Technology Division
भारत सरकार / Government of India
भाभा परमाणु अनुसंधान केंद्र / Bhabha Atomic Research Centre
दुभाषण / मुंबई / Trombay / Mumbai - 400 085

Technical specifications and scope of work for fabrication of High voltage diode arms based on Fast Recovery Epitaxial Diodes

1. **Introduction:-** High voltage diode whose technical specifications given below shall be made of series connection of Fast Recovery Epitaxial diodes. Necessary static and dynamic equalization network across each diode shall be used to ensure equal voltage sharing during static reverse bias condition as well as during reverse recovery transient. Overall series arm of diodes shall be packed in insulated body and stud type connections for anode and cathode shall be available outside insulation body for connection with other devices.

2. Technical specifications

Sr. No.	Parameters	Value
1	Max. Peak Repetitive reverse Voltage	120kV DC
2	Max. Working Peak Reverse Voltage	120kV DC
3	DC Blocking Voltage	120kV DC
4	Maximum Average Forward Current	>8Amp
5	Maximum Repetitive Peak Current	>80Amp
6	Max. Nonrepetitive Peak Surge Current (Half sine wave 10ms)	>100Amp
7	Maximum Continuous Power Dissipation	≈150 Watt
8	Typical Instantaneous Forward Voltage	80 Volts
9	Typical Reverse Blocking Current	<1μA @ 25C & 0.95 reverse voltage
10	Typical Reverse Recovery Time	<200ns @ I_{AFM} , $di/dt = 100A/\mu s$
11	Module Dimension (PCB version)	Within -10% of 200 X60 X 40 mm ³

3. Testing and certificate:

- a. Reverse voltage with stand test
- b. Average forward current and voltage drop test
- c. Certificate for reverse recovery storage charge
- d. Certificate for reverse recovery time

4. Scope of work:-

- a. Design drawing, components selected and their approval before fabrication.
- b. Fabrication of 2Nos. of High voltage diode arms as per above mentioned technical specifications.
- c. Routine and type testing of HV diode.
- d. Safe delivery to BARC.
- e. **Quantity:** - 02 Nos.



R. L. Bhardwaj
SO/G, L&PTD

वैज्ञानिक अधिकारी / SCIENTIFIC OFFICER
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