



BHARAT HEAVY ELECTRICALS LTD.,
CORPORATE R&D DIVISION
VIKAS NAGAR, HYDERABAD-500093 (INDIA)

Enquiry No. :

Date :

dd/ mm/ 2009

PURCHASE SECTION

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P.K. Kakkar

pkkakk@bhelrnd.co.in

TECHNICAL SECTION

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SPEC.NO

HVE:SPEC:FFT:09:27/00

SPECIFICATION CUM COMPLIANCE CERTIFICATION FOR SPECTRUM ANALYZER

Important

1. Vendor must submit complete information against clauses Nos 32.0 and 33.0. The offer meeting these clauses would only be processed.
2. The offer and all documents enclosed with offer should be in English language only.
3. BHEL reserves the right to verify the information submitted by the vendor. The offer with false/ incorrect/incomplete information may be rejected.
4. Vendor shall sign and stamp all sheets
5. Offers submitted shall be valid for a period of minimum 8(eight) months from date of commercial bid.
6. Revised technical bid may be necessary should the specification needs up gradation/ modification on technical scrutiny.
7. Vendor shall only give conformation to all points in the specification. No deviation is acceptable. Any additional details shall be separately provided.

ADDRESS OF THE SUPPLIER :	ADDRESS OF THE INDIAN AGENT :
TELEPHONE NOS.:	TELEPHONE NOS.:
FAX NOS.:	FAX NOS.:
CONTACT PERSON:	CONTACT PERSON:
E-MAIL ADDRESS :	E-MAIL ADDRESS :

SCOPE:	Design, supply, commissioning and training of FFT Spectrum analyzer
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Quantity required:	ONE
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Serial No.	DESCRIPTION OF REQUIREMENT	DESIRED ACTION	OFFERED BY THE VENDOR	DEVIATIONS (IF ANY, ELSE PRINT NONE)	Remarks
1.0	Purpose : This facility will be used in the laboratory to measure and analyse the high frequency pulses in the frequency domain.	Vendor to note			
2.0	Frequency Range : 100 KHz to 6 GHz	Vendor to confirm			
3.0	Resolution Bandwidth : 10Hz to 5 MHz or above.	Vendor to conform			
4.0	Viedo bandwidth : 1 Hz to 8 MHz	Vendor to conform			
5.0	Displayed average noise level : For frequency range 50 MHz to 3 GHz - better than -150 dBm . For frequency range 3 GHz to 6 GHz- better than -140 dBm .	Vendor to conform			
6.0	Total Measurement accuracy : +/-0.5 dB or better	Vendor to conform			
7.0	Maximum safe input level : +30 dBm	Vendor to conform			
8.0	Pre-Amplifier : This may be quoted as an optional item.				
8.1	Frequency range : 100kHz to 6 GHz	Vendor to conform			
8.2	Gain : 18 dB and above	Vendor to conform			

Serial No.	DESCRIPTION OF REQUIREMENT	DESIRED ACTION	OFFERED BY THE VENDOR	DEVIATIONS (IF ANY, ELSE PRINT NONE)	Remarks
9.0	Input attenuation range : 0 to 40 dB	Vendor to conform			
10.0	1 dB gain compression : + 5 dBm	Vendor to conform			
11.0	Input terminal : RF input , N female, 50 Ohm	Vendor to conform			
12.0	Calibration: The system shall be calibrated as per the relevant standard , preferably at internationally accredited laboratory. Calibration certificate has to supplied along with the equipment. The vendor must have a calibration facility in India for all future requirements.	Vendor to conform			
13.0	Interface to computer: USB	Vendor to conform			
14.0	Power supply : 230 V AC , 50 Hz	Vendor to conform			
15.0	Type: Table top	Vendor to conform			
16.0	Weight :	Vendor to indicate			
17.0	Display: colour	Vendor to Conform			
18.0	Size of Disply Unit	Vendor to indicate			
19.0	Resolution	Vendor to indicate			
20.0	Temparature of the environment: 0 to 50 ⁰ C	Vender to conform.			
21.0	EMI compatability : For conducted and radiated emission as per relevent standard	Vender to conform.			
22.0	External triggering input: Required:- Terminal :BNC Female	Vender to conform.			
23.0	Wave form storage in a computer: Provision for transfer of waveform to a computer through USB is required, associated software has to be supplied by vendor	Vendor to conform			
24.0	Safety: Shock proof, Vibration proof and other safety requirements.	Vendor to conform			
25.0	Documentation: Four sets of following documents (Hard Copies) in English should be supplied along with the machine. 1.Operating manuals for system and related Accessories. 2.Detailed Maintenance manual with all drawings, circuit diagrams. 3.Test and Guarantee certificates 4. SOFT COPY of all above documentation on CD ROM, wherever applicable	Vendor to conform			

Serial No.	DESCRIPTION OF REQUIREMENT	DESIRED ACTION	OFFERED BY THE VENDOR	DEVIATIONS (IF ANY, ELSE PRINT NONE)	Remarks
26.0	Training: BHEL engineers to be trained for acquaintance on operation and maintenance of supplied equipment at the indenter's premises, persons shall be trained for mutually agreed period in area of use of all features, operating instructions, warnings and precautions, location and functions of control instrumentation, interlocks, preventive and periodic maintenance, operating limitations, any unique or potentially hazardous condition which could affect safe operation, supplied accessories, etc.	Vendor to conform			
27.0	Commissioning and Demonstration: Required items for the commissioning of equipment within stipulated time shall be brought by vendor on the returnable basis. Charges, for commissioning and demonstration shall also be included in the offer.	Vendor to conform			
28.0	Acceptance tests: A list of tests and measurements that indicate the performance of the equipment has to be given by the vendor. This will be witnessed by the Quality Dept of the vendor's organisation.	Vendor to conform			
29.0	Packing:: Rigid packing for all items of complete equipment, all accessories and other supplied items to avoid any loss / damage in transit.	Vendor must supply			
30.0	Performance Guarantee : 12 months from the date of commissioning and acceptance of equipment.	Vendor to conform			
31.0	Service after sales: The vendor should have an established service centre in India.	Vendor to conform			
32.0	Detailed catalogue, sketch / photographs of the equipment and accessories / attachments should be submitted with the offer	Vendor to conform			
33.0	Qualification Requirements: The supplier must be an international repute. The design of the equipment must be proven and in operation for three years without any technical problems. The vendor must have service outlets/ service personnel in India to support the equipment as and when required by BHEL. A customers; reference list shall be provided.	Vendor to conform			