



Project on

# Design of S- and X-Band High Power Microwave Source-Relativistic Backward Wave Oscillator (RBWO)

DRDO DIA-COE Sponsored Project (No.: R&D/SA/DRDO/ECE/24-25/01/571)

DEPARTMENT OF ELECTRONICS ENGINEERING  
INDIAN INSTITUTE OF TECHNOLOGY (BHU), VARANASI-221 005.

Ref: IIT(BHU)/ECE/MT/DRDO/2024-25/

Date: 20.01.2025

## Corrigendum: Modification in Technical Specifications and Date Extension

Tender Ref. No.: IIT(BHU)/ECE/MT/DRDO/2024-25/Tender/97, Dated: 30/12/2024

**Tender Title:** Benchtop Performance Vector Network Analyzer (PNA) up to 50 GHz along with Both 50 GHz to 75 GHz & 75 GHz to 110 GHz Extender Modules, Configurable Test Set, and all other Related Accessories

Consequent upon the project purchase committee meeting held on 20.01.2025 (Monday) at 11:00 AM in the Department of Electronics Engineering, IIT(BHU), for the amendment of technical specifications and the bid submission extension date and bid opening date of the tender Ref. No.: IIT(BHU)/ECE/MT/DRDO/2024-25/Tender/97, Dated: 30/12/2024 for the procurement of "Benchtop Performance Vector Network Analyzer (PNA) up to 50 GHz along with Both 50 GHz to 75 GHz & 75 GHz to 110 GHz Extender Modules, Configurable Test Set, and all other Related Accessories"

With reference to the above mentioned tender, please note the following amendment:

### 1. Base Unit Specifications:

Tender Document Reference	Tender Specification (Original content)	Amended content
Annexure-I, Page: 42, S. No. 7: (Number of Sweep Points)	100003 or more	100001 or more
Annexure-I, Page: 42, S. No. 9: (System dynamic range (at test port) at 10 Hz IF bandwidth)	500 MHz to 20 GHz: > 126 dB 20 GHz to 30 GHz: > 123 dB 30 GHz to 50 GHz: > 112 dB	500 MHz to 20 GHz: 126 dB or better 20 GHz to 30 GHz: 123 dB or better 30 GHz to 50 GHz: 112 dB or better
Annexure-I, Page: 42, S. No. 10: (Maximum output power)	500 MHz to 20 GHz: $\geq +13$ dBm 20 GHz to 40 GHz: $\geq +9$ dBm 40 GHz to 50 GHz: $\geq 0$ dBm (typical)	500 MHz to 20 GHz: +13 dBm or better 20 GHz to 40 GHz: +9 dBm or better 40 GHz to 50 GHz: 0 dBm (typical) or better
Annexure-I, Page: 42, S. No. 14: (Phase Noise @ 10 kHz Offset (typical))	< -129 dBc/Hz @ 1 GHz < -112 dBc/Hz @ 10 GHz < -106 dBc/Hz @ 20 GHz < -100 dBc/Hz @ 50 GHz	-129 dBc/Hz or better @ 1 GHz -112 dBc/Hz or better @ 10 GHz -106 dBc/Hz or better @ 20 GHz -100 dBc/Hz or better @ 50 GHz
Annexure-I, Page: 42, S. No. 17: (Input damage power level for test ports (at all the ports))	> +27 dBm RF, 40 VDC	+27 dBm RF or better, 40 VDC or better

### 2. Specifications for Performance Network Analyzer Extenders Module (50 GHz to 75GHz)

Component	Tender Specification (Original content)	Amended content
Annexure-I, Page: 43, S. No. 28: (Maximum Damage Level)	$\geq 30$ dBm	30 dBm or better
Annexure-I, Page: 43, S. No. 29: (Dynamic Range (10 Hz IFBW))	$\geq 110$ dB	110 dB or better

H. *[Signature]*  
**Dr. M. THOTTAPPAN**  
 Principal Investigator  
 DIA-CoE Sponsored Project  
 Project Code-R&D/SA/DRDO/ECE/24-25/01/571  
 Department of Electronics Engineering  
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**3. Specifications for Performance Network Analyzer Extenders Module (75 GHz to 110 GHz)**

Component	Tender Specification (Original content)	Amended content
Annexure-I, Page: 43, S. No. 38: (Maximum Damage Level)	$\geq 30$ dBm	30 dBm or better
Annexure-I, Page: 43, S. No. 39: (Dynamic Range (10 Hz IFBW))	$\geq 110$ dB	110 dB or better

**4. Bid-submission End Date and Bid Opening Date:**

Bid submission end date has been extended till **27.01.2025 (04:00 PM)** and Bid opening date will be **28.01.2025 (04:00 PM)**

All other contents of the aforementioned tender document shall remain unchanged.

  
**M. Dr. M. THOTTAPPAN**  
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