

## Datasheet

### Description

The FEV-03 Series will expand your existing Vector Network Analyzer (VNA) capabilities so you can conduct industry leading millimeter wave S-parameters measurements in H band. These frequency extension modules connect to your existing test ports, and leverage the inherent microwave network analyzer's performance and features to display full port S-parameters: Two measurement architectures are available: 1-path/2-port and fully reversing 2-port. Waveguide calibration kits are available as separate accessories.



### Features

- Full simultaneous 2-port or 4-port network analysis
- Excellent dynamic range
- Excellent stability
- Compact and robust design
- Convection cooled – no fans – hence no vibration.
- T/R and T heads available
- Electronic power control compatibility with Agilent PNA-X
- 25 dB integrated manual variable attenuator on Port 1 heads
- 2-Port controller available as standard
- 4-port controller available for balanced and multi-port measurements to special order

### Applications

- Test and measurement frequency range extension
- Balanced S-parameters
- Multi-port S-parameters
- Wafer probe measurement
- Antenna measurements
- Dielectric material characterisation

### Accessories

- Calibration kits
- Cables
- Manuals
- Flight cases

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| Specification                           | Unit   | Min             | Typ  | Max   |
|---|--------|-----------------|------|-------|
| System Operating Frequency              | GHz    | 220             |      | 325   |
| Test Port Output Power (2)              | dBm    | -20             | -15  |       |
| System Dynamic Range (3)                | dB     | 70              | 90   |       |
| Raw Coupler Directivity                 | dB     | 25              | 30   |       |
| Trace Stability Magnitude (4)           | dB     |                 | ±0.8 |       |
| Trace Stability Phase (4)               | degree |                 | 8    |       |
| Test Port Input 0.1dB Compression Point | dBm    |                 | 0    |       |
| Manual Variable Attenuator              | dB     | 0               |      | 25    |
| RF Input Frequency                      | GHz    | 12.22           |      | 18.05 |
| RF Input Power                          | dBm    | +5              |      | +10   |
| LO Input Frequency                      | GHz    | 9.17            |      | 13.54 |
| LO Input Power                          | dBm    | +5              |      | +10   |
| IF Output Frequency                     | MHz    | 5               |      | 50    |
| Test Port Damage Level                  | dBm    | +5              |      |       |
| RF/LO Port Damage Level                 | dBm    | +15             |      |       |
|   |        |                 |      |       |
| Test Port Interface                     | -      | WR-03 UG-387/UM |      |       |
| RF/LO Connector                         | -      | 3.5 mm (F)      |      |       |
| IF Connector                            | -      | SMA (F)         |      |       |
| DC Power Requirements                   | -      | +6V at 1750 mA  |      |       |
| Weight                                  | kg     |                 | 3.5  |       |
| Dimensions (L x W x H)                  | -      | 290 x 130 x 85  |      |       |
| Operating Temperatures                  | °C     | 0               |      | 30    |

- (1) Specifications are typical and subject to change without a notice.
- (2) For frequencies greater than 110 GHz traceable only to FTL calorimeter.
- (3) Measured with PNA-X 5242A at 10 Hz of IF bandwidth.
- (4) Measured at 1h after 2h warm up and calibration. Assuming ideal RF and LO cables.