

## Datasheet

### Description

The FEV-05 Series will expand your existing Vector Network Analyzer (VNA) capabilities so you can conduct industry leading millimeter wave S-parameters measurements in G 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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| <b>Specification</b>                    | <b>Unit</b> | <b>Min</b>      | <b>Typ</b> | <b>Max</b> |
|---|-------------|-----------------|------------|------------|
| System Operating Frequency              | GHz         | 140             |            | 220        |
| Test Port Output Power (2)              | dBm         | -20             | -12        |            |
| System Dynamic Range (3)                | dB          | 70              | 90         |            |
| Raw Coupler Directivity                 | dB          | 30              | 35         |            |
| Trace Stability Magnitude (4)           | dB          |                 | ±0.6       |            |
| Trace Stability Phase (4)               | degree      |                 | 6          |            |
| Test Port Input 0.1dB Compression Point | dBm         |                 | 0          |            |
| Manual Variable Attenuator              | dB          | 0               |            | 25         |
| RF Input Frequency                      | GHz         | 11.67           |            | 18.33      |
| RF Input Power                          | dBm         | +5              |            | +10        |
| LO Input Frequency                      | GHz         | 11.67           |            | 18.33      |
| 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-05 UG-387/UM |            |            |
| RF/LO Connector                         | -           | 3.5 mm (F)      |            |            |
| IF Connector                            | -           | SMA (F)         |            |            |
| DC Power Requirements                   | -           | +6V at 1500 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.