Product Datasheet - Technical Specifications

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The Millimeter-Wave VNA Extender AV3644A/45A/43Q/49/49A/49B/43U/43V has reached the international level in measurement speed, dynamic range and measurement stability. For hardware, it adopts new design concept measurement speed, dynamic range and measurement stability. For hardware, it adopts new design concept and technical solution, which significantly enhance the key performance indexes of the instrument. As for the software, the frequency extending system is based on Windows OS, which greatly improves the interconnectivity and practicability of the instrument. AV3644A/45A/43Q/49/49A/49B

Millimeter-Wave VNA Extender, AV3640A millimeter-wave frequency extending controller and vector network analyzer together constitute the millimeter-wave vector network analyzing system, which can realize flexible configuration of 5mm, 3mm, 2mm, 1mm frequency range and higher, the highest reaches 1100GHz. With advantages of concise system configuration, user-friendly interface, high test precision etc., it can realize the full S-parameters measurement of the millimeter-wave network under test. The system is widely used for the R&D, manufacture and test in the fields of millimeter wave components, MMIC, antenna, RCS and materials.

- Frequency range: 50GHz~1100GHz.

- Windows 7 operating system, Simplified Chinese menu (English menu is an option).

- Various calibration types: frequency response, single port, response isolation, full dual port, TRL etc.

- Applicable to various models of vector network analyzer.

- Working with AV3640A to perform frequency extension measurement of dual-port vector network analyzer.

- Miniaturization of instruments with different frequency range, inclined panel design, general platform, convenient to operate, can enhance the test efficiency.

Model / Index	AV3644A	AV3645A	AV3643Q	AV3649	AV3649A	AV3649B	3643U	3643V
Frequency range	50GHz ... 75GHz	75GHz ... 110GHz	110GHz ... 170GHz	170GHz ... 220GHz	220GHz ... 325GHz	325GHz ... 500GHz	500GHz ... 750GHz	750GHz ...1100GHz
Output power	+3dBm	+3dBm	-10dBm	-10dBm	-13dBm	-23dBm	≥-30dBm	≥-36dBm
Dynamic range (dB)	95	95	100	100	100	80	≥70 (Port 1 and Port 2)	≥40 (Port 1 and Port 2)
Reflection tracking (dB)	±0.15	±0.15	±0.15	±0.2	±0.2	±0.3	±0.5 (Port 1 and Port 2)	±0.6 (Port 1 and Port 2)
Transmission tracking (dB)	±0.15	±0.15	±0.15	±0.2	±0.2	±0.3	±0.5 (Port 1 and Port 2)	±0.6 (Port 1 and Port 2)
Effective directivity (dB)	38	36	34	30	25	20	≥20 (Port 1 and Port 2)	≥20 (Port 1 and Port 2)
Effective source match (dB)	36	36	34	30	25	25	≥20 (Port 1 and Port 2)	≥20 (Port 1 and Port 2)
Effective load match (dB)	38	34	34	30	25	25	≥20 (Port 1 and Port 2)	≥20 (Port 1 and Port 2)
Connector type	WR15	WR10	WR06	WR05	WR03	WR02	WR1.5	WR1.0
	System impedance 1Ω							
Working voltage	12VDC@ 2A							
Size W×H×D (mm)	120×90×240							

AV3640A is a frequency extension controller and is compatible with **AV3672X** and the **PNA-X** Series Vector Network Analyzers.

Specs/Model	Frequency range	Output power	Controlling interface	Power supply output	Power supply	Size W×H×D(mm)
AV3640A	50GHz ... 75GHz	75GHz ... 110GHz	110GHz ... 170GHz	170GHz ... 220GHz	220GHz ... 325GHz	325GHz ... 500GHz