Product Data Sheet

ZVA-Z Series

Product Description

Millimeter-wave measurements in the V, E, W, F, D, G, J and Y band – network analysis in frequency ranges from 50 GHz to 500 GHz depending on the converter model. Featuring a wide dynamic range, the RPG converters offer high operating convenience and allow fast measurements. Two-port measurements can be performed using a four-port network analyzer and two converters; no external generator is required. When using a two-port network analyzer, an external generator is needed to supply the LO signals.

Description

The ZVA-Z110 converters, offered for the ZVA family, enable network analysis in the W band (75 GHz to 110 GHz). Test configurations for such measurements have so far been implemented only with coaxial connector systems for a frequency range up to approx. 40 GHz. The term 'multiport measurements' was created for this type of measurements.

Features

- Variable output power
- Electronic power control
- Automatic parameter setting
- Convenient handling
- Multiport and true differential measurements
- Pulsed measurements
- Calibration kit
- ZVA-Z325 and ZVA-Z500 special compact version
- ZVA-Z90E, ZVA-Z110E: Electronic power control for power calibration and calibrated power sweeps

Specification	ZVA-Z75		ZVA-Z90		ZVA-Z110	
Waveguide designation	Electronic Industries Alliance (EIA)	WR15	Electronic Industries Alliance (EIA)	WR12	Electronic Industries Alliance (EIA)	WR10
Connector type	anti-cocking flange	precision waveguide flange compatible with UG387/U-M	anti-cocking flange	precision waveguide flange compatible with UG387/U-M	anti-cocking flange	precision waveguide flange compatible with UG387/U-M
Frequency range		50 GHz to 75 GHz		60 GHz to 90 GHz		75 GHz to 110 GHz
Output power	with +7 dBm input power from the ZVA/R&S®ZVT	> 0 dBm, 4 dBm (typ.)	with +7 dBm input power from the ZVA/R&S®ZVT	> 6 dBm, 10 dBm (typ.)	with +7 dBm input power from the ZVA/R&S®ZVT	> 7 dBm, 10 dBm (typ.)
Output power attenuation	manually adjustable attenuator	0 dB to 40 dB	electronic power control	adjustable by reduction of RF input power 0 dB to 70 dB	manually adjustable attenuator	0 dB to 40 dB adjustable by reduction of RF input power 0 dB to 70 dB
Dynamic range		> 90 dB, 110 dB (typ.)		> 100 dB, 115 dB (typ.)		> 100 dB, 110 dB (typ.)
Partnumber	**1307.7400.02**		**1322.3024.02**		**1307.7000.03**	

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Specification	ZVA-Z110E		ZVA-Z140		ZVA-Z170	
Waveguide designation	Electronic Industries Alliance (EIA)	WR10	Electronic Industries Alliance (EIA)	WR08	Electronic Industries Alliance (EIA)	WR06
Connector type	anti-cocking flange	precision waveguide flange compatible with UG387/U-M	anti-cocking flange	precision waveguide flange compatible with UG387/U-M	anti-cocking flange	precision waveguide flange compatible with UG387/U-M
Frequency range		75 GHz to 110 GHz		90 GHz to 140 GHz		110 GHz to 170 GHz
Output power	with +7 dBm input power from the ZVA/R&S®ZVT	> -3 dBm, 0 dBm (typ.)	with +7 dBm input power from the ZVA/R&S®ZVT	> -1 dBm, 3 dBm (typ.)	with +7 dBm input power from the ZVA/R&S®ZVT	*for f < 160 GHz:* > -4 dBm (n.trc.), *for f > 160 GHz:* 0 dBm (typ.) -9 dBm (n.trc.), -4 dBm (typ.)
Output power attenuation	manually adjustable attenuator	0 dB to 25 dB	manually adjustable attenuator	0 dB to +40 dB	manually adjustable attenuator	0 dB to +40 dB
Dynamic range		> 95 dB, 110 dB (typ.)		> 85 dB, 105 dB (typ.)		> 85 dB, 105 dB (typ.)
Partnumber	**1307.7000.40**		**1307.7800.02**		**1311.8707.02**	

Specification	ZVA-Z220		ZVA-Z325		ZVA-Z500	
Waveguide designation	Electronic Industries Alliance (EIA)	WR05	Electronic Industries Alliance (EIA)	WR03	Electronic Industries Alliance (EIA)	WR02
Connector type	anti-cocking flange	precision waveguide flange compatible with UG387/U-M	anti-cocking flange	precision waveguide flange compatible with UG387/U-M	anti-cocking flange	precision waveguide flange compatible with UG387/U-M
Frequency range		140 GHz to 220 GHz		220 GHz to 325 GHz		325 GHz to 500 GHz
Output power	with +7 dBm input power from the ZVA/R&S®ZVT	*for f < 150 GHz*: > -18 dBm (n.trc.), -12 dBm (typ.) *for f > 150 GHz*: >-14 dBm (n.trc.), -10 dBm (typ.)	with +7 dBm input power from the ZVA/R&S®ZVT	> -22 dBm (n.trc.), -20 dBm (typ.)	with +7 dBm input power from the ZVA/R&S®ZVT	*325 to 480 GHz:* > -25 dBm (n.trc.), -22 dBm (typ.) *480 to 500 GHz:* > -30 dBm (n.trc.), -27 dBm (typ.)
Output power attenuation	manually adjustable attenuator	0 dB to +40 dB	manually adjustable attenuator	0 dB to +40 dB	manually adjustable attenuator	0 dB to +40 dB
Dynamic range		> 85 dB, 105 dB (typ.)		> 80 dB, 100 dB (typ.)		> 70 dB, 90 dB (typ.)
Partnumber	**1307.8006.02**		**1317.0514.02**		**1317.0520.02**	

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