Data sheet

Version 01.00

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Antenna and RCS measurements with Vector Network Analyzers R&S®ZVA 8/24 and R&S®ZVT 8

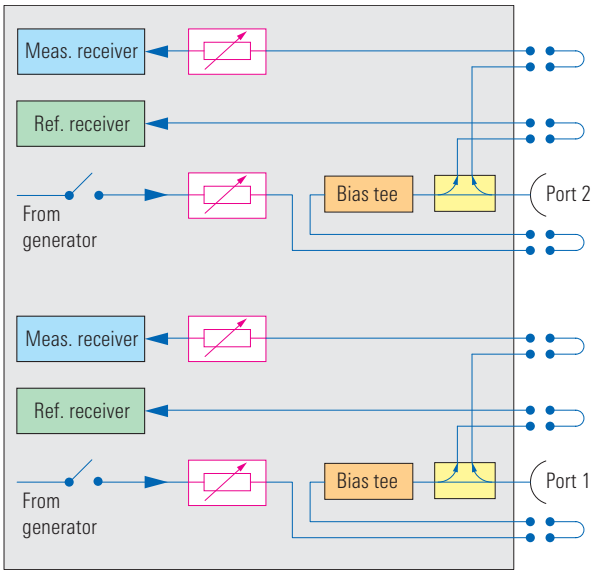
- 300 kHz/10 MHz to 8 GHz/24 GHz (R&S®ZVA 8/24)
  300 kHz to 8 GHz (R&S®ZVT 8)
- Wide dynamic range
  >135 dB at test port
  >145 dB with direct receiver access
- High sensitivity
  <–115 dBm at test port
  <–130 dBm with direct receiver access
- High measurement speed
  – Up to 285 000 test points/s (CW and pulsed mode)
  – Up to 33 500 test points/s (frequency sweep)
- High output power >13 dBm
- Up to 20 001 test points
- Fast data transfer <0.7 ms
- Up to eight receivers on four-port R&S®ZVA model and up to 16 receivers on R&S®ZVT 8 for rapid testing of complex antennas
- Versatile frequency conversion option for remote mixer control

ROHDE&SCHWARZ

The new R&S®ZVA 8/ZVA 24 high-end network analyzers and the R&S®ZVT 8 multiport network analyzer from Rohde & Schwarz offer superior RF characteristics, measurement performance and functionality. This makes them ideal for use as receivers and control units in antenna and RCS measurements.

The network analyzers offer the following exceptional characteristics:

- Direct access to the analyzer's internal generators/receivers:
  - Increased dynamic range (up to 150 dB)
  - Enhanced sensitivity (typ. –130 dBm)
  - Four receivers available with the R&S®ZVA two-port model
  - Eight receivers available with the R&S®ZVA four-port model
  - Up to 16 receivers available with the R&S®ZVT 8 (8 GHz, fully configurable to eight ports)
- R&S®NRP power meters with USB connectors available as additional scalar inputs
- Versatile frequency-conversion measurement option for controlling external generators or supplying an additional signal to external mixers
- Two internal generators on R&S®ZVA four-port model (and up to four internal generators on R&S®ZVT 8) for maximum efficiency with a minimum number of external devices
- Minimized antenna test times due to:
  - Extremely fast measurements of up to 285 000 test points/s (CW and pulsed mode) and up to 33 500 test points/s (frequency sweep)
  - Parallel data acquisition by all receivers and parallel data processing through to result display
  - Data transfer simultaneously with the measurement
  - 1 Hz to 1 MHz IF bandwidth while maintaining high receiver sensitivity
  - Integrated generator and mixer control
  - Sweep status indication and fast TTL control of external antenna switches



Direct generator and receiver access options (blue); generator and receiver step attenuator options (red)

Specifications

Number of test ports R&S®ZVA 8/24 R&S®ZVT 8	 2 or 4 2 to 8
Frequency range R&S®ZVA 8/24 R&S®ZVT 8	 300 kHz/10 MHz to 8 GHz/24 GHz 300 kHz to 8 GHz
Dynamic range Between test ports With direct receiver access	 >130 dB typ. >145 dB
Sensitivity at 10 Hz IF bandwidth At test port With direct receiver access	 <–115 dBm typ. <–130 dBm
Measurement speed	285 000 test points/s (CW and pulsed mode) 33 500 test points/s (frequency sweep)
Data transfer time (201 test points) Via RSIB over 100 Mbit/s LAN	 <0.7 ms
Switching time between channels	<1 ms
Output level at test port	>+13 dBm
Level sweep range	>50 dB
IF bandwidths	1 Hz to 1 MHz
Number of channels, diagrams, traces	>100 each (limited by available RAM capacity)
Number of test points per trace	20 001
Operating system	Windows XP Embedded

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