

Technical Data

Bode 100

Vector Network Analyzer



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1. Signal Source

Waveform	Sinusoidal signal
Frequency range	1 Hz to 40 MHz
Signal level	-27 dBm to 13 dBm 0.01 V _{RMS} to 1 V _{RMS} (at 50 Ω load)
Accuracy of the source level (23°C ± 5°C)	± 0.3 dB (1 Hz to 1 MHz) ± 0.6 dB (1 MHz to 40 MHz)
Frequency response of the source level (1 Hz to 40 MHz)	± 0.3 dB (referred to 100 kHz)
Frequency accuracy (23°C ± 5°C)	± 15 ppm (< 1 year after calibration) ± 25 ppm (< 3 years after calibration)
Source impedance:	50 Ω
Return loss (1 Hz to 40 MHz)	> 28 dB (VSWR < 1.09)
Spurious signals	< -55 dBc (typical)
Harmonics	< -55 dBc (typical)
Connector	BNC

2. Inputs: CH1, CH2

Input impedance (high)	1 MΩ ± 2% (by design) 40 to 55 pF
Input impedance (low)	50 Ω
Return loss for low input impedance (1 Hz to 40 MHz)	> 25 dB (VSWR < 1.12)
Receiver bandwidth	1 Hz, 3 Hz, 10 Hz, 30 Hz, 100 Hz, 300 Hz, 1 kHz, 3 kHz
Noise floor (gain measurement) Conditions: Receiver bandwidth = 10 Hz, select internal reference, P _{SOURCE} = 13 dBm, 50 Ω load at CH2, 20 dB attenuators for CH1 and CH2	1 Hz to 5 kHz: -100 dB (typical) 5 kHz to 50 kHz: -110 dB (typical) 50 kHz to 20 MHz: -115 dB (typical) 20 MHz to 40 MHz: -110 dB (typical)
Input attenuator	0 dB, 10 dB, 20 dB, 30 dB, 40 dB
Input sensitivity	100 mV _{RMS} full scale (for 0 dB input attenuator)
Dynamic range	> 100 dB (at 10 Hz receiver bandwidth)
Gain error	< 0.1 dB (calibrated)
Phase error	< 0.5° (calibrated)
Connectors	BNC

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3. USB Interface

Connector	Type B
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4. PC Requirements

Minimum configuration	Pentium 1 GHz, 512 MB RAM, CD-ROM drive
Recommended configuration	Pentium 2.5 GHz, 1 GB RAM, CD-ROM drive
Interface	USB 1.1 or 2.0
Supported operating systems	Windows XP SP3 (32 bit) Windows Vista (32 bit) Windows Vista (64 bit) Windows 7 (32 bit) Windows 7 (64 bit) Windows 8 (32 bit) Windows 8 (64 bit)

5. Power Requirements

AC power adapter

Input voltage/frequency	100...240 V / 47...63 Hz
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DC power supply

Input voltage/output power	+10... 24 V / 10 W
Supply current	at 12 V: 450 mA (typical) at 18 V: 300 mA (typical) at 24 V: 230 mA (typical)
Low supply voltage shut-down	8.25 V (typical)
Inrush current for a low impedance source at 12V	15 A for 300 μ s (typical)
Inrush current for a low impedance source at 24V	30 A for 300 μ s (typical)
Inner connector	+10...24 V
Outer connector	Ground
Inner diameter	2.5 mm
Outer diameter	5.0 mm

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6. Environmental Requirements

Temperature	Storage	-35...+60 °C / -31...+140 °F
	Operating	+5...+40 °C / +41...+104 °F
	For specifications	23 °C ± 5 °C / 73 °F ± 18 °F
Relative humidity	Storage	20...90 %, non-condensing
	Operating	20...80 %, non-condensing

7. General

Dimensions (w × h × d)	26 x 5 x 26.5 cm 10.25 x 2 x 10.5 inch
Weight - Bode 100	< 2 kg/4.4 lb
Weight - Accessories	< 0.5 kg/1.1 lb

8. Absolute Maximum Ratings

DC supply voltage	+28 V
DC supply reverse voltage (device doesn't work)	-28 V
Maximum AC input signals at CH1 or CH2 (high impedance)	50 V _{RMS} up to 1 MHz 30 V _{RMS} 1 MHz to 2 MHz 15 V _{RMS} 2 MHz to 5 MHz 10 V _{RMS} 5 MHz to 10 MHz 7 V _{RMS} 10 MHz to 40 MHz
Maximum DC input signal at CH1 or CH2 (high impedance)	50 V
Maximum input power at CH1 or CH2 (low impedance)	1 W (= 7 V _{RMS})
Maximum possible return power at the source connector	0.5 W

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