

Bode 100 Vector Network Analyzer Technical Data



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Smart Measurement Solutions



1 Signal Source

Wave form:	Sinusoidal signal
Frequency range	10Hz to 40MHz (standard frequency range)* 1Hz to 40MHz (extended frequency range)* *frequency ranges software switch able
Signal Level	-27dBm to 13dBm 0.01VRMS to 1VRMS (at 50 Ohm load)
Accuracy of the source level (23°C +/-5°C)	+/-0.3dB (1Hz to 1MHz) +/-0.6dB (1MHz to 40MHz)
Frequency response of the source level 1Hz to 40MHz	+/-0.3dB (referred to 100kHz)
Frequency accuracy (23°C +/-5°C)	+/-15ppm (<1 year after calibration) +/-25ppm (<3 years after calibration)
Source impedance:	50 Ohm
Return loss (1Hz to 40MHz)	> 28dB (VSWR < 1.09)
Spurious signals	< -55dBc (typical)
Harmonics	< -55dBc (typical)
Connector:	BNC

2 Inputs: CH1, CH2

Input Impedance (high):	1MOhm +/-2% (by design)
Input capacitance:	40 to 55pF
Input Impedance (low):	50 Ohm
Return loss for low input impedance (1Hz to 40MHz)	> 25dB (VSWR < 1.12)
Noise floor for the gain measurement Conditions: Resolution bandwidth = 10Hz, select internal reference, PSOURCE = 13dBm, 500 load at CH2, 20dB attenuators for CH1 and CH2	1Hz to 5kHz: -100dB (typical) 5kHz to 50kHz: -110dB (typical) 50kHz to 20MHz: -115dB (typical) 20MHz to 40MHz: -110dB (typical)
Connectors	BNC
Receiver bandwidth:	1Hz to 3kHz
Input attenuator:	0 dB, 10 dB, 20 dB, 30 dB, 40 dB
Input sensitivity:	100 mV full scale (for input attenuator 0 dB)
Dynamic range:	> 100 dB (at 10 Hz receiver bandwidth)
Gain error:	< 0.1 dB (calibrated)
Phase error:	< 0.5° (calibrated)

3 USB Interface

Connector	Type B
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4 PC Requirements

Minimum configuration:	Pentium 500 MHz, 256 MB RAM, CD-ROM drive
Recommended configuration:	Pentium 1 GHz, 256 MB RAM, CD-ROM drive
Interface:	USB 1.1 or 2.0
Supported operating systems:	Windows 2000 Windows XP Windows XP 64 bit Windows Vista Windows Vista 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 12V: 450mA (typical) at 18V: 300mA (typical) at 24V: 230mA (typical)
Low supply voltage shut-down	8.25V (typical)
Inrush current for a low impedance source at 12V	15A for 300 μ s (typical)
Inrush current for a low impedance source at 24V	30A for 300 μ s (typical)
Inner connector	+10...24 V
Outer connector	Ground
Inner diameter	2.5 mm
Outer diameter	5.0 mm

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:	< 2kg/4.4 lb
Weight - Accessories:	< 0.5kg/1.1 lb

8 Absolute Maximum Ratings

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