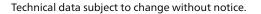# Technical Data Sheet
Bode 100 Revision 1
Vector Network Analyzer

V2.10
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1. Signal Source (OUTPUT)

Waveform	Sinusoidal signal
Frequency range	1 Hz to 40 MHz
Signal level	-30 dBm to 13 dBm 0.007 V_{RMS} to 1 V_{RMS} (@ 50 Ω load)
Source level accuracy	± 0.3 dB (1 Hz to 1 MHz) ± 0.6 dB (1 MHz to 40 MHz)
Source level frequency response (flatness)	± 0.3 dB (typical, referring to 10 MHz)
Frequency stability	± 15 ppm* (< 1 year after adjustment) ± 25 ppm* (< 3 years after adjustment) *± quantisation error (= 0.5 · step size)
Frequency step size / resolution	0.03492 Hz
Source impedance	50 Ω
Return loss (1Hz to 40 MHz)	> 28 dB (VSWR < 1.09)
Spurious signals	< -55 dBc (typical)
Harmonics	< -55 dBc (typical)
Connector type	BNC

2. Inputs (CH1, CH2)

Input impedance (software switchable)	**High**: 1 MΩ ± 2% || 40...55 pF **Low**: 50 Ω
Return loss @ 50 Ω input impedance	> 25 dB (1 Hz to 40 MHz)
Receiver bandwidth - RBW (software selectable)	1 Hz, 3 Hz, 10 Hz, 30 Hz, 100 Hz, 300 Hz, 1 kHz, 3 kHz
Noise floor (S21 measurement) RBW = 10 Hz, P_{SOURCE} = 13 dBm, Attenuator CH1: 20 dB, CH2: 0 dB	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 attenuators (software selectable)	0 dB, 10 dB, 20 dB, 30 dB, 40 dB
Input sensitivity / range	100 mV_{RMS} full scale @ 0 dB input attenuator 10 V_{RMS} full scale @ 40 dB input attenuator
Input channels dynamic range	> 100 dB (@ 10 Hz RBW)
Gain error	< 0.1 dB (User-Range calibrated)
Phase error	< 0.5° (User-Range calibrated)
Connector type	BNC

Technical data subject to change without notice.

3. USB Interface

Connector	Type B

4. PC Requirements

Processor	Intel Core-I Dual-Core (or similar)
Memory (RAM)	2 GB, 4 GB recommended
Graphics resolution	Super VGA (1024 x 768) higher resolution recommended
Graphics card	DirectX 11 with Direct2D support
USB interface	USB 1.1 or higher
Operating system	Windows 7 SP1 or higher

5. Power Requirements

AC/DC power adapter

Input voltage / frequency	100…240 V / 47…63 Hz

DC power requirements

Supply voltage range / 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)
Power connector / socket	Coaxial power socket Inner diameter 2.5 mm Outer diameter 5.5 mm
Connector polarity	Inner connector … positive Outer connector … ground

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6. Environmental Requirements

Temperature range	Storage	−35…+60 ºC / −31…+140 ºF
	Operating	+5…+40 ºC / +41…+104 ºF
	For specifications	23 ºC ± 5 ºC / 73 ºF ± 18 ºF
Relative humidity	Storage	20…90 %, non-condensing
	Operating	20…80 %, non-condensing

7. General

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

8. Absolute Maximum Ratings (device will be destroyed)

DC supply voltage	+28 V
DC supply reverse voltage	-28 V
Maximum input signal at CH1 or CH2 (low impedance, 50 Ω)	1 W (= 7 V_{RMS})
Maximum AC input signals at CH1 or CH2 (high impedance 1 MΩ)	50 V_{RMS} 1 Hz 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, 1 MΩ)	50 V
Maximum return power at the OUTPUT connector	0.5 W (= 5 V_{RMS})

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