Quick Fact Sheet

Economy ShockLine™ MS46322B
Vector Network Analyzers

Anritsu
Advancing beyond

High Performance at an Affordable Price

The MS46322B Economy ShockLine Vector Network Analyzer delivers laboratory-grade RF performance at an affordable price, making it an ideal solution for engineering, manufacturing, education, and general-purpose microwave measurements. Available in frequency ranges from 1 MHz to 8, 20, or 43.5 GHz, it combines excellent measurement performance with the compact footprint and low cost of ownership expected from the ShockLine family.

Built on Anritsu's patented ShockLine VNA-on-chip technology, the MS46322B simplifies the VNA architecture while delivering excellent accuracy, low measurement uncertainty, and reliable performance in a compact 2U chassis. With fast 130 µs per point sweep speed and greater than 100 dB dynamic range, it enables efficient and repeatable characterization of passive RF and microwave components.

ShockLine Economy VNA Highlights

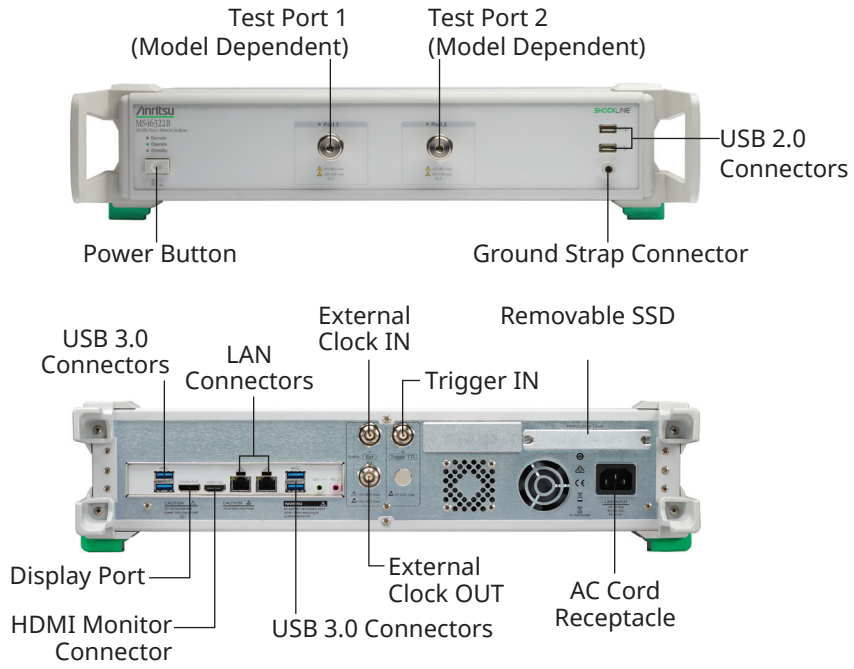
- Affordable laboratory-grade VNA with frequency coverage up to **43.5 GHz**
- Compact **2U** chassis minimizes bench and rack space requirements
- Patented **ShockLine VNA-on-chip technology** reduces system complexity while maintaining excellent RF performance
- Fast **130 µs per point** sweep speed helps reduce measurement and production test time
- **>100 dB dynamic range** enables accurate characterization of passive devices
- Excellent corrected directivity minimizes measurement uncertainty
- Optional **Time Domain with Time Gating** simplifies cable fault location, connector inspection, and fixture analysis

SHOCKLINE™

Simple | Economical | Great Performance

ShockLine Economy VNA Highlights *(Continued)*

- Modern **LAN interface** enables high-speed remote control and automated testing
- Common **ShockLine GUI and SCPI command set** simplifies operation and software migration across the product family
- Multiple USB ports support peripherals, removable storage devices, and calibration accessories
- Compatible with the **36585K AutoCal** unit for fast and repeatable calibrations up to **40 GHz**
- Standard removable SSD enhances data security for secure and production environments



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Key Specifications

Analyzer Performance	
Frequency Options	MS46322B-010, 1 MHz to 8 GHz, type N(f) ports MS46322B-020, 1 MHz to 20 GHz, type Ruggedized K(m) ports MS46322B-043, 1 MHz to 43.5 GHz, type Ruggedized Extended-KTM(m) ports (Extended-K (m) ports are compatible with standard K (2.92 mm), 3.5mm, and SMA connectors)
Dynamic Range	> 100 dB
Sweep Speed	130 us / data point, typical
High Level Noise	High Level Noise 0.001 dB, 20 MHz to 43.5 GHz, typical
General	
Measurement Parameters	Single ended S-Parameters: S11, S21, S12, S22 Mixed-Mode S-Parameters: SDD, SCC, SDC, SCD User-defined combination: a1, a2, b1, b2, 1 Max Efficiency: kQ product, ηmax
Display Graphs	Log Magnitude, Phase, Group Delay, Linear Magnitude, Real, Imaginary, SWR, Impedance, Smith Chart kQ product and ηmax
Measurements Data Points	2 to 16,001 points
Limit Lines	Single or segmented. 2 limit lines per trace. 50 segments per trace.
IF Bandwidth	10, 20, 50, 70, 100, 200, 300, 500, 700 Hz 1, 2, 5, 7, 10, 20, 30, 50, 70, 100, 300 kHz
Display and Traces	Up to 16 traces. A separate memory for each trace can be used to store measurement data for later display or subtraction, addition, multiplication or division with current measurement data. The trace data can be saved and recalled.
Markers	12 markers + 1 reference marker per trace
Remote Control Interface	SCPI/Software drivers over LAN
Display	Powerful GUI displayed on user-provided monitor, touchscreen compatible
Temperature	Operating Temperature 0 °C to 50 °C, humidity 95% or less at 40 °C
Dimensions	108 mm x 484 mm x 590 mm
Weight	< 11 kg (< 25 lb), typical

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Product General Options

Option Number	Description
MS46322B-001	Rack Mount
MS46322B-002	Time Domain with Time Gating
MS46322B-024	Universal Fixture Extraction

Calibration Accessories

Part Number	Description
MN25208A	2-Port SmartCal 8.5 GHz USB Auto Calibration Unit
MN25218A	2-Port SmartCal 20 GHz USB Auto Calibration Unit
TOSLN50A-8	Precision N Male Through/Open/Short/Load Mechanical Calibration Tee
TOSLNF50A-8	Precision N Female Through/Open/Short/Load Mechanical Calibration Tee
TOSLK50A-40	Precision K Male Through/Open/Short/Load Mechanical Calibration Tee
TOSLKF50A-40	Precision K Female Through/Open/Short/Load Mechanical Calibration Tee
TOSLK50A-43.5	Precision Extended-K Male Through/Open/Short/Load Mechanical Calibration Tee, DC to 43.5 GHz, 50 ohm, includes .s1p files for data-based calibration support
TOSLKF50A-43.5	Precision Extended-K Female Through/Open/Short/Load Mechanical Calibration Tee, DC to 43.5 GHz, 50 ohm, includes .s1p files for data-based calibration support
36585K	2-Port AutoCal 40 GHz Auto Calibration Unit
3653A	Type N Calibration Kit
3650A	SMA / 3.5 mm Calibration Kit

Product Options

Cables

Automatic Calibration Unit

Calibration Accessories

Torque Wrenches

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11410-01015, Rev. C Printed in United States 2026-08
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