

# MS46322A Economy ShockLine™ Vector Network Analyzers



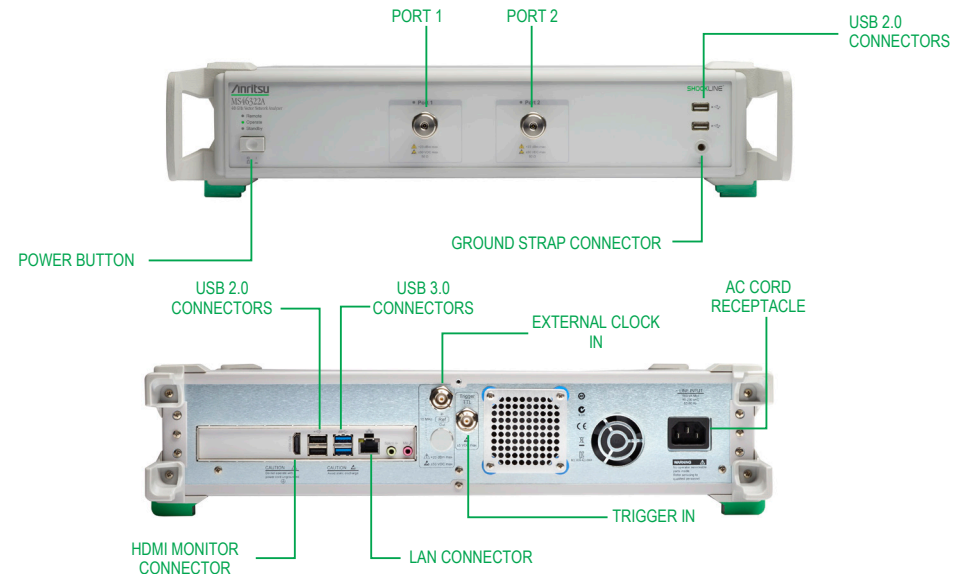
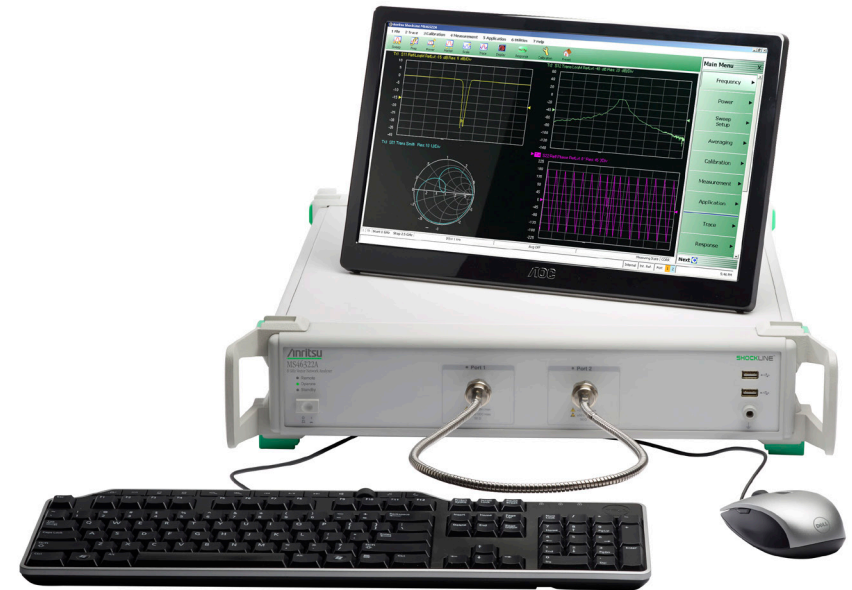
## The Ideal Choice for Cost-Sensitive Applications

The MS46322A is a series of Economy ShockLine™ Vector Network Analyzers with frequency range from 1 MHz to 4/8/14/20/30/40 GHz. It is based on patented shock line VNA-on-chip technology, which simplifies the internal VNA architecture at high frequencies, reduces instrument cost, enhances accuracy and minimizes measurement uncertainty.

The MS46322A are all 2-port VNAs packaged in a compact and rugged 2U chassis. The entire series has 220 microseconds per point sweep speed, and better than 100 dB dynamic range to 40 GHz, making it suitable for testing passive devices in engineering, manufacturing and cost-sensitive education applications.

## ShockLine™ Economy VNA Highlights

- > Ideal for testing RF and microwave devices
- > Fast sweep speed and wide dynamic range minimize test times and maximize throughput
- > Excellent corrected directivity allows for less measurement uncertainty
- > Time domain with time gating option grants easier and faster fault identification
- > The LAN interface for remote control is more robust than USB and faster than GPIB
- > A common GUI and SCPI interface within the ShockLine™ family
- > USB ports allow for easy connection to user-provided monitor, keyboard, and mouse
- > The small 2U packages allows for the efficient use of rack space



Simple. Economical. High Performance.



### Key Specifications

Analyzer Performance	
Frequency Options	MS46322A-004 1 MHz to 4 GHz MS46322A-010 1 MHz to 8 GHz MS46322A-014 1 MHz to 14 GHz MS46322A-020 1 MHz to 20 GHz MS46322A-030 1 MHz to 30 GHz MS46322A-040 1 MHz to 40 GHz
Dynamic Range	> 100 dB
Sweep Speed	220 us / data point, typical
Corrected Directivity	≥ 30 dB at 30 - 40 GHz
General	
Measurement Parameters	$S_{11}$ , $S_{21}$ , $S_{22}$ , $S_{12}$ , and any user-defined combination of $a_1$ , $a_2$ , $b_1$ , $b_2$ , 1.
Display Graphs	Log Magnitude, Phase, Group Delay, Linear Magnitude, Real, Imaginary, SWR, Impedance, Smith Chart (Impedance)
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

### Product Options

Option Number	Description
MS46322A-001	Rack mount
MS46322A-002	Time Domain with time gating

### Calibration Accessories

Part Number	Description
3653A	Type N Calibration Kit
3650A	SMA / 3.5 mm Calibration Kit
3652A	Type K Calibration Kit
TOSLN50A-18	Precision N Male Through/Open/Short/Load Mechanical Calibration Tee
TOSLNF50A-18	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

### Accessories

#### Cables



#### Adapters



#### Calibration Kits



#### Torque Wrenches



## Pricing | Ordering | Support

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