

# ShockLine™ ME7868A Modular 2-Port Vector Network Analyzers

## World's First Distributed 2-Port VNA with Portable Phase Synchronized Remote Ports

The ShockLine ME7868A 2-Port VNAs are unique modular configurations that consist of two ShockLine MS46131A 1-port VNAs that act as remote VNA ports. Using patented PhaseLync™ synchronization technology, the 1-port VNAs are phase synchronized over a distance of 100 meters or more to enable full 2-port vector S-parameter measurements. This architecture eliminates the need for long cables by bringing the VNA port to the DUT. This simplifies and improves the S-parameter measurements over distance in applications like over-the-air (OTA) and large vehicle shielding and propagation testing.

The ShockLine ME7868A is offered in 8 GHz, 20 GHz, and 43.5 GHz frequencies and requires cabling between the two ShockLine MS46131A VNAs to support the PhaseLync option. The cables come in three standard lengths (2 meter, 5 meter, 25 meter) with longer lengths available as special orders.

## ShockLine Compact VNA Highlights

- Portable and remote ShockLine ME7868A ports eliminate long cables by bringing the VNA to the DUT, improving measurement stability and dynamic range
- PhaseLync technology enables magnitude and phase S-parameter measurements between two ShockLine MS46131A VNAs separated by 100 meters or more
- Modular architecture maximizes uptime by making ports easily replaceable
- A single external PC controls the pair of ShockLine MS46131As as a fully reversing 2-port VNA with powerful ShockLine software
- No on-board data storage eliminates the need for data purging in secure applications
- Fast and easy calibrations with AutoCal™



ShockLine ME7868A 2 Meter 2-Port Configuration



Remote ShockLine MS46131A Connections



ShockLine ME7868A 25 Meter 2-Port Configuration



Simple | Economical | Great Performance



# Quick Fact Sheet

## ShockLine ME7868A

### Modular 2-Port Vector Network Analyzers



#### Key Specifications\*

Analyzer Performance	
Standard 2-Port Configurations	ME7868A-010-2 8 GHz, 2 meter PhaseLync cabling ME7868A-020-2 20 GHz, 2 meter PhaseLync cabling ME7868A-043-2 43.5 GHz, 2 meter PhaseLync cabling  ME7868A-010-5 8 GHz, 5 meter PhaseLync cabling ME7868A-020-5 20 GHz, 5 meter PhaseLync cabling ME7868A-043-5 43.5 GHz, 5 meter PhaseLync cabling  ME7868A-010-25 8 GHz, 25 meter PhaseLync cabling ME7868A-020-25 20 GHz, 25 meter PhaseLync cabling ME7868A-043-25 43.5 GHz, 25 meter PhaseLync cabling
System Dynamic Range	105 dB Typical
High Level Noise	0.003 dB 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
Display Graphs	Log Magnitude, Phase, Group Delay, Linear Magnitude, Real, Imaginary, SWR, Impedance, Smith Chart, Polar
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 Channels and Traces	Up to 16 channels with a maximum of 16 traces each. 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
Display	Powerful GUI displayed on user-provided computer
Temperature	Operating temperature -10 °C to 55 °C
Dimensions	191.8 mm x 107 mm x 54 mm (H x W x D)
Weight:	< 1 kg (< 2.2 lb), typical weight

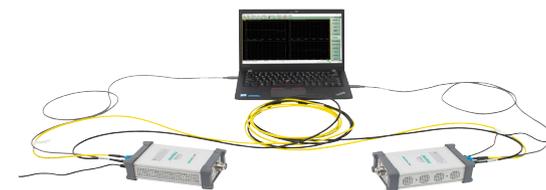
\*For complete 2-port specifications, please refer the ShockLine ME7868A Technical Data Sheet (P/N 11410-02824).

#### Product Options

Option Number	Description
MS46131A-002	Time Domain (must be enabled on both ShockLine MS46131As to enable option)
MS46131A-012	PhaseLync synchronization option (must be installed on both ShockLine MS46131As to enable option)

#### 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-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
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
3652A	Type K Calibration Kit
3650A	SMA / 3.5 mm Calibration Kit



ShockLine ME7868A 5 Meter Setup

For more information go to [www.anritsu.com](http://www.anritsu.com)