

ShockLine™

Selection Guide

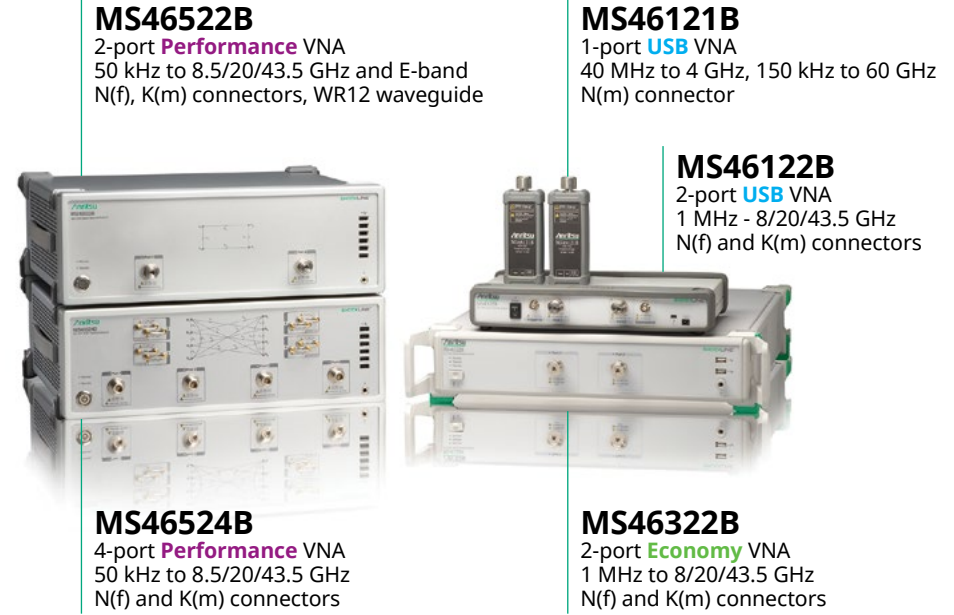


Anritsu's ShockLine Family of Vector Network Analyzers (VNA) is a series of five VNA models (with 15 products to choose from) that provide a broad range of solutions to meet your unique performance, application, and budget needs. Whether you are looking for an economical, portable 1-port solution or a full-featured solution that delivers best-in-class performance, the ShockLine family of VNAs provides you with:

- **Simplicity:** compact, durable, and ready-to-use right out of the box
- **Economy:** wide frequency range across the family of solutions with fast test times for optimal throughput
- **Great performance:** fast measurement speeds with high dynamic range minimizes test times and maximizes throughput in automated and manual test applications
- **Stability:** excellent corrected directivity and minimal drift reduces measurement uncertainty and smaller guard bands for improved yield in production
- **World-class customer support:** 3-year warranty provides the support and service when you need it.

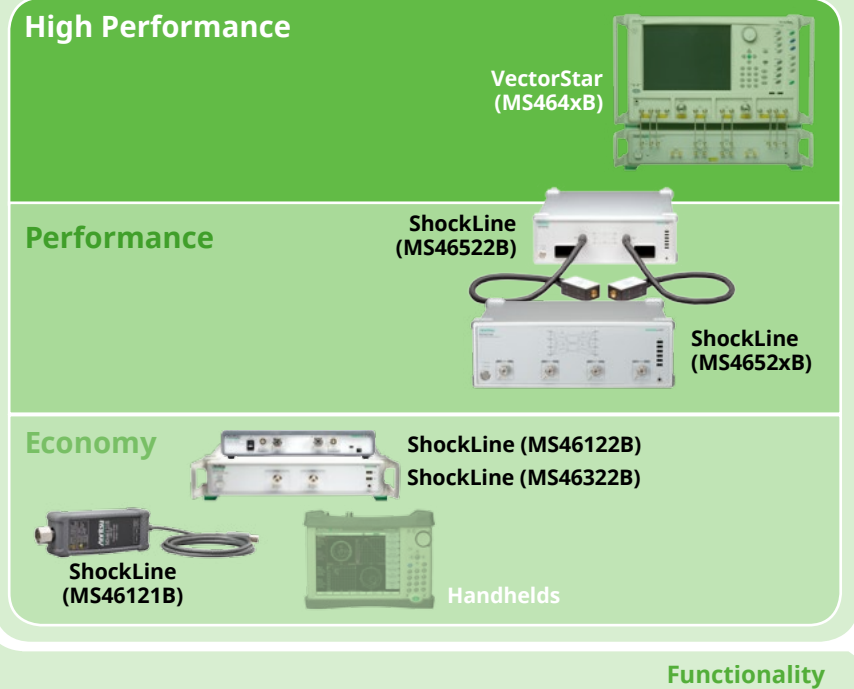
Anritsu's modern architecture employs the patented nonlinear transmission line (NLT) shockline technology, which enables high-frequency measurements at an economical cost.

Simple. Economical. Great Performance.



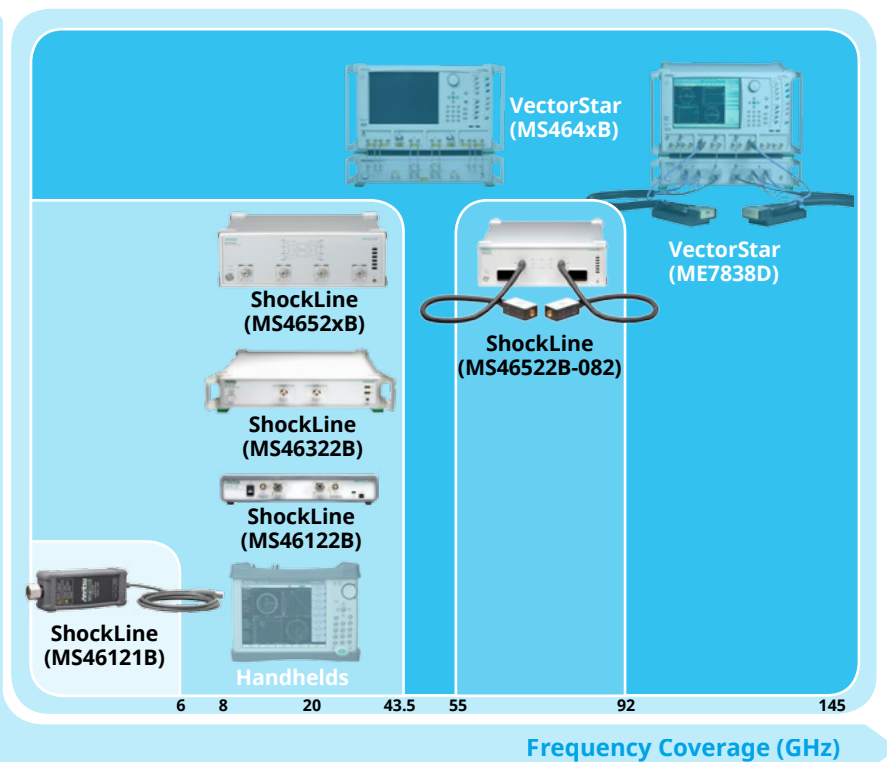
The right solution for your frequency or port requirements. ShockLine VNAs provide 1-, 2-, and 4-port solutions that cover a broad range of frequencies. Broadband models are available that cover frequencies as low as 50 kHz to as high as 43.5 GHz. The MS46522B 2-port Performance VNA is also available in a banded version, covering the extended E-band frequencies from 55 GHz to 92 GHz.

Price / Performance



Performance / Functionality

VNA Frequency Guide



Note: Figures used in comparison graphics are not to scale.








ShockLine VNA Series Comparison

	MS46522B Option 82 (E-band)	MS46522B/524B	MS46322B	MS46122B	MS46121B
Frequency Range	55 to 92 GHz Extended E-band	50 kHz to 8.5/20/43.5 GHz	1 MHz to 8/20/43.5 GHz	1 MHz to 8/20/43.5 GHz	40 MHz to 4 GHz 150 kHz to 6 GHz
Dynamic Range	≥ 109 dB 60 GHz to 67 GHz ≥ 113 dB 67 GHz to 87 GHz ≥ 101 dB 87 GHz to 90 GHz	≥ 140 dB 50 MHz to 2 GHz ≥ 130 dB 2 GHz to 6 GHz ≥ 117 dB 6 GHz to 40 GHz	≥ 100 dB 20 MHz to 40 GHz	≥ 100 dB 20 MHz to 40 GHz	Scalar Transmission: 80 dB (typical, 150 kHz to 6 GHz)*
Trace Noise (rms) (100 Hz IFBW)	0.004 dB	0.004 dB	0.006 dB	0.006 dB	0.02 dB (typical)
Port Power	Variable: -50 to 0 dBm	Variable: -30 to +15 dBm	High State: +5, -3 dBm Low State: -20 dBm	High State: +5, -3 dBm Low State: -20 dBm	Nominal Output: +3 dBm (>23.2 MHz to 4 GHz)
Measurement Speed, Typical (@widest IFBW)	30 μs/point	30 μs/point	130 μs/point	130 μs/point	120 μs/point
Major Options	Time Domain and Rack-Mount	Time Domain, Advanced Time Domain, Loops, Bias Tees, and Rack-Mount	Time Domain and Rack-Mount	Time Domain and Rack-Mount (Standard)	Low Pass Time Domain (Band Pass TD Standard)
Remote Control	LAN	LAN	LAN	USB	USB
Calibration	SOLT, SOLR, SSLT, SSST, LRL/LRM, WG, Microstrip, Thru Update	SOLT, SOLR, SSLT, SSST, LRL/LRM, WG, Microstrip, AutoCal/SmartCal, Thru Update	SOLT, SOLR, SSLT, SSST, LRL/LRM, WG, Microstrip, AutoCal/SmartCal, Thru Update	SOLT, SOLR, SSLT, SSST, LRL/LRM, WG, Microstrip, AutoCal/SmartCal, Thru Update	SOL, Scalar Thru (w/option 21), AutoCal/SmartCal
Sweep Type	Freq: Linear, Log, CW, Segment	Freq: Linear, Log, CW, Segment Power: Linear	Freq: Linear, Log, CW, Segment	Freq: Linear, Log, CW, Segment	Freq: Linear, CW
Max Number of Points	20,000	20,000	16,000	16,000	20,000





* Specified using two MS46121B instruments with option 21 at 30 Hz IFBW with external reference.

With a robust set of capabilities, the ShockLine family of VNAs are a simple and economical solution for manufacturing, engineering labs/R&D, mil/aero, and universities looking to perform measurements on passive RF and microwave devices.

VNA Port Count Guide

 ShockLine (MS46121B) Control up to 16 MS46121B VNAs per PC	 ShockLine (MS46522B)  ShockLine (MS46322B)  ShockLine (MS46122B)  Handhelds	 VectorStar (MS464xB)  ShockLine (MS4652xB)
1-Port Model	2-Port Models	2- and 4-Port Models

VNA Capabilities Guide

 ShockLine (MS46121B) Frequency to 6 GHz 80 dB Scalar Transmission Dynamic Range Measurements: 1-port S-parameters 2-port Scalar S21 Single port output power	 ShockLine (MS46322B)  ShockLine (MS46122B) Frequency to 43.5 GHz 100 dB Dynamic Range Measurements: 1-, 2-port S-parameters, Time Domain Hi/Low port output power	 ShockLine Series (MS4652xB) Frequency: Broadband to 43.5 GHz, E-band 120 dB dynamic range Measurements: 1-, 2-, 4-port S-parameters, Time domain, Single Integrity Variable port power control (ALC) Multiple sources Loops (Rcv, Scr, 8.5 GHz models only) Bias Tees (8.5 GHz models only)
Application Complexity		

• United States

Anritsu Company

1155 East Collins Blvd., Suite 100, Richardson,
TX 75081, U.S.A.
Toll Free: 1-800-267-4878
Phone: +1-972-644-1777
Fax: +1-972-671-1877

• Canada

Anritsu Electronics Ltd.

700 Silver Seven Road, Suite 120, Kanata,
Ontario K2V 1C3, Canada
Phone: +1-613-591-2003
Fax: +1-613-591-1006

• Brazil

Anritsu Elettronica Ltda.

Praça Amadeu Amaral, 27 - 1 Andar
01327-010 - Bela Vista - Sao Paulo - SP
Brazil
Phone: +55-11-3283-2511
Fax: +55-11-3288-6940

• Mexico

Anritsu Company, S.A. de C.V.

Av. Ejército Nacional No. 579 Piso 9, Col. Granada
11520 México, D.F., México
Phone: +52-55-1101-2370
Fax: +52-55-5254-3147

• United Kingdom

Anritsu EMEA Ltd.

200 Capability Green, Luton, Bedfordshire, LU1 3LU, U.K.
Phone: +44-1582-433200
Fax: +44-1582-731303

• France

Anritsu S.A.

12 avenue du Québec, Bâtiment Iris 1-Silic 612,
91140 VILLEBON SUR YVETTE, France
Phone: +33-1-60-92-15-50
Fax: +33-1-64-46-10-65

• Germany

Anritsu GmbH

Nemetschek Haus, Konrad-Zuse-Platz 1
81829 München, Germany
Phone: +49-89-442308-0
Fax: +49-89-442308-55

• Italy

Anritsu S.r.l.

Via Elio Vittorini 129, 00144 Roma, Italy
Phone: +39-6-509-9711
Fax: +39-6-502-2425

• Sweden

Anritsu AB

Kistagången 20B, 164 40 KISTA, Sweden
Phone: +46-8-534-707-00
Fax: +46-8-534-707-30

• Finland

Anritsu AB

Teknobulevardi 3-5, FI-01530 VANTAA, Finland
Phone: +358-20-741-8100
Fax: +358-20-741-8111

• Denmark

Anritsu A/S

Kay Fiskers Plads 9, 2300 Copenhagen S, Denmark
Phone: +45-7211-2200
Fax: +45-7211-2210

• Russia

Anritsu EMEA Ltd.

Representation Office in Russia

Tverskaya str. 16/2, bld. 1, 7th floor.
Moscow, 125009, Russia
Phone: +7-495-363-1694
Fax: +7-495-935-8962

• Spain

Anritsu EMEA Ltd.

Representation Office in Spain
Edificio Cuzco IV, Po. de la Castellana, 141, Pta. 8
28046, Madrid, Spain
Phone: +34-915-726-761
Fax: +34-915-726-621

• United Arab Emirates

Anritsu EMEA Ltd.

Dubai Liaison Office

902, Aurora Tower,
P O Box: 500311- Dubai Internet City
Dubai, United Arab Emirates
Phone: +971-4-3758479
Fax: +971-4-4249036

• India

Anritsu India Private Limited

2nd & 3rd Floor, #837/1, Binnamangla 1st Stage,
Indiranagar, 100ft Road, Bangalore - 560038, India
Phone: +91-80-4058-1300
Fax: +91-80-4058-1301

• Singapore

Anritsu Pte. Ltd.

11 Chang Charn Road, #04-01, Shriro House
Singapore 159640
Phone: +65-6282-2400
Fax: +65-6282-2533

• P.R. China (Shanghai)

Anritsu (China) Co., Ltd.

Room 2701-2705, Tower A,
New Caohejing International Business Center
No. 391 Gui Ping Road Shanghai, 200233, P.R. China
Phone: +86-21-6237-0898
Fax: +86-21-6237-0899

• P.R. China (Hong Kong)

Anritsu Company Ltd.

Unit 1006-7, 10/F., Greenfield Tower, Concordia Plaza,
No. 1 Science Museum Road, Tsim Sha Tsui East,
Kowloon, Hong Kong, P.R. China
Phone: +852-2301-4980
Fax: +852-2301-3545

• Japan

Anritsu Corporation

8-5, Tamura-cho, Atsugi-shi, Kanagawa, 243-0016 Japan
Phone: +81-46-296-6509
Fax: +81-46-225-8359

• Korea

Anritsu Corporation, Ltd.

5FL, 235 Pangyoyeok-ro, Bundang-gu, Seongnam-si,
Gyeonggi-do, 13494 Korea
Phone: +82-31-696-7750
Fax: +82-31-696-7751

• Australia

Anritsu Pty. Ltd.

Unit 20, 21-35 Ricketts Road,
Mount Waverley, Victoria 3149, Australia
Phone: +61-3-9558-8177
Fax: +61-3-9558-8255

• Taiwan

Anritsu Company Inc.

7F, No. 316, Sec. 1, NeiHu Rd., Taipei 114, Taiwan
Phone: +886-2-8751-1816
Fax: +886-2-8751-1817



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