SilverLine®-VNA Flex Supreme™

(50 & 67 GHz)

ISO 9001 Certified

Coaxial Test Cables

- ***Communications:***
  Inter-satellite, point-to-point & wireless HDMI
- ***Wafer Test:***
  Probe connections
- ***Electronic Warfare:***
  Targeting/tracking systems
- ***Research:***
  Component & subsystem development

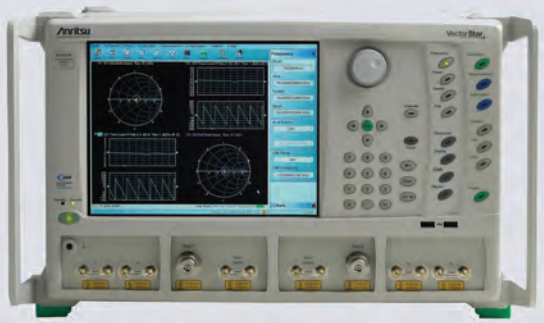


Photo courtesy Anritsu

SilverLine®-VNA Flex Supreme™ 50 & 67 GHz are extremely flexible, very high frequency coax cable assemblies designed for Vector Network Analyzer use. The high flexibility is ideal for use with small or delicate circuitry. "Light" armoring helps reduce accidental damage without adding excess weight and/or inhibiting flexibility. A Nomex®, abrasion resistant outer braid improves feel and handling characteristics.

SilverLine®-VNA Flex Supreme™ 50 & 67 GHz are also phase, amplitude & return loss stable over many thousands of flexes when handled in accordance with Times' recommendations.

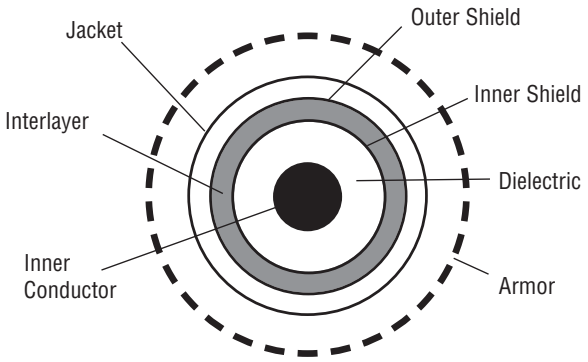
Features & Benefits:

- Extremely flexible
- Long flex life
- Torque resistant outer armor
- Nomex® outer sleeve
- 2.4mm & 1.85 male and female connectors
- ROHS Compliant

Nomex is a registered trademark of Dupont

TIMES MICROWAVE SYSTEMS
An Amphenol Company

SilverLine®-VNA Flex Supreme™ (50 & 67 GHz)



Cable Construction:

Inner Conductor:
Solid silver plated copper.

Dielectric:
Micro-porous PTFE.

Inner Shield:
Helically wound silver plated copper flat strip.

Outer Shield:
Silver plated copper round wire braid

Jacket: FEP

Armor:
Stainless steel flat coil, stainless steel torque resistant wire braid, PVC jacket, Nomex® abrasion resistant sleeve.

Connectors:
Stainless steel. Solder contact and braid. Additional crimp to armor for added torque resistance.

Physical & Mechanical Specifications

Dimensions	in	mm
Outside Diameter	0.308	7.8
Min bend radius (max flex life)	1 (4)	25 (100)
Flex life (min)*	50,000	
Crush Resistance (armored)	188 lbs per linear inch	
Mating Life Cycle**	500	
Temperature Range	-67°/+194°F	-55°/+90°C

Electrical Specifications

VSWR Max	50 Ghz 1.3:1	67 Ghz 1.4:1
Impedance	50 Ohms	
Velocity of Propagation	78%	
Shielding Effectiveness	>100dB	
Capacitance	25.9 pf/ft (85pf/m)	
Phase Stability typical (max) *	50 Ghz +/-3 (+/- 8)deg	67 Ghz +/-5 (+/-10)deg
Amplitude Stability	+/- 0.12db	+/-0.15db
Attenuation, max @ 77°F (25°C)	50 Ghz	67 Ghz
	dB/ft (m)	dB/ft (m)
	1.04 (3.42)	1.98 (6.5)

Maximum attenuation at any frequency: $(K1 \times \sqrt{f(ghz)}) + (K2 \times f(ghz))$ K1 = 0.671, K2 = 0.0135

Cable Power Handling @77°F (25°C) sea level, watts, (max)		
Frequency (Ghz)	50 Ghz	67 Ghz
	18w	14w

*See SilverLine-VNA 26.5 & 40 GHz data sheet for test details or contact your Times representative.

A brand new cable can have a break-in period of several hundred flexes.

Care and Handling Guidelines:

While armored, 50 & 67 GHz cables are sensitive microwave instruments. Small, flexible cables can easily be forced beyond the recommended minimum bend radius. This will likely degrade or destroy the RF performance. All flexible cables have a limited flex life. Develop procedures that limit flexing. 2.4 and 1.85mm interfaces are delicate. Keep them meticulously clean and the center contacts concentric within the outer contact. Use a microscope to examine if necessary. DO NOT mate connectors that are dirty, suspected of being damaged or outside concentric tolerances. Connectors must be aligned when mating. Misalignment could damage the interfaces and voids the warrantee. Test equipment makers publish extensive use and handling procedures on their web sites that cover these and other topics.

ALWAYS:
-Inspect interfaces before every mate. Clean if needed.
-Gently start the coupling nut and fully thread with fingers first.
-Hand tighten, but if a calibrated torque wrench is used 8 lbs max.
-Limit use to experienced technicians.
-Cap connectors and store cables separately in a protective container.
-Keep a spare pair of cables ready, just in case.

NEVER:
-Force the cable to bend beyond the recommended minimum radius.
-Force two connectors. If any resistance is felt STOP and examine.
-Mate to another series.
-Mate connectors that are not aligned and concentric.
-Put foreign or dirty objects into the interface.

Warranty

Product to be free from workmanship and materials defects and to meet stated data sheet performance for a period of 90 days. Excludes cable or connector interface damage from misuse, abuse, mishandling or mis-mating outside the data sheet recommendations. Warranty claims are subject to factory analysis and may include analysis charges depending on findings.

Ordering Information

SilverLine Steel Armored, VNA (Nomex® cover)

Every half foot or quarter meter. 2 ft (0.75) shortest, 6 ft, (2m) longest.

SLSVXX-XXXXXX-XX.XXX

F = Feet
M = Meter

50 = 50 GHz
67 = 67 GHz

Connector Codes
18M = 1.85mm Male
18F = 1.85mm Female
24M = 2.4mm Male
24F = 2.4mm Female

First Connector
Second Connector

**Mating life requires hand tightening and/or the strict use of a calibrated torque wrench and clean interfaces that are within the IEEE 287 precision connector standards.