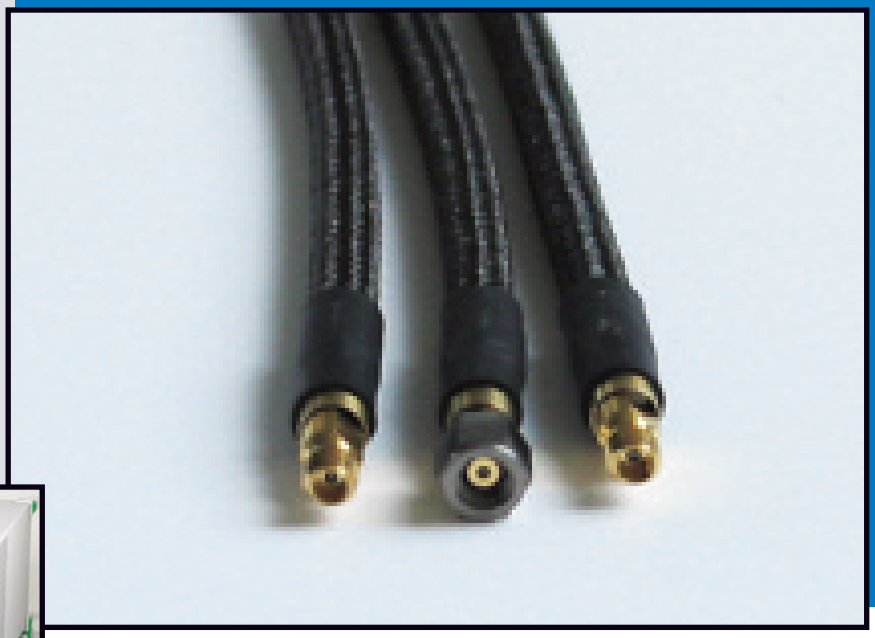
SilverLine®-VNA (110 GHz)

ISO 9001 Certified

Coaxial Test Cables

- ***Automotive:***
  Collision avoidance radar test
- ***Communications:***
  Point-to-point backhaul system test
- ***Wafer Test:***
  Probe Connections
- ***Electronic Warfare:***
  Targeting/tracking systems.
  Satellite testing
- ***Environmental:***
  Remote atmospheric sensing



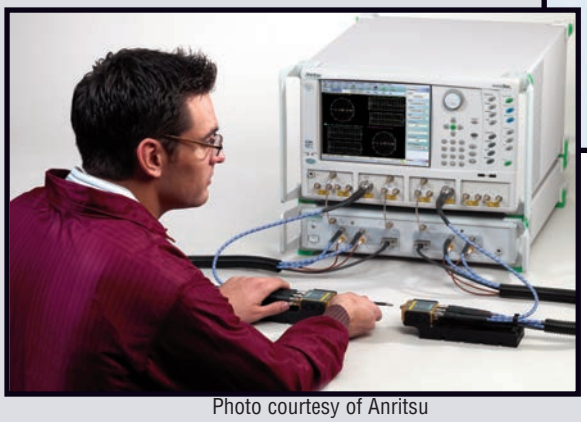


Photo courtesy of Anritsu

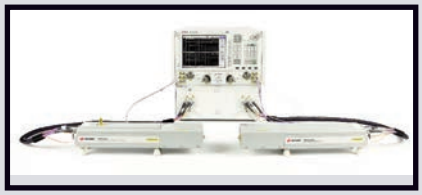


Photo courtesy of Keysight

SilverLine®-VNA 110 GHz is an armored, extremely high frequency coax cable assembly designed for use where waveguide is impractical.

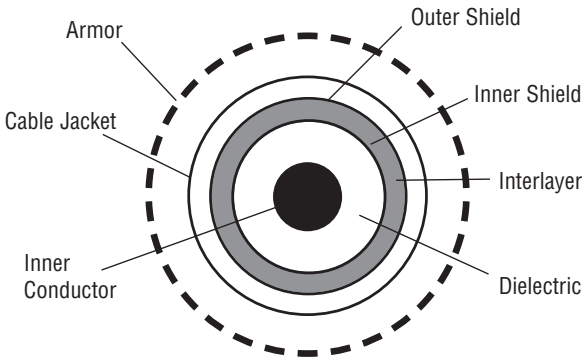
SilverLine®-VNA 110 GHz now offers the user working in these frequencies an alternative to the limited selection of semi-rigid solutions offered by current suppliers. Test technicians experienced in the use and handling of traditional 110 GHz products will find Times' solution to be more than competitive for RF stability and overall product life.

Features & Benefits:

- Flexible / rebendable
- Steel armored, torque resistant
- Nomex outer sleeve
- 1.0mm male and female connectors
- ROHS Compliant

TIMES MICROWAVE SYSTEMS
An Amphenol Company

SilverLine®-VNA (110 GHz)



Physical & Mechanical Specifications

Dimensions	in	mm
Outside Diameter	0.18	4.6
Min Bend Radius (Rebendable)	0.40 (1.0)	10 (25)
Mating Life Cycle	500	
Temperature Range	-65° C - +125° C	

Electrical Specifications

VSWR (DC-110 GHz)	1.25:1 typical 1.40: max
Impedance	50 Ohms
Velocity of Propagation	78%
Shielding Effectiveness	>100 dB
Capacitance	25.9 pf/ft (85pf/m)
Phase Stability (over 2000 flexes[1])	+/- 10°
Time Delay	4.3ns/m
Attenuation, max @ 77° (25° C)	
Frequency (GHz)	dB/m
50	10.76
72	13.06
84	14.19
96	15.24
110	16.42

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 strength and torsion resistance.

1. Standard "tick-tock" flex test. Contact Times for test details.
A brand new cable can have a break-in period of several hundred flexes.

Care and Handling Guidelines:
While armored, 110 GHz cables are sensitive microwave instruments. 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. 1.0mm 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 will damage the interfaces and voids the warrantee. Test equipment makers publish extensive use and handling procedures on their websites that cover these and other topics.

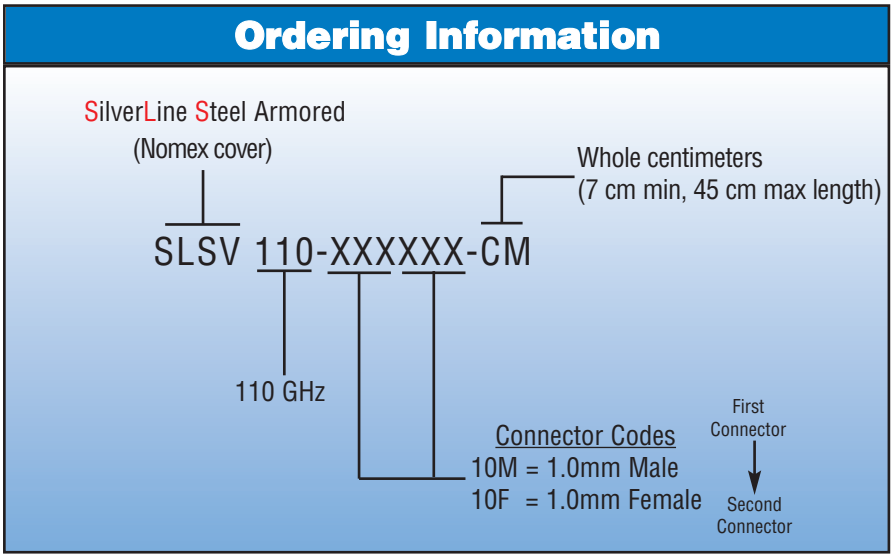
Always:
-Inspect interfaces before every mate. Clean if needed.
-Gently start the coupling nut and fully thread with fingers first.
-Hand tighten, but use a calibrated torque wrench to tighten. 4 lbs max.
-Limit use to experienced technicians.
-Cap connectors and store cables separately in a protective 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.

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. Warrantee claims are subject to factory analysis and may include analysis charges depending on findings.

Ordering Information



*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.

TIMES MICROWAVE SYSTEMS
An Amphenol Company