

SilverLine®

Test Cables

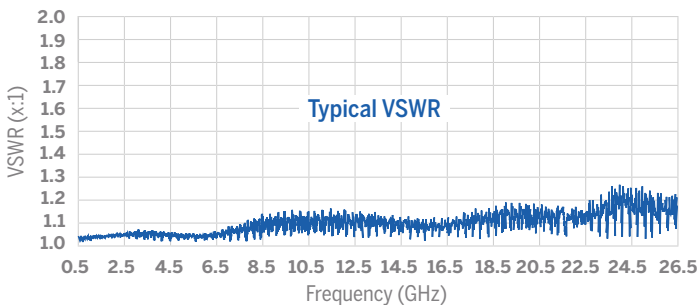
SilverLine® Test Cables are cost effective, durable, high performance cable assemblies designed for use in a broad range of test and interconnect applications. Fabricated from rugged, solid PTFE dielectric cable with stainless steel connectors and a proven strain relief system, these cables provide long life and excellent stability in applications where they are repeatedly flexed and mated/unmated. SilverLine test cables are ideal for use in production and field and laboratory test environments. They are also economical enough to be used as interconnects in test systems.

Features & Benefits:

- Phase & Loss Stable
- Long Flex Life
- Triple Shielded Cable
- High Mating Cycle, Stainless Steel Connectors
- Rugged, Solder-Clamp Attachment
- Redundant, Long Life Strain Relief System
- ROHS Compliant

Coax Test Cables for:

- High volume, in-process production test
- Incoming/final test inspection
- RF test systems interconnects



** Phase stability data IAW Times' phase/flex test criteria as demonstrated. (26.5 GHz SMA Male/SMA Male, 3 ft long)



INNER CONDUCTOR

Solid silver plated copper clad steel

INNER SHIELD

Silver-plated copper flat ribbon braid Aluminum-Polyimide tape

OUTER SHIELD

Silver-plated copper flat ribbon braid Aluminum-Polyimide tape

DIELECTRIC

Solid PTFE

INTERLAYER

36 GA silver-plated copper round braid (90%k)

CABLE JACKET

Clear FEP

ARMOR

Full, 100% non-interleaved spiral steel sheath overlaid with captured opposing-force structure for anti-torque resistance. Waterproof, UV resistant, black TPR outer jacket.

CONNECTORS:

- Passivated stainless steel finish
- Captive center contact
- Thick wall, 26.5 GHz SMA
- Type N & SMA OneTurn™ (1 full rotation to mate)
- Knurl/hex coupling nut (Type N and TNC)

CONNECTOR ATTACHMENT/STRAIN RELIEF:

- Rugged, solder-clamp to braid, 175-300 lb pull force. Additional crimp system on armored version.
- Redundant triple layer strain relief system (dual layer on armored version)



Flex Test (one full cycle)



Cable is pulled off center 10" in both directions

Specifications

MECHANICAL

Units


Armored Diameter: armor	in (mm)	0.450 (11.50)
Unarmored Diameter: strain relief	in (mm)	0.195 (4.950)
Minimum Bend Radius	armored	in (mm) 2.25 (57)
	armored max flex life	in (mm) 2.25 (57)
	unarmored	in (mm) 1.0 (25)
	unarmored max flex	in (mm) 1.00 (25)
Crushing (armored version)	PVC	lbs/lin.in 1.200
	Steel	lbs/lin.in 1.500
Crushing (unarmored version)	lbs/lin.in	200
Mating Life Cycle	SMA, Type N:	>5000

CABLE POWER HANDLING (Cable only)

	6 GHz	18 GHz	26.5 GHz
@77°F (25°C) sea level, watts (max)	180	88	65

ELECTRICAL

 Impedance
50 Ohms

 Op Temp
-67 to 185°F
-55 to 125°C

Units

Velocity of Propagation	%	70
Shielding Effectiveness	dB	>-90

4 GHz 6 GHz 18 GHz 26.5 GHz

VSWR (Maximum)	BNC	1.20:1		
	7-16 DIN		1.25:1	
	SMA, 3.5mm		1.20:1	1.35:1
	Type N, TNC	1.30:1, 1.35:1		
Phase Stability Typical* (50,000 cycles)			+/- 2.0	+/- 3.0
Amplitude Stability Typical dB*	+/- 0.1			

Attenuation	1000 MHz	5000 MHz	18000 MHz	26500 MHz
dB/FT (db/M)	0,122 (0,372)	0,306 (0,933)	0,683 (2,081)	0,885 (2,696)

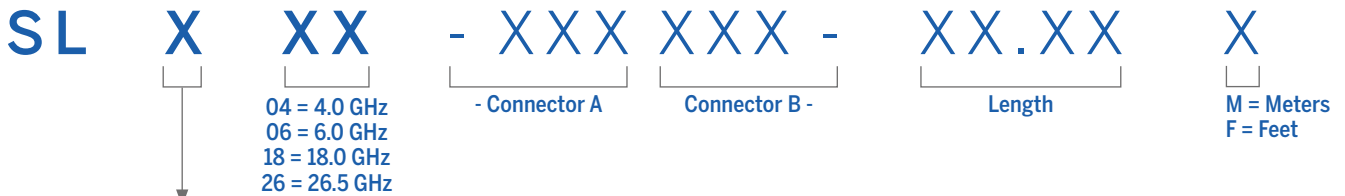
CALCULATION

$$IL = (K1 \times \sqrt{f}) + K2 \times (f) \times \text{Cable Length}$$

IL = Cable Insertion Loss (f) is in MHz
Length unit must match K value unit

k values	dB/ft	db/m
K1	0.348	0.1060704
K2	0.0012	0.00036576

Ordering Guide



U	Unarmored 1ft (0.25m) minimum assembly length
A	Armored 2 ft (0.5m) minimum assembly length
S	Steel, torque & crush resistant armor 3 ft (1.0m) min. length

Connector Code	Description	Connector Code	Description
BM	BNC Male (for 4GHZ only)	N1T	Type N Male OneTurn™
SM	SMA Male	NF	Type N Female
S1T	SMA Male OneTurn™	NMR	N Male Right Angle
SF	SMA Female	76F	7-16 Female
SMR	SMA Right Angle	43M	4.3/10 male (this is not a low PIM assembly)
35M	3.5mm Male	43F	4.3/10 female (this is not a low PIM assembly)
35F	3.5mm Female	TM	ETNC Male (Extended range)
3RF	3.5mm Ruggedized Female	TF	ETNC Female (Extended range)
NM	Type N Male		

Specifications subject to change without notice.