

## Test Cables

### Coax Test Cables for:

- *High Volume Production Test Stations*
- *Research & Development Labs*
- *Environmental & Temperature Test Chambers*
- *Replacement for OEM Test Port Cables*
- *Field RF Testing*
- *Cellular Infrastructure Site Testing*



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, field and laboratory test environments. They are also economical enough to be used as interconnects in test systems.

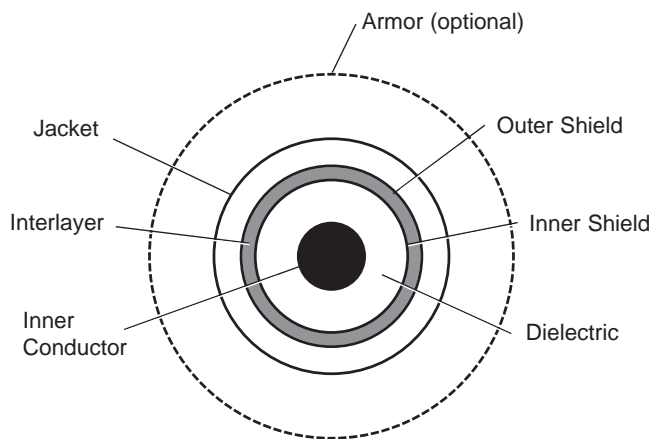
#### Features & Benefits:

- 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

#### Time's Silverline™ Product Guarantee

*Times will repair or replace your SilverLine test cable at its option if the connector attachment fails within four months of shipment. This guarantee excludes cable or connector interface damage from misuse or abuse.*

# SilverLine™ Specifications:



## Cable Construction

**Inner Conductor:** Solid Silver Plated Copper Clad Steel

**Dielectric:** Solid PTFE

**Shield:** Silver-Plated Copper Flat Ribbon Braid Aluminum-Polyimide Tape Interlayer 36 GA Silver-Plated Copper Braid (90%k)

**Jacket:** Clear FEP

**Armor (Optional):** Steel wire reinforced, thick wall, high flex life clear PVC

## Connectors

- Passivated stainless steel finish (QMA coupling nut nickel plated brass)
- QMA sure-grip coupling nut design
- Captive contact
- Thick wall interface (SMA)
- Gold plated beryllium copper center contacts
- PTFE dielectric
- Type N OneTurn™ (1 full rotation to mate)
- High temperature 7mm
- Knurl/hex coupling nut (Type N and TNC)
- Precision grade 7-16

## Connector Attachment/Strain Relief

- Rugged, solder-clamp to braid. 200 lb pull force additional crimp system on armored version
- Redundant triple layer strain relief system (Dual layer on armored version)



World Headquarters: Tel. 203-949-8400

SilverLine™					
Physical & Mechanical Specifications					
Dimensions	in		mm		
Inner Conductor	0.037		0.94		
Dielectric	0.116		2.95		
Inner Shield	0.126		3.20		
Interlayer	0.132		3.35		
Outer Shield	0.154		3.91		
Jacket	0.195		4.95		
Armor (optional)	0.450		11.50		
Bend Radius: minimum	1		25		
Connector Retention	Unarmored > 80 lbs		Armored > 200 lbs		
Mating Life Cycle	SMA, Type N: > 5000*		QMA: > 2500†		
Length Tolerances	< 2 ft. or 0.75m, -0, +0.50" (12.7mm)				
	> 2 ft. or 0.75m, -0, +2% of length				
Temperature Range	-67°/+221°F		-55°/+105°C		
Electrical Specifications					
VSWR Max		4 GHz	6 GHz	18 GHz	26.5 GHz**
	BNC	1.20:1			
	7-16 DIN, QMA		1.25:1		
	SMA, 3.5mm, Type N, TNC		1.20:1	1.30:1	1.35:1 (SMA, 3.5mm)
	7mm		1.25:1	1.35:1	
Impedance	50 ohms				
Velocity of Propagation	70 %				
Shielding Effectiveness	>100 dB				
Capacitance	29.4 pf/ft = 96.4 pf/meter				
Phase Stability (ten, 4" radius, 180° reverse bends)	DC to 10 GHz: +/- 1.1°				
	10 to 18 GHz: +/- 2.0°				
Attenuation Max @ +77°F (+25°C)					
Attenuation	(GHz)	dB/100 ft		dB/100 m	
	1	12.2		40.0	
	2	18.0		59.0	
	6	34.2		112	
	12	52.5		172	
	18	68.4		224	
	26.5	88.7		290	
Attenuation at Frequency		(A=K1 √ FMHz + K2 FMHz)			
	K1	0.348			
	K2	0.0012			
Power Handling @ +77°F (+25°C) (Sea Level) (Cable Only***)					
Power Handling	(GHz)	Watts (max.)			
	0.4	891			
	1	539			
	2	363			
	6	180			
	12	117			
	18	88			
	26.5	65			

\* SMA Male & Type N: Assumes use of calibrated torque wrench, proper care and cleaning of interface and mated connector is within mil spec limits. † QMA: Assumes proper use, care and cleaning.

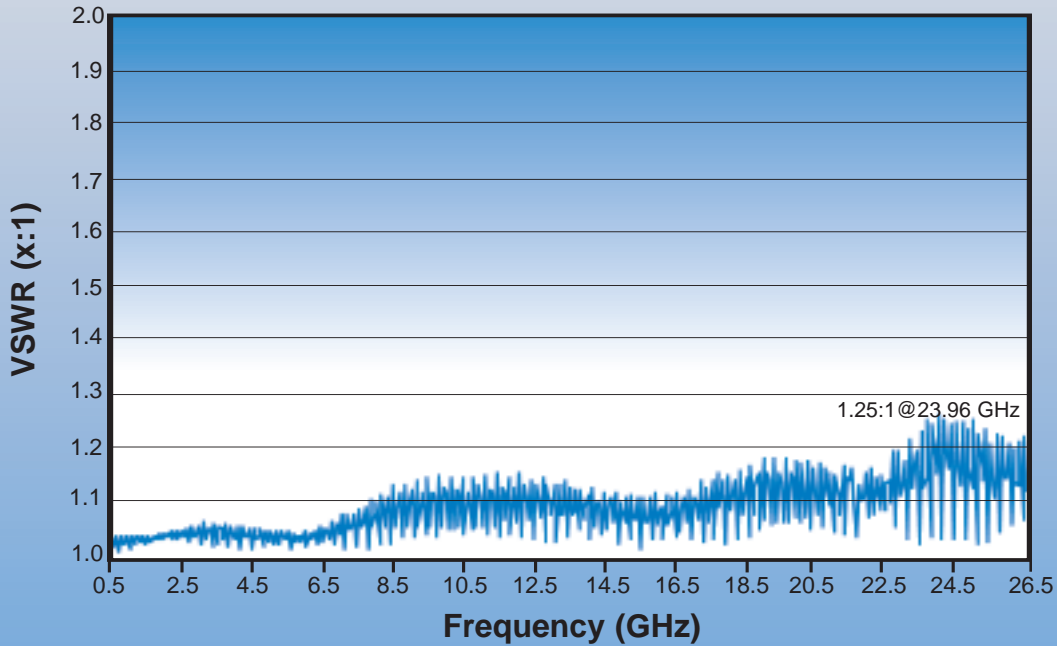
\*\* All 26.5 GHz cables are RF characterized on a production basis through 20.0 GHz.

\*\*\* Connector configuration may limit cable assembly maximum power handling capability.

Specifications subject to change without notice.

## SilverLine Test Cable

Typical VSWR vs Frequency  
(26.5 GHz SMA Male/SMA Male, 3 ft long)



## Ordering Information

**Length**

Feet: 0.50 ft Increments  
Example: -04.50F = 4.50 ft

Meters: 0.25 m increments  
Example: -00.75M = 0.75 m

U = Unarmored  
A = Armored

**SLXXX-XXXXXX-XX.XXX**

F = Feet M = Meters

**Connector Codes (2 or 3 Characters)**

BM = BNC Male  
SM = SMA Male  
SF = SMA Female  
SMR = SMA Right Angle  
35M = 3.5mm Male  
35F = 3.5mm Female  
3RM = 3.5mm Ruggedized Male  
3RF = 3.5mm Ruggedized Female  
NM = Type N Male  
N1T = Type N Male **OneTurn™**  
NF = Type N Female  
NMR = Type N Right Angle  
70M = 7mm  
76M = 7-16 DIN Male  
76F = 7-16 DIN Female  
TM = ETNC Male  
TF = ETNC Female  
QMM = QMA Male

**Frequency Range**

04 = 4.0 GHz (BNC)  
06 = 6.0 GHz  
18 = 18.0 GHz  
26 = 26.5 GHz (SMA & 3.5mm)

**Adaptors**

3191-133 = QMA(f)-SMA(m)  
3191-134 = QMA(f)-SMA(f)  
3191-135 = Type N(m)-QMA(m)  
3190-1941 = QMA Extraction Tool

First Connector  
Second Connector

*Some connector combinations and/or lengths may be unavailable. Please contact Times or your Times Authorized Distributor.*

*Specifications subject to change without notice.*

### ***About TIMES MICROWAVE SYSTEMS***

Times Microwave Systems, a Smiths Company, was founded in 1948 and was formerly known as Times Wire and Cable Company. Times Microwave Systems specializes in the design and manufacture of high performance flexible, semi-flexible and semi-rigid coaxial cable, connectors and cable assemblies. Times Microwave Systems, with over 50 years of leadership in the defense microwave systems arena, offers high tech solutions for today's most challenging applications.



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