

## 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.

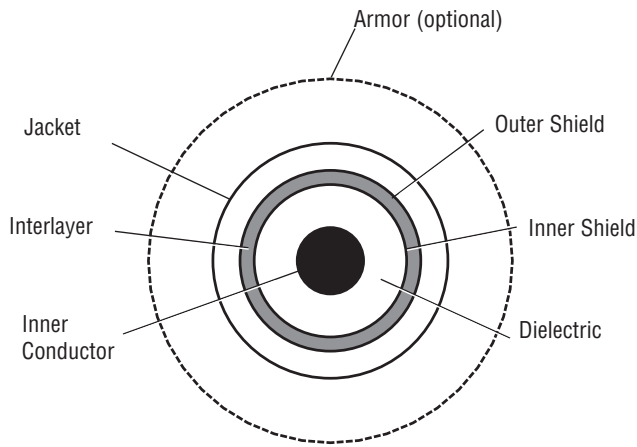
#### Features & Benefits:

- 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
- ROHS Compliant

#### 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 (Complete QMA right angle and QMA straight coupling nut only are nickel plated brass)
- QMA SureGrip™ coupling nut design
- Captive contact
- Thick wall interface (SMA)
- Gold plated beryllium copper center contacts
- PTFE dielectric
- Type N & SMA 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. 175 lb pull force. Additional crimp system on armored version.
- Redundant triple layer strain relief system (Dual layer on armored version)

## 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
Weight lbs./ft (kg/m)	Cable: 0.043 (0.064) Armor: 0.066 (0.098)	
Armor Crush Resistance	1200 lbs. per linear inch	
Bend Radius: minimum	1	25
Connector Retention	Unarmored & Armored > 175 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, QMA 2.4mm, 3.5mm, Type N, TNC		1.20:1	1.30:1 1.35:1 (R/As)	1.35:1 (SMA, 2.4mm, 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°				
<b>Attenuation Max @ +77°F (+25°C)</b>					
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			
<b>Power Handling @ +77°F (+25°C) (Sea Level) (Cable Only***)</b>					
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.

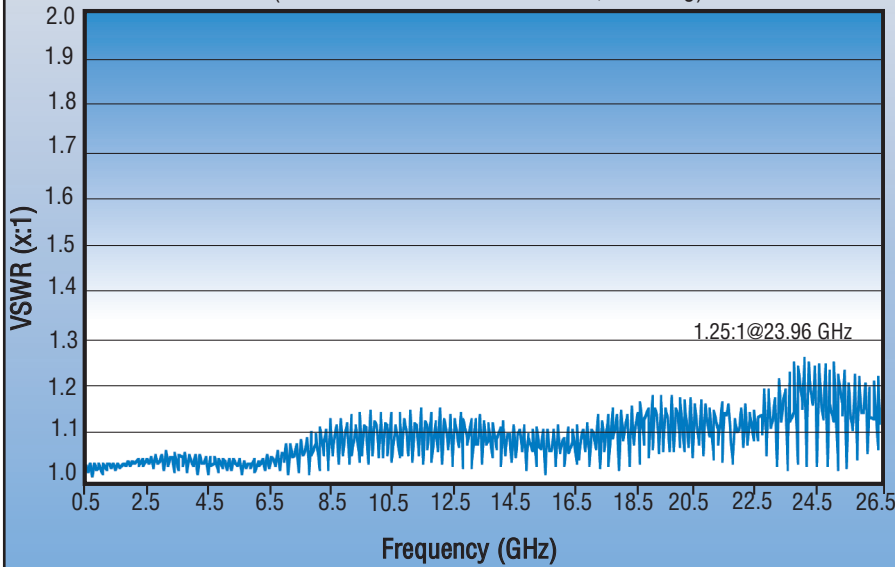
\*\* All 26.5 GHz cables are RF characterized on a production basis through 20.0 GHz.

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

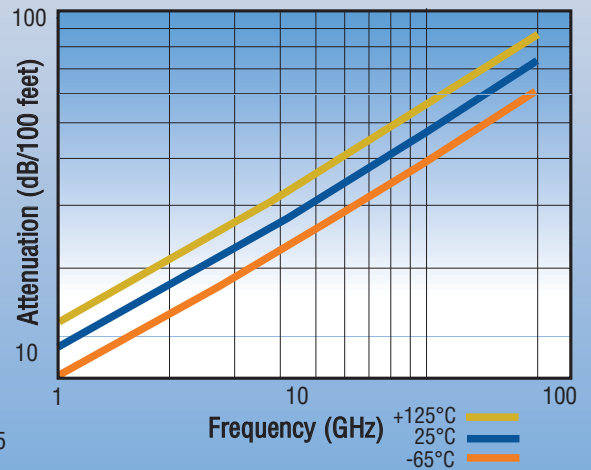
Specifications subject to change without notice.

# Silverline Test Cables

(26.5 GHz SMA Male/SMA Male, 3 ft long)



## Attenuation vs. Temperature



# Ordering Information

U = Unarmored  
A = Armored

Feet: 0.50 ft Increments

Example: -04.50F = 4.50 ft

Meters: 0.25 m increments

Example: -00.75M = 0.75 m

SLXXX-XXXXXX-XX.XXX

F= Feet M= Meters

Connector Codes (2 or 3 Characters)

### Maximum Frequency

04 = 4.0 GHz (BNC equipped only)

06 = 6.0 GHz

18 = 18.0 GHz

26 = 26.5 GHz (SMA, 2.4mm, 3.5mm only)



3.5mm Female (L), Ruggedized 3.5mm Female (R)



3.5mm Male (L), Ruggedized 3.5mm Male (R)

- BM = BNC Male
- SM = SMA Male
- S1T = SMA Male **OneTurn™**
- 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
- 2RF = 2.4mm 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 (Extended range)
- TF = ETNC Female (Extended range)
- QMM = QMA Male (changeable interface see pg. 4)
- QMR = QMA Right Angle (changeable interface see pg. 4)

First Connector

Second Connector

Labels on unarmored assemblies under 1.5 feet long are left loose to increase flexibility.

Some connector combinations and/or lengths may be unavailable. Please contact Times or your Times authorized representative.

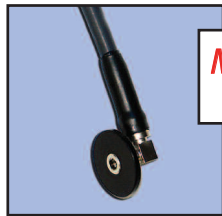
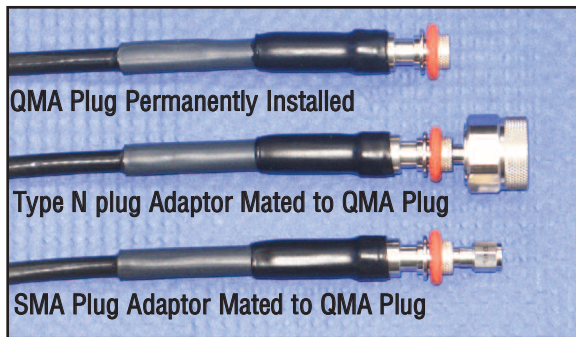
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# SilverLine™ Specifications:

## SilverLine™-QMA Changeable Interface System



**NEW!** 18GHz QMA r/a  
with Quick Release

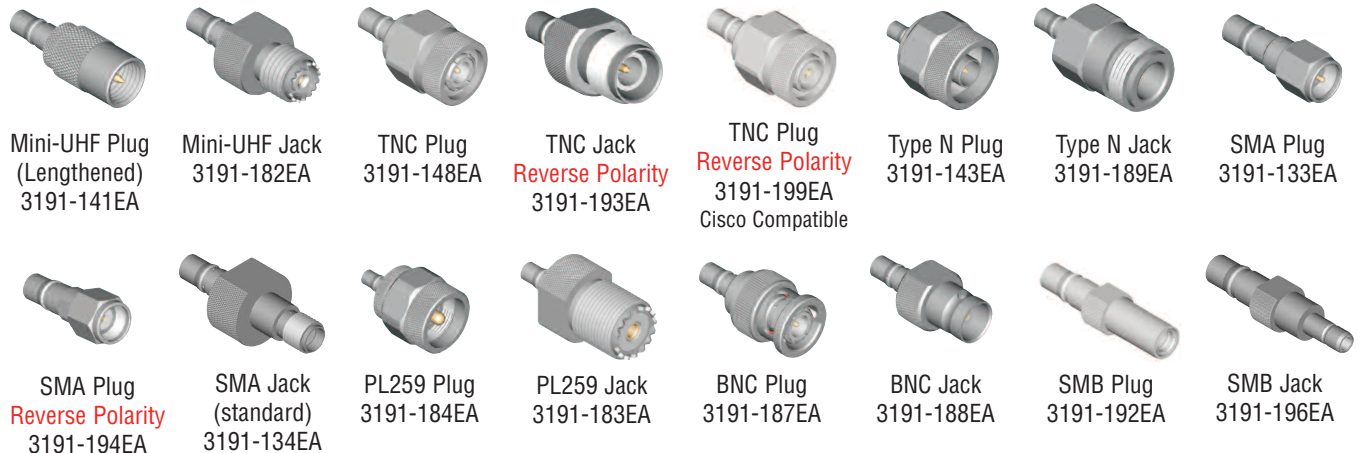
### Specifications:

- Frequency response: DC-18.0 GHz (QMA, QMA r/a, Type N, SMA and TNC)
- VSWR: 1:35:1 Maximum, 1:25:1 Typical (Cable Assembly with Mated Adaptor)

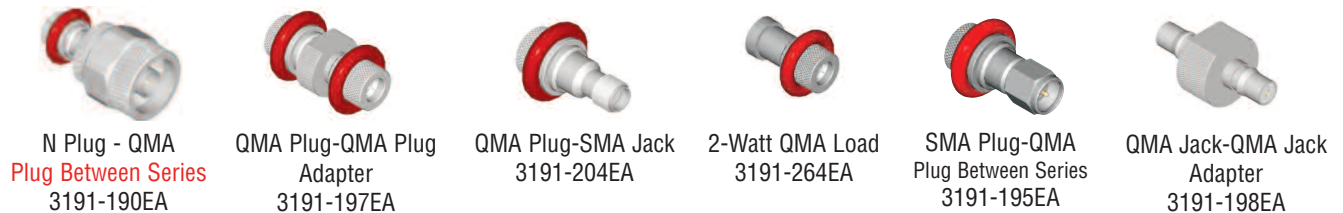
### Features & Benefits:

- High Frequency Operation
- 5000 Mate Life
- SureGrip™ Coupling Nut
- Smooth, Fast Retraction for Quick Changes
- Large Interface Selection
- Between Series & Reverse Polarity Interfaces

### Adaptors From QMA Jack To:



### Between & Within Series Adaptors and Termination



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