

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.

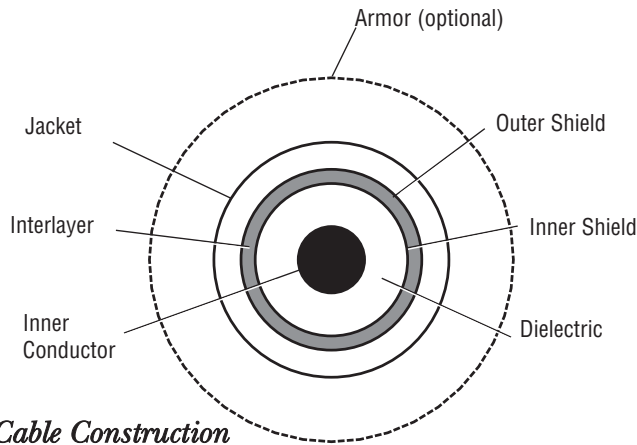
Features & Benefits:

- 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):

PVC Style: Steel wire reinforced, thick wall, high flex
life clear PVC

Steel Style: 100% coverage, square locked, galvanized
steel hose, high angle steel braid and TPR jacket.

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. 175-300 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 | PVC: 1200 lbs. per linear inch - Steel: 1500 lbs. per linear inch | |
| Bend Radius: minimum | 1 | 25 |
| Connector Retention | Unarmored & Armored PVC > 175 lbs - Steel Armored > 300 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 | | 1.20:1 | 1.30:1 | 1.35:1 |
| | Type N, TNC | | | 1.35:1 (R/As) | (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° | | |
| 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 | | | |

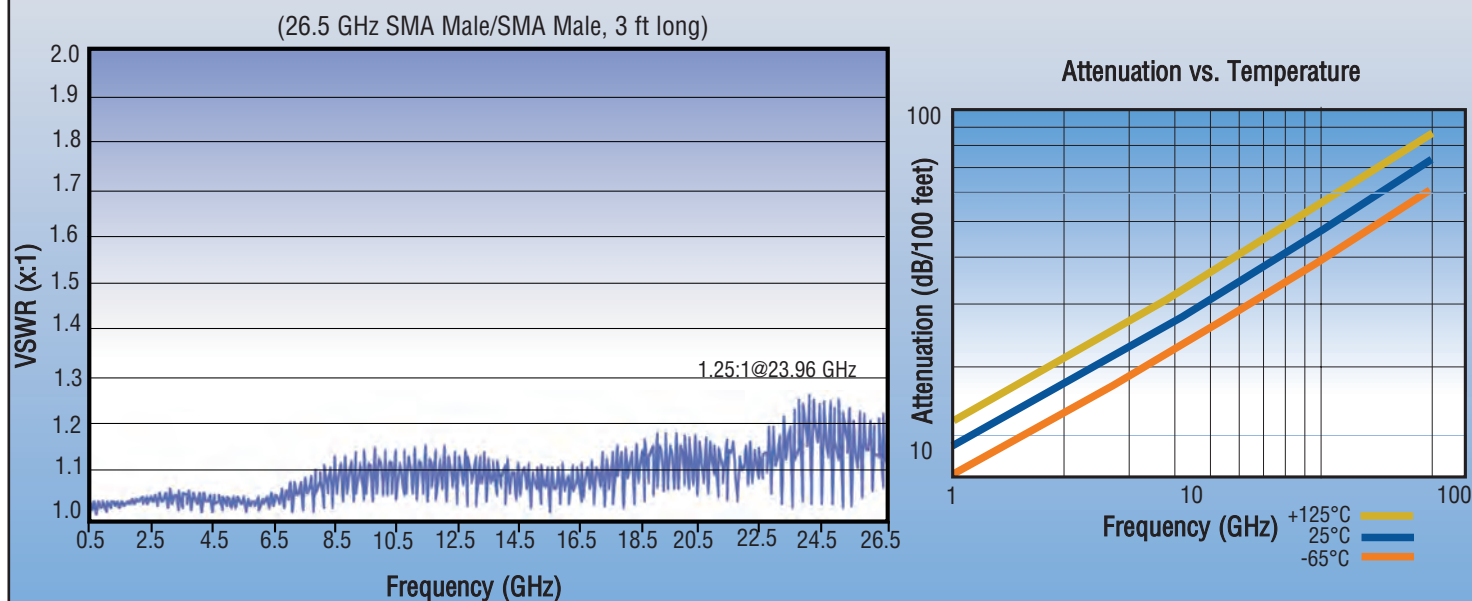
* SMA Male & Type N: Assumes use of calibrated torque wrench, proper care and cleaning of interface and mated connector is within mil spec limits. = QMA: Assumes proper use, care and cleaning.

** 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 Cables



Ordering Information

U = Unarmored (1ft (0.25m) Minimum Assembly Length)
 A = Armored (2 ft (0.5m) Minimum Assembly Length)
 S = Steel, torque and crush resistant armor 3ft (1.0m)

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

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)

Connector Codes (2 or 3 Characters)

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
 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 = (available as SilverLine TuffGrip only)
 76F = (available as SilverLine TuffGrip only)
 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)



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

First Connector

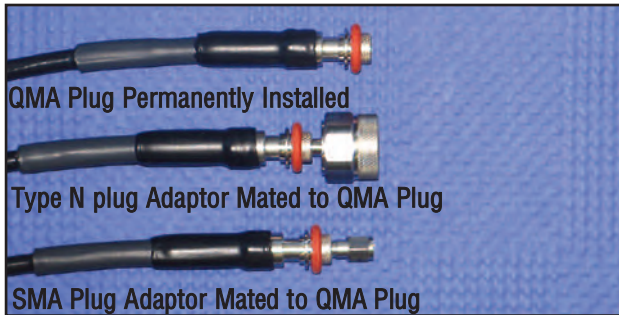
Second Connector

Labels on unarmored assemblies under 1.5 feet (0.5m) long remain loose to increase flexibility.

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

SilverLine™ Specifications:

SilverLine™-QMA Changeable Interface System



NEW! 18GHz QMA r/a
with Quick Release

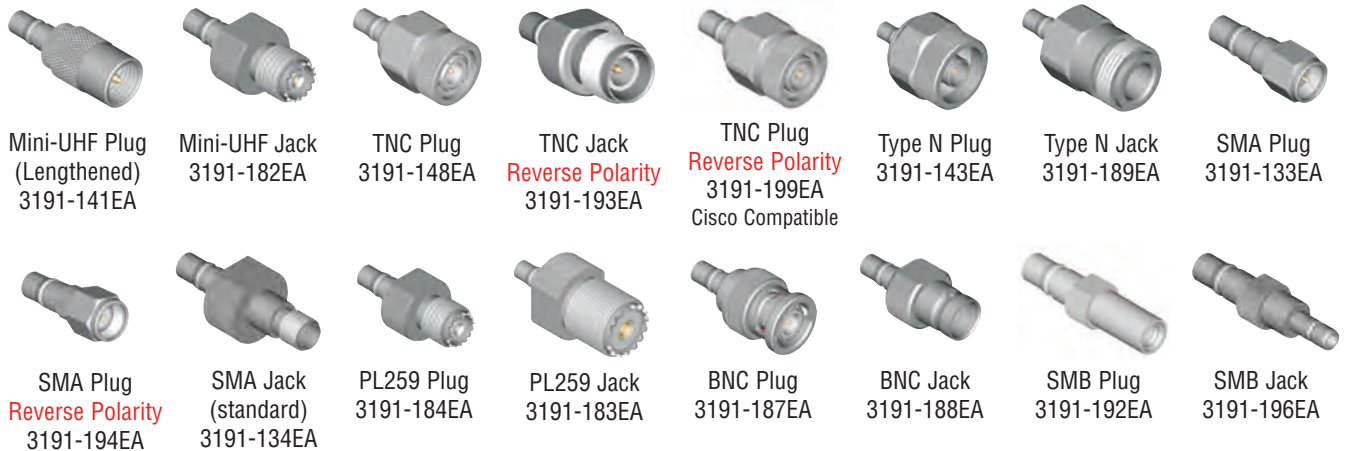
Specifications:

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

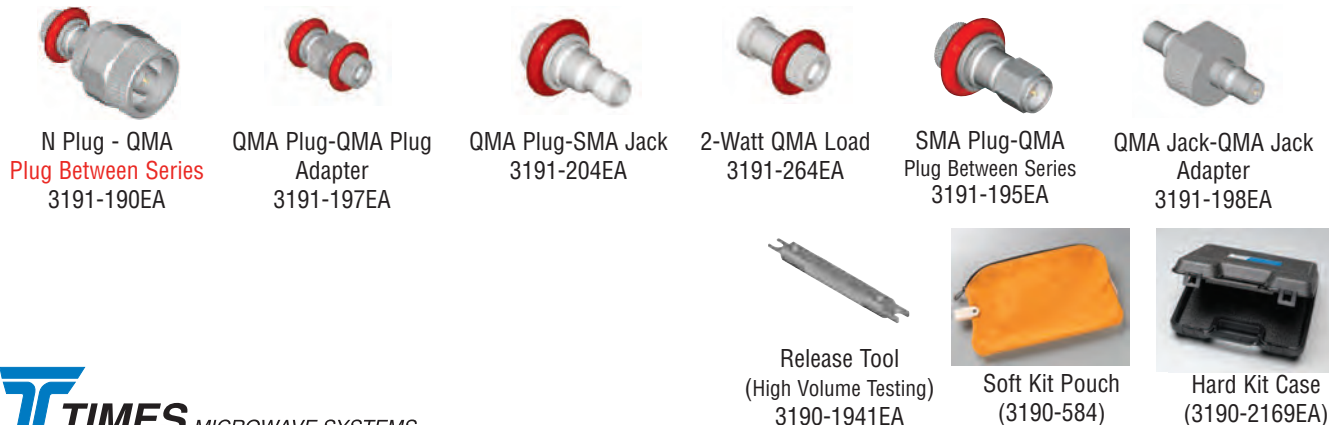
Features & Benefits:

- 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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