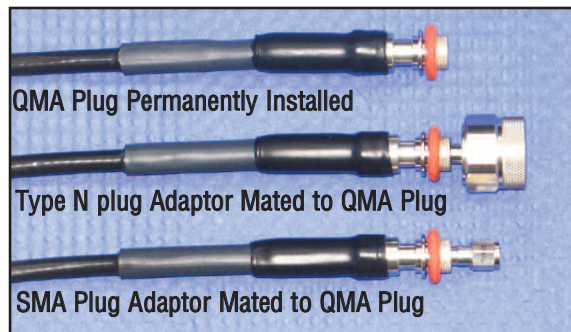


# SilverLine™ Specifications:

## SilverLine™-QMA Changeable Interface System



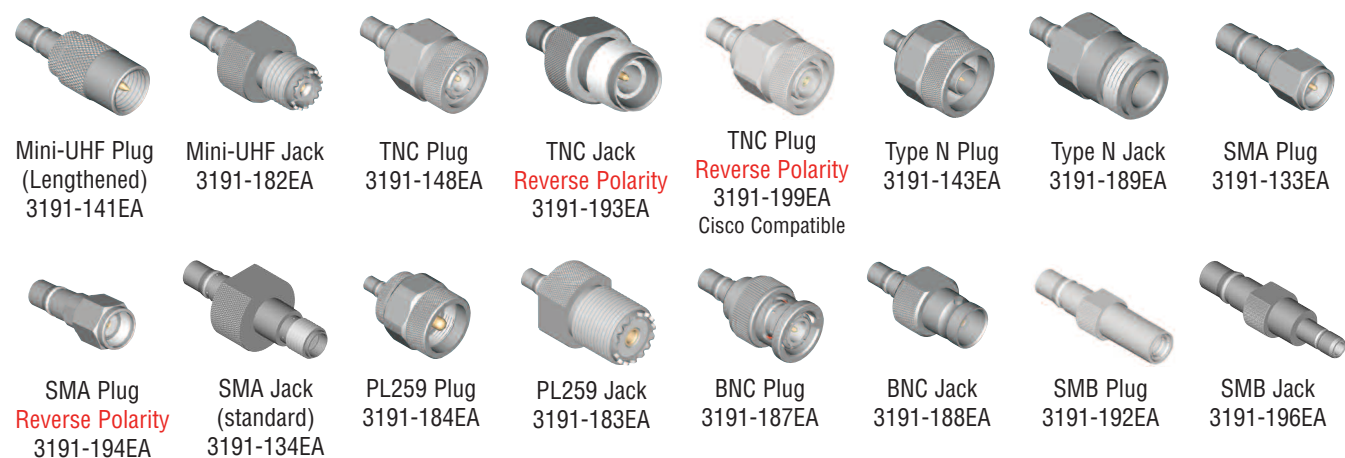
**Specifications:**

- 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)

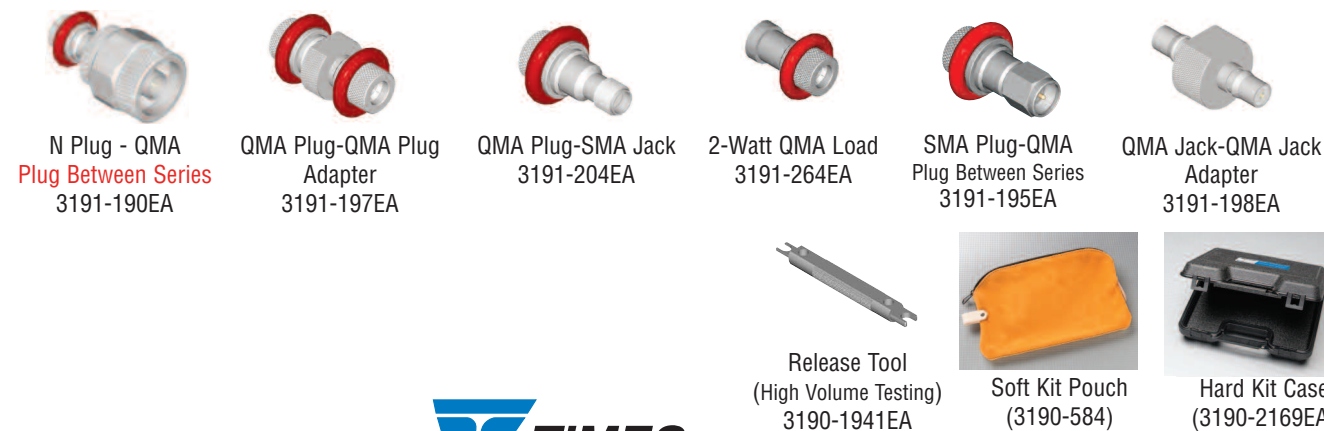
**Features & Benefits:**

- 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



World Headquarters: 358 Hall Avenue, Wallingford, CT 06492 • Tel: 203-949-8400, 1-800-867-2629 Fax: 203-949-8423  
International Sales: 4 School Brae, Dysart, Kirkcaldy, Fife, Scotland KY1 2XB UK • Tel: +44(0)1592655428 Fax: +44(0)1592653162  
China Sales: 16F United Plaza, West Nanjing Road, Shanghai, China 200040 • Tel: 86-21-32224506 Fax: 86-21-62898980  
www.timesmicrowave.com

# SilverLine™

ISO 9001 Certified

## 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:

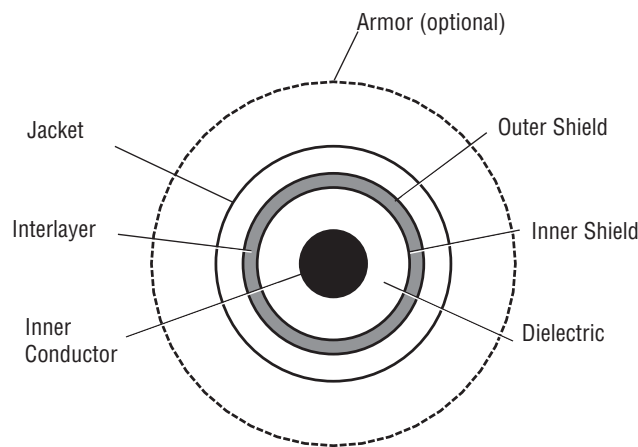
- Phase & Loss Stable
- Long Flex Life
- Triple Shielded Cable
- High Mating Cycle, Stainless Steel Connectors
- Rugged, Solder-Clamp Attachment
- Redundant, Long Life Strain Relief System
- ROHS Compliant

### 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		
VSWR Max	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	

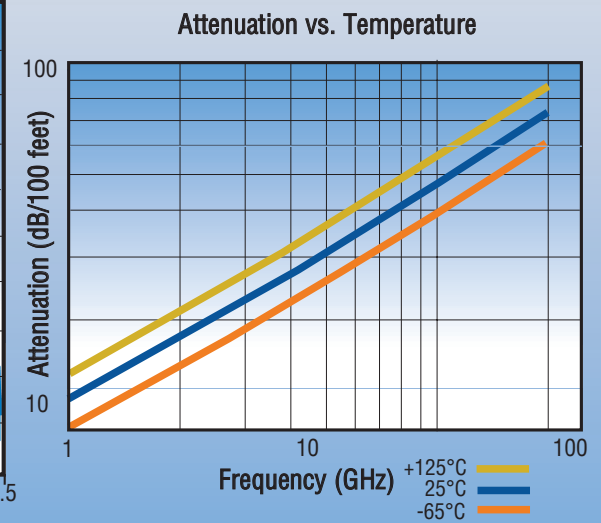
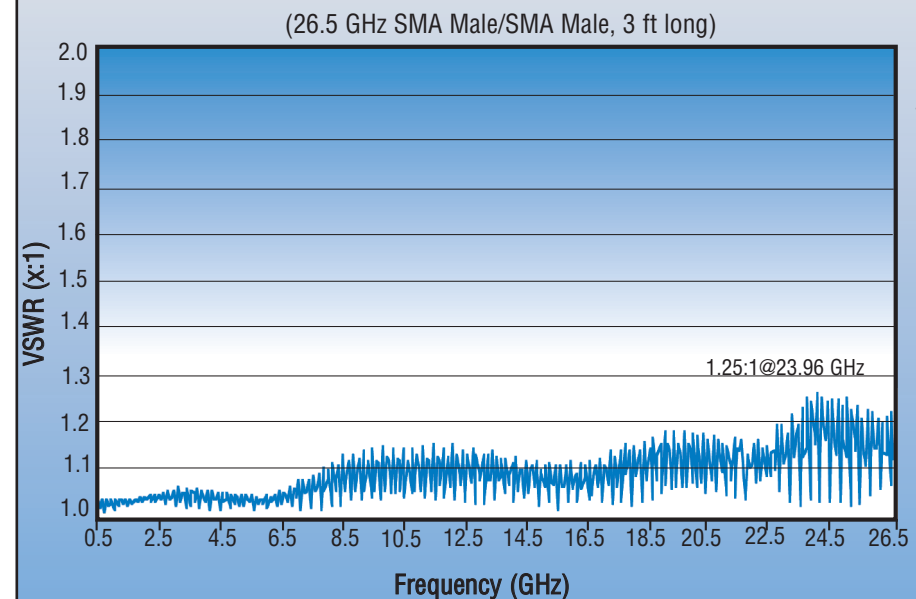
Attenuation at Frequency (A=K1 FMHz + K2 FMHz)		
	K1	K2
	0.348	0.0012

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  
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

### 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
- 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)



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



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

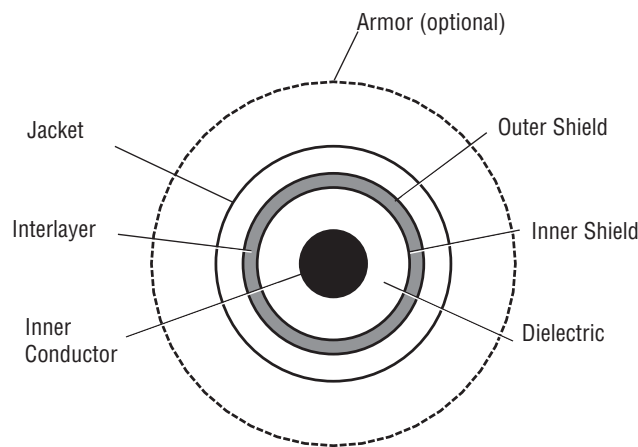
Labels on unarmored assemblies under 1.5 feet long are left loose to increase flexibility.

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



Specifications subject to change without notice.

# 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		
VSWR Max	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	

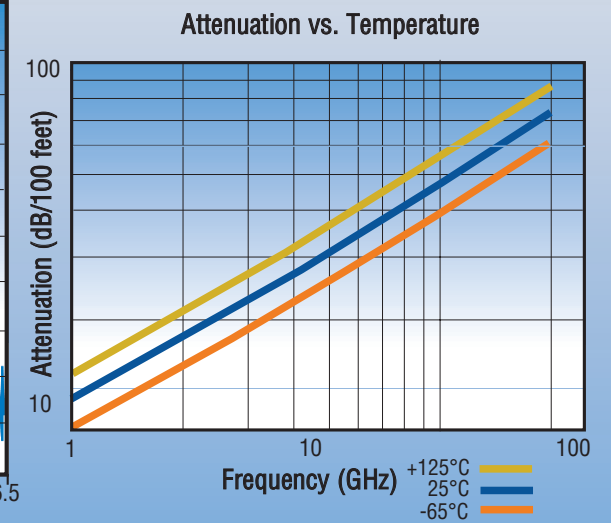
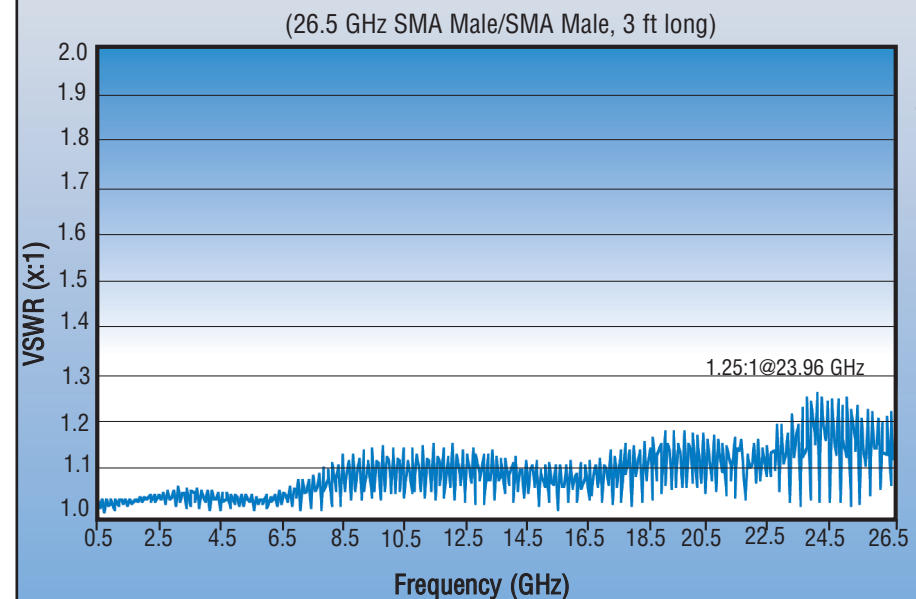
Attenuation at Frequency (A=K1 FMHz + K2 FMHz)		
	K1	K2
	0.348	0.0012

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  
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)

- 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)



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



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

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

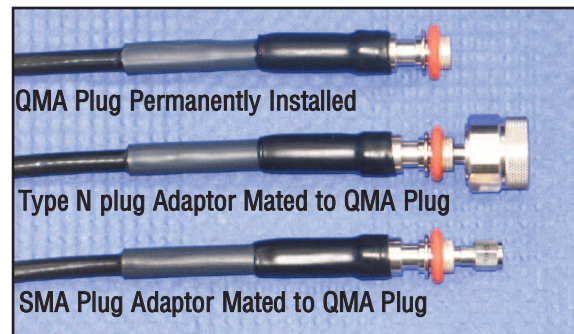
Some connector combinations and/or lengths may be unavailable. Please contact Times or your Times authorized representative.



Specifications subject to change without notice.

# SilverLine™ Specifications:

## SilverLine™-QMA Changeable Interface System



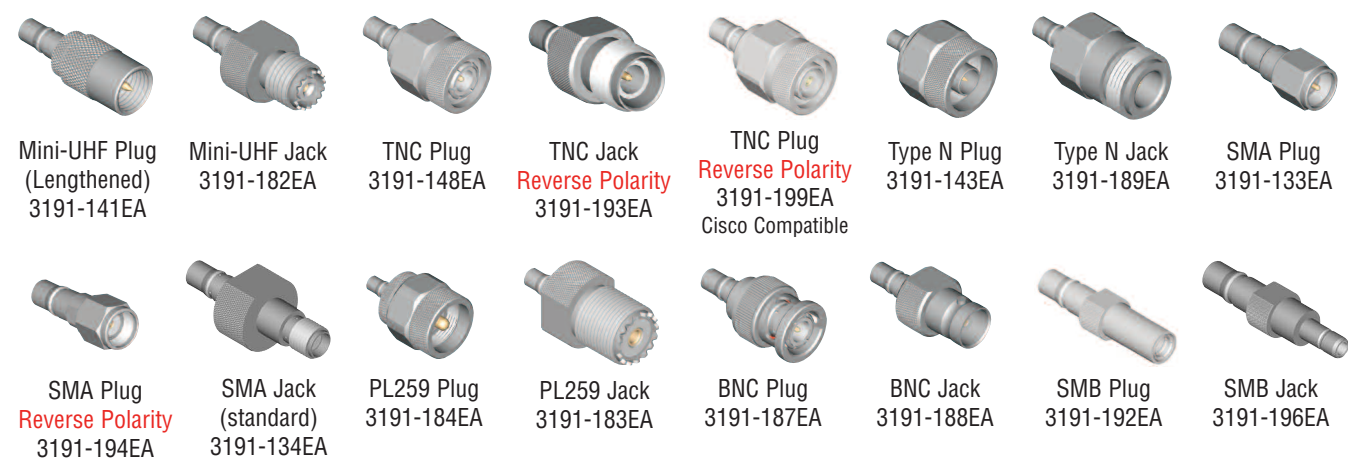
### Specifications:

- 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)

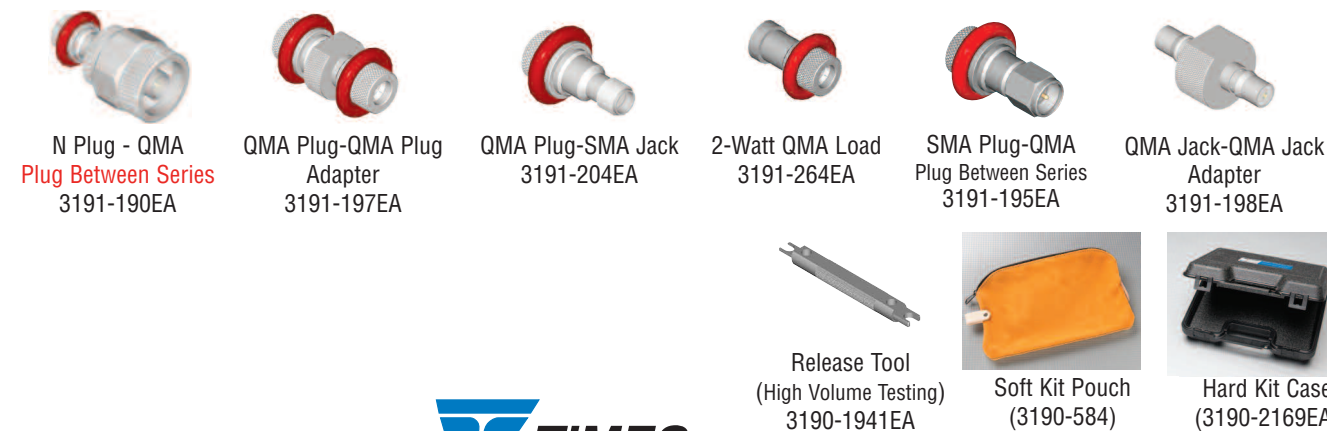
### Features & Benefits:

- 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



World Headquarters: 358 Hall Avenue, Wallingford, CT 06492 • Tel: 203-949-8400, 1-800-867-2629 Fax: 203-949-8423  
International Sales: 4 School Brae, Dysart, Kirkcaldy, Fife, Scotland KY1 2XB UK • Tel: +44(0)1592655428 Fax: +44(0)1592653162  
China Sales: 16F United Plaza, West Nanjing Road, Shanghai, China 200040 • Tel: 86-21-32224506 Fax: 86-21-62898980  
www.timesmicrowave.com

# SilverLine™

ISO 9001 Certified

## 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.



## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [times microwave manufacturer](#):*

Other Similar products are found below :

[SLU04-BMNM-03.00F](#) [SLU04-BMBM-10.00F](#) [3190518](#) [3190240](#) [TC-300-NMH-X](#) [31901156](#) [SLU04-BMSMR-10.00F](#) [SLU18-SMSMR-02.00F](#) [SLU04-BMSM-06.00F](#) [3190824](#) [SLU18-SMSM-02.00M](#) [3190244](#) [SLU18-SMSMR-09.00F](#) [SLU26-SMSM-03.00F](#) [SLU18-NMNM-06.00F](#) [SLUXF18-SMSM-01.50F](#) [EZ-600-TM](#) [EZ-600-TM-X](#) [SLUXF18-NMNM-03.00F](#) [31902641](#) [SLU18-NMNM-03.00F](#) [EZ400NMHRA](#) [SLUXFHT18-SMSM-03.00F](#) [SLU18-SMSM-03.00F](#) [TC-240-SM-SS-X](#) [SLU18-SMSM-06.00F](#) [3190242](#) [SLUXF18-SMSM-01.00F](#) [5402910024](#)