

RF316-07SP1-07BJ1-0200

RF174-01RP1-02RP1-0300

**RF174, RF316 SERIES**

# 50Ω RG 174 & RG 316 CABLE ASSEMBLIES

**SPECIFICATIONS**

For complete specifications see [www.samtec.com?RF174](http://www.samtec.com?RF174) or [www.samtec.com?RF316](http://www.samtec.com?RF316)

**RF Connector:**

**Outer Contact Material:**  
Ni plated Brass (BNC)  
Au plated Brass (SMB & SMA)  
Au plated BeCu (MCX & MMCX)  
**Center Contact Material:**  
Au plated Brass (BNC-P, MCX-P, MMCX-P, SMA-P)  
Au plated BeCu (SMB-P)  
Au plated Phosphor Bronze (BNC-J)  
Au plated BeCu (SMA-J)  
**Insulator Material:** PTFE  
**Operating Temperature:**  
RF174: -50°C to +90°C  
RF316: -50°C to +165°C  
**Insulator Resistance:** 5,000 MΩ  
**Impedance:** 50Ω  
**Frequency Range:** 0-6 GHz (Cable & connector dependent)  
**RoHS Compliant:** Yes

**RG 174 Cable:**

**Impedance:** 50Ω  
**Capacitance:** 101.024pF/meter  
**Propagation Delay:** 5.06 nsec/meter  
**Max Attenuation:** 1.4dB @ 1GHz for 1 meter  
**Conductor Size:** 26 AWG, (0.48mm) .019" dia.  
**Conductor Material:** Copper  
**Conductor Resistance:** 0.14Ω/meter  
**Current Rating:** 5A DC  
**Insulator Material:** LEP  
**Dielectric Constant:** 2.3dK  
**Shield Material:** Tin Copper  
**Jacket Material:** PVC  
**Jacket Diameter:** (2.70mm) .106"  
**Jacket Temp Rating:** -50°C to +90°C  
**Jacket Color:** Black  
**RoHS Compliant:** Yes

**RG 316 Cable:**

**Impedance:** 50Ω  
**Capacitance:** 96.432pF/meter  
**Propagation Delay:** 4.83 nsec/meter  
**Max Attenuation:** 1.25dB @ 1GHz for 1 meter  
**Conductor Size:** 26 AWG, (0.51mm) .020" dia.  
**Conductor Material:** Silver Plated Copper  
**Conductor Resistance:** 0.13Ω/meter max  
**Current Rating:** 5A DC  
**Insulator Material:** PTFE  
**Dielectric Constant:** 2.1dK  
**Shield Material:** Silver Plated Copper Clad Steel  
**Jacket Material:** FEP  
**Jacket Diameter:** (2.54mm) .100"  
**Jacket Temp Rating:** -50°C to +165°C  
**Jacket Color:** Amber  
**RoHS Compliant:** Yes

**Mates with:**  
MCX, MMCX,  
SMA, SMB5



Standard performance 26 AWG RG 174 coax cable

2.3dK

Plugs and Jacks

Single or Double Ended

**RF Cable Builder**

Quickly...Build a cable.  
Verify a part number.  
View print, Request price,  
Order sample...all online!

[www.samtec.com/rfbuilder](http://www.samtec.com/rfbuilder)

Straight or Right Angle



CABLE TYPE

END 1 CONNECTOR

END 2 CONNECTOR

Specify END OPTIONS from chart

**RF174**  
= RG 174 Cable

**RF316**  
= RG 316 Cable

END OPTIONS	
-01SP1 = SMA, Straight Plug (30µ" (0.76µm) Gold on Center Contact, Gold Flash on Shell)	
-01RP1 = SMA, Right Angle Plug (30µ" (0.76µm) Gold on Center Contact, Gold Flash on Shell)	
-07SP1 = SMB, Straight Plug (30µ" (0.76µm) Gold on Center Contact, Gold Flash on Shell)	
-07RP1 = SMB, Right Angle Plug (30µ" (0.76µm) Gold on Center Contact, Gold Flash on Shell)	
-02SJ1 = MCX, Straight Jack (30µ" (0.76µm) Gold on Contact, Gold Flash on Shell)	

END OPTIONS	
-02RP1 = MCX, Right Angle Plug (30µ" (0.76µm) Gold on Center Contact, Gold Flash on Shell)	
-02SP1 = MCX, Straight Plug (30µ" (0.76µm) Gold on Center Contact, Gold Flash on Shell)	
-03SP1 = MMCX, Straight Plug (30µ" (0.76µm) Gold on Center Contact, Gold Flash on Shell)	
-03RP1 = MMCX, Right Angle Plug (30µ" (0.76µm) Gold on Center Contact, Gold Flash on Shell)	
-04SP3 = BNC, Straight Plug (10µ" (0.25µm) Gold on Center Contact, Nickel on Shell)	
-05SP3 = TNC, Straight Plug (10µ" (0.25µm) Gold on Center Contact, Nickel on Shell)	

Due to technical progress, all designs, specifications and components are subject to change without notice.

[WWW.SAMTEC.COM](http://WWW.SAMTEC.COM)



High performance 26 AWG  
RG 316 coax cable

2.1dK

Standard heat  
shrink wraps

Heavy Gold  
plated

Choice of RF  
connector styles

### ALSO AVAILABLE

- Connector Kits.
  - Additional plating options available.
  - Additional end connector combinations.
  - Knurled nuts with BNC option.
- Call Samtec.

Choice of RG 174 &  
RG 316 cable

Single or  
double ended

Variety of  
Bulkhead Jacks

## OVERALL LENGTH

—“XXXX”

= Overall Length in millimeters —0100 (100mm) minimum  
(Cable lengths larger than 1000 millimeters are not supported by S.I. Test data)

### END OPTIONS

#### STRIPPED & TINNED (Dimensions in mm)

CALLOUT	A	B	C
-303030	3.0	3.0	3.0
-303040	3.0	3.0	4.0
-403030	4.0	3.0	3.0
-403040	4.0	3.0	4.0
-404040	4.0	4.0	4.0

Both center conductor and braid shield are stripped, only the center conductor is tinned.  
Call Samtec for other sizes or tinning options.

#### END OPTIONS

-07BJ1 = SMB, Bulkhead Jack (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	
-01BJ1 = SMA, Straight Bulkhead Jack	
-01BR1 = SMA, Straight Bulkhead Jack, Reversed Polarity (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	

#### END OPTIONS

-SING = Single-Ended (End 2 only)	
XXXXXX = Stripped & Tinned (End 2 callout)	

-04BJ3 = BNC, Bulkhead Jack (10µ" (0,25µm) Gold on Center Contact, Nickel on Shell)	
-05BJ3 = TNC, Bulkhead Jack (10µ" (0,25µm) Gold on Center Contact, Nickel on Shell)	
-06BJ2 = N Type, Bulkhead Jack (30µ" (0,76µm) Gold on Center Contact, Nickel on Shell)	

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