

RF174-07SP1-01BJ1-0300



RF174-01RP1-02RP1-0200

# 50 $\Omega$ RG 174 CABLE ASSEMBLIES

## SPECIFICATIONS

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

### 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)

#### Insulator Material:

PTFE  
 (SMB-P & SMA-J)

#### Operating Temperature:

-50 °C to +90 °C

#### Impedance:

50  $\Omega$

#### Frequency Range:

0-6 GHz

(Cable & connector dependent)

#### RoHS Compliant:

Yes

### RG 174 Cable:

#### Impedance:

50  $\Omega$

#### Capacitance:

101.024 pF/meter

#### Max Attenuation

(cable only):

1.4 dB @ 1 GHz for 1 meter

#### Conductor Size:

26 AWG, (0.48 mm) .019" dia.

#### Conductor Material:

Copper

#### Insulator Material:

KLPE

#### Shield Material:

Tin Copper

#### Jacket Material:

PVC

#### Jacket Diameter:

(2.70 mm) .106"

#### Jacket Color:

Black

#### Bend Radius:

25.4 mm

#### RoHS Compliant:

Yes

### Mates with:

MCX, MMCX, MMCXV,  
 SMA, SMB5, BNC5,  
 TNC



**Solutionator**  
 DESIGN IN A MINUTE

- Create a full system:  
cable assembly and board level mates,  
50  $\Omega$  and 75  $\Omega$  solutions
- Free samples available
- Visit: [rf.samtec.com](http://rf.samtec.com)

Standard performance 26 AWG  
 RG 174 coax cable

2.3dK

Plugs and  
 Jacks

Straight or  
 Right-angle

Single or  
 Double Ended

CABLE TYPE

END 1  
 CONNECTOR

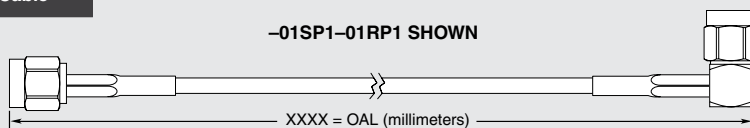
END 2  
 CONNECTOR

RF174

= RG 174 Cable

Specify END OPTIONS from chart

-01SP1-01RP1 SHOWN



| END OPTIONS                                                                                                 |  |
|-------------------------------------------------------------------------------------------------------------|--|
| -01SP1 = SMA<br>Straight Plug<br>(30 $\mu$ " (0.76 $\mu$ m) Gold on Center Contact, Gold Flash on Shell)    |  |
| -01RP1 = SMA<br>Right-angle Plug<br>(30 $\mu$ " (0.76 $\mu$ m) Gold on Center Contact, Gold Flash on Shell) |  |
| -07SP1 = SMB<br>Straight Plug<br>(30 $\mu$ " (0.76 $\mu$ m) Gold on Center Contact, Gold Flash on Shell)    |  |
| -07RP1 = SMB<br>Right-angle Plug<br>(30 $\mu$ " (0.76 $\mu$ m) Gold on Center Contact, Gold Flash on Shell) |  |
| -02SJ1 = MCX<br>Straight Jack<br>(30 $\mu$ " (0.76 $\mu$ m) Gold on Center Contact, Gold Flash on Shell)    |  |

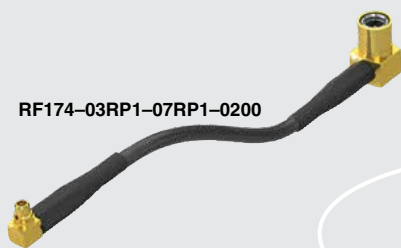
| END OPTIONS                                                                                                               |  |
|---------------------------------------------------------------------------------------------------------------------------|--|
| -02RP1 = MCX<br>Right-angle Plug<br>(30 $\mu$ " (0.76 $\mu$ m) Gold on Center Contact, Gold Flash on Shell)               |  |
| -02SP1 = MCX<br>Straight Plug<br>(30 $\mu$ " (0.76 $\mu$ m) Gold on Center Contact, Gold Flash on Shell)                  |  |
| -03SP1 = MMCX<br>Straight Plug<br>(30 $\mu$ " (0.76 $\mu$ m) Gold on Center Contact, Gold Flash on Shell)                 |  |
| -03RP1 = MMCX<br>Right-angle Plug<br>(30 $\mu$ " (0.76 $\mu$ m) Gold on Center Contact, Gold Flash on Shell)              |  |
| -V3SP1 = MMCXV<br>Straight Plug, High Vibration<br>(30 $\mu$ " (0.76 $\mu$ m) Gold on Center Contact, Nickel on Shell)    |  |
| -V3RP1 = MMCXV<br>Right-angle Plug, High Vibration<br>(30 $\mu$ " (0.76 $\mu$ m) Gold on Center Contact, Nickel on Shell) |  |
| -V3SJ1 = MMCXV<br>Straight Jack, High Vibration<br>(30 $\mu$ " (0.76 $\mu$ m) Gold on Center Contact, Nickel on Shell)    |  |

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

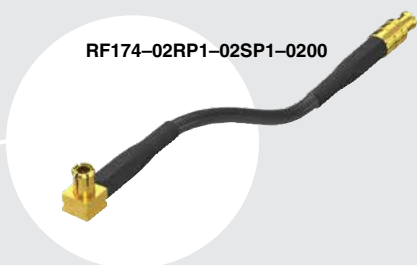
[WWW.SAMTEC.COM](http://WWW.SAMTEC.COM)

All parts within this catalog are built to Samtec's specifications.

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RF174-03RP1-07RP1-0200



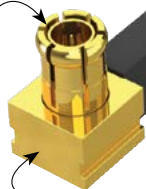
RF174-02RP1-02SP1-0200



RF174-04BJ2-07SP1-0100

## RF174 SERIES

Heavy Gold plated



Choice of RF connector styles

Standard heat shrink wraps

### ALSO AVAILABLE (MOQ Required)

- Additional stripping and tinning options
- IP67 TNC option
- Additional plating options
- Additional end connector combinations
- Knurled nuts with BNC option

Variety of Bulkhead Jacks



Single or Double ended

### OTHER SOLUTIONS

- Cable connector kits (see cable components catalog pages)

## OVERALL LENGTH

—“XXXX”—

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

| END OPTIONS                                                                                                                                                                                                                                                                                                                                             |     | END OPTIONS                                                                                                                      |     | END OPTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |   |   |   |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---|---|---|----------------|-----|-----|-----|----------------|-----|-----|-----|----------------|-----|-----|-----|----------------|-----|-----|-----|----------------|-----|-----|-----|
| <p><b>—04SP3 = BNC</b><br/>Straight Plug<br/>(10 μ" (0.25 μm)<br/>Gold on Center Contact,<br/>Nickel on Shell)</p>                                                                                                                                                                                                                                      |     | <p><b>—01PN1 = SMA</b><br/>4-Hole Panel Mount Jack<br/>(30 μ" (0.76 μm)<br/>Gold on Center Contact,<br/>Gold Flash on Shell)</p> |     | <p><b>—SING = Single Ended</b><br/>(End 2 Callout)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                |         |   |   |   |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |
| <p><b>—05SP3 = TNC</b><br/>Straight Plug<br/>(10 μ" (0.25 μm)<br/>Gold on Center Contact,<br/>Nickel on Shell)</p>                                                                                                                                                                                                                                      |     | <p><b>—04BJ2 = BNC</b><br/>Bulkhead Jack<br/>(30 μ" (0.76 μm)<br/>Gold on Center Contact,<br/>Nickel on Shell)</p>               |     | <p><b>XXXXXX = Stripped &amp; Tinned</b><br/>(End 2 Callout)</p>                                                                                                                                                                                                                                                                                                                                                                                                                      |         |   |   |   |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |
| <p><b>—07BJ1 = SMB</b><br/>Bulkhead Jack (30 μ" (0.76 μm)<br/>Gold on Center Contact,<br/>Gold flash on Shell)</p>                                                                                                                                                                                                                                      |     | <p><b>—05BJ3 = TNC</b><br/>Bulkhead Jack<br/>(10 μ" (0.25 μm)<br/>Gold on Center Contact,<br/>Nickel on Shell)</p>               |     | <p><b>STRIPPED &amp; TINNED</b><br/>(Dimensions in mm)</p> <table><tr><th>CALLOUT</th><th>A</th><th>B</th><th>C</th></tr><tr><td><b>—303030</b></td><td>3.0</td><td>3.0</td><td>3.0</td></tr><tr><td><b>—303040</b></td><td>3.0</td><td>3.0</td><td>4.0</td></tr><tr><td><b>—403030</b></td><td>4.0</td><td>3.0</td><td>3.0</td></tr><tr><td><b>—403040</b></td><td>4.0</td><td>3.0</td><td>4.0</td></tr><tr><td><b>—404040</b></td><td>4.0</td><td>4.0</td><td>4.0</td></tr></table> | CALLOUT | A | B | C | <b>—303030</b> | 3.0 | 3.0 | 3.0 | <b>—303040</b> | 3.0 | 3.0 | 4.0 | <b>—403030</b> | 4.0 | 3.0 | 3.0 | <b>—403040</b> | 4.0 | 3.0 | 4.0 | <b>—404040</b> | 4.0 | 4.0 | 4.0 |
| CALLOUT                                                                                                                                                                                                                                                                                                                                                 | A   | B                                                                                                                                | C   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |         |   |   |   |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |
| <b>—303030</b>                                                                                                                                                                                                                                                                                                                                          | 3.0 | 3.0                                                                                                                              | 3.0 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |         |   |   |   |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |
| <b>—303040</b>                                                                                                                                                                                                                                                                                                                                          | 3.0 | 3.0                                                                                                                              | 4.0 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |         |   |   |   |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |
| <b>—403030</b>                                                                                                                                                                                                                                                                                                                                          | 4.0 | 3.0                                                                                                                              | 3.0 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |         |   |   |   |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |
| <b>—403040</b>                                                                                                                                                                                                                                                                                                                                          | 4.0 | 3.0                                                                                                                              | 4.0 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |         |   |   |   |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |
| <b>—404040</b>                                                                                                                                                                                                                                                                                                                                          | 4.0 | 4.0                                                                                                                              | 4.0 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |         |   |   |   |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |
| <p><b>—01BJ1 = SMA</b><br/>Straight Bulkhead Jack<br/><b>—01SB1 = SMA</b><br/>Straight Bulkhead Jack, Sealed<br/><b>—01SR1 = SMA</b><br/>Straight Bulkhead Jack, Sealed,<br/>Reversed Polarity<br/><b>—01BR1 = SMA</b><br/>Straight Bulkhead Jack,<br/>Reversed Polarity<br/><br/>(30 μ" (0.76 μm) Gold on Center<br/>Contact, Gold Flash on Shell)</p> |     | <p><b>—06BJ2 = N Type</b><br/>Bulkhead Jack<br/>(30 μ" (0.76 μm)<br/>Gold on Center Contact,<br/>Nickel on Shell)</p>            |     | <p>Both center conductor and<br/>braid shield are stripped,<br/>only the center<br/>conductor is tinned.</p>                                                                                                                                                                                                                                                                                                                                                                          |         |   |   |   |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |                |     |     |     |

Both center conductor and braid shield are stripped, only the center conductor is tinned.

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