

RF178-02RP1-01BJ1-0200



RF178-02SP1-02RP1-0300

# 50 Ω RG 178 CABLE ASSEMBLIES

## SPECIFICATIONS

For complete specifications see [www.samtec.com?RF178](http://www.samtec.com?RF178)

### RF Connector:

**Outer Contact Material:**  
Au plated Brass (SMA & SMB)  
Au plated BeCu (MCX & MMCX)  
Nickel (BNC & TNC)

### Center Contact Material:

Au plated Brass  
(MCX-P, MMCX-P, BNC,  
TNC & SMB)  
Au plated BeCu  
(SMA-J & MCX-J)

### Insulator Material:

PTFE

### Operating Temperature:

-50 °C to +165 °C

### Frequency Range:

0-5 GHz  
(Connector dependent)

### Impedance:

50 Ω

### RoHS Compliant:

Yes

### RG 178 Cable:

#### Impedance:

50 Ω

#### Capacitance:

96 pF/meter

#### Propagation Delay:

4.83 nsec/meter

#### Max Attenuation

(cable only):

1.7 dB @ 1 GHz for 1 meter

#### Conductor Size:

30 AWG, (0.31 mm) .012" dia.

#### Conductor Material:

Silver Plated Copper

#### Conductor Resistance:

0.34 Ω/meter max

#### Current Rating:

3 A DC

#### Insulator Diameter:

(0.86 mm) .034"

#### Insulator Material:

PTFE

#### Dielectric Constant:

2.1 dK

#### Shield Material:

Silver Plated Copper Clad Steel

#### Jacket Material:

FEP

#### Jacket Diameter:

(1.80 mm) .071"

#### Jacket Temp Rating:

-50 °C to +165 °C

#### Jacket Color:

Amber

#### Bend Radius:

10.2 mm

#### RoHS Compliant:

Yes

### Mates with:

MCX, MMCX, BNC5,  
TNC, SMA, SMB5



**Solutionator**  
DESIGN IN A MINUTE

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

Light Gauge 30 AWG  
RG 178 coax cable

2.1dK

Standard Heat  
Shrink

SMA, MCX, MMCX,  
SMB, BNC, TNC and  
N Type End Options

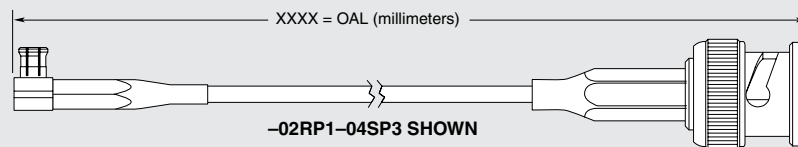
CABLE TYPE

END 1  
CONNECTOR

END 2  
CONNECTOR

**RF178**  
= RG 178 Cable

Specify END OPTIONS from chart



END OPTIONS		END OPTIONS	
<p><b>-01BJ1 = SMA</b> Straight Bulkhead Jack <b>-01BR1 = SMA</b> Straight Bulkhead Jack, Reversed Polarity</p> <p>(30 μ" (0.76 μm) Gold on Center Contact, Gold Flash on Shell)</p>		<p><b>-02SP1 = MCX</b> Straight Plug (30 μ" (0.76 μm) Gold on Center Contact, Gold Flash on Shell)</p>	
<p><b>-02SJ1 = MCX</b> Straight Jack (30 μ" (0.76 μm) Gold on Center Contact, Gold Flash on Shell)</p>		<p><b>-03SP1 = MMCX</b> Straight Plug (30 μ" (0.76 μm) Gold on Center Contact, Gold Flash on Shell)</p>	
<p><b>-02RP1 = MCX</b> Right-angle Plug (30 μ" (0.76 μm) Gold on Center Contact, Gold Flash on Shell)</p>		<p><b>-03RP1 = MMCX</b> Right-angle Plug (30 μ" (0.76 μm) Gold on Center Contact, Gold Flash on Shell)</p>	

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.

Customer specific requirements must be approved by Samtec and identified in a Samtec customer-specific drawing to apply.

RF178-04SP3-02SJ1-0100

RF178-01BJ1-03RP1-0200

RF178-07BJ2-03SP1-0200

**RF178 SERIES**

Straight or Right-angle

Variety of Bulkhead Jacks

Single or Double ended

**ALSO AVAILABLE**  
(MOQ Required)

- Additional stripping and tinning options
- IP67 TNC option
- Additional plating options
- Additional end connector combinations

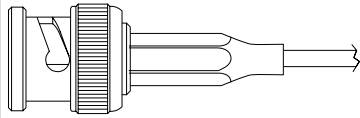
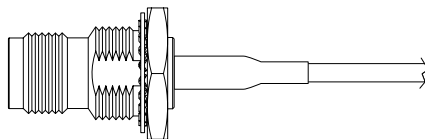
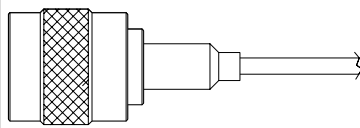
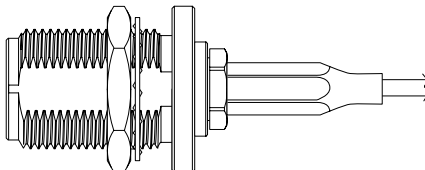
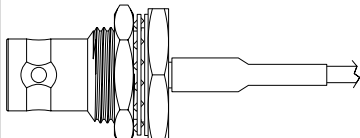
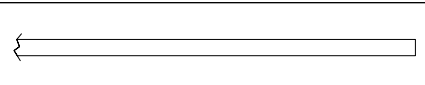
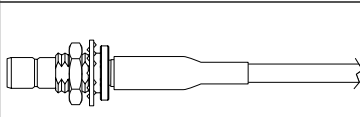
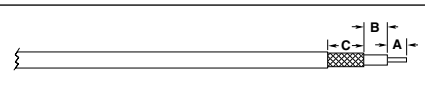
**OTHER SOLUTIONS**

- Cable connector kits (see cable components catalog pages)

**OVERALL LENGTH**

—“XXXX”

= Overall Length in millimeters -0100 (100 mm) 3.94" minimum

END OPTIONS		END OPTIONS	
<p><b>-04SP3 = BNC</b> Straight Plug (10 μ" (0.25 μm)) Gold on Center Contact, Nickel on Shell</p> 		<p><b>-05BJ3 = TNC</b> Straight Bulkhead Jack (10 μ" (0.25 μm)) Gold on Center Contact, Nickel on Shell</p> 	
<p><b>-05SP3 = TNC</b> Straight Plug (10 μ" (0.25 μm)) Gold on Center Contact, Nickel on Shell</p> 		<p><b>-06BJ2 = N Type</b> Straight Bulkhead Jack (30 μ" (0.76 μm)) Gold on Center Contact, Nickel on Shell</p> 	
<p><b>-04BJ2 = BNC</b> Straight Bulkhead Jack (30 μ" (0.76 μm)) Gold on Center Contact, Nickel on Shell</p> 		<p><b>-SING =</b> Single Ended (End 2 Callout)</p> 	
<p><b>-07BJ2 = SMB</b> Straight Bulkhead Jack (30 μ" (0.76 μm)) Gold on Center Contact, Nickel on Shell</p> 		<p><b>XXXXXX =</b> Stripped &amp; Tinned (End 2 Callout)</p> 	

**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.

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