

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

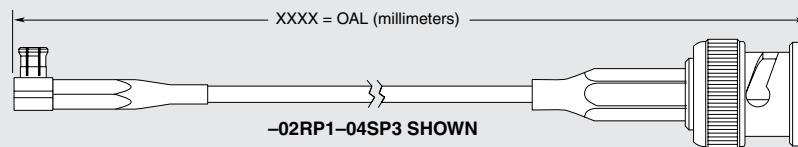
CABLE TYPE

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

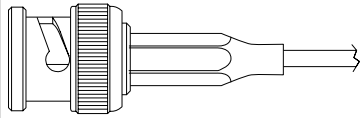
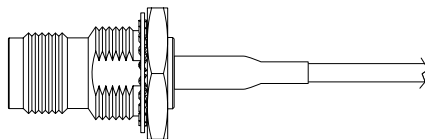
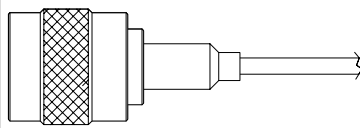
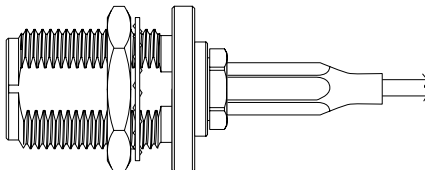
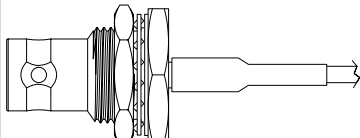
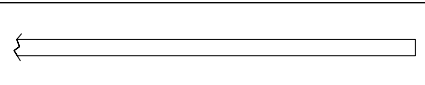
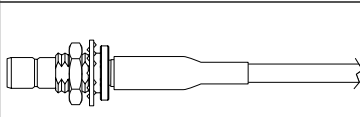
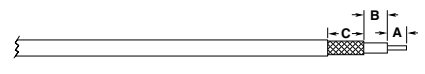
**OTHER SOLUTIONS**

- 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.

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.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Samtec:](#)

[RF178-03SP1-03RP1-0354](#)