

Strain Relief Boot protects the solder joint from bending stress



MIL-C-17 RG178 Imported Cable



PCB to Panel Interconnect Cable Assembly with SMB (F) Rt. Angle - SMB (F) Rt. Angle

Our RG178/316 series Cable Sets are designed for RF PCB & Panel interconnect applications. These cables sets are constructed using imported MIL-C-17 RG178/316 cables.

MATERIALS & TURNAROUND TIME

- Quick turnaround for SMB, SMC, MCX, MMCX & Nano-hex Cable Assemblies
- Imported RG316/178 (MIL) cables in stock
- Imported SMB, SMC, MMCX, MCX & Nano-hex straight connectors in stock

MIL STANDARDS CONFORMANCE

- MIL-C-17
- MIL-PRF-39012

APPLICATIONS (DC~4 Ghz)

- RF PCB & Panel interconnect applications
- Tight spaced applications
- Application demanding miniature coaxials

Ordering Codes Description

RG316/RG178 - (Length) (Connector 1) (Connector 2)
 □ □ - □ (□ / □) - □ (□ / □) - □
L L 1 2 3 1 2 3 U

LL	Length	0.5 = 0.5 ; 1 = 1.0
1	Connector Designator	SMB = SMB; SSMB = SSMB; SMC = SMC; MMCX = MMCX; MCX = MCX
2	Male/Female Designator	M = Male ; F = Female
3	Orientation of Connector	ST = Straight ; RA = Right Angle
U	Unit of Length	I = Inch; M= Meter; F = Feet; CM = centimeter

2 meter RG178 cable assembly with SMB (F) on both sides = RG178-2.0-SMB(F/ST)-SMB(F/ST)-M

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Parameter	RG316	RG 178
Cable Outer Diameter	2.5 mm	1.85 mm
Center Conductor	SCCS	SCCS
Dielectric	PTFE	PTFE
Outer Shield	Silver-plated copper	Silver-plated copper
Jacket	FEP	FEP
Min. Bending Radius	15 mm	10 mm
Weight	0.015kg/meter	0.0078kg/meter
Temperature Range	-55°C to +125°C	-55°C to +125°C
Impedance	50 Ω	50 Ω
Capacitance	29.4 (pF/ft)	29.4 (pF/ft)

Note: For RG174, we recommend to use RG316 as it is mechanically almost same as RG174 but has PTFE dielectric and tougher FEP jacket as compared to RG174 which is PVC jacket. For RG188, we recommend RG316. For RG196 & RG179, we recommend to use RG178.

RG316 Attenuation Vs Frequency

Frequency (MHz)	100	400	1000	2400
(dB/100 feet)	8.2	17	27.7	42.2
(dB/100m)	27	56	91	145

RG178 Attenuation Vs Frequency

Frequency (MHz)	100	400	1000	2400
(dB/100 feet)	14.5	30.1	49.7	78.65
(dB/100m)	46	99	163	258

Technical Data of RG316 PCB and Panel Cable Assemblies

Part Number	Conn 1	Conn 2	Length	Insertion Loss (dB) Typical			
				100 MHz	400 MHz	1 GHz	2.4 GHz
SMB(Female) Straight - SMB(Female) Straight (DC~4 GHz)							
RG316-1.0-SMB(F/ST)-SMA(F/ST)-M	SMB(F)	SMB(F)	1m	0.57	0.86	1.21	1.78
RG316-2.0-SMB(F/ST)-SMA(F/ST)-M	SMB(F)	SMB(F)	2m	0.84	1.42	2.12	3.26
RG316-3.0-SMB(F/ST)-SMA(F/ST)-M	SMB(F)	SMB(F)	3m	1.24	1.98	3.03	4.74
SMB(Female) Straight - SMB(Female) Right Angle (DC~4 GHz)							
RG316-1.0-SMB(F/ST)-SMA(F/RT)-M	SMB(F)	SMB(F) Rt.	1m	0.58	0.88	1.25	1.80
RG316-2.0-SMB(F/ST)-SMA(F/RT)-M	SMB(F)	SMB(F) Rt.	2m	0.89	1.48	2.18	3.29
RG316-3.0-SMB(F/ST)-SMA(F/RT)-M	SMB(F)	SMB(F) Rt.	3m	1.28	2.02	3.18	4.78

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Ready-to-use part numbers for RG316 PCB and Panel Cable Sets
(Any cable length, as specified by customer, is available)

Part Number	Conn 1	Conn 2	Length	Insertion Loss (dB) Typical			
				100 MHz	400 MHz	1 GHz	2.4 GHz
SMB(Female) Right Angle - SMB(Female) Right Angle (DC ~ 4 GHz)							
RG316-1.0-SMB(F/RT)-SMA(F/RT)-M	SMB(F)Rt	SMB(F)Rt	1m	0.59	0.92	1.38	2.13
RG316-2.0-SMB(F/RT)-SMA(F/RT)-M	SMB(F)Rt	SMB(F)Rt	2m	0.94	1.53	2.37	3.54
RG316-3.0-SMB(F/RT)-SMA(F/RT)-M	SMB(F)Rt	SMB(F)Rt	3m	1.38	2.24	3.39	5.01
SMC(Female) Straight - SMC(Female) Right Angle (DC ~ 4 GHz)							
RG316-1.0-SMC(F/ST)-SMC(F/RT)-M	SMC(F)	SMC(F)Rt	1m	0.58	0.89	1.26	1.85
RG316-2.0-SMC(F/ST)-SMC(F/RT)-M	SMC(F)	SMC(F)Rt	2m	0.89	1.49	2.21	3.31
RG316-3.0-SMC(F/ST)-SMC(F/RT)-M	SMC(F)	SMC(F)Rt	3m	1.29	2.04	3.21	4.82
SMC(Female) Right Angle - SMC(Female) Right Angle (DC ~ 4 GHz)							
RG316-1.0-SMC(F/RT)-SMC(F/RT)-M	SMC(F)Rt	SMC(F)Rt	1m	0.59	0.91	1.28	1.87
RG316-2.0-SMC(F/RT)-SMC(F/RT)-M	SMC(F)Rt	SMC(F)Rt	2m	0.90	1.52	2.28	3.36
RG316-2.0-SMC(F/RT)-SMC(F/RT)-M	SMC(F)Rt	SMC(F)Rt	3m	1.30	2.11	3.26	4.89

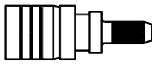
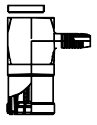

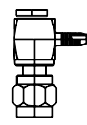
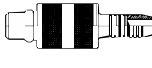
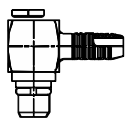
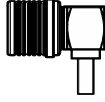
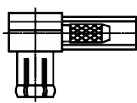

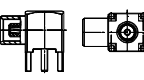
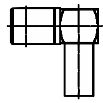


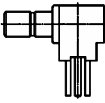
Ready-to-use part numbers for RG178 PCB and Panel Cable Sets
(Any cable length, as specified by customer, is available)

Part Number	Conn 1	Conn 2	Length	Insertion Loss (dB) Typical			
				100 MHz	400 MHz	1 GHz	2.4 GHz
SMB(Female) Straight - SMB(Female) Straight (DC~4 GHz)							
RG178-1.0-SMB(F/ST)-SMB(F/ST)-M	SMB(F)	SMB(F)	1m	0.59	1.07	1.71	2.72
RG178-2.0-SMB(F/ST)-SMB(F/ST)-M	SMB(F)	SMB(F)	2m	1.02	2.08	3.38	5.30
RG178-3.0-SMB(F/ST)-SMB(F/ST)-M	SMB(F)	SMB(F)	3m	1.49	3.11	4.95	7.89
SSMB(Female) Straight - SSMB(Female) Straight (DC~3 GHz)							
RG178-1.0-SSMB(F/ST)-SSMB(F/ST)-M	SSMB(F)	SSMB(F)	1m	0.59	1.08	1.74	2.78
RG178-2.0-SSMB(F/ST)-SSMB(F/ST)-M	SSMB(F)	SSMB(F)	2m	1.04	2.11	3.48	5.39
RG178-3.0-SSMB(F/ST)-SSMB(F/ST)-M	SSMB(F)	SSMB(F)	3m	1.50	3.15	5.02	7.91
SMC(Female) Straight - SMC(Female) Straight (DC~4 GHz)							
RG178-1.0-SMC(F/ST)-SMC(F/ST)-M	SMC(F)	SMC(F)	1m	0.58	1.09	1.73	2.76
RG178-2.0-SMC(F/ST)-SMC(F/ST)-M	SMC(F)	SMC(F)	2m	1.03	2.10	3.43	5.31
RG178-3.0-SMC(F/ST)-SMC(F/ST)-M	SMC(F)	SMC(F)	3m	1.48	3.13	4.99	7.90
MMCX(Male) Straight - MMCX(Male) Straight (DC~4 GHz)							
RG178-1.0-MMCX(M/ST)-MMCX(M/ST)-M	MMCX (M)	MMCX(M)	1m	0.58	1.10	1.72	2.75
RG178-2.0-MMCX(M/ST)-MMCX(M/ST)-M	MMCX (M)	MMCX(M)	2m	1.02	2.09	3.44	5.33
RG178-3.0-MMCX(M/ST)-MMCX(M/ST)-M	MMCX (M)	MMCX(M)	3m	1.49	3.20	5.01	7.88
MCX(Male) Straight - MCX(Male) Straight (DC~4 GHz)							
RG178-1.0-MCX(M/ST)-MCX(M/ST)-M	MCX (M)	MCX(M)	1m	0.59	1.11	1.71	2.79
RG178-2.0-MCX(M/ST)-MCX(M/ST)-M	MCX (M)	MCX(M)	2m	1.05	2.08	3.34	5.40
RG178-3.0-MCX(M/ST)-MCX(M/ST)-M	MCX (M)	MCX(M)	3m	1.51	3.19	5.45	8.01

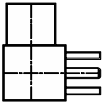
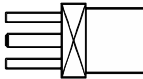
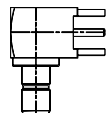
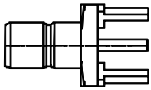
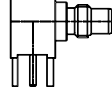
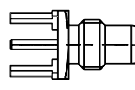
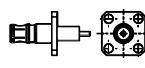
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Connectors available for RG316 & RG178 PCB & Panel Cable Sets

<p>SMB Straight Cable Jack</p> 	<p>SMB Right Angle Jack Crimp</p> 	<p>SMC Straight Jack Crimp</p> 	<p>SMC Right Angle Jack Crimp</p> 	<p>MMCX Plug Straight</p> 	<p>MMCX Plug Right Angle</p> 	<p>Quick Lock Plug Right Angle</p> 
<p>MCX Plug Right Angle</p> 	<p>MCX Jack Straight PCB Mount</p> 	<p>MCX Jack Right Angle PCB Mount</p> 	<p>SSMB Jack Right Angle</p> 	<p>SSMB Jack Straight</p> 	<p>SSMB Plug Straight PCB Mount</p> 	<p>SSMB Plug Right Angle PCB Mount</p> 

Mating PCB Jack Connectors are also available from us

<p>MMCX Jack Right angle PCB Mount</p> 	<p>MMCX Jack Straight PCB Mount</p> 	<p>SMB Plug Right Angle PCB Mount</p> 	<p>SMB Plug Straight PCB Mount</p> 	<p>SMC Plug Right Angle PCB Mount</p> 	<p>SMC Jack Right Angle PCB Mount</p> 	<p>Quick Lock Jack Panel Mount</p> 
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Connector Specifications

Specifications	SMB	SSMB	SMC	MMCX	MCX
Outer Conductor	Brass, Gold plated				
Center Conductor	Brass, Gold Plated				
Insulation	PTFE				
Gasket	Silicon Rubber				
Impedance	50Ω				
Frequency range	DC~4GHz	DC~3 GHz	DC~4 GHz	DC~4 GHz	DC~6 GHz
Mating/Unmating	500 operations min.				
Vibration	As per MIL-STD-202, method 204, test condition D				
Mechanical Shock	As per MIL-STD-202, method 213, test condition I				
Thermal Shock	As per MIL-STD-202, method 107, test condition B				
Corrosion	As per MIL-STD-202, method 101, test condition B				
Humidity	As per MIL-STD-202, method 106				
Temperature Cycle	As per MIL-STD-202, method 102A, test condition C				

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