

Cannon's SMB Snap-on and SMC Screw-on subminiature coaxial connectors have been specifically engineered for high performance and high reliability applications in both military and commercial equipment operating at frequencies up to 4 GHz (SMB) and 12.4 GHz (SMC).

The Snap-on mating engagement allows a rapid connect/disconnect facility. The Screw-on mating engagement allows a low VSWR under vibration conditions and a matched impedance of 50 ohms.

Cannon SMB/SMC connectors are compatible with all SMB/SMC type connectors conforming with MIL-C-39012, BS 9210, UTE C93 561, UTE C93 562, CECC 22 130 and CECC 22 140.

In addition to this range we also offer FAKRA SMB connectors for automotive applications.

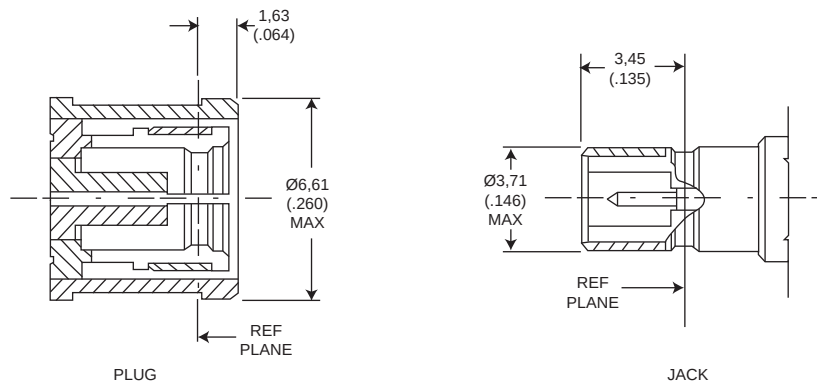


Key Features

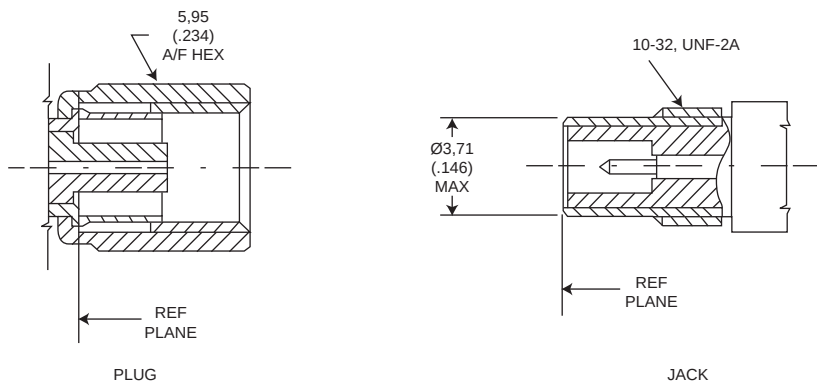
- Rapid connect / disconnect (SMB)
- Standoff legs on PCB
- Frequency range to 12.4 GHz (SMC) or 4 GHz (SMB)
- Vibration withstanding design (SMC)

MATING INTERFACES

SMB (SNAP-ON)



SMC (SCREW-ON)



NOTES

1) Inside diameter of female contact to meet VSWR mating characteristics and connector durability when mated with a 0.48 ± 0.53 (.019 $\pm$.021) diameter male contact.

2) All undimensioned pictorial representations are for reference purposes only.

3) Slide-on versions of most SMB female styles, prefix 052, are available. For slide-on male interconnection use male SMB (snap-on type).

Dimensions shown in mm (inch)
Specifications and dimensions subject to change

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SPECIFICATIONS

ELECTRICAL	Impedance	50Ω			
	Frequency Range	SMB = 0 to 4.0 GHz. SMC = 0 to 12.4 GHz			
	Voltage Rating	Connectors for RG196/U series cable: At Sea Level = 300 Vrms. At 21km (70k feet) = 75 Vrms Connectors for RG188/U series cable: At Sea Level = 400 Vrms. At 21km (70k feet) = 100 Vrms			
	Insulation Resistance	1000 MΩ minimum			
	Contact resistance	Center Contact = 6.0 m Ω maximum initial. 8.0 m Ω maximum after environment Outer Contact = 1.0 m Ω maximum initial. 1.5 m Ω maximum after environment Braid to Body = 1.0 m Ω maximum			
	Contact Current Rating	1.5 A dc maximum			
	Insertion Loss	0.25 dB maximum @ 4 GHz			
	RF Leakage	SMB = -55 dB minimum @ 2 - 3 GHz SMC = -60 dB minimum @ 2 - 3 GHz			
	Voltage Standing Wave Ratio (VSWR)	Connector Configuration			
	To 10 GHz or 80% of upper cut-off frequency of the cable, whichever is lower.	SMB			
MECHANICAL	Engagement Design	SMB			
	Engagement Forces	SMC			
	Mating Torque	Cable group	Straight	Right Angle	Right Angle
	Locknut Torque	RG196/U Series	1.30 + .04F	1.45 + .06F	1.25 + .04F
	Coupling Nut Retention	RG188/U Series	1.20 + .04F	1.35 + .04F	1.20 + .04F
	Materials	SMB per MIL-C-39012, Series SMB. SMC per MIL-C-39012, Series SMC.			
	Finish/Plating	SMB: Initial = 62 N (14 lbs.) max. engagement. After 500 matings = 62 N (14 lbs.) max. engagement and disengagement = 8.9 N (2 lbs.) min. disengagement. SMC: 0.11 Nm (16 in. oz.) torque max.			
	Temperature Rating	SMB: N/A SMC: 0.42 to 0.50 Nm (60 to 70 in.oz)			
	Corrosion (salt spray)	0.56 to 0.64 Nm (80 to 90 in. oz)			
	Vibration, High Frequency Shock	SMB: N/A SMC: 155 N (35 lbs.) minimum			
ENVIRONMENTAL	Moisture Resistance	Body, Body Components and Male Contacts: Brass, half hard. Female Contacts: Beryllium Copper, heat treated. Insulators: PTFE. Lockwashers: Phosphor Bronze. Crimp Ferrule: Annealed copper alloy. Gaskets: Silicone rubber			
	Thermal Shock	Center Contacts: Gold plated. Other Metal Parts: Gold plated or nickel plated (as specified) to meet the finish and corrosion requirements of MIL-C-39012			
	Connector Durability	-65° C to 165° C			
	Contact Captivation	MIL-STD-202, Method 101, test condition B, 5% salt solution			
	Cable Retention	MIL-STD-202, Method 204, SMB: test condition B (15 G's). SMC: test condition D (20 G's)			
	Body Plating Options	MIL-STD-202, Method 213, SMB: test condition B, 75 G's @ 6 milliseconds, 1/2 sine. SMC: test condition C, 100 G's @ 6 milliseconds, 1/2 sine.			
		MIL-STD-202, Method 107, test condition B, except high temperature shall be 85°C. High temperature shall be 200°C for connectors using 200°C cables.			
		MIL-STD-202, Method 106, when interface gasket is used. No measurement at high humidity. Insulation resistance shall be 200 MΩ minimum within five minutes after removal from humidity.			
		500 matings minimum			
		Unless otherwise specified, all connectors feature captivated contacts. When captivated the contacts will withstand 17,8 N (4 lbs.) minimum axial force. CECC 22 130 = 10 N(2.25 lb.)			
GENERAL		When properly assembled to the compatible single braided coaxial cable, the retention is equal to the breaking strength of the cable.			
		The following part number suffices can be specified for SMB/SMC Connectors:			
		 220	gold body		
		 910	nickel body		
		 C90	nickel body		

STRAIGHT PLUGS AND JACKS

Straight Crimp Plug

Part Number	Cable Numbers
B51 - 024 - 0000220	RG174/U, 316/U
B51 - 024 - 3196220	RG178/U, 196/U
B51 - 024 - 9399220	RD316, 179

Straight Crimp Bulkhead Jack

Part Number	Cable Numbers
051 - 027 - 0000220	RG174/U, 316/U
051 - 027 - 3196220	RG178/U, 196/U
051 - 027 - 9399220	RD316, 179

RIGHT ANGLE PLUGS

Right Angle Crimp Plug

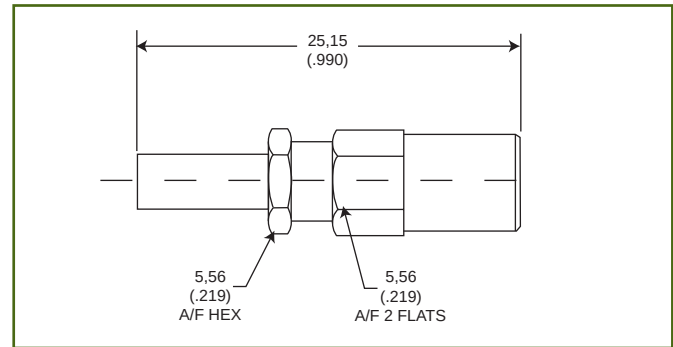
Part Number	Cable Numbers
B51 - 328 - 3188220	RG174/U, 316/U
B51 - 328 - 3196220	RG178/U, 196/U
B51 - 328 - 9399220	RD316, 179
B51 - 328 - 9019AU0	BT3002, T2C75024

IN-SERIES ADAPTORS

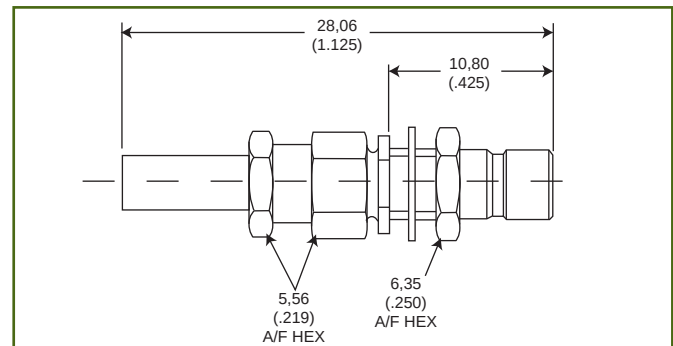
Jack to Jack Adaptor, Bulkhead Mounting

Part Number
051 - 075 - 0000220

SMB connectors have solder center contacts.

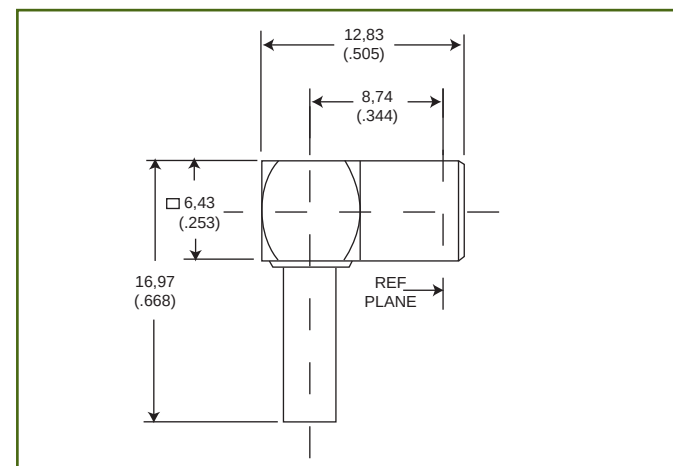


Assembly Instructions BAI-003 (Page 50)

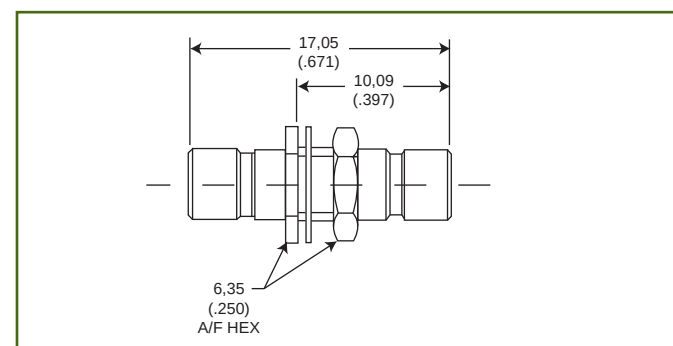


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Assembly Instructions BAI-003 (Page 50)



Assembly Instructions BAI-015 (Page 49)



Mounting Plan V (Page 40)

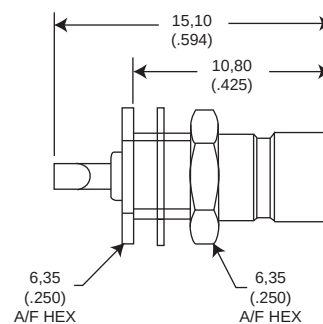


BULKHEAD JACKS

Straight Bulkhead Jack, Solder Pot,
Mounting Nut Outside Panel

Part Number

051 - 043 - 0000220

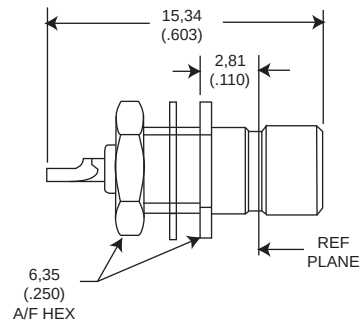


Mounting Plan V (Page 40)

Straight Bulkhead Jack, Solder Pot,
Mounting Nut Inside Panel

Part Number

051 - 045 - 0000220

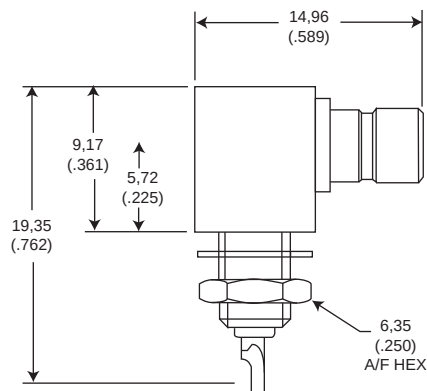


Mounting Plan V (Page 40)

Right Angle Bulkhead Jack, Solder Pot,
Mounting Nut Inside Panel

Part Number

051 - 047 - 0000220



Mounting Plan V (Page 40)

PRINTED CIRCUIT BOARD JACKS

SMB PCB preferred styles feature stepped legs. This allows the jacks to be raised from the surface of the PCB, thereby preventing the accumulation of soldering fluids and foreign bodies. A single piece conductor overcomes the problem of internal joint separation during continuous wave / flow soldering operations.

Straight PCB Jack, 1,00 (.039) sq Legs

Part Number

B51 - 351 - 0000220

Straight PCB Jack, 0,81 (.032) sq Legs

Part Number

B51 - 051 - 9029220

Right Angle PCB Jack, 1,00 (.039) sq Legs

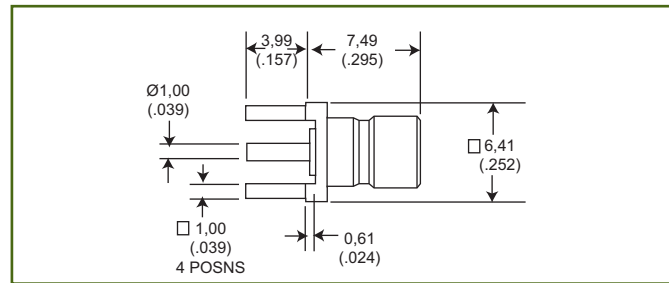
Part Number

B51 - 053 - 0000220

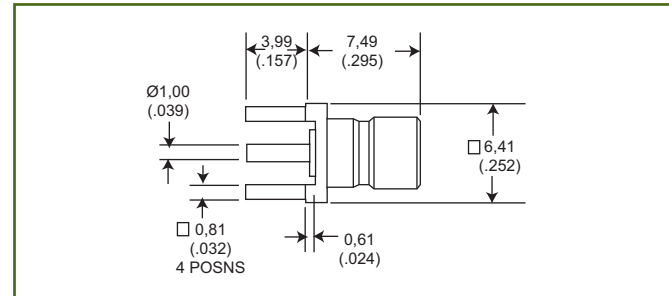
Right Angle PCB Jack, 0,81 (.032) sq Legs

Part Number

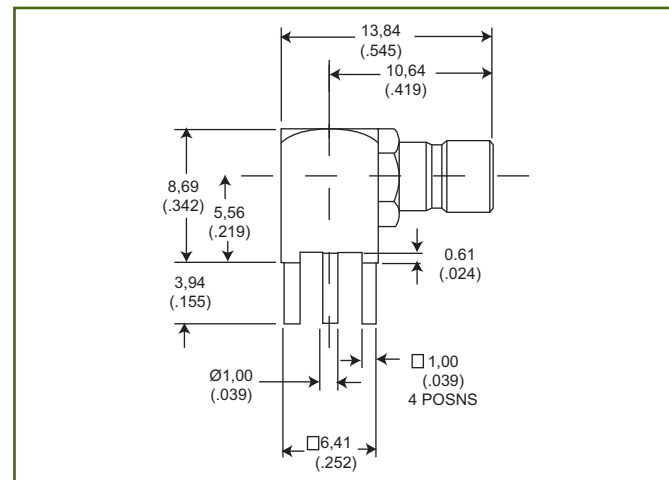
B51 - 053 - 9029220



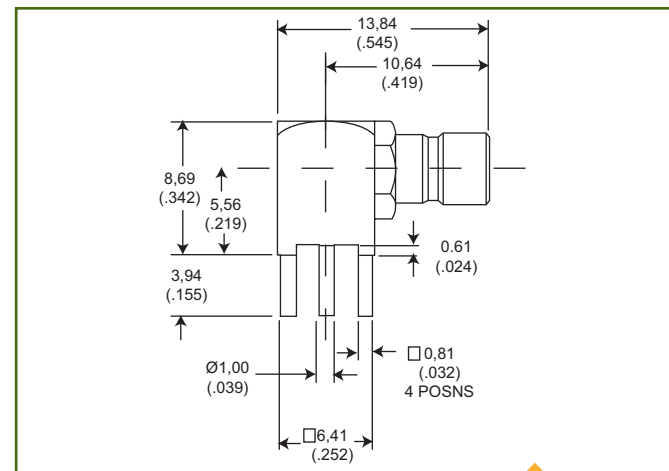
Mounting Plan A (Page 40)



Mounting Plan B (Page 40)



Mounting Plan A (Page 40)



Mounting Plan B (Page 40)



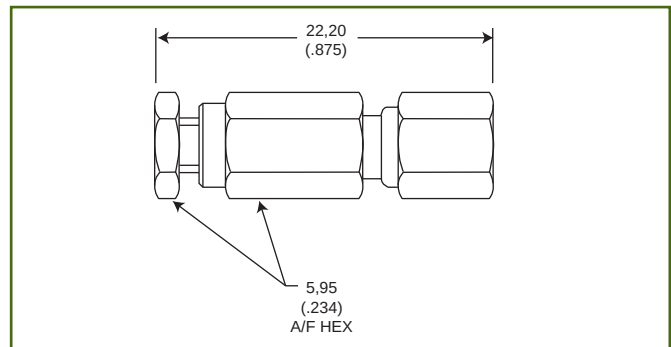
Dimensions shown in mm (inch)
Specifications and dimensions subject to change

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STRAIGHT PLUGS AND JACKS**Straight Clamp Plug**

Part Number	Cable Numbers
050 - 007 - 0000220	RG174/U, 316/U

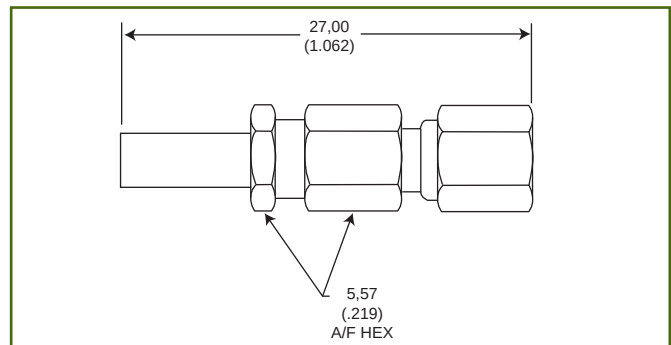
SMC CONNECTORS HAVE SOLDER CENTER CONTACTS



Assembly Instructions BAI-001 (Page 52)

Straight Crimp Plug

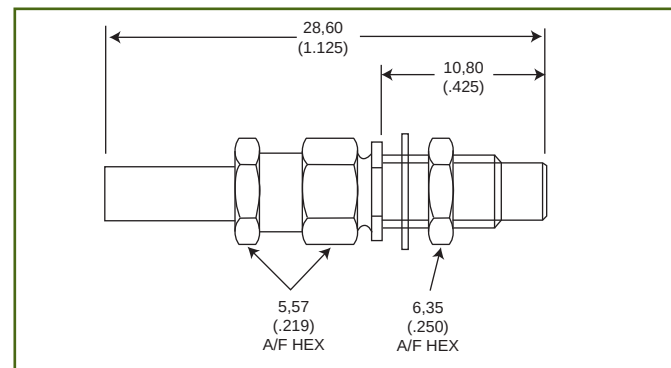
Part Number	Cable Numbers
050 - 024 - 0000220	RG174/U, 316/U



Assembly Instructions BAI-003 (Page 50)

Straight Crimp Bulkhead Jack

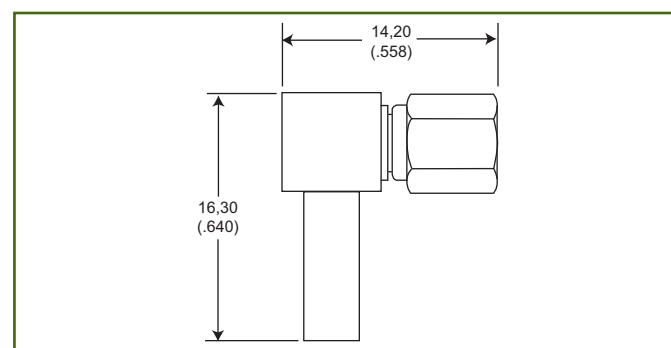
Part Number	Cable Numbers
050 - 027 - 0000220	RG174/U, 316/U



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 Assembly Instructions BAI-003 (Page 50)

RIGHT ANGLE PLUGS**Right Angle Crimp Plug**

Part Number	Cable Numbers
B50 - 328 - 3188220	RG174/U, 316/U
B50 - 328 - 9399220	RD316, 179



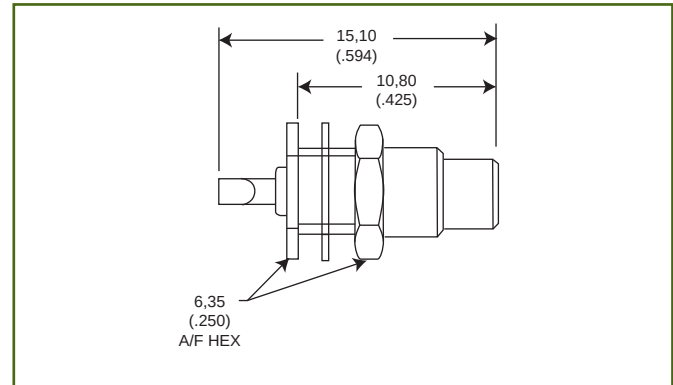
Assembly Instructions
 BAI-015 (Page 49)

BULKHEAD JACKS

Straight Bulkhead Jack, Solder Pot,
Mounting Nut outside Panel

Part Number

050 - 043 - 0000220

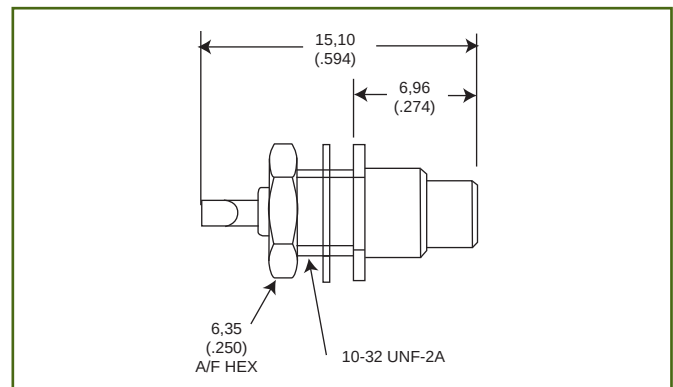


Mounting Plan V (Page 40)

Straight Bulkhead Jack, Solder Pot ,
Mounting Nut inside Panel

Part Number

050 - 045 - 0000220

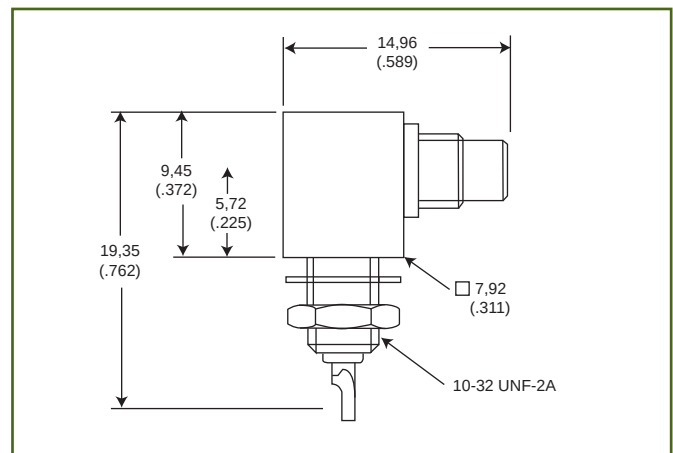


Mounting Plan V (Page 40)

Right Angle Bulkhead Jack, Solder Pot,
Mounting Nut inside Panel

Part Number

050 - 047 - 0000220



Mounting Plan V (Page 40)

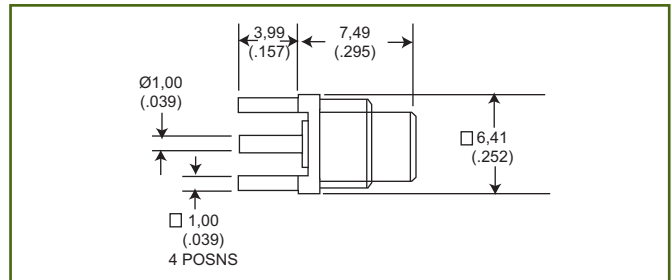
PRINTED CIRCUIT BOARD JACKS

SMC PCB preferred styles feature stepped legs. This allows the jacks to be raised from the surface of the PCB, thereby preventing the accumulation of soldering fluids and foreign bodies. A single piece conductor overcomes the problem of internal joint separation during continuous wave/flow soldering operations.

Straight PCB Jack, 1,00 (.039) square legs

Part Number

B50 - 051 - 0000220

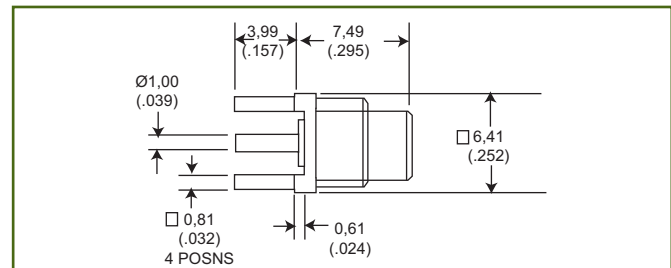


Mounting Plan A (Page 40)

Straight PCB Jack, 0,81 (.032) square legs

Part Number

B50 - 051 - 9019220

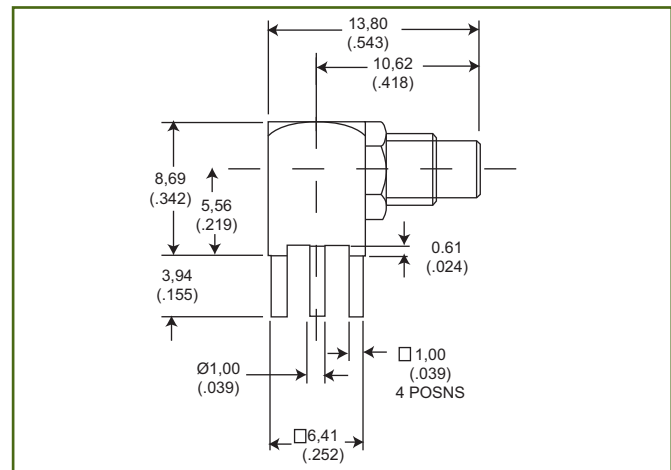


Mounting Plan B (Page 40)

Right Angle PCB Jack, 1,00 (.039) square legs

Part Number

B50 - 053 - 0000220

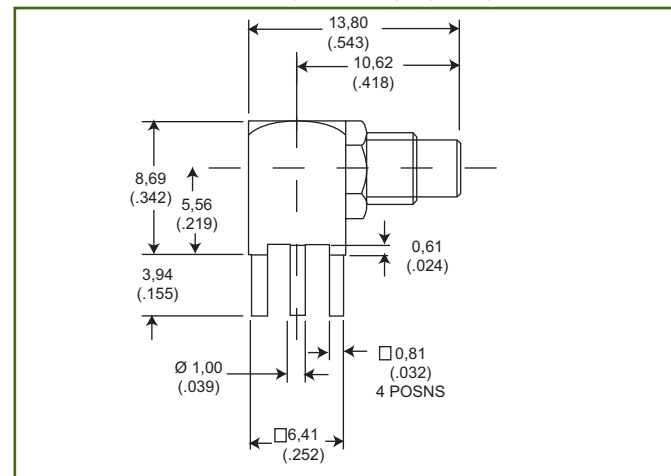


Mounting Plan A (Page 40)

Right Angle PCB Jack, 0,81 (.032) sq Legs

Part Number

B50 - 053 - 9019220



Mounting Plan B (Page 40)

Mouser Electronics

Authorized Distributor

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