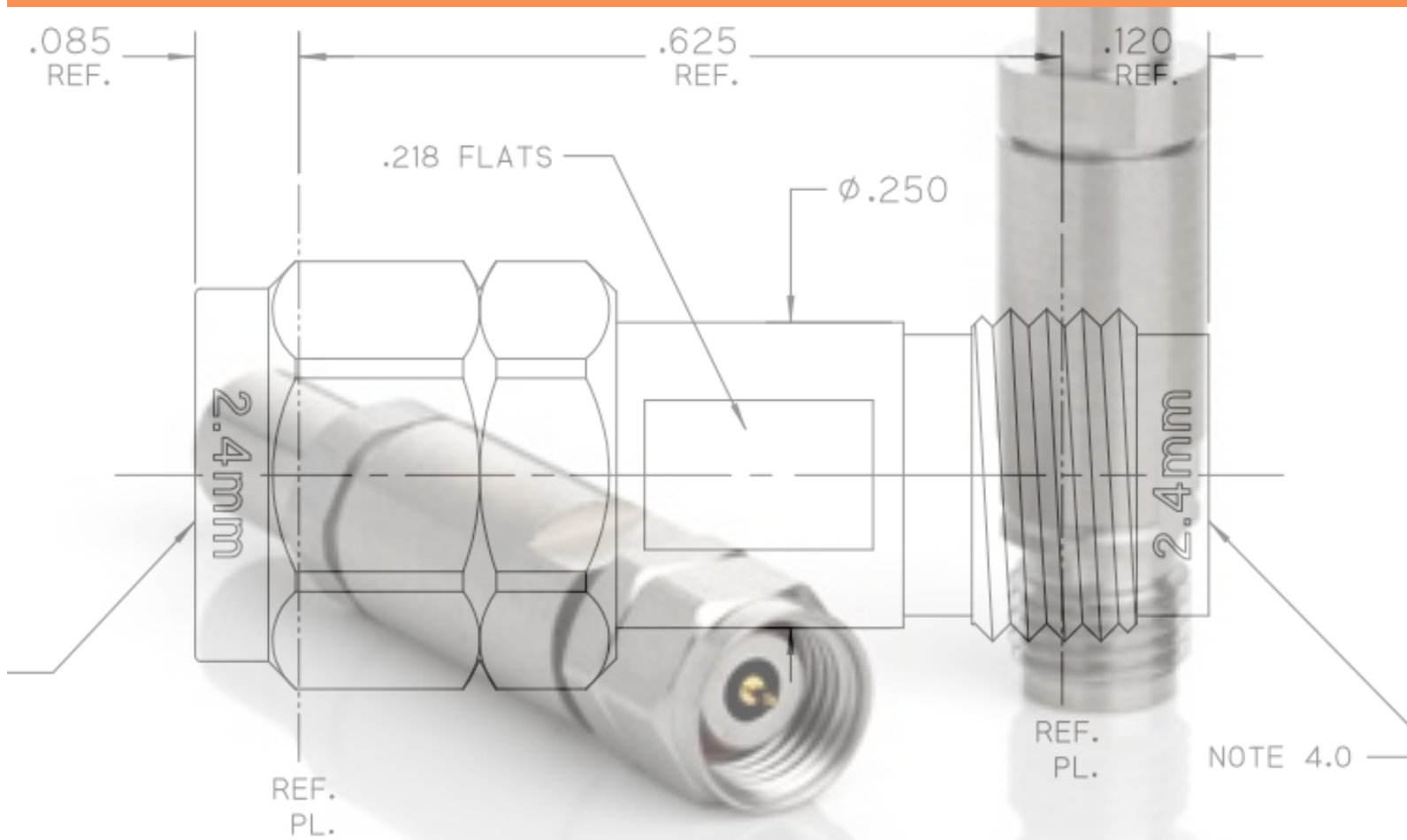


# 2.4mm

## Precision 50GHz Connectors



# 2.4mm Precision Connectors

## DESCRIPTION

2.4mm connector is 50ohm precision connector designed to perform up to 50GHz. The connector was originally conceived as a ruggedized SMA alternative with a thicker outer conductor that measures 2.4mm. The robust wall of the connector body is designed to engage before the center conductor, assuring a solid and repeatable mating interface. The high performance comes from the air dielectric interface with the contact supported by a short dielectric bead. ConductRF offers 2.4mm connectors for many performance cable options as well as 2 holes and 4 holes receptacle versions. In-Series Precision adapters are also supported.

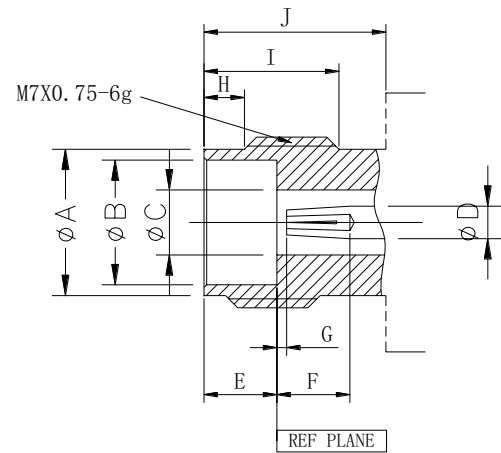
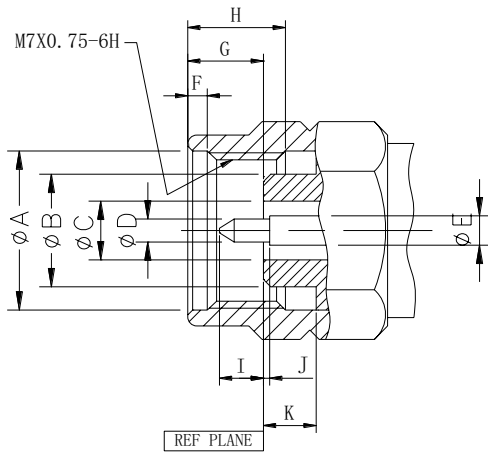
### 2.4mm Design Features

- Excellent performance up to 50GHz
- Low VSWR and insertion loss
- Rugged construction for reliability
- Mechanically compatible with 1.85mm connector series

## CONTENTS

Description .....	1
Interface dimensions .....	2
Technical data .....	3
Cable & Adaptor Configurations .....	4
Receptacles With Accepts Pin .....	5
Receptacles, Metal Through The Wall.....	8
Receptacles, Insulator Through The Wall.....	10
Receptacles, Air Line Through The Wall.....	12

## 2.4mm INTERFACE



2.4mm Male				
	mm		Inch	
	Min	Max	Min	Max
A	7.01	7.11	0.276	0.280
B	4.72	4.75	0.186	0.187
C	2.39	2.41	0.094	0.095
D	0.50	0.52	0.0196	0.0206
E	1.03	1.05	0.0405	0.0415
F	0.51	0.76	0.020	0.030
G	1.85	2.67	0.073	0.105
H	4.37	4.65	0.172	0.183
I	1.35	1.45	0.053	0.057
J	—	0.08	—	0.003
K	3.40	3.51	0.134	0.138

2.4mm Female				
	mm		Inch	
	Min	Max	Min	Max
A	5.79	5.89	0.228	0.232
B	4.77	4.80	0.1878	0.1888
C	2.39	2.41	0.094	0.095
D	1.03	1.05	0.0406	0.0414
E	3.00	3.10	0.118	0.122
F	2.65	—	0.1043	—
G	—	0.08	—	0.003
H	1.37	1.63	0.054	0.064
I	4.80	5.05	0.189	0.199
J	6	—	0.2362	—

Interface dimensions conformable to the standards: IEEE STD 287-2007

# TECHNICAL DATA

ELECTRICAL DATA	
Impedance	50 Ohm
Frequency range	DC — 50GHz
Dielectric withstanding voltage	750V
Insulation resistance	$\geq 3 \cdot 1000 \text{ M}\Omega$
Contact resistance	Innwe Contact $\leq 3 \text{ m}\Omega$ Outer Contact $\leq 2.0 \text{ m}\Omega$
VSWR max.	1.15 : 1

MECHANICAL DATA	
Base material	
Center contact	Beryllium Copper Alloy, Gold-pated
Body	Stainless Steel, Passivated
Insulator	PEI, PTFE
Durability(matings)	$\geq 500$

ENVIRONMENTAL	
Temperature Range	-55 °C to + 165 °C
Thermal shock	MIL-STD-202, Method 107, Condition B
Corrosion	Saltspray test acc.to MIL-STD-202, Method 101, Condition B
Vibration	MIL-STD-202, Method 204, Condition D

# Cable and Adapter Configurations

## DESCRIPTION

### 2.4mm Jacks

2.4mm JACK, SOLDER CLAMP FOR RG405 CABLE  
 2.4mm BULKHEAD JACK, SOLDER CLAMP FOR RG405 CABLE  
 2.4mm JACK, SOLDER CLAMP FOR .085-LL SEMI-RIGID CABLE  
 2.4mm JACK, SOLDER CLAMP FOR .085-LL SEMI-RIGID CABLE (ARMORED)  
 2.4mm NMD JACK, SOLDER CLAMP FOR .085-LL SEMI-RIGID CABLE (ARMORED)  
 2.4mm JACK, SOLDER CLAMP FOR ATM CF160  
 2.4mm JACK, SOLDER CLAMP FOR DYNAWAVE DF150 CABLE  
 2.4mm JACK, SOLDER CLAMP FOR IW1401 CABLE  
 2.4mm JACK, SOLDER CLAMP FOR IW1403 CABLE  
 2.4mm JACK, SOLDER CLAMP FOR IW1501 CABLE  
 2.4mm JACK, SOLDER CLAMP FOR IW1801 CABLE  
 2.4mm JACK, SOLDER CLAMP FOR SEMFLEX HP160  
 2.4mm JACK, PCB MOUNT, 0.012 PIN

## ConductRF Part #

PCF11A-A28S01  
 PCF31A-A28S01  
 PCF11B-A28S01  
 PCF11C-A28S01  
 PCFNMD-A28S01  
 Contact Factory  
 PCF11B-A72S01  
 Contact Factory  
 Contact Factory  
 Contact Factory  
 Contact Factory  
 Contact Factory  
 PCF11A-EPCS01

### 2.4mm Plugs

2.4mm PLUG, DIRECT SOLDER TO RG-405 CABLE  
 2.4mm PLUG, DIRECT SOLDER FOR .085 SEMI-RIGID CABLE  
 2.4mm PLUG, SOLDER CLAMP FOR .085-LL SEMI-RIGID CABLE  
 2.4mm PLUG, SOLDER CLAMP FOR .085-LL SEMI-RIGID CABLE (ARMORED)  
 2.4mm PLUG, SOLDER CLAMP FOR ATM CF160  
 2.4mm PLUG, SOLDER CLAMP FOR DYNAWAVE DF150 CABLE, KNURL/HEX NUT  
 2.4mm PLUG, SOLDER CLAMP FOR DYNAWAVE DF150 CABLE, (ARMORED)  
 2.4mm PLUG, SOLDER CLAMP FOR DYNAWAVE DF465 CABLE, KNURL/HEX  
 2.4mm PLUG, SOLDER CLAMP FOR HARBOUR LL120  
 2.4mm PLUG, SOLDER CLAMP FOR IW1401 CABLE  
 2.4mm PLUG, SOLDER CLAMP FOR IW1403 CABLE  
 2.4mm PLUG, SOLDER CLAMP FOR IW1501 CABLE  
 2.4mm PLUG, SOLDER CLAMP FOR SEMFLEX HP120  
 2.4mm PLUG, SOLDER CLAMP FOR SEMFLEX HP160 CABLE  
 2.4mm PLUG, SOLDER CLAMP FOR SEMFLEX HP160 CABLE (ARMORED)  
 2.4mm PLUG, SOLDER CLAMP FOR TEMP-FLEX 086-2201 CABLE  
 2.4mm PLUG, 2-HOLE FLANGE, MOUNT. EXTENDED DIELECTRIC AND PROBE

PCM12A-A28S01  
 PCM12B-A28S01  
 PCB11B-A28S01  
 PCB11C-A28S01  
 Contact Factory  
 PCM12A-A72S01  
 PCM12B-A72S01  
 Contact Factory  
 PCM12A-A75S01  
 Contact Factory  
 Contact Factory  
 Contact Factory  
 Contact Factory  
 PCM12A-A76S01  
 Contact Factory  
 Contact Factory  
 PCM11D-A28S01  
 PCM41D-2HLS01

### 2.4mm In-Series Adapters

2.4mm PLUG TO 2.4mm JACK, ADAPTER  
 2.4mm JACK TO 2.4mm JACK, ADAPTER  
 2.4mm PLUG TO 2.4mm PLUG, ADAPTER

PCA11A-ADPS01  
 PCF11A-ADPS01  
 PCM11A-ADPS01

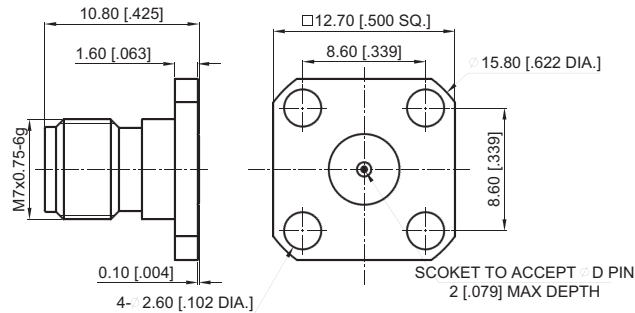
Drawings available on Request



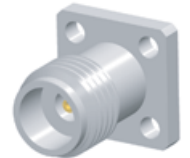
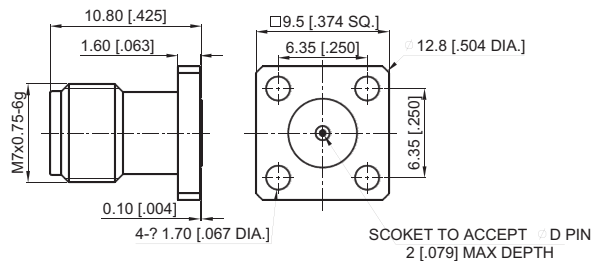
# RECEPTACLES WITH ACCEPTS PIN

## Receptacles, jacks (female), Flange Mount

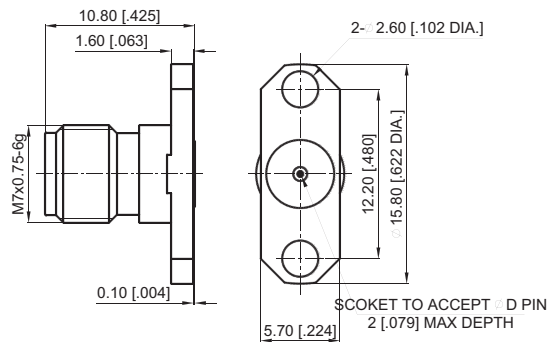
Part Number	Ø D PIN
PCF41A-4HLS01	0.23 [.009]
PCF42A-4HLS01	0.30 [.012]
PCF43A-4HLS01	0.51 [.020]



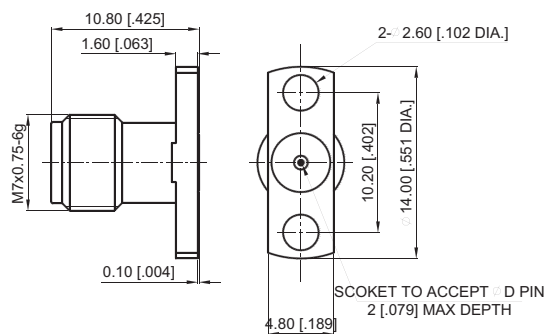
Part Number	Ø D PIN
PCF41B-4HLS01	0.23 [.009]
PCF42B-4HLS01	0.30 [.012]
PCF43B-4HLS01	0.51 [.020]



Part Number	Ø D PIN
PCF41A-2HLS01	0.23 [.009]
PCF42A-2HLS01	0.30 [.012]
PCF43A-2HLS01	0.51 [.020]



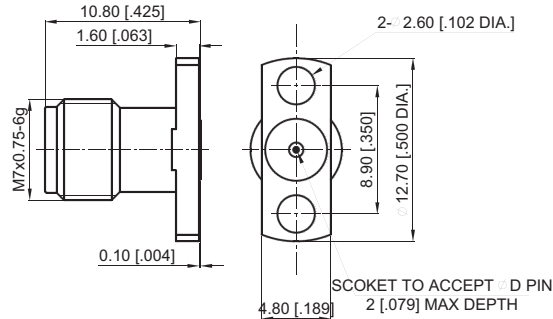
Part Number	Ø D PIN
PCF41B-2HLS01	0.23 [.009]
PCF42B-2HLS01	0.30 [.012]
PCF43B-2HLS01	0.51 [.020]



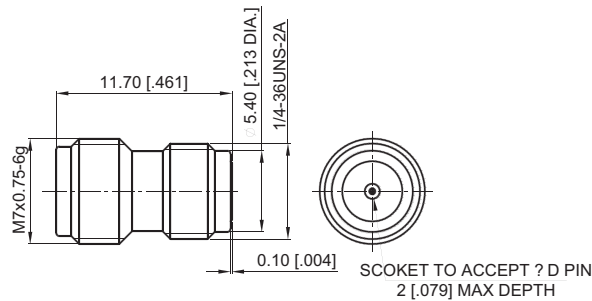
# RECEPTACLES WITH ACCEPTS PIN

## Receptacles, jacks (female), Flange Mount

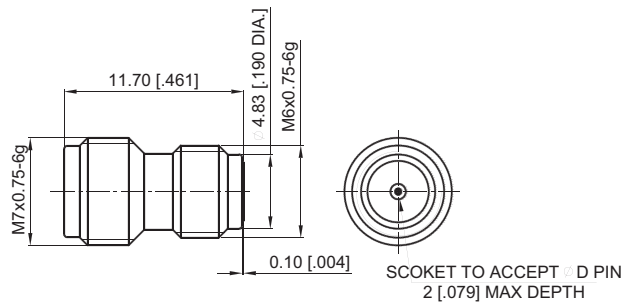
Part Number	∅ D PIN
PCF41C-2HLS01	0.23 [.009]
PCF42C-2HLS01	0.30 [.012]
PCF43C-2HLS01	0.51 [.020]



Part Number	∅ D PIN
PCF11A-RECS01	0.23 [.009]
PCF12A-RECS01	0.30 [.012]
PCF13A-RECS01	0.51 [.020]

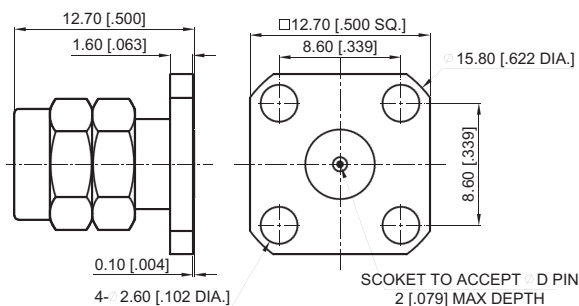


Part Number	∅ D PIN
PCF11B-RECS01	0.23 [.009]
PCF12B-RECS01	0.30 [.012]
PCF13B-RECS01	0.51 [.020]



## Receptacles, plugs (male), Flange Mount

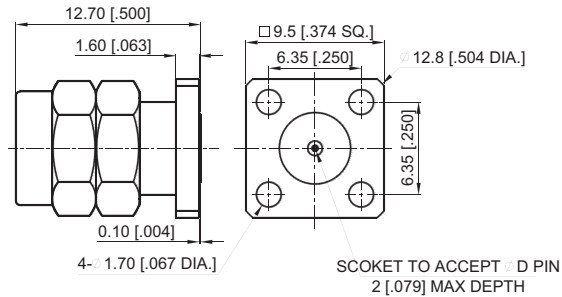
Part Number	∅ D PIN
PCM11A-4HLS01	0.23 [.009]
PCM12A-4HLS01	0.30 [.012]
PCM13A-4HLS01	0.51 [.020]



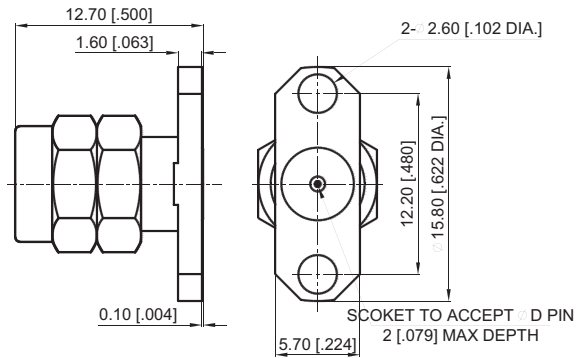
# RECEPTACLES WITH ACCEPTS PIN

Receptacles, plugs (male), Flange Mount

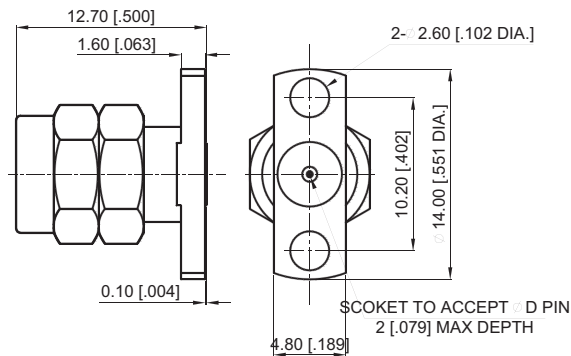
Part Number	Ø D PIN
PCM11B-4HLS01	0.23 [.009]
PCM12B-4HLS01	0.30 [.012]
PCM13B-4HLS01	0.51 [.020]



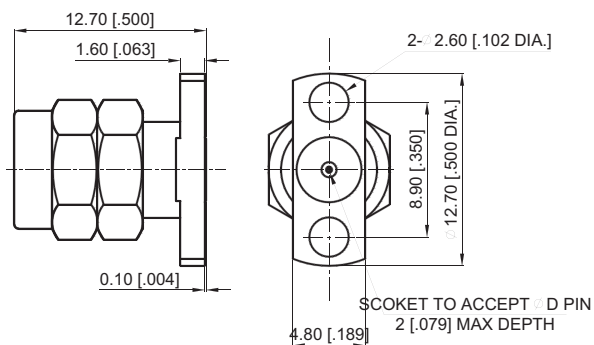
Part Number	Ø D PIN
PCM11A-2HLS01	0.23 [.009]
PCM12A-2HLS01	0.30 [.012]
PCM13A-2HLS01	0.51 [.020]



Part Number	Ø D PIN
PCM11B-2HLS01	0.23 [.009]
PCM12B-2HLS01	0.30 [.012]
PCM13B-2HLS01	0.51 [.020]



Part Number	Ø D PIN
PCM11C-2HLS01	0.23 [.009]
PCM12C-2HLS01	0.30 [.012]
PCM13C-2HLS01	0.51 [.020]

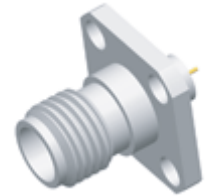
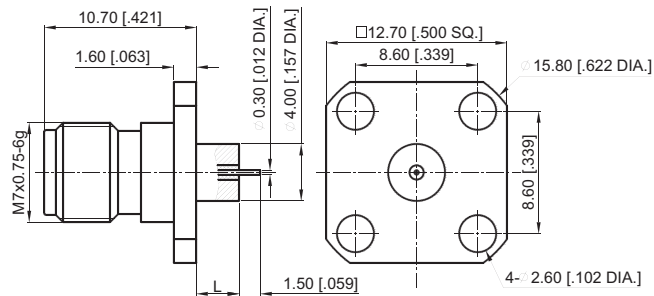




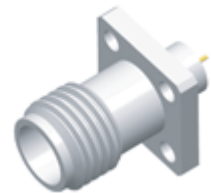
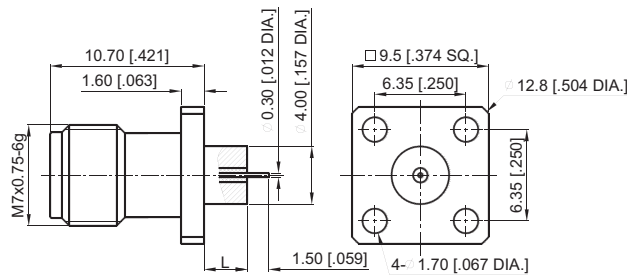
# RECEPTACLES, METAL THROUGH THE WALL

## Receptacles, jacks (female), Flange Mount

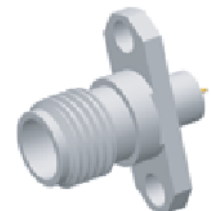
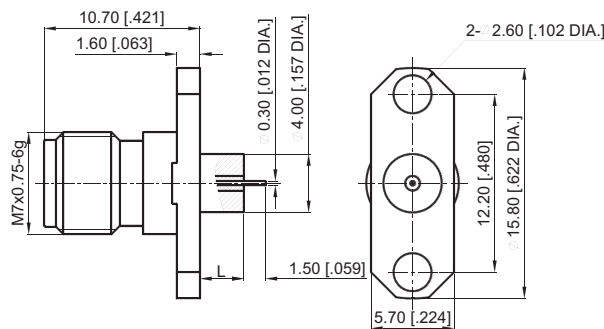
Part Number	L
PCF11E-4HLS01	1.4 [.055]
PCF12E-4HLS01	3 [.118]



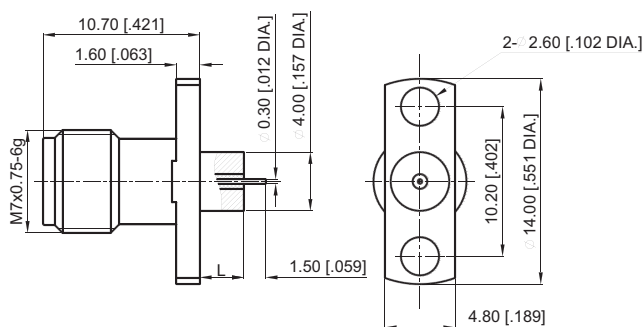
Part Number	L
PCF11F-4HLS01	1.4 [.055]
PCF12F-4HLS01	3 [.118]



Part Number	L
PCF11E-2HLS01	1.4 [.055]
PCF12E-2HLS01	3 [.118]



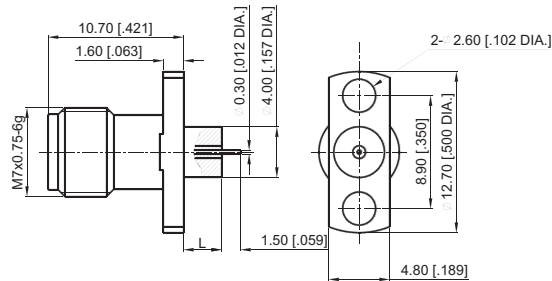
Part Number	L
PCF11F-2HLS01	1.4 [.055]
PCF12F-2HLS01	3 [.118]



# RECEPTACLES, METAL THROUGH THE WALL

Receptacles, jacks (female), Flange Mount

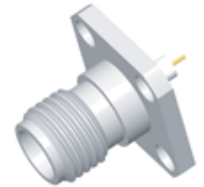
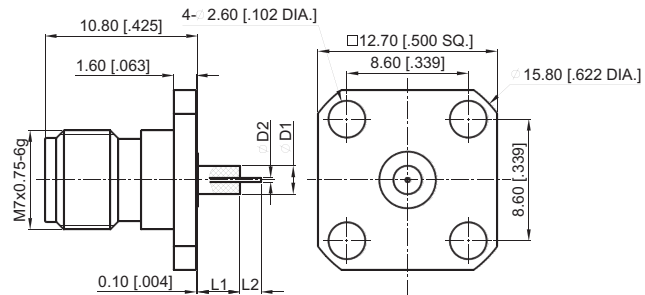
Part Number	L
PCF11G-2HLS01	1.4 [.055]
PCF12G-2HLS01	3 [.118]



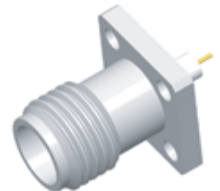
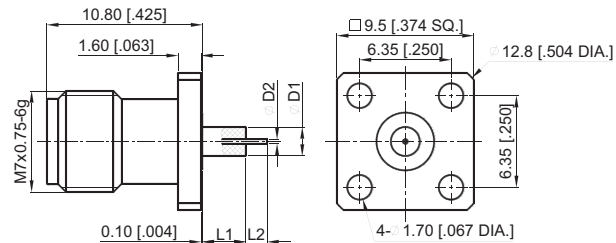
# RECEPTACLES, INSULATOR THROUGH THE WALL

## Receptacles, jacks (female), Flange Mount

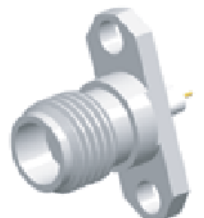
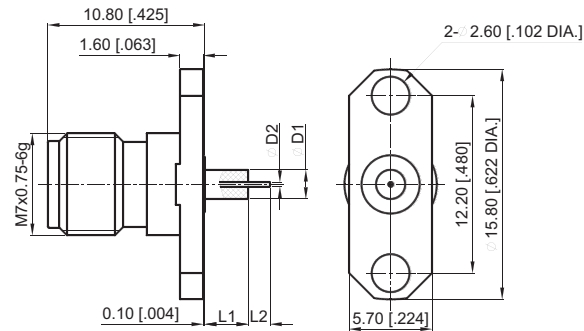
Part Number	D1	D2	L1	L2
PCF11H-4HLS01	1.67 [.066]	0.3 [.012]	1.4 [.055]	1.5 [.059]
PCF12H-4HLS01	1.67 [.066]	0.3 [.012]	3 [.118]	1.5 [.059]
PCF13H-4HLS01	2 [.078]	0.61 [.024]	6.35 [.250]	1.27 [.005]



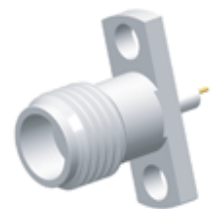
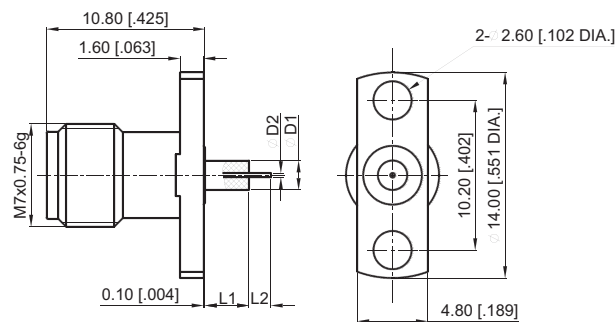
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PCF11J-4HLS01	1.67 [.066]	0.3 [.012]	1.4 [.055]	1.5 [.059]
PCF12J-4HLS01	1.67 [.066]	0.3 [.012]	3 [.118]	1.5 [.059]
PCF13J-4HLS01	2 [.078]	0.61 [.024]	6.35 [.250]	1.27 [.005]



Part Number	D1	D2	L1	L2
PCF11H-2HLS01	1.67 [.066]	0.3 [.012]	1.4 [.055]	1.5 [.059]
PCF12H-2HLS01	1.67 [.066]	0.3 [.012]	3 [.118]	1.5 [.059]
PCF13H-2HLS01	2 [.078]	0.61 [.024]	6.35 [.250]	1.27 [.005]



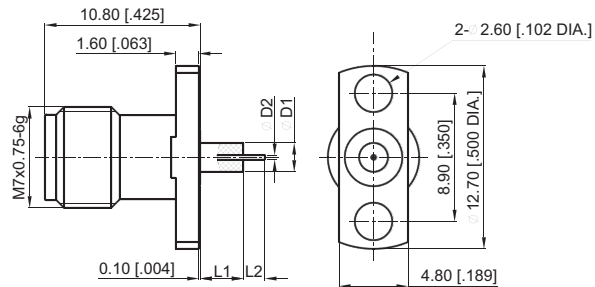
Part Number	D1	D2	L1	L2
PCF11J-2HLS01	1.67 [.066]	0.3 [.012]	1.4 [.055]	1.5 [.059]
PCF12J-2HLS01	1.67 [.066]	0.3 [.012]	3 [.118]	1.5 [.059]
PCF13J-2HLS01	2 [.078]	0.61 [.024]	6.35 [.250]	1.27 [.005]



# RECEPTACLES, INSULATOR THROUGH THE WALL

Receptacles, jacks (female), Flange Mount

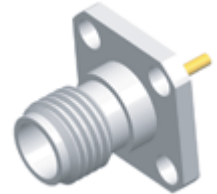
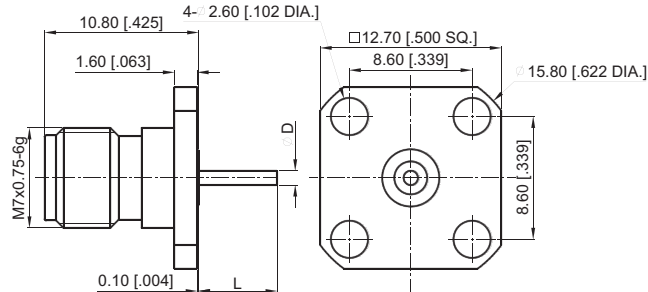
Part Number	D1	D2	L1	L2
PCF11K-2HLS01	1.67 [.066]	0.3 [.012]	1.4 [.055]	1.5 [.059]
PCF12K-2HLS01	1.67 [.066]	0.3 [.012]	3 [.118]	1.5 [.059]
PCF13K-2HLS01	2 [.078]	0.61 [.024]	6.35 [.250]	1.27 [.005]



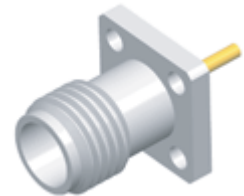
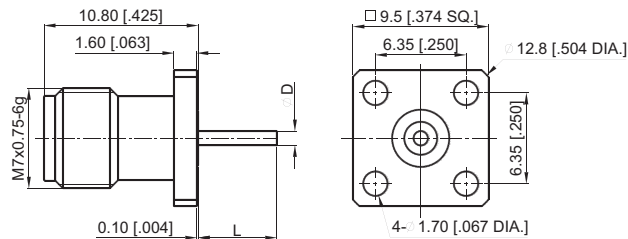
# RECEPTACLES, AIR LINE THROUGH THE WALL

## Receptacles, jacks (female), Flange Mount

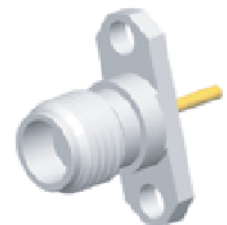
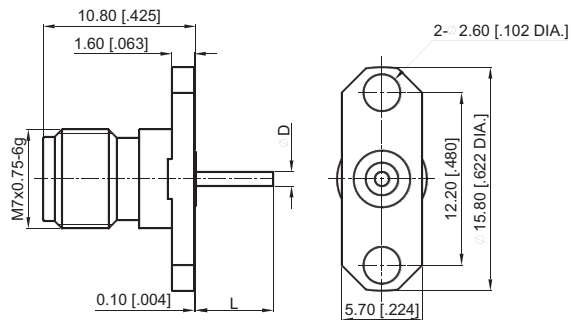
Part Number	D	L
PCF11L-4HLS01	0.75 [.029]	9 [.354]
PCF12L-4HLS01	0.86 [.034]	8.75 [.344]
PCF13L-4HLS01	1 [.040]	5.5 [.216]
PCF14L-4HLS01	1.04 [.041]	6.34 [.250]
PCF15L-4HLS01	1.2 [.047]	3 [.118]



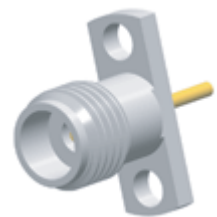
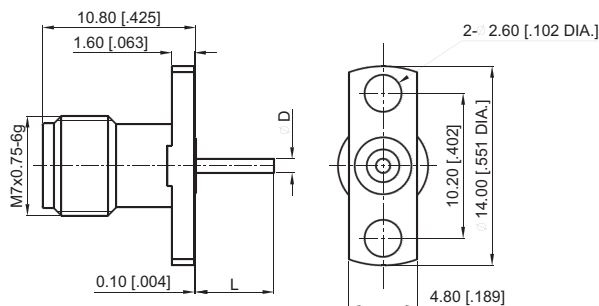
Part Number	D	L
PCF11M-4HLS01	0.75 [.029]	9 [.354]
PCF12M-4HLS01	0.86 [.034]	8.75 [.344]
PCF13M-4HLS01	1 [.040]	5.5 [.216]
PCF14M-4HLS01	1.04 [.041]	6.34 [.250]
PCF15M-4HLS01	1.2 [.047]	3 [.118]



Part Number	D	L
PCF11L-2HLS01	0.75 [.029]	9 [.354]
PCF12L-2HLS01	0.86 [.034]	8.75 [.344]
PCF13L-2HLS01	1 [.040]	5.5 [.216]
PCF14L-2HLS01	1.04 [.041]	6.34 [.250]
PCF15L-2HLS01	1.2 [.047]	3 [.118]



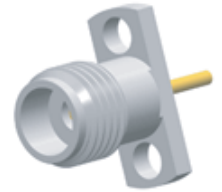
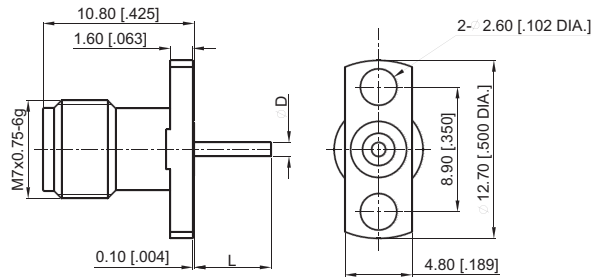
Part Number	D	L
PCF11M-2HLS01	0.75 [.029]	9 [.354]
PCF12M-2HLS01	0.86 [.034]	8.75 [.344]
PCF13M-2HLS01	1 [.040]	5.5 [.216]
PCF14M-2HLS01	1.04 [.041]	6.34 [.250]
PCF15M-2HLS01	1.2 [.047]	3 [.118]



# RECEPTACLES, AIR LINE THROUGH THE WALL

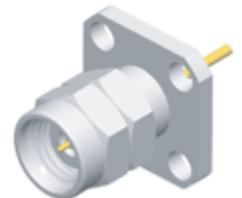
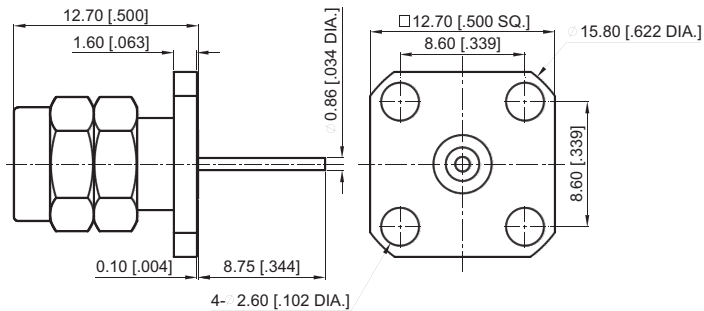
## Receptacles, jacks (female), Flange Mount

Part Number	D	L
PCF11P-2HLS01	0.75 [.029]	9 [.354]
PCF12P-2HLS01	0.86 [.034]	8.75 [.344]
PCF13P-2HLS01	1 [.040]	5.5 [.216]
PCF14P-2HLS01	1.04 [.041]	6.34 [.250]
PCF15P-2HLS01	1.2 [.047]	3 [.118]

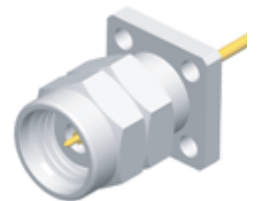
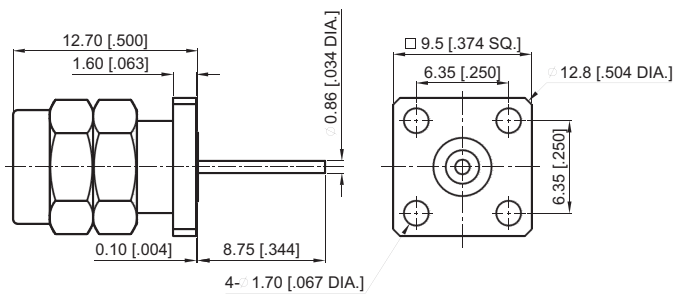


## Receptacles, plugs (male), Flange Mount

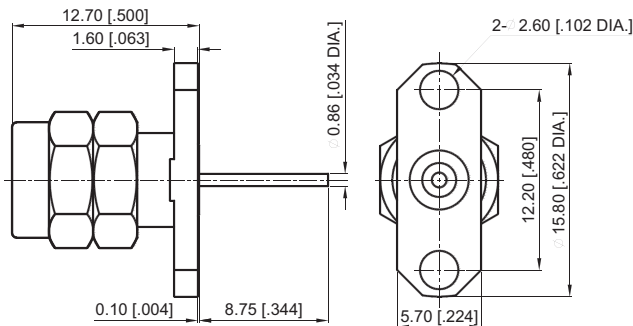
Part Number
PCM12H-4HLS01



Part Number
PCM12L-4HLS01



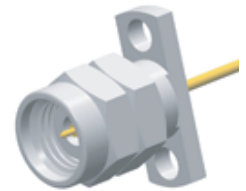
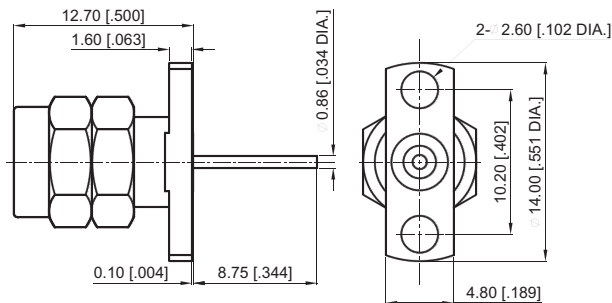
Part Number
PCM-12H-2HLS01



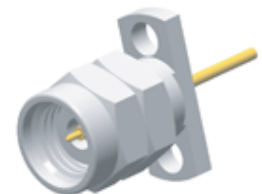
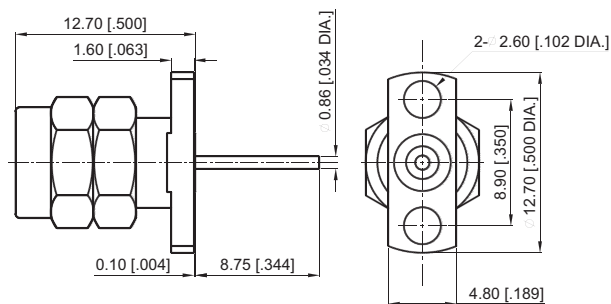
# RECEPTACLES, AIR LINE THROUGH THE WALL

Receptacles, plugs (Male), Flange Mount

Part Number
PCM12L-2HLS01



Part Number
PCM12P-2HLS01



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