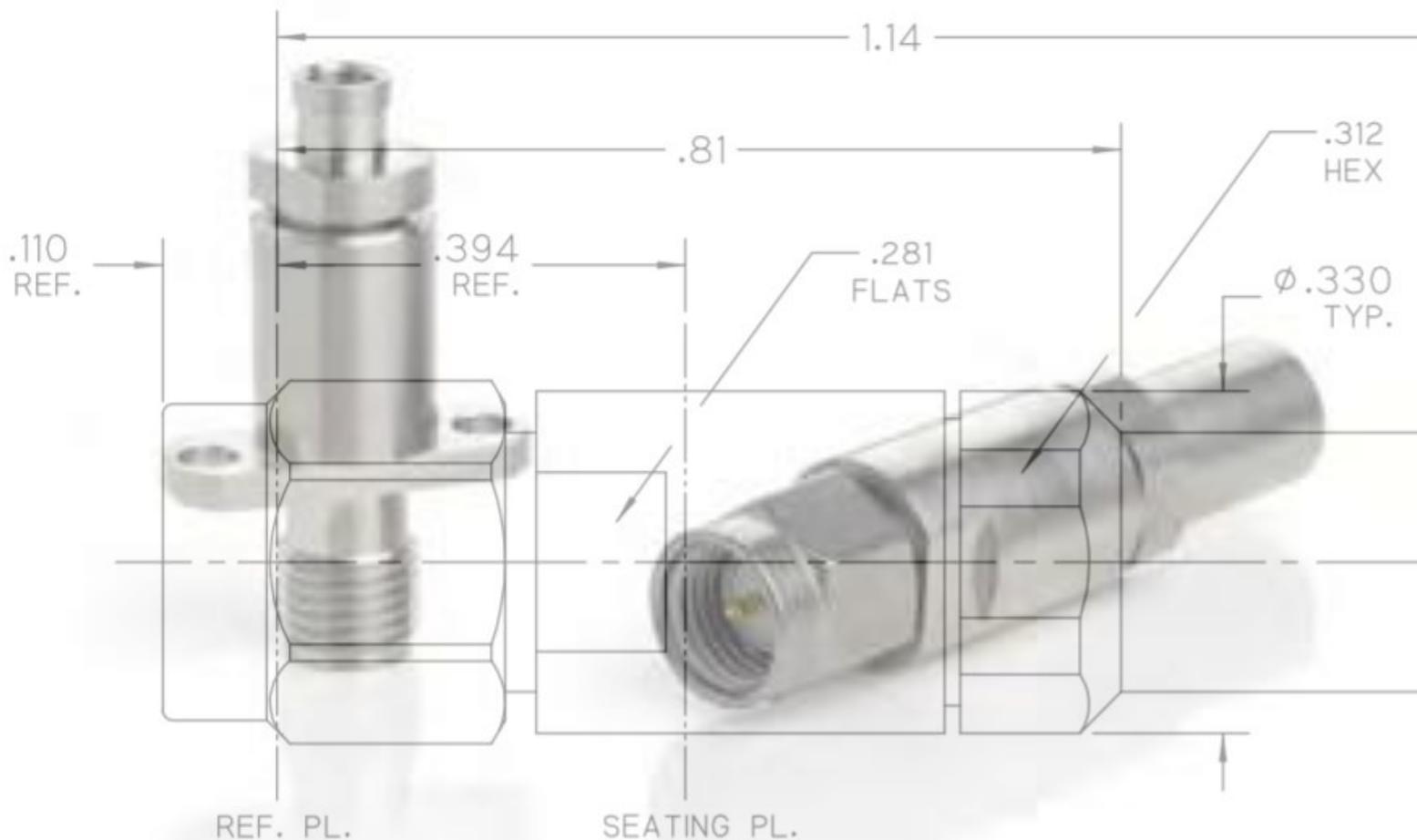


SMA

Precision 26.5GHz Connectors



SMA Precision Connectors

DESCRIPTION

SMA subminiature connectors are 50 ohm precision connectors initially designed for performance through 18GHz, however the standard interface is capable of operating mode free up to 24 Ghz. Extended frequency versions are also available with performance to 26.5GHz. SMA connectors are one of the most popular and commonly used connectors in both microwave and RF applications where size, performance and cost are critical considerations. The SMA connector interface utilizes a PTFE (Teflon) dielectric. ConductRF offers SMA connectors for semi-rigid and low loss cables as well as receptacles and precision adapters which may be adapted for custom applications.

SMA DESIGN FEATURES

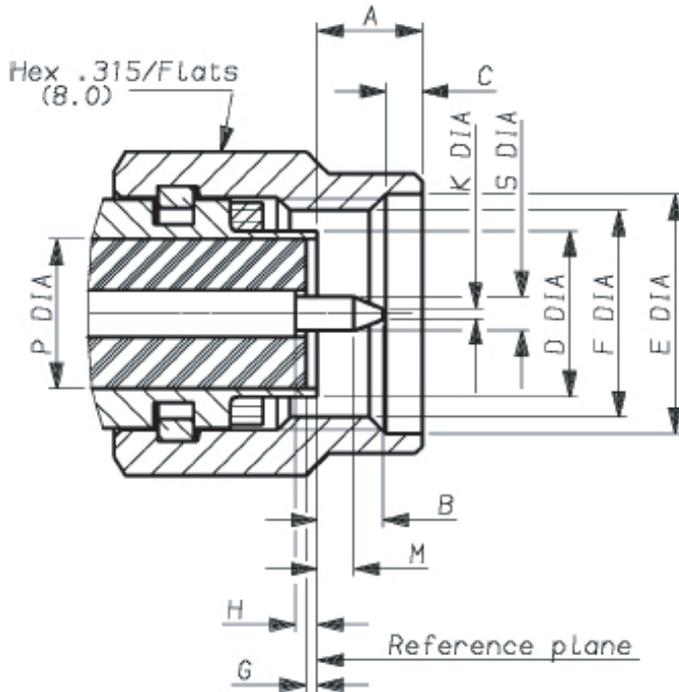
- Excellent performance up to 26.5GHz
- Low VSWR and Insertion loss
- Rugged stainless steel construction
- Mechanically compatible with 3.5mm and 2.92mm connector series

CONTENTS

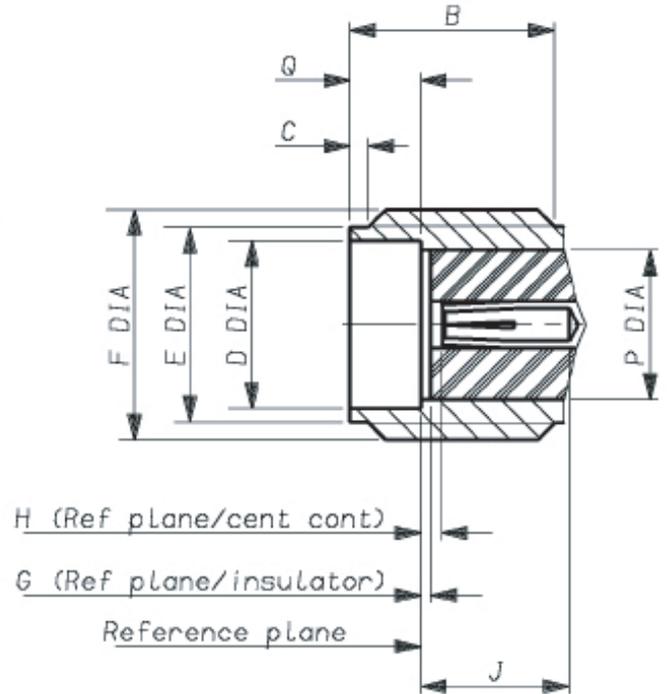
1. Description
2. Interface Dimensions
3. Technical Data
4. Cable Configurations
5. Adapter Configurations
6. Receptacles that Accept Pins
9. Receptacles with Extended Rear
10. Receptacles with Extended Contact

SMA INTERFACE

PLUG



JACK



LETTER	mm		inch	
	min.	max.	min.	max.
A		3.43		.135
B		2.54		.100
C	0.38	1.14	0.15	0.45
D DIA		4.59		
E DIA	6.35		.250	
F DIA	1/4 36 UNS 2B			
G*	0.0	-0.20	0.0	-0.08
H*	0.0	-0.25	0.0	-0.10
J				
K DIA		0.38		0.15
M	1.27		0.05	
P DIA	4.10 nom.		.161 nom.	
Q DIA				
S DIA	0.09	0.94	.035	.037

LETTER	mm		inch	
	min.	max.	min.	max.
A				
B	4.31		.170	
C	0.38	1.14	0.15	0.45
D DIA	4.596		.181	
E DIA	5.28	5.49	.208	.216
F DIA	1/4 36 UNS 2A			
G*	0.0	-0.20	0.0	-0.08
H*	0.0	-0.25	0.0	-0.10
J	2.92		0.115	
K DIA				
M				
P DIA	4.10 nom.		.161 nom.	
Q DIA	1.88	1.98	.074	.078
S DIA				

Interface dimensions conformable to the standards:

International: **IEC 61169-4**
 Europe: **CECC 22190**
 Germany: **DIN 47223, VG 95250**

IP rating (interface, mated) IP68

TECHNICAL DATA

ELECTRICAL DATA	
Impedance	50 Ohm
Frequency range	DC to 26.5GHz
Dielectric withstanding voltage	1,000 VRMS
V.S.W.R.	straight connectors: 1.2 max 0-18 GHz; right angle connectors: 1.25 max 0-18 GHz
Insulation resistance	5,000 M Ω
Contact resistance	Body: 2.0 m Ω ; Braid to body: 0.5 m Ω
RF leakage	-60 dB minimum

MECHANICAL DATA	
Mating	.250-36 threaded coupling
Connector Durability (matings)	500 mating and unmating cycles at 12 cycles per minute

MATERIAL DATA	
Body and Outer Contacts	Stainless Steel
Insulator	PTEF PER ASTM-D1457
Gasket	Silicone rubber
Center Contacts	Female = BeCU, Male = Brass

ENVIRONMENTAL	
Temperature Range	TFE: -65°C to +165°C
Mechanical Shock	MIL STD 202, method 213
Moisture resistance	MIL STD 202, method 106
Corrosion	MIL STD 202, method 101, condition B,
Vibration	MIL STD 202, method 204, condition D, 20g

Cable Configurations

SMA Straight Cable Plugs

PLUG, DIRECT SOLDER TO RG-405 CABLE	PSM11A-A28G01
PLUG, DIRECT SOLDER TO RG-402 CABLE (18 GHz)	PSM11A-A29G01
PLUG, DIRECT SOLDER FOR .047 SEMI-RIGID CABLE (18 GHz)	PSM11A-A33G01
PLUG, DIRECT SOLDER TO RG-405 CABLE, ANTI TORQUE	PSM11B-A28G01
PLUG, DIRECT SOLDER TO RG-402 CABLE, ANTI TORQUE, WITH CONTACT	PSM11B-A29G01
PLUG, SOLDER CLAMP FOR HARBOUR SS402 CABLE	PSM11C-A29S01
PLUG, SOLDER CLAMP FOR HARBOUR LL142 CABLE	PSM11C-A74S01
PLUG, SOLDER CLAMP FOR HARBOUR LL120 CABLE	PSM11C-A76S01
PLUG, SOLDER CLAMP FOR DYNAWAVE DF426W	PSM11C-A79S01
PLUG, SOLDER CLAMP FOR HARBOUR SB142 CABLE	PSM11C-A80S01
PLUG, DIRECT SOLDER FOR RG-405 CABLE, WRENCH FLATS	PSM12A-A28G01
PLUG, DIRECT SOLDER TO RG-402 CABLE (26.5 GHz)	PSM12A-A29G01
PLUG, DIRECT SOLDER FOR .047 SEMI-RIGID CABLE (26.5 GHz)	PSM12A-A33G01
PLUG, SOLDER CLAMP FOR HARBOUR LL142 CABLE (VENTED)	PSM12C-A74S01
PLUG, DIRECT SOLDER TO RG-405 CABLE, LOW PROFILE	PSM13A-A28G01
PLUG, SOLDER CLAMP FOR HARBOUR LL142 CABLE (26.5 GHz VERSION)	PSM13C-A74S01
PLUG, SWEPT TO DEG FOR DYNAWAVE DF426W	PSM21B-A79S01

SMA Rt. Angle Cable Plugs

RT. ANGLE PLUG, DIRECT SOLDER TO RG-405, SWEPT LOW PROFILE	PSM21A-A28G01
RT. ANGLE PLUG, DIRECT SOLDER FOR RG-402 CABLE, L/W HOLES	PSM21A-A29S01
RT. ANGLE PLUG, DIRECT SOLDER FOR RG-405 CABLE, L/W HOLES	PSM21B-A28S01
RT. ANGLE PLUG, DIRECT SOLDER FOR RG-405 CABLE	PSM21C-A28S01
RT. ANGLE PLUG, SOLDER CLAMP FOR HARBOUR SS402 CABLE	PSM21D-A28S01
RT. ANGLE PLUG, SOLDER CLAMP FOR HARBOUR LL142 CABLE	PSM21D-A74S01
RT. ANGLE PLUG, DIRECT SOLDER FOR RG-405, L/W HOLES, CHAMFERED	PSM22B-A28S01

SMA Straight Cable Jacks

JACK, DIRECT SOLDER TO RG-405 CABLE	PSF11A-A28G01
JACK, DIRECT SOLDER TO .047 SEMI-RIGID CABLE	PSF11A-A33G01
JACK, SOLDER CLAMP FOR HARBOUR LL142 CABLE	PSF11B-A74S01
JACK, SOLDER CLAMP FOR HARBOUR LL120	PSF11B-A75S01
JACK, SOLDER CLAMP FOR SEMFLEX HP120	PSF11B-A76S01
BULKHEAD, DIRECT SOLDER FOR RG405	PSF31A-A28G01
BULKHEAD JACK, SOLDER CLAMP FOR HARBOUR LL142 CABLE	PSF31B-A74S01
BULKHEAD JACK, SOLDER CLAMP FOR HARBOUR LL120	PSF31B-A75S01
BULKHEAD JACK, SOLDER CLAMP FOR SEMFLEX HP120	PSF31B-A76S01
JACK, 4-HOLE FLANGE MOUNT, DIRECT SOLDER TO RG-405 CABLE	PSF41A-A28G01
JACK, 4-HOLE FLANGE MOUNT, DIRECT SOLDER TO .047 SEMI-RIGID	PSF41A-A33G01
JACK, 4-HOLE FLANGE MOUNT, TAPPED, DIRECT SOLDER TO RG-405	PSF41B-A28G01

Drawings available on Request

Adapter Configurations

SMA & Compatible Options

Description

SMA In-Series Adapters

SMA PLUG TO PLUG ADAPTER
 SMA JACK TO JACK ADAPTER
 SMA PLUG TO JACK ADAPTER
 SMA PANEL MOUNT JACK TO JACK 27GHZ

3.5mm In Series Adapters

3.5mm PLUG TO 3.5mm PLUG ADAPTER
 3.5mm PLUG TO 3.5mm JACK ADAPTER
 3.5mm JACK TO 3.5mm JACK ADAPTER

2.92mm In Series Adapters

2.92mm PLUG TO 2.92mm JACK, ADAPTER
 2.92mm JACK TO 2.92mm JACK, ADAPTER
 2.92mm PLUG TO 2.92mm PLUG, ADAPTER
 2.92mm BULKHEAD JACK TO 2.92mm JACK
 2.92mm BULKHEAD JACK TO 2.92mm JACK (.375 HEX)
 2.92mm BULKHEAD JACK TO 2.92mm PLUG

SMA Between Series Adapters

SMA JACK TO N JACK, BULKHEAD ADAPTER
 SMAJACK TO N JACK, 4-HOLE FLANGE ADAPTER
 SMA JACK TO N PLUG, ADAPTER

3.5mm Between Series Adapters

3.5mm JACK to 2.92mm JACK ADAPTER
 3.5mm JACK to 2.92mm BULKHEAD JACK ADAPTER
 3.5mm PLUG to 2.92mm JACK ADAPTER
 3.5mm PLUG to TYPE N JACK ADAPTER
 3.5mm JACK TO N JACK ADAPTER 18GHZ-1PC BODY
 3.5mm JACK TO N PLUG ADAPTER 18GHZ-1PC BODY
 3.5mm PLUG TO N PLUG ADAPTER 18GHZ-1PC BODY
 3.5mm PLUG TO N JACK ADAPTER 18GHZ-1PC BODY

2.92mm Between Series Adapters

ADAPTER, 2.92mm JACK TO 1.85 PLUG
 ADAPTER, 2.92mm PLUG TO 1.85 PLUG
 ADAPTER, 2.92mm JACK TO SMPM SOCKET
 ADAPTER, 2.92mm JACK TO SMPM PLUG
 ADAPTER, 2.92mm JACK TO SMA JACK
 ADAPTER, 2.92mm PLUG TO SMA PLUG
 ADAPTER, 2.92mm JACK TO SMA PLUG
 ADAPTER, 2.92mm PLUG TO SMA JACK
 ADAPTER, 2.92mm JACK TO 3.5mm JACK
 ADAPTER, 2.92mm JACK BULHEAD TO 3.5mm JACK
 ADAPTER, 2.92mm JACK TO 3.5mm PLUG
 ADAPTER, 2.92mm JACK TO 2.4mm JACK
 ADAPTER, 2.92mm PLUG TO 2.4mm JACK
 ADAPTER, 2.92mm JACK TO 2.4mm PLUG
 ADAPTER, 2.92mm PLUG TO 2.4mm PLUG

Drawings available on Request

ConductRF

PSM11A-ADPS01
 PSF11A-ADPS01
 PSA11A-ADPS01
 PSF41A-ADPS01

PEM11A-ADPS01
 PEA11A-ADPS01
 PEF11A-ADPS01

PDA11A-ADPS01
 PDF11A-ADPS01
 PDM11A-ADPS01
 PDF31A-ADPS01
 PDF31B-ADPS01
 PDA31A-ADPS01

BA-PNF-PS3-50
 BA-PNF-PS4-50
 BA-PNM-PSF-50

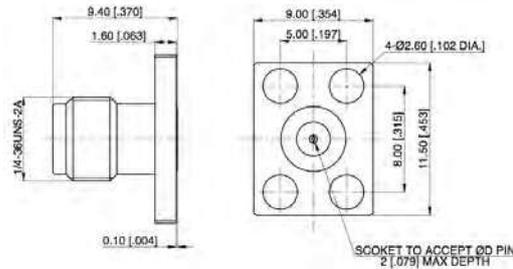
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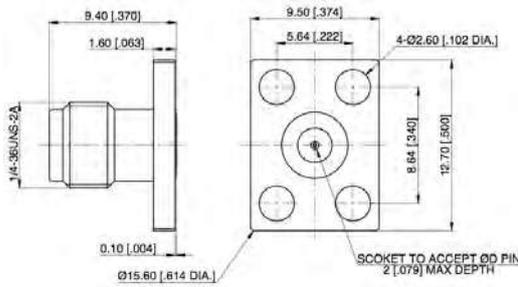
Receptacles that Accept Pins

Receptacles, jacks (female)

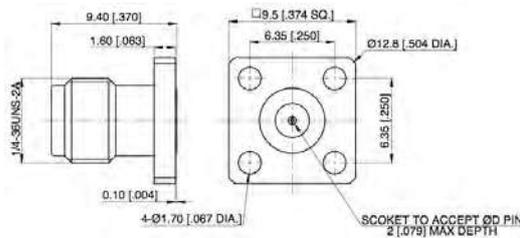
Part Number	Ø D PIN
PSF41A-4HLS01	0.23 [.009]
PSF42A-4HLS01	0.30 [.012]
PSF43A-4HLS01	0.38 [.015]
PSF45A-4HLS01	0.51 [.020]



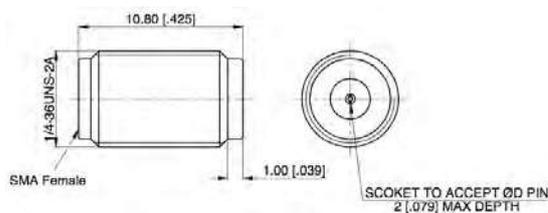
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PSF42B-4HLS01	0.30 [.012]
PSF43B-4HLS01	0.38 [.015]
PSF45B-4HLS01	0.51 [.020]



Part Number	Ø D PIN
PSF41C-4HLS01	0.23 [.009]
PSF42C-4HLS01	0.30 [.012]
PSF43C-4HLS01	0.38 [.015]
PSF45C-4HLS01	0.51 [.020]



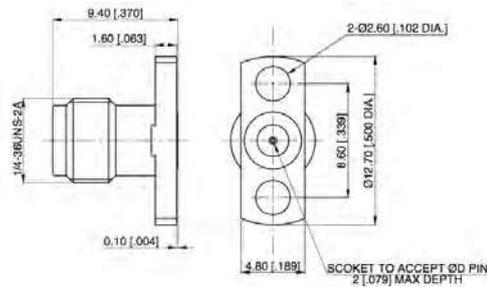
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PSF11C-RECS01	0.23 [.009]
PSF12C-RECS01	0.30 [.012]
PSF13C-RECS01	0.38 [.015]
PSF15C-RECS01	0.51 [.020]



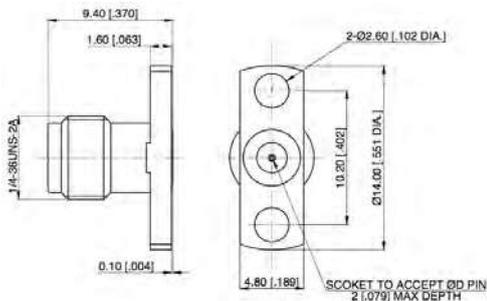
Receptacles that Accept Pins

Receptacles, jacks (female)

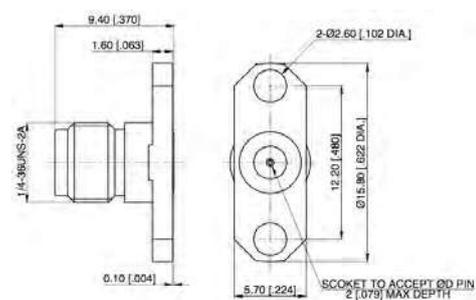
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PSF41C-2HLS01	0.23 [.009]
PSF42C-2HLS01	0.30 [.012]
PSF43C-2HLS01	0.38 [.015]
PSF45C-2HLS01	0.51 [.020]



Part Number	Ø D PIN
PSF41D-2HLS01	0.23 [.009]
PSF42D-2HLS01	0.30 [.012]
PSF43D-2HLS01	0.38 [.015]
PSF45D-2HLS01	0.51 [.020]



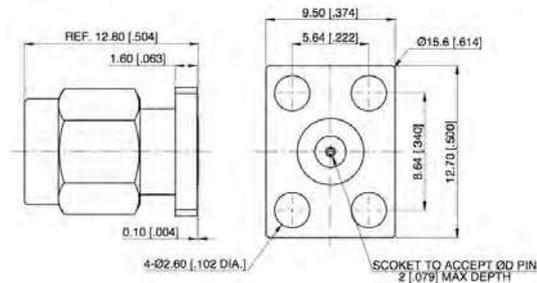
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PSF43E-2HLS01	0.38 [.015]
PSF45E-2HLS01	0.51 [.020]



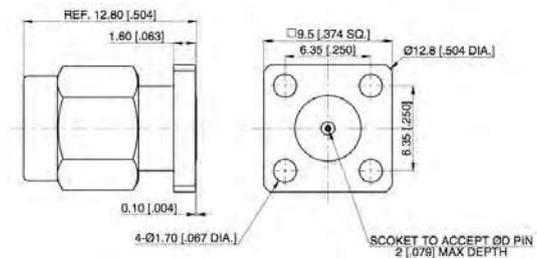
Receptacles that Accept Pins

Receptacles, plugs (male)

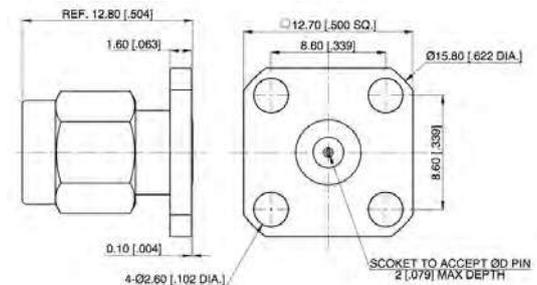
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PSM41B-4HLS01	0.23 [.009]
PSM42B-4HLS01	0.30 [.012]
PSM43B-4HLS01	0.38 [.015]
PSM45B-4HLS01	0.51 [.020]



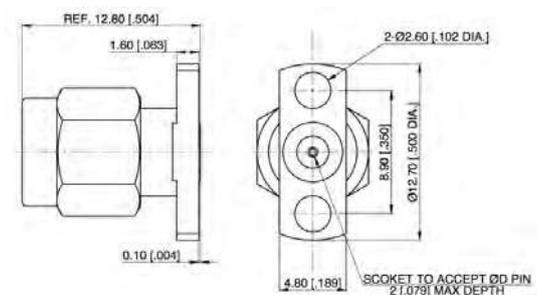
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PSM42C-4HLS01	0.30 [.012]
PSM43C-4HLS01	0.38 [.015]
PSM45C-4HLS01	0.51 [.020]



Part Number	Ø D PIN
PSM41D-4HLS01	0.23 [.009]
PSM42D-4HLS01	0.30 [.012]
PSM43D-4HLS01	0.38 [.015]
PSM45D-4HLS01	0.51 [.020]



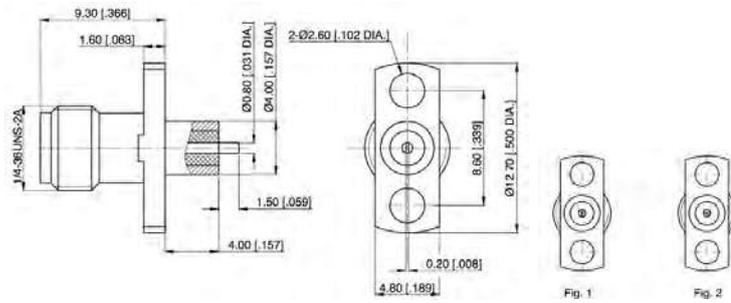
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PSM42B-2HLS01	0.30 [.012]
PSM43B-2HLS01	0.38 [.015]
PSM45B-2HLS01	0.51 [.020]



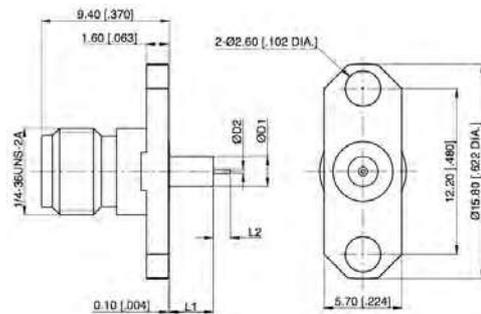
Receptacles with Extended Rear

Receptacles, jacks (female)

Part Number	Figure
PSF41E-2HLS01	1
PSF42E-2HLS01	2



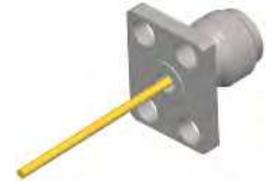
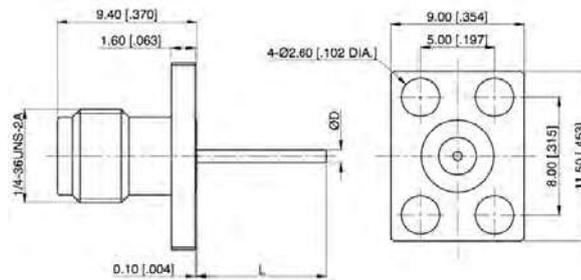
Part Number	L1/L2
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PSF42F-2HLS01	15 [.591]/3 [.118]



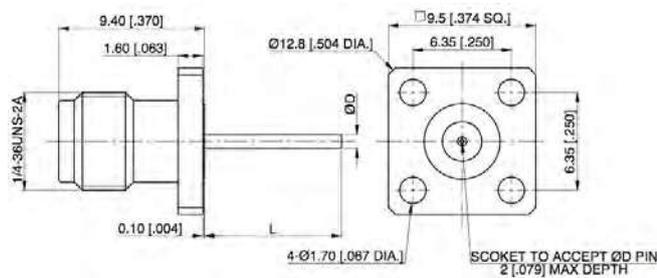
Receptacles with Extended Contact

Receptacles, jacks (female)

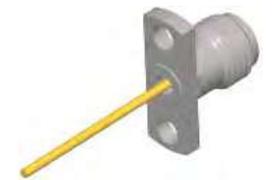
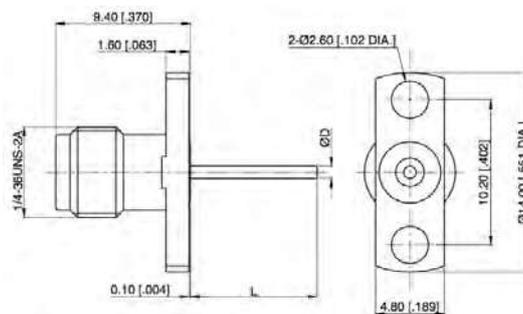
Part Number	D	L
PSF41N-4HLS01	0.64 [.025]	18 [.709]
PSF42N-4HLS01	0.87 [.034]	26 [1.024]
PSF43N-4HLS01	0.87 [.034]	10.92 [.430]



Part Number	∅D	L
PSF41P-4HLS01	0.64 [.025]	18 [.709]
PSF42P-4HLS01	0.87 [.034]	26 [1.024]
PSF43P-4HLS01	0.87 [.034]	10.92 [.430]



Part Number	∅D	L
PSF41N-2HLS01	0.64 [.025]	18 [.709]
PSF42N-2HLS01	0.87 [.034]	26 [1.024]
PSF43N-2HLS01	0.87 [.034]	10.92 [.430]



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