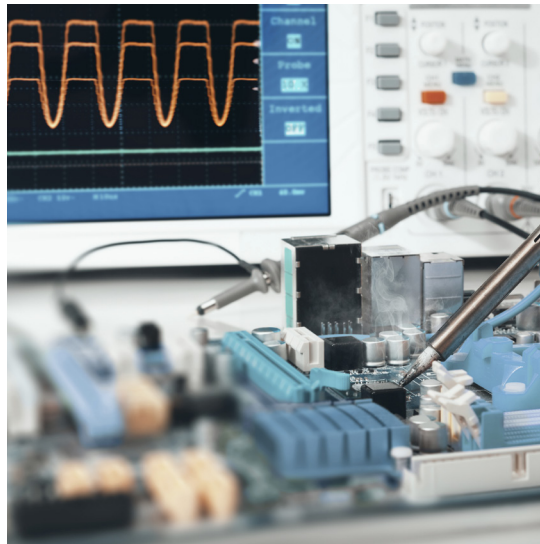


# JOHNSON™



## Type SMP/SMPM Connectors Product Catalog



**cinch**  
CONNECTIVITY SOLUTIONS  
a bel group

[belfuse.com/cinch](http://belfuse.com/cinch)

# About Bel

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Bel is a publicly traded company that has been operated by the same family for over 65 years. Our history of organic growth and acquisitions have broadened our product portfolio. This has established Bel as a world leader with a diverse offering of power, protection and interconnect products. We design and manufacture these products which are primarily used in the networking, telecommunications, computing, military, aerospace, transportation and broadcasting industries. Bel's portfolio of products also finds application in the automotive, medical and consumer electronics markets.

# About Johnson

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Johnson™ designs and manufactures an industry-leading line of RF coaxial connectors and adapters, available in both 50 and 75 Ohm versions, operating up to 67GHz. The range of products available within the Johnson product line includes board and cable mount connectors across subminiature, micro-miniature, ultra-miniature and millimeter wave classes as well as semi-rigid, conformable, and flexible RF coaxial cables. Johnson connectors are designed to provide the highest quality data transmission for data, audio, and video applications.

The SMP Interface offers superior performance up to 40GHz and is compatible with all SMP and GPO®\* Connectors. They offer high electrical reliability where extreme shock and vibration conditions are experienced.

## Applications

(Military and Commercial)

- Phased arrays
- Active antennas
- Satellites
- Communication
- Airborne radar
- Shipborne radar equipment
- Ground radar
- Hi-density modular packaging
- Axial/radial misalignment solutions

## Markets

- Aerospace
- Broadband
- Instrumentation
- Telecom
- Defense
- Microwave

## Transmission Options

- Box-to-box
- Cable-to-board
- Board-to-board
- Cable-to-panel-to-board

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\*GPO® is a registered trademark of Corning Gilbert.

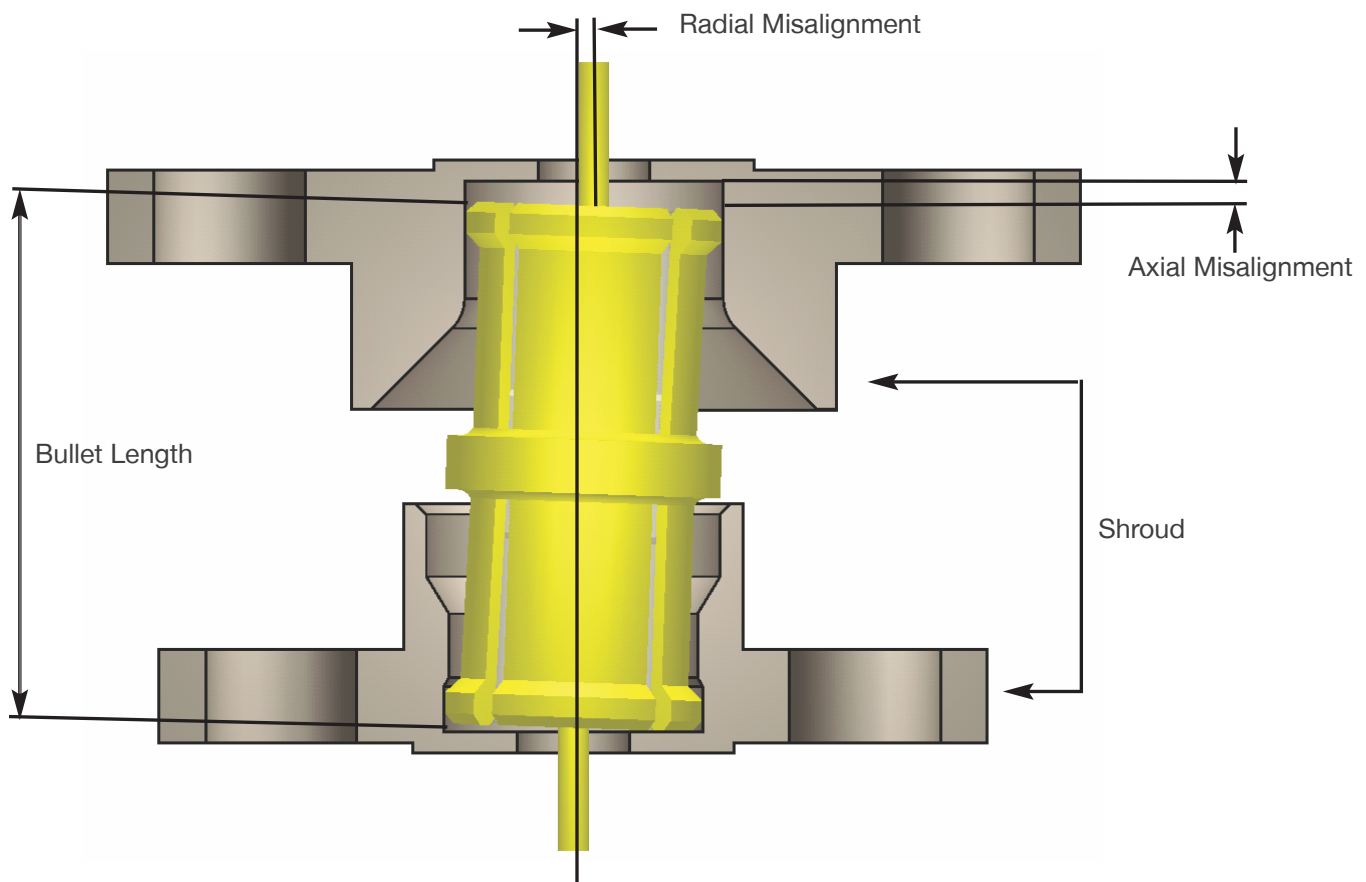
## Description

One of the key benefits of the SMP connector interface is its use in high frequency blind-mate applications. The design of the SMP bullet and shroud system allows for both axial and radial misalignment. The basic system is comprised of an inner “bullet” adapter, and two outer receptacles called “shrouds”. The bullet provides a flexible link between the shroud connections.

In blind-mate applications, one shroud connector will be typically specified as a snap-on interface and the other as a slide-on. This ensures that the bullet adapter remains fixed in the same shroud connector when the connection is disengaged.

The two snap-on interfaces Full Detent (FD) and Limited Detent (LD) each have different engage and disengage coupling forces. The LD is typically selected as the snap-on interface in PCB mount or blind-mate applications, while the FD is mainly used for cabled connections where higher retention forces are required.

The two slide-on interfaces Smooth Bore (SB) and Catcher’s Mitt (CM) allow for reduced connection forces as compared to the snap-on versions. The push-on interface creates a sliding connection that does not physically locate the mating reference planes, allowing for axial and radial misalignment. Both the SB and CM have the same engage/disengage forces; however the CM is typically specified as the shroud configuration in blind-mate applications as its generous lead-in chamfer helps capture and guide the bullet into place.



# SPECIFICATIONS

Electrical					
Impedance	50 ohms				
Frequency Range:	Bullet adapter (0.254 length), semi-rigid straight cabled connectors	0-40GHz			
	All other in-series adapters, semi-rigid right angle cabled connectors	0-18GHz			
	Field replaceable connectors, end launch connectors, hermetic feedthroughs PC mount connectors	0-12GHz			
VSWR: (maximum)	Bullet adapter (0.254 length):	0-18GHz 1.10	18-23GHz 1.15	23-26.5GHz 1.30	26.5-40GHz 1.70
	Semi-rigid straight cabled connectors:	0-18GHz 20	18-26.5GHz 1.35	26.5-40GHz 1.70	
	All other in-series adapters:	0-4GHz 1.10	4-12GHz 1.15	12-18GHz 1.20	
	Semi-rigid right angle cabled connectors:	0-18GHz 1.20			
	Field replaceable connectors (typical, measured back to back with seal pin)	0-18GHz 1.15			
	Un-cabled connectors (dependant on application)	Not applicable			
Insertion Loss: (dB maximum, tested at 10GHz)	In-series adapters, field replaceable connectors	0.10 $\sqrt{F}$ (GHz)			
	Semi-rigid cabled connectors	0.12 $\sqrt{F}$ (GHz)			
	All other un-cabled connector	Not applicable			
Working Voltage:	335 Vrms maximum at sea level, 65 Vrms maximum at 70,000 feet				
Dielectric Withstanding Voltage:	500 Vrms minimum at sea level				
RF High Potential Withstanding Voltage:	325 Vrms minimum at sea level, tested at 4 and 7MHz				
Corona Level:	190 Vrms minimum at 70,000 feet				
Contact Resistance: (milliohms maximum initial, not applicable after environmental testing)	Center contact (connectors and adapters)	6.0			
	Outer contact (connectors and adapters)	2.0			
	Cable shield to body (semi-rigid cabled connectors only)	0.5			
Insulation Resistance:	5000 megohms minimum				
RF Leakage: (dB typical, tested at 2.5GHz)	Cabled and field replaceable connectors	-80			
	In-series adapters	-65			
	All other un-cabled connectors	Not applicable			

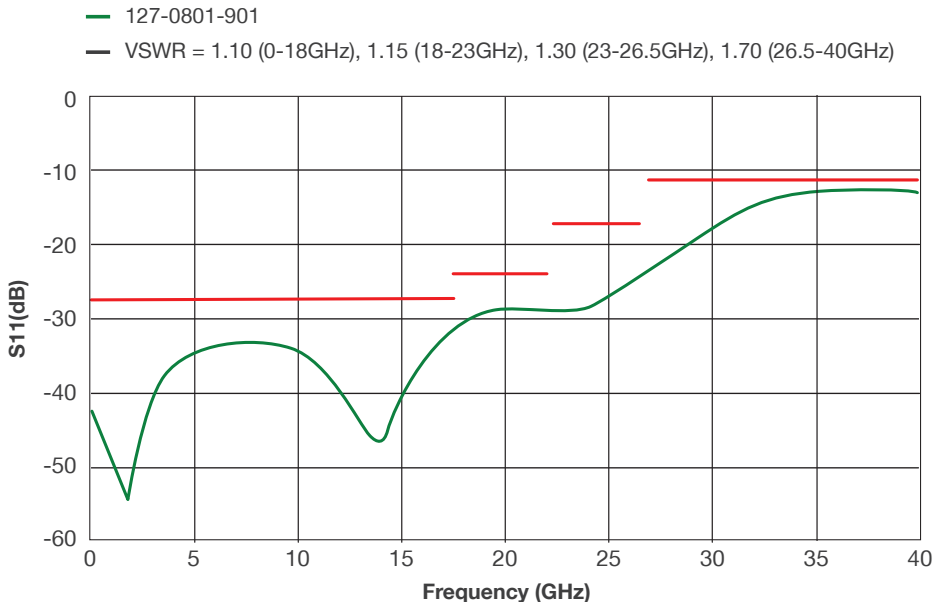
## Mechanical

### Interface Design: MIL-STD-348A, Series SMP

Engagement Force (pounds maximum, mated pair)	Full detent (FD)	15.0	
	Limited detent (LD)	10.0	
	Smooth bore and catcher's mitt (SB and CM)	2.0	
Disengagement Force (pounds minimum, mated pair)	Full detent (FD)	5.0	
	Limited detent (LD)	12.0	
	Smooth bore and catcher's mitt (SB and CM)	0.5	
Mated Radial Misalignment (inches maximum allowed, female adapters only)	Between centerlines of mating planes (FD,LD, SB)	0.010"	
	Between centerlines of mating planes (CM only)	0.020"	
Mated Axial Misalignment	010 inches maximum allowed between mating planes (female adapters only)		
Durability (mating cycles minimum)	Full detent (all female connectors and adapters)	100	
	Limited detent (female adapters only)	500	
	Smooth bore and catcher's mitt (female adapters only)	1000	
Contact Retention	1.5 pounds minimum axial force (captivated contacts only)		
Cable Retention: (minimum)		Axial Force* (lbs)	Torque (in-oz)
	Cabled connectors for RG-405 (0.086 semi-rigid)	30	16.0
	Cabled connectors for M17/151 (0.047 semi-rigid)	20	N/A

\*Or cable breaking strength, whichever is less

## Typical Measured Return Loss Bullet Adapter 127-0901-801



## Environmental

Meets or exceeds the applicable paragraph of MIL-PRF-39012

Operating temperature	-65°C to +165°C
Thermal shock	MIL-STD-202, Method 107, Condition B (except high temp +165°C or max high temp of cable)
Corrosion	MIL-STD-202, Method 101, Condition B
Vibration	MIL-STD-202, Method 204, Condition D
Shock (specified pulse)	MIL-STD-202, Method 213, Condition I
Moisture resistance	MIL-STD-202, Method 106 (except step 7b omitted)

## Mechanical

Spring finger (female) and end launch (male) bodies: 348A, Series SMP	Beryllium copper per ASTM B196, gold* plated per MIL-DTL-45204 (0.00005" min)
Hermetic seal bodies (male)	Kovar alloy per ASTM F15, gold* plated per MIL-DTL-45204 (0.00005" min)
All other shroud bodies (male)	Stainless steel, type 303, per ASTM A582, passivated per MIL-DTL-14072 (EL 300)
Connector and adapter contacts (male and female)	Beryllium copper per ASTM B196, gold* plated per MIL-DTL-45204 (0.00005" min)
Hermetic seal center pins	Kovar alloy per ASTM F15, gold* plated per MIL-DTL-45204 (0.00005" min)
EML/anti-rock rings	Beryllium copper per ASTM B196, gold* plated per MIL-DTL-45204 (0.00003" min)
PC mount legs	Brass per ASTM B16, gold* plated per MIL-DTL-45204 (0.00003" min)
Connector and adapter insulators	Brass per ASTM B16, gold* plated per MIL-DTL-45204 (0.00003" min)
Hermetic seal glass	Corning 7070

\*All gold plated parts include a 0.00005" minimum nickel barrier layer

## Mounting Holes

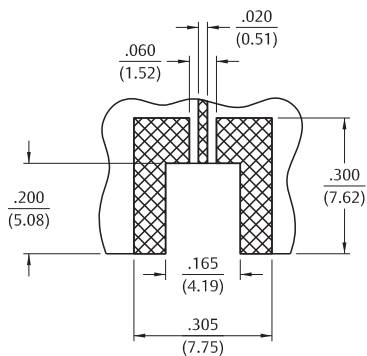


Figure 1

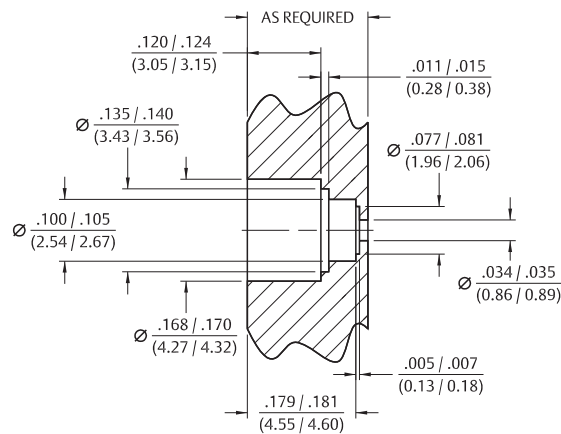


Figure 2

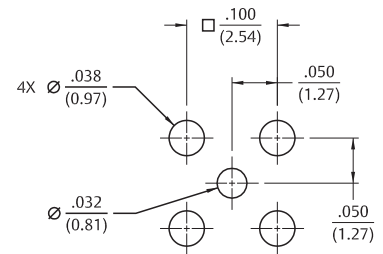
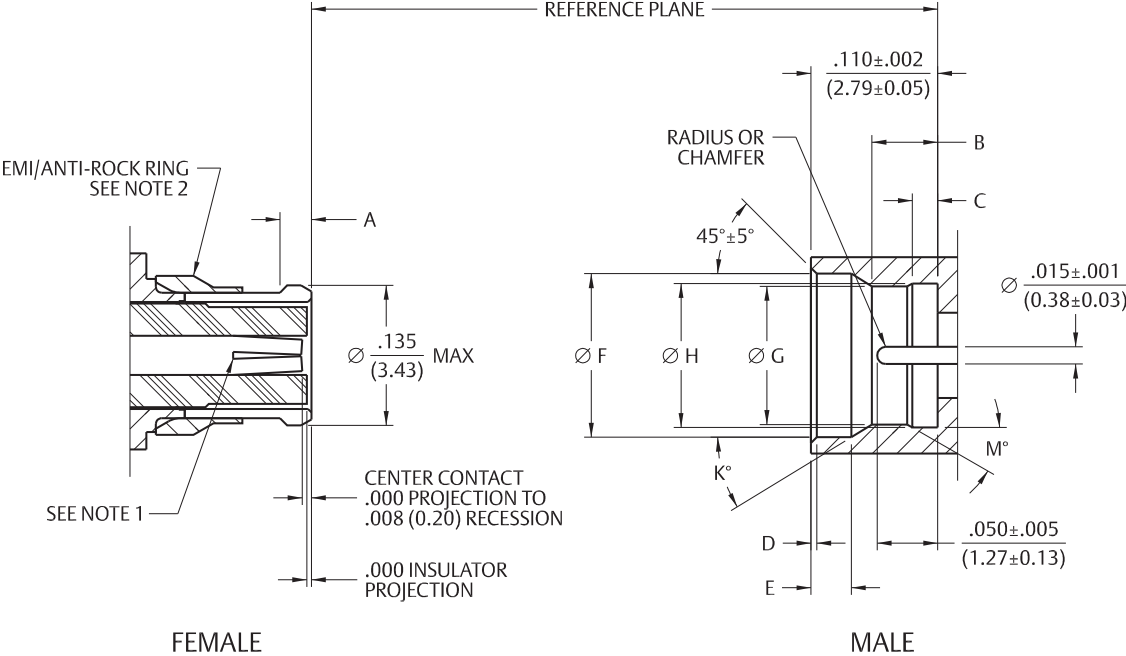


Figure 3

\*This pattern is for reference only. Pattern will vary depending on board type and specific electrical and mechanical requirements.

## Mating Engagement for SMP Series per MIL-STD-348A



**Notes:**

- 1. Socket to accept mating pin  $\text{Ø}0.015\pm0.001$  (0.38±0.03).
- 2. EMI/Anti-Rock Ring configuration optional, used on cabled connectors only. Shall not prevent proper mating engagement.
- 3. All dimensions shown in inches. Metric equivalents (rounded to nearest 0.01mm) are given for general information only.

### SMP Female Connector Interface

Dimension	Cabled		Uncabled	
	Minimum	Maximum	Minimum	Maximum
A	0.025 (0.64)	0.035 (0.89)	0.018 (0.46)	0.025 (0.64)

### SMP Male Connector Interface

Dimension	Full Detent		Limited Detent		Smooth Bore		Catcher's Mitt	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
B	0.051 (1.30)	0.057 (1.45)	0.054 (1.37)	0.060 (1.52)	0.059 (1.50)	0.065 (1.65)	N/A	N/A
C	0.0205 (0.52)	0.0235 (0.60)	0.0205 (0.52)	0.0235 (0.60)	N/A	N/A	N/A	N/A
D	0.003 (0.08)	0.008 (0.20)	0.003 (0.08)	0.008 (0.20)	0.003 (0.08)	0.008 (0.20)	0.043 (1.09)	0.047 (1.19)
E	0.033 (0.84)	0.037 (0.94)	0.033 (0.84)	0.037 (0.94)	0.033 (0.84)	0.037 (0.94)	N/A	N/A
F	0.139 (3.53)	0.145 (3.68)	0.139 (3.53)	0.145 (3.68)	0.139 (3.53)	0.145 (3.68)	0.123 (3.12)	0.127 (3.23)
G	0.114 (2.90)	0.118 (3.00)	0.118 (3.00)	0.122 (3.10)	0.123 (3.12)	0.127 (3.23)	N/A	N/A
H	0.124 (3.15)	0.126 (3.20)	0.124 (3.15)	0.126 (3.20)	N/A	N/A	N/A	N/A
K	35° REF	35° REF	35° REF	35° REF	35° REF	35° REF	N/A	N/A
M	30° REF	30° REF	30° REF	30° REF	N/A	N/A	N/A	N/A

## Straight Solder Type Cabled Female

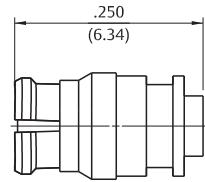


Figure 1  
0.047"

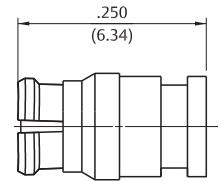
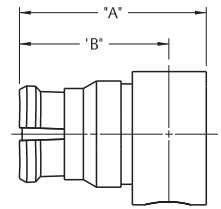
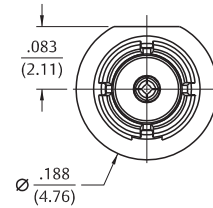
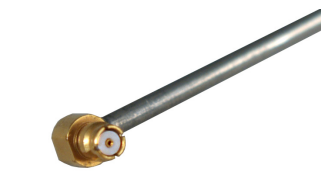


Figure 2  
0.086"

Cable Type	VSWR & Frequency Range*	Gold Plated	Figure
M17/151, 0.047 Semi-Rigid	1.20 max 0-18GHz, 1.35 max 18-26.5GHz, 1.70 max 26.5-40GHz	127-0692-001	1
RG-405, 0.086 Semi-Rigid	1.20 max 0-18GHz, 1.35 max 18-26.5GHz, 1.70 max 26.5-40GHz	127-0693-001	2

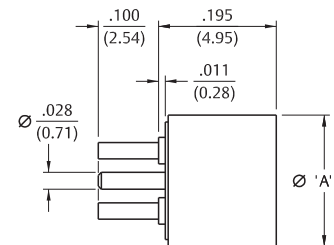
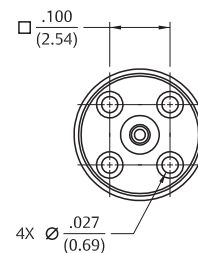
\* Specifications dependent on cable ratings

## Right Angle Solder Type Cabled Female



Cable Type	VSWR & Frequency Range	Gold Plated	"A"	"B"
M17/151, 0.047 Semi-Rigid	1.20 max 0-18GHz	127-0692-101	0.248 (6.30)	0.197 (5.00)
RG-405, 0.086 Semi-Rigid	1.20 max 0-18GHz	127-0693-101	0.271 (6.88)	0.209 (5.31)

## Straight PCMount Male Receptacle



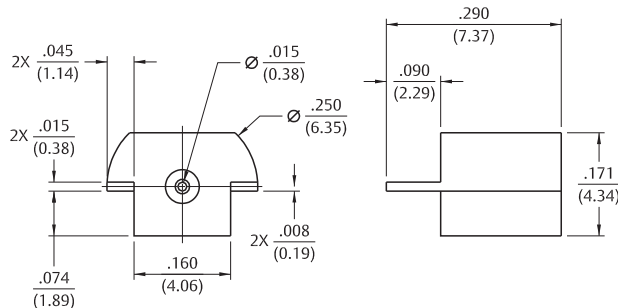
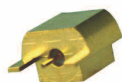
Interface	Frequency Range	Passivated*	"A"
Full Detent	0-12GHz	127-0701-201	0.218 (5.54)
Limited Detent	0-12GHz	127-1701-201	0.218 (5.54)
Smooth Bore	0-12GHz	127-2701-201	0.218 (5.54)
Catcher's Mitt	0-12GHz	127-3701-201	0.234 (5.94)

\* Base and legs gold plated brass

Mounting hole layout figure 3 on page 7

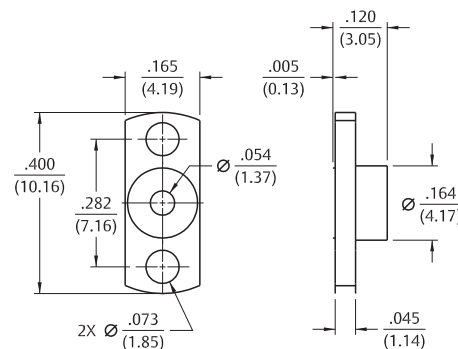


## End Launch Male Receptacle – Surface Mount



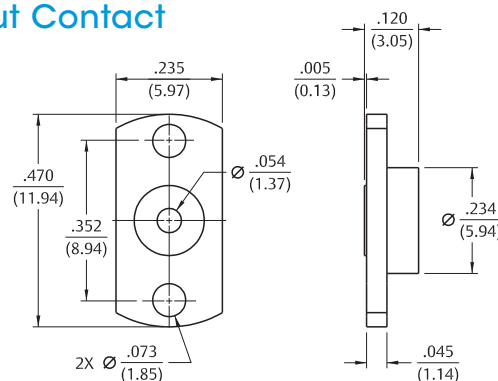
Interface	Frequency Range	Gold Plated	Figure
Full Detent	0-18GHz	127-0701-801	Stock
Full Detent	0-18GHz	127-0701-802	Tape and reel -1000 pieces
Limited Detent	0-18GHz	127-1701-801	Stock
Limited Detent	0-18GHz	127-1701-802	Tape and reel -1000 pieces
Smooth Bore	0-18GHz	127-2701-801	Stock
Smooth Bore	0-18GHz	127-2701-802	Tape and reel -1000 pieces

## 2-Hole Flange Mount Male Shroud - Without Contact



Interface	Passivated
Full Detent	127-0701-602
Limited Detent	127-1701-602
Smooth Bore	127-2701-602

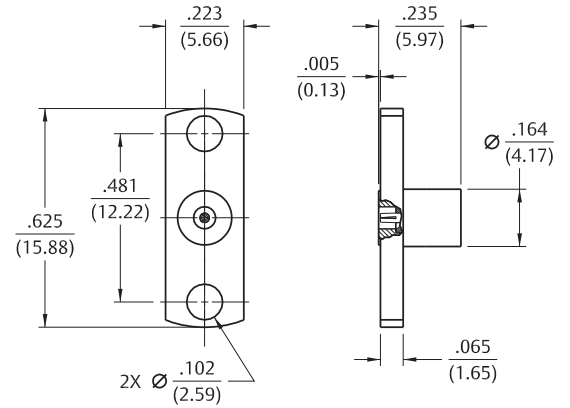
## 2-Hole Flange Mount Male Catcher's Mitt Shroud - Without Contact



Interface	Passivated
Catcher's Mitt	127-3701-602

Mounting hole layout figure 1 on page 7

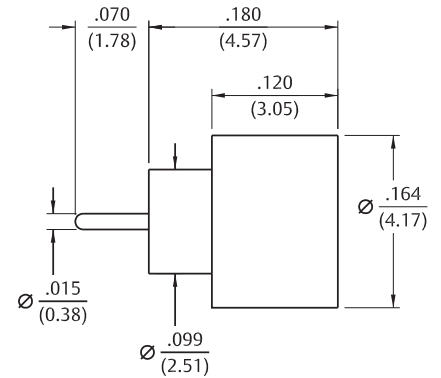
## 2-Hole Flange Mount Male Field Replaceable



Interface	VSWR & Frequency Range*	Passivated	Accepts Pin Size
Full Detent	1.15 typical 0-18GHz	127-0701-612	0.012 (0.030)
Limited Detent	1.15 typical 0-18GHz	127-1701-612	0.012 (0.030)
Smooth Bore	1.15 typical 0-18GHz	127-2701-612	0.012 (0.030)

\* Two connectors mated back to back with hermetic seal fixture

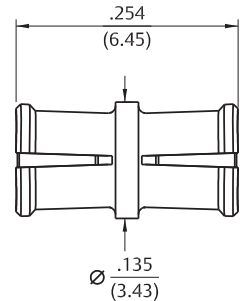
## Hermetic Seal Male



Interface	Frequency Range	Gold Plated
Full Detent	0-18GHz	127-0701-601
Limited Detent	0-18GHz	127-1701-601
Smooth Bore	0-18GHz	127-2701-601

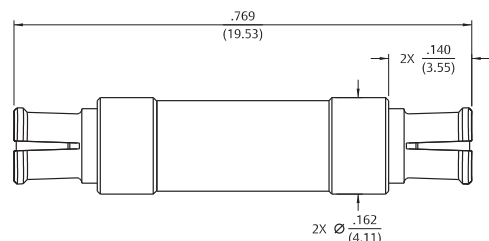
Mating Detail: see figure 2 on page 7

## Female to Female Bullet Adapter



VSWR & Frequency Range	Gold Plated
1.10 Max 0-18GHz, 1.15 Max 18-23GHz, 1.30 Max 23-26.5GHz, 1.70 Max 26.5-40GHz	127-0901-801

## Female to Female Adapter



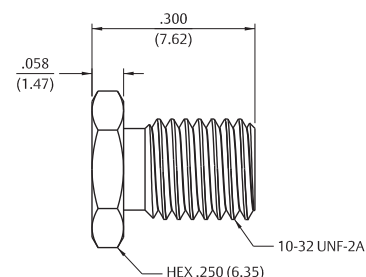
### VSWR & Frequency Range

1.10 Max 0-4GHz, 1.15 Max 4-12GHz, 1.20 Max 12-18GHz

### Gold Plated

127-0901-811

## Male to Male Catcher's Mitt Adapters, Stainless Steel



### Interface

### VSWR & Frequency Range

### Stainless Steel, Passivated

Full Detent

1.10 max 0-4GHz,  
1.15 max 4-12GHz,  
1.20 max 12-18GHz

127-0901-822

Limited Detent

1.10 max 0-4GHz,  
1.15 max 4-12GHz,  
1.20 max 12-18GHz

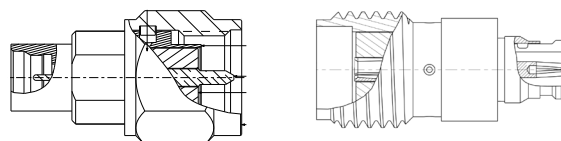
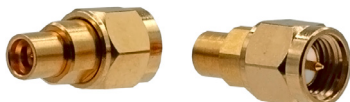
127-1901-822

Smooth Bore

1.10 max 0-4GHz,  
1.15 max 4-12GHz,  
1.20 max 12-18GHz

127-2901-822

## SMA to SMP Adapters



### Interface

### VSWR & Frequency Range

### Gold Plated

SMA Plug to SMP Plug

1.20 max 0-20 GHz, 1.25 max 20-26.5 GHz

134-1019-441

SMA Plug to SMP Jack

1.20 max 0-20 GHz, 1.25 max 20-26.5 GHz

134-1019-451

SMA Jack to SMP Jack

1.20 max 0-20 GHz, 1.25 max 20-26.5 GHz

134-1019-461

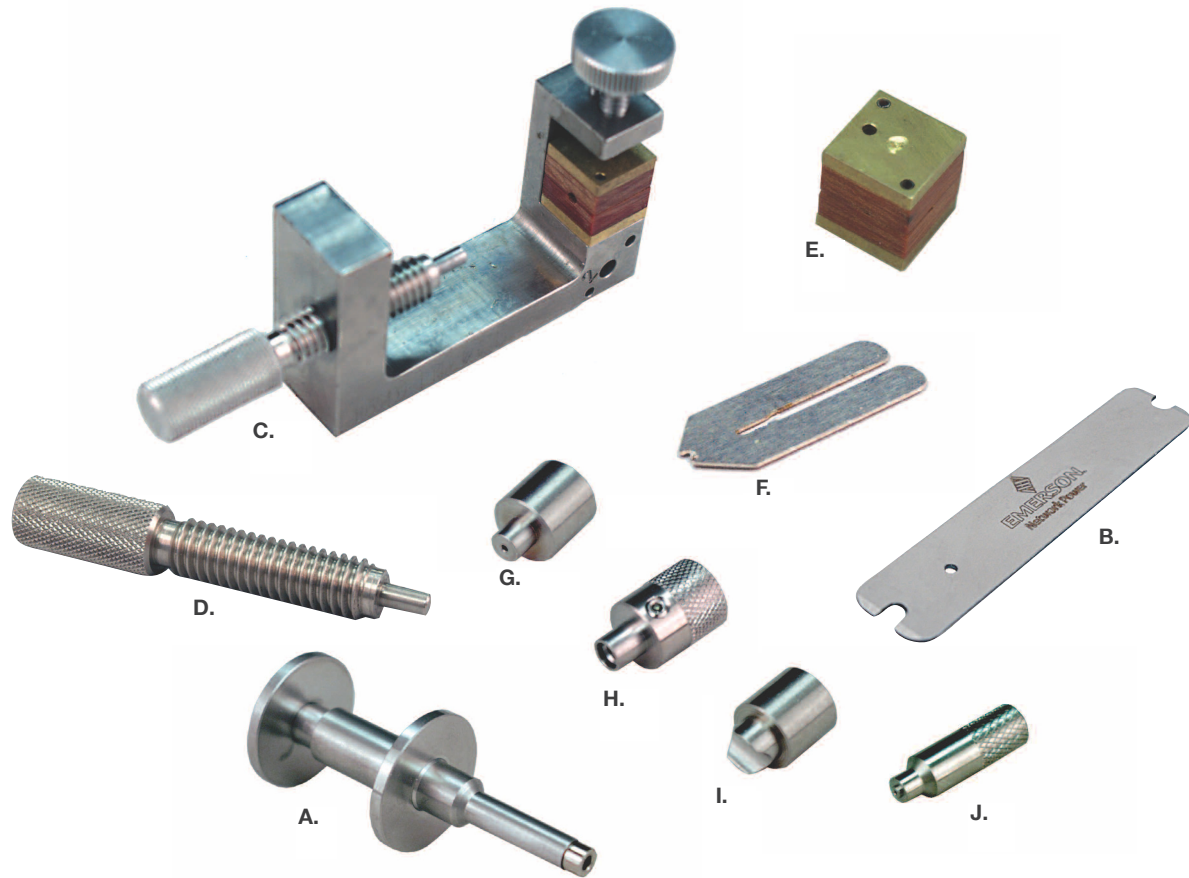
SMA Jack to SMP Plug

1.20 max 0-20 GHz, 1.25 max 20-26.5 GHz

134-1019-471

## SMP Customer Tooling

Accurate assembly of the semi-rigid cabled connectors is obtained with the tools listed below. Industry standard devices are used if possible for customer convenience and tool compatibility.



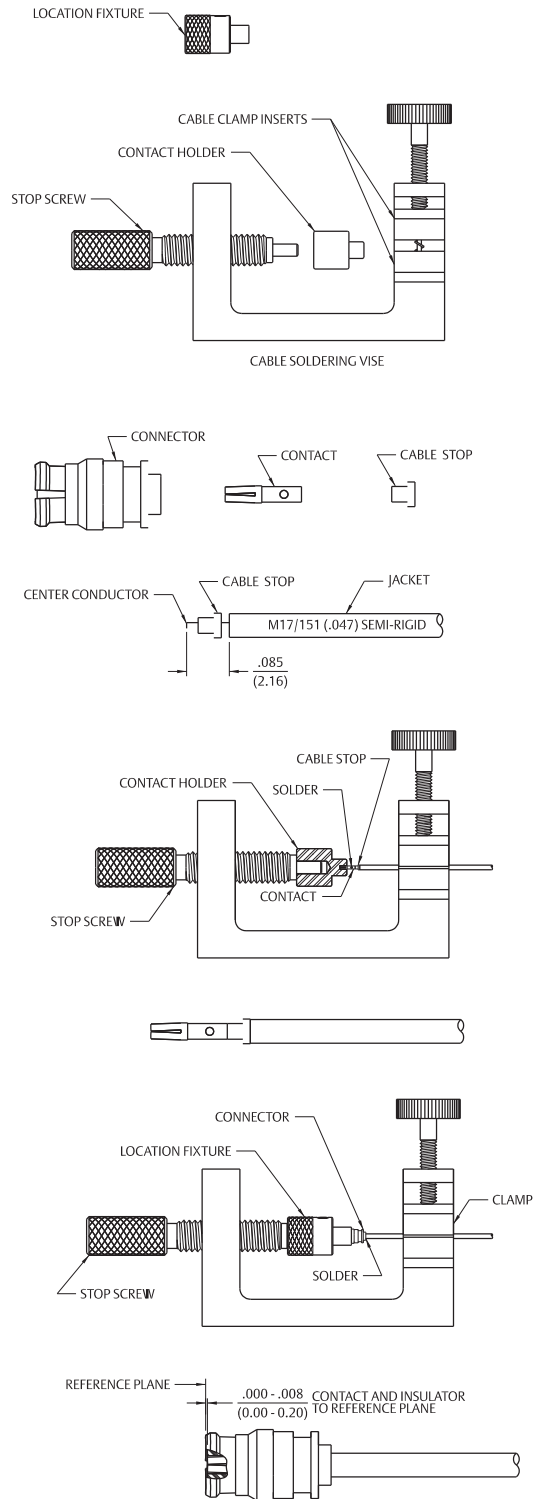
Item	Description	Part Number
A	SMP bullet extraction tool	127-0000-900
B	SMP cabled connector removal tool	127-0000-901
C	Soldering vise (does not include clamp inserts or stop screw)	140-0000-962
D	Stop screw for soldering vise	140-0000-981
E	Semi-rigid cable clamp inserts for 0.086" OD cable Semi-rigid cable clamp inserts for 0.047" OD cable	140-0000-964 140-0000-997
F	Solder shim for 0.086" OD cable	140-0000-984
G	SMP center contact holder	127-0000-902
H	SMP interface locator tool	127-0000-903
I	SMP right angle body holder	127-0000-904
J	SMP FD shroud centering tool SMP LD shroud centering tool SMP SB shroud centering tool	127-0000-905 127-0000-906 127-0000-907

## SMP Straight Female Solder Style for 0.047 OD Semi-Rigid Cable

1. Identify tools (5 piece parts) and connector parts (3 piece parts).
2. Strip cable jacket and dielectric to dimension shown. Do not nick center conductor. Clean all debris from prepared cable.
3. Insert center conductor into cable stop as shown and place contact onto center conductor.
4. Insert contact into contact holder fixture and clamp cable in vise. Tighten stop screw until light pressure is applied between contact, cable stop and cable jacket.
5. Solder contact to center conductor through solder hole using 0.016 (0.41) diameter flux core solder wire or solder paste. Use a minimum amount of solder and heat for a good joint. Do not allow heat to build up for a long period of time as cable stop may melt.
6. After solder joint has cooled, remove cable from vise. Remove any excess solder from contact with a sharp blade and clean all debris from contact and cable.
7. Insert contact into connector assembly, making sure cable stop bottoms out against internal shoulder of connector body. Insert connector assembly into interface location fixture and clamp cable in vise. Make sure connector assembly is fully engaged within location fixture. Tighten stop screw until light pressure is applied between connector assembly and cable stop.
8. Solder end of connector body to cable jacket, using a minimum amount of solder and heat for a full fillet joint. Allow assembly to cool before removing connector from vise and location fixture. Best results are obtained when contact location is flush to 0.004 (0.10) recessed from reference plane. Interface location fixture is pre-set at factory, but can be adjusted to control location.

Cable Group	Part Number
MIL-C-17/151, 0.047 Semi-Rigid	127-0692-101

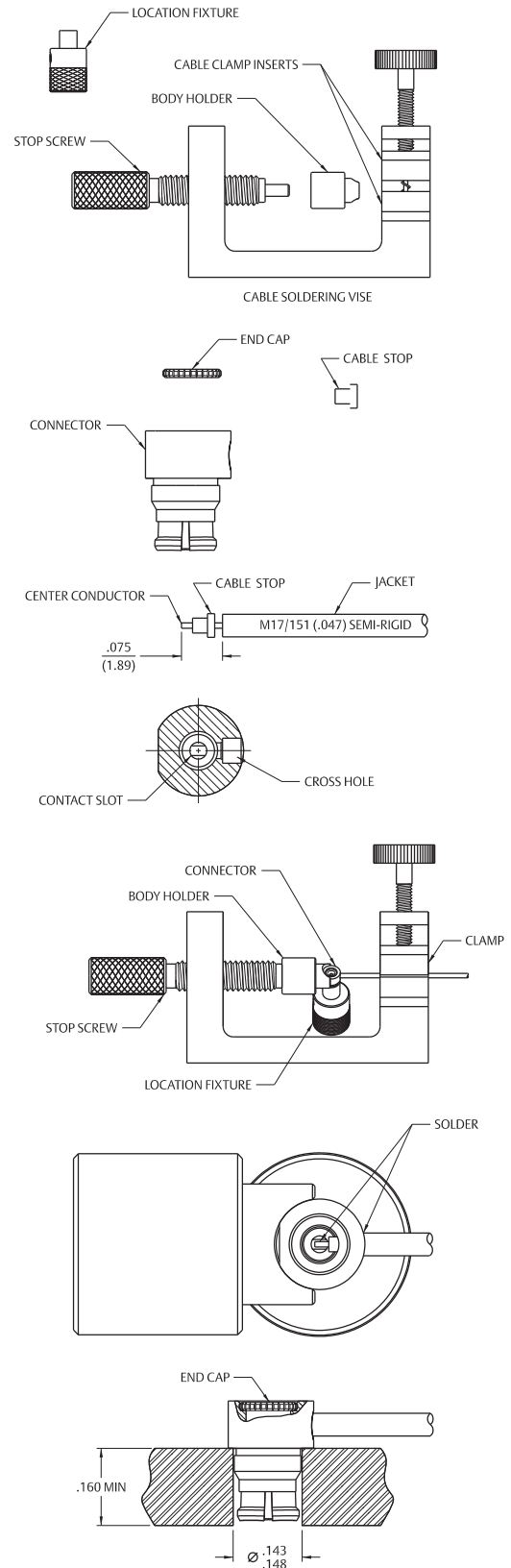
Tool	Part Number
Cable Vise	140-0000-962
Stop Screw	140-0000-981
Clamp Inserts	140-0000-997
Contact Holder	127-0000-902
Interface Location Fixture	127-0000-903



# ASSEMBLY INSTRUCTIONS

## SMP Right Angle Female Solder Style for 0.047 OD Semi-Rigid Cable

1. Identify tools (5 piece parts) and connector parts (3 piece parts).
2. Strip cable jacket and dielectric to dimension shown. Do not nick center conductor. Clean all debris from prepared cable.
3. Insert center conductor into cable stop as shown. Make sure slot in connector contact is aligned with cross hole in body as shown. Insert cable into cross hole in connector body, making sure cable stop bottoms out against internal shoulder of connector body.
4. Insert connector assembly into interface location fixture and clamp cable in vise using body holder fixture as shown. Tighten stop screw until light pressure is applied between connector body, cable stop and cable jacket.
5. Solder contact to center conductor through rear access port in connector body using a minimum amount of solder and heat for a good joint.
6. After center conductor solder joint has cooled, solder connector body to cable jacket, using a minimum amount of solder and heat for a full fillet joint. Take care so that solder does not flow onto anti-rock ring or into rear access port. Allow assembly to cool before removing connector from vise and location fixture.
7. Using a fixture plate as shown, press end cap into rear access port using a 0.156 (3.96) diameter flat punch until fully seated within body counter bore.
8. Best results are obtained when contact location is flush to 0.004 (0.10) recessed from reference plane. Interface location fixture is pre-set at factory, but can be adjusted to control location.



Cable Group	Part Number
MIL-C-17/151, 0.047 Semi-Rigid	127-0692-101

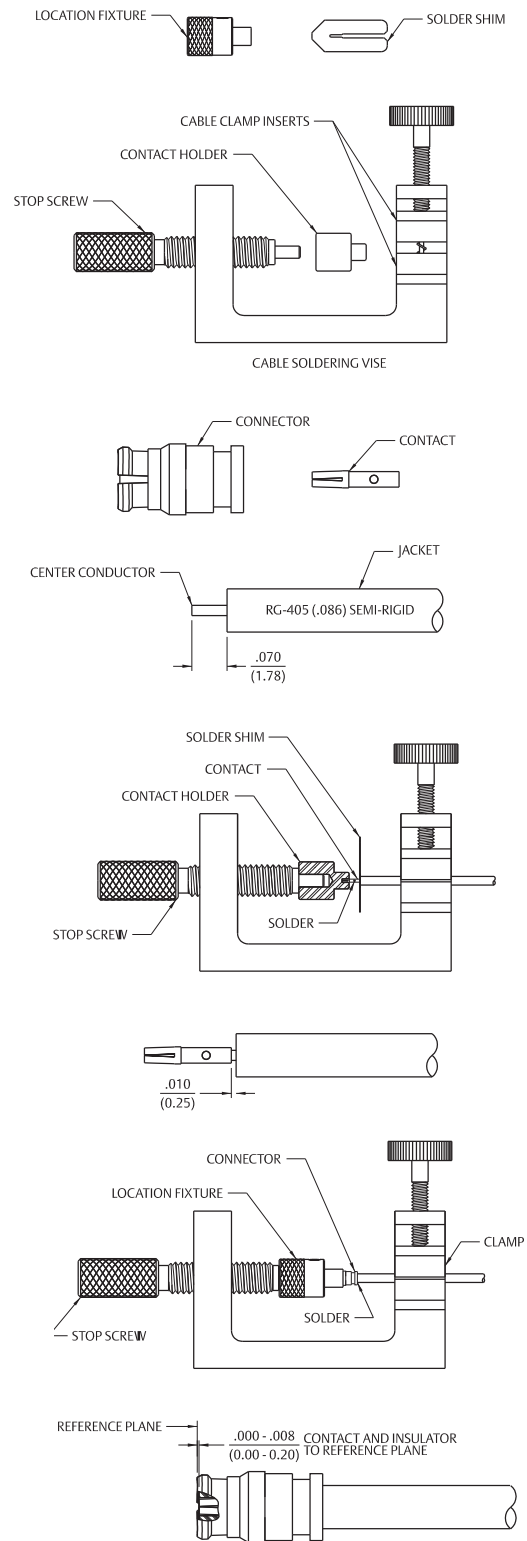
Tool	Part Number
Cable Vise	140-0000-962
Stop Screw	140-0000-981
Clamp Inserts	140-0000-997
Body Holder	127-0000-904
Interface Location Fixture	127-0000-903

## SMP Straight Female Solder Style for 0.086 OD Semi-Rigid Cable

1. Identify tools (6 piece parts) and connector parts (2 piece parts).
2. Strip cable jacket and dielectric to dimension shown. Do not nick center conductor. Clean all debris from prepared cable.
3. Place contact onto center conductor, insert solder shim between cable jacket and contact.
4. Insert contact into contact holder fixture and clamp cable in vise. Tighten stop screw until light pressure is applied between contact, solder shim and cable jacket.
5. Solder contact to center conductor through solder hole using 0.016 (0.41) diameter flux core solder wire or solder paste. Use a minimum amount of solder and heat for a good joint. Do not allow heat to build up for a long period of time as cable dielectric will expand.
6. After solder joint has cooled, remove solder shim and cable from vise. Remove any excess solder from contact with a sharp blade and clean all debris from contact and cable.
7. Insert contact into connector assembly, making sure cable jacket bottoms out against internal shoulder of connector body. Insert connector assembly into interface location fixture and clamp cable in vise. Make sure connector assembly is fully engaged within location fixture. Tighten stop screw until light pressure is applied between connector assembly and cable jacket.
8. Solder end of connector body to cable jacket, using a minimum amount of solder and heat for a full fillet joint. Allow assembly to cool before removing connector from vise and location fixture. Best results are obtained when contact location is flush to 0.004 (0.10) recessed from reference plane. Interface location fixture is preset at factory, but can be adjusted to control location.

Cable Group	Part Number
RG-405, 0.086 Semi-Rigid	127-0693-001

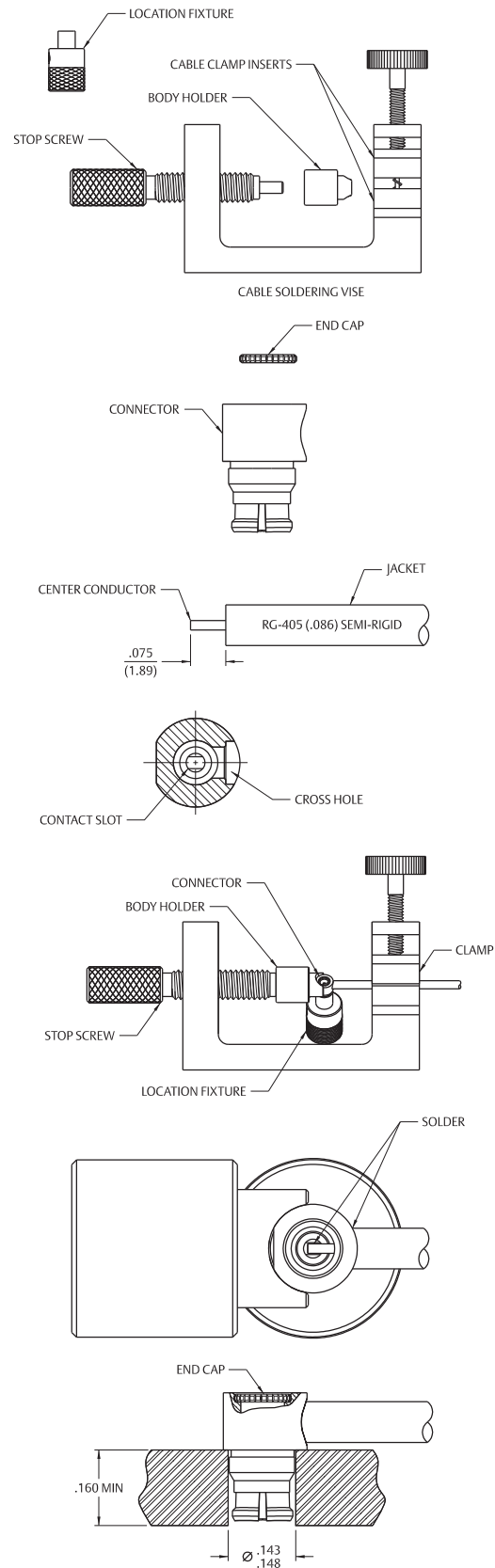
Tool	Part Number
Cable Vise	140-0000-962
Stop Screw	140-0000-981
Clamp Inserts	140-0000-964
Solder Shim	140-0000-984
Contact Holder	127-0000-902
Interface Location Fixture	127-0000-903



# ASSEMBLY INSTRUCTIONS

## SMP Right Angle Female Solder Style for 0.086 OD Semi-Rigid Cable

1. Identify tools (5 piece parts) and connector parts (2 piece parts).
2. Strip cable jacket and dielectric to dimension shown. Do not nick center conductor. Clean all debris from prepared cable.
3. Make sure slot in connector contact is aligned with cross hole in body as shown. Insert cable into cross hole in connector body, making sure cable jacket bottoms out against internal shoulder of connector body.
4. Insert connector assembly into interface location fixture and clamp cable in vise using body holder fixture as shown. Tighten stop screw until light pressure is applied between connector body and cable jacket.
5. Solder contact to center conductor through rear access port in connector body using a minimum amount of solder and heat for a good joint. Do not allow solder to build up along exposed center conductor.
6. After center conductor solder joint has cooled, solder connector body to cable jacket, using a minimum amount of solder and heat for a full fillet joint. Take care so that solder does not flow onto anti-rock ring or into rear access port. Allow assembly to cool before removing connector from vise and location fixture.
7. Using a fixture plate as shown, press end cap into rear access port using a 0.156 (3.96) diameter flat punch until fully seated within body counter bore.
8. Best results are obtained when contact location is flush to 0.004 (0.10) recessed from reference plane. Interface location fixture is preset at factory, but can be adjusted to control location.



Cable Group	Part Number
RG-405, 0.086 Semi-Rigid	127-0693-101

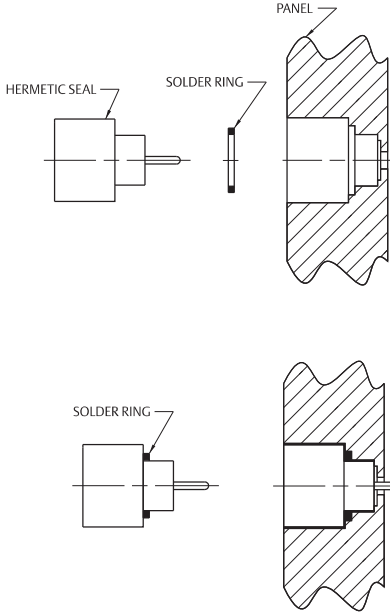
Tool	Part Number
Cable Vise	140-0000-962
Stop Screw	140-0000-981
Clamp Inserts	140-0000-964
Body Holder	127-0000-904
Interface Location Fixture	127-0000-903



## SMP Hermetic Seal Installation

1. Prepare housing panel per figure 2 as shown on page 7
2. Install solder ring on hermetic seal as shown. Recommended ring size is 0.103 (2.62) ID x 0.128 (3.25) OD x 0.015 (0.38) thick.
3. Solder in place as shown

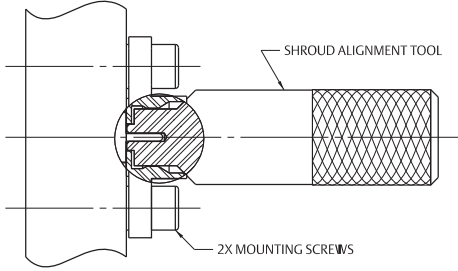
Interface	Part Number
Full Detent	127-0711-601
Limited Detent	127-1711-601
Smooth Bore	127-2711-601



## SMP Shroud Installation

1. Install appropriate assembly tool into shroud as shown.
2. While holding tool in place, align flange mount with mounting holes in panel. Install fasteners and torque to 6-8 in/lbs.

Shroud Part Number	Tool Part Number
127-0701-602	127-0000-905
127-1701-602	127-0000-906
127-2701-602	127-0000-905
127-3701-602	127-0000-905



## Introduction

Cinch Connectivity Solutions offers the Johnson line of SMPM connectors. The sub-miniature, push-on style micro interfaces are distinguished for blind mating and for their size (about 35% smaller than the SMP design) and becoming increasingly popular for the two-fold design benefit of allowing for a higher-density of connection points and maintaining solid Return Loss performance from DC-level frequencies up to 65GHz.

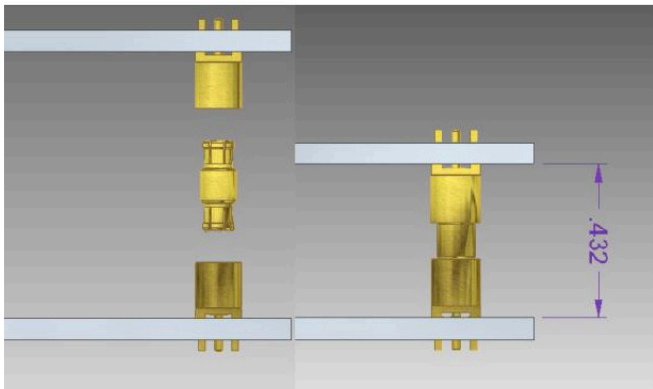
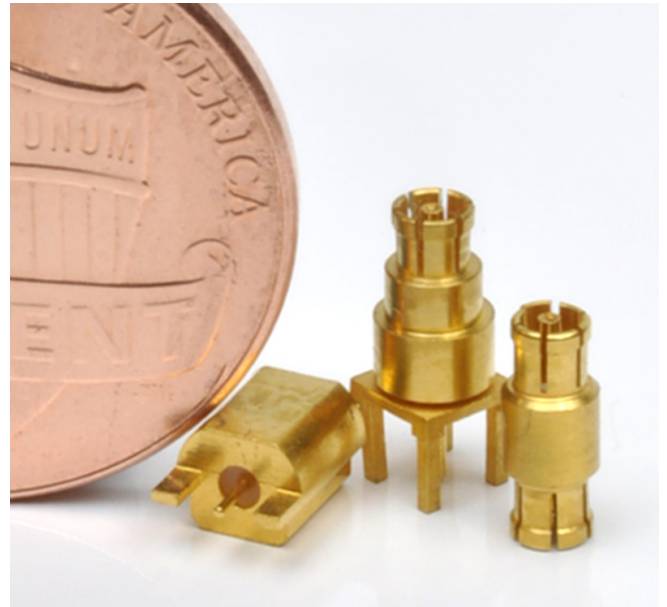
The Johnson SMPM family includes PC mount and End Launch styles, straight and right-angled, 0.047 cabled connectors and sealable flange mounts. All male connectors are offered as full detent or smooth bore designs for your preference of separation forces. Detent features are provided to retain the push-on connectors in mated condition. Different levels of engage and disengage forces are accomplished by various Detent offerings in the shroud housing.

The SMPM bullet adapter provides the same coveted blind mate functionality as the larger SMP size connectors, mitigating radial and axial misalignment with negligible change to VSWR and other signal losses. The SMPM-series is perfect for use in test equipment and racked-electronics where footprint space is a premium and mating boards together is difficult.

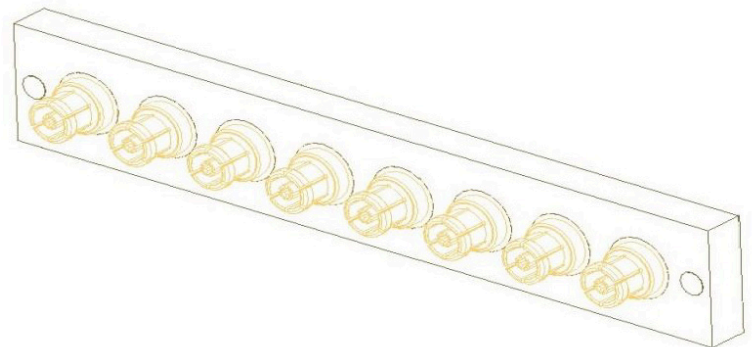
For those systems with even tighter tolerance restrictions on center to center spacing, multi-channel blocks for straight or right-angle interfaces can be designed and quoted through Cinch Connectivity Solutions responsive product design team.

### Key Features & Benefits

- 35% smaller than SMP connectors
- DC-65GHz
- Bullet adapter provides blind mate capabilities
- Excellent electrical performance with axial and radial misalignment
- Available in PC mount, end launch and cabled styles



Estimated spacing between two mated boards connected via PC mount and bullet adapters



8 Port Connector Block

## Straight PC mount, female



**Gold Plated**

125-0801-201

## Straight PC mount male, full detent



**Gold Plated**

125-0701-201

## Straight PC mount male, smooth bore



**Gold Plated**

125-2701-201

## Male PCB SMT 0.150" height, full detent



**Gold Plated**

125-0701-211

## Male PCB SMT 0.113" height, full detent



**Gold Plated**

125-2701-201

The Johnson line of SMPM connectors are manufactured with high quality beryllium copper and brass components and designed to meet MIL-PRF-39012 and MIL-PRF-39012 specifications.

# ASSEMBLY INSTRUCTIONS

## End launch male, full detent



Gold Plated

125-0701-801

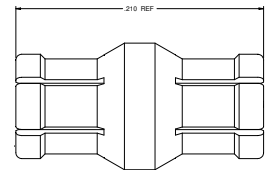
## End launch male, smooth bore



Gold Plated

125-2701-801

## Bullet adapter, 0.210" Length



Gold Plated

125-0901-811

VSWR & Frequency Range

1.15 Max 18GHz,  
1.25 Max 40GHz,  
1.45 Max 65GHz

## Bullet adapter, 0.256" Length



Gold Plated

125-0901-801

The Johnson line of SMPM connectors are manufactured with high quality beryllium copper and brass components and designed to meet MIL-PRF-39012 and MIL-PRF-39012 specifications.

Straight male for 0.047" semi-rigid cable, full detent



Gold Plated

125-0592-001

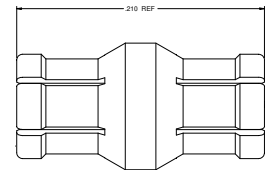
Straight male for 0.047" semi-rigid cable, smooth bore



Gold Plated

125-2592-001

Straight male for 0.086" semi-rigid cable, full detent



Gold Plated

125-0593-001

VSWR & Frequency Range

1.15 Max 18GHz,  
1.25 Max 40GHz,  
1.45 Max 65GHz

Right angle male for 0.086" semi-rigid cable, full detent



Gold Plated

125-0593-101

The Johnson line of SMPM connectors are manufactured with high quality beryllium copper and brass components and designed to meet MIL-PRF-39012 and MIL-PRF-39012 specifications.

# ASSEMBLY INSTRUCTIONS

## Straight female for 0.047" cable



**Gold Plated**

125-0692-001

## Low profile right-angled female for 0.047" cable, full detent



**Gold Plated**

125-0692-111

## 2-hole flange mount male shroud, full detent



**Gold Plated**

125-0701-602

## 2-hole flange mount male shroud, smooth bore



**Gold Plated**

125-2701-602

## Hermetic seal feed-thru



**Gold Plated**

142-1000-041

The Johnson line of SMPM connectors are manufactured with high quality beryllium copper and brass components and designed to meet MIL-PRF-39012 and MIL-PRF-39012 specifications.

## SMPM extraction tool for cabled connectors



**Gold Plated**

125-0000-900

## SMPM bullet adapter installation/extraction tool



**Gold Plated**

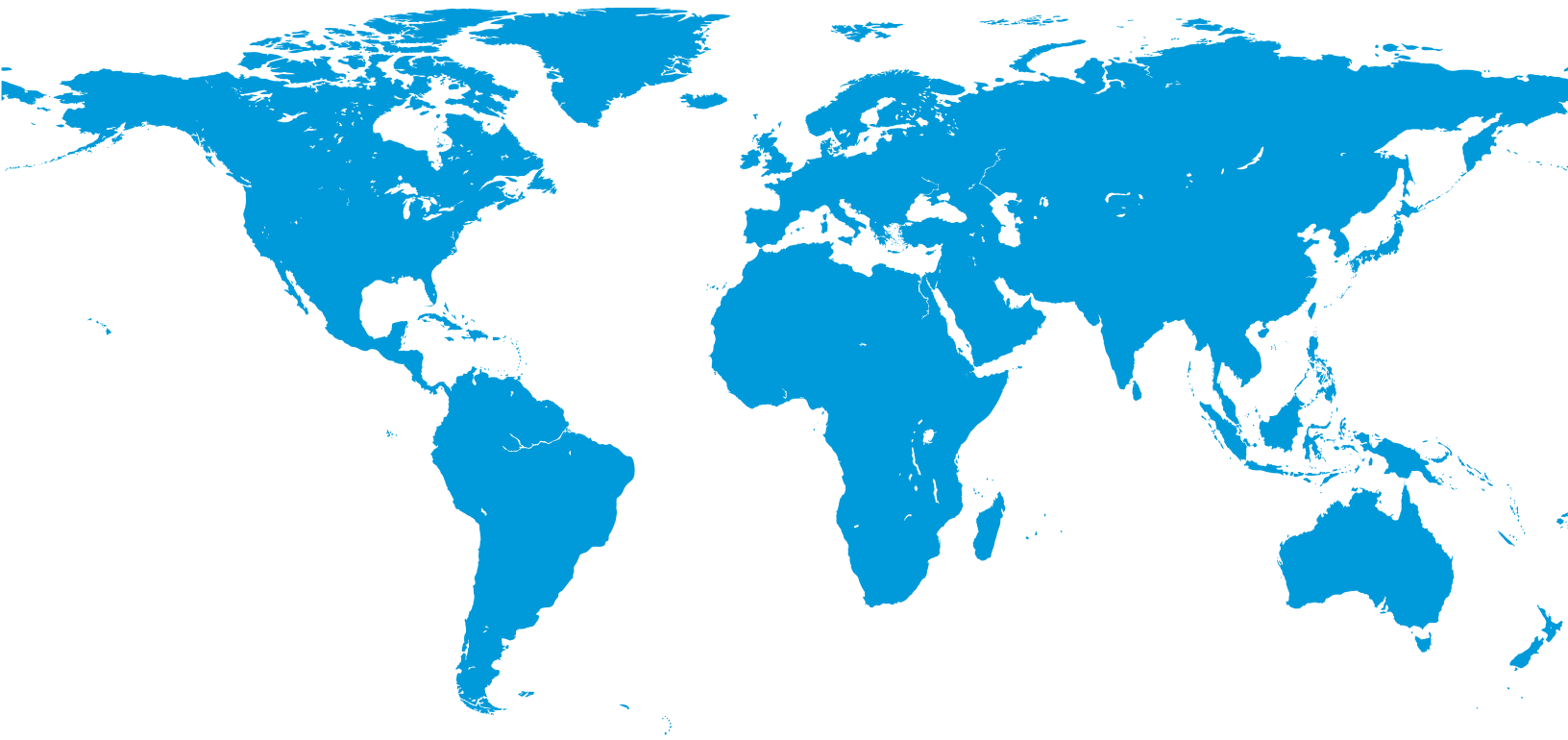
125-0000-901



## About Cinch Connectivity Solutions

For over 100 years, Cinch Connectivity Solutions has manufactured high-quality and reliable high-performance connectors and cable assemblies. Cinch is recognized as a world class connectivity supplier of RF, fiber optic, hybrid, microwave components, circular, d-subminiatures, modular rectangular, electronic enclosures and cable assemblies.

Cinch provides innovative solutions to the military, commercial aerospace, networking, telecommunication, test and measurement, oil and gas and other harsh environment industries.

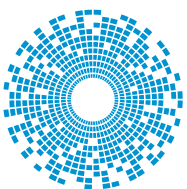


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