# Type SMP Connectors

Product Catalog

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JOHNSON® a cinch connectivity solutions brand

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doc rev number

# TABLE OF CONTENTS


| | |
|---|---|
| Introduction | 1-2 |
| Specifications | 3-8 |
| Mounting Holes | 7 |
| Applications | 9-12 |
| Assembly Tools | 13 |
| Assembly Instructions | 14-18 |
| Competitor Cross Reference | 19 |

# INTRODUCTION

## SMP Blind-Mate Connectors

**Johnson**® line of **SMP Blind-Mate Connectors** offers our customers a Micro-Miniature, Slide-On/Snap-On Interconnect System that aid's in the design ofhigh-density packaging as well as axial and radial misalignment issues.

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

## TransmissionOptions

- Box-to-Box
- Cable-to-Board
- Board-to-Board
- Cable-to-Panel-to-Board

*GPO® is a registeredtrademark of Corning Gilbert.

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# INTRODUCTION

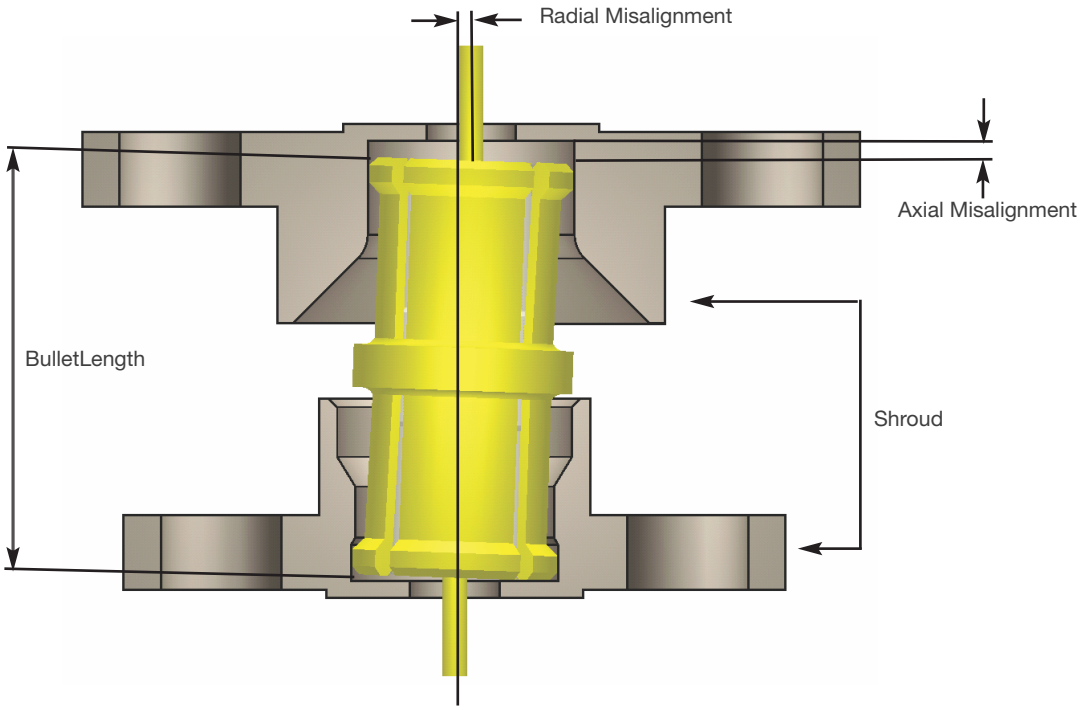
## Description

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) andLimited Detent (LD) each have different engage and disengage coupling forces. TheLD 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 (SM) and Catcher’s Mit (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 SM 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 SPECIFICATIONS

**Impedance:** 50 Ohms

**Frequency Range:**

Bullet Adapter (.254 length), Semi-Rigid Straight Cabled Connectors ..... 0-40 GHz
All other In-Series Adapters, Semi-Rigid Right Angle Cabled Connectors,
Field Replaceable Connectors, EndLaunch Connectors, Hermetic Feedthroughs ..... 0-18 GHz
PC Mount Connectors..... 0-12 GHz

**VSWR:** (maximum)

| | | | | |
|---|---|---|---|---|
| Bullet Adapter (.254 length)..... | 0-18 GHz<br>1.10 | 18-23 GHz<br>1.15 | 23-26.5 GHz<br>1.30 | 26.5-40 GHz<br>1.70 |
| Semi-Rigid Straight Cabled Connectors..... | 0-18 GHz<br>20 | 18-26.5 GHz<br>1.35 | 26.5-40 GHz<br>1.70 | |
| All other In-Series Adapters ..... | 0-4 GHz<br>1.10 | 4-12 GHz<br>1.15 | 12-18 GHz<br>1.20 | |
| Semi-Rigid Right Angle Cabled Connectors..... | 0-18 GHz<br>1.20 | | | |
| Field Replaceable Connectors (typical, measured back to back with seal pin..... | 0-18 GHz | | | |
| Un-cabled Connectors (dependant on application)..... | Not Applicable<br>1.15 | | | |

**Insertion Loss:** (dB maximum, tested at 10 GHz)

| | |
|---|---|
| In-Series Adapters, Field Replaceable Connectors | 0.10 √ F (GHz) |
| Semi-Rigid Cabled Connectors | 0.12 √ 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 7 MHz
**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 2.5 GHz)

| | |
|---|---|
| Cabled and Field Replaceable Connectors | -80 |
| In-Series Adapters | -65 |
| All other Un-cabled Connectors | Not Applicable |

# SPECIFICATIONS

## MECHANICAL SPECIFICATIONS

**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 Mit (SM and CM)..... 2.0

**Disengagement Force:** (pounds minimum, mated pair)

- Full Detent (FD)..... 5.0
- Limited Detent (LD) ..... 2.0
- Smooth Bore and Catcher's Mit (SM and CM)..... 0.5

**Mated Radial Misalignment:** (inches maximum allowed, female adapters only)

- Between Centerlines of Mating Planes (FD,LD, SM) ..... 010
- Between Centerlines of Mating Planes (CM only)..... 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 Mit (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 (.086 Semi-Rigid) | 30 | 16.0 |
| Cabled Connectors for M17/151 (.047 Semi-Rigid) | 20 | N/A |

*Or cable breaking strength, whichever is less

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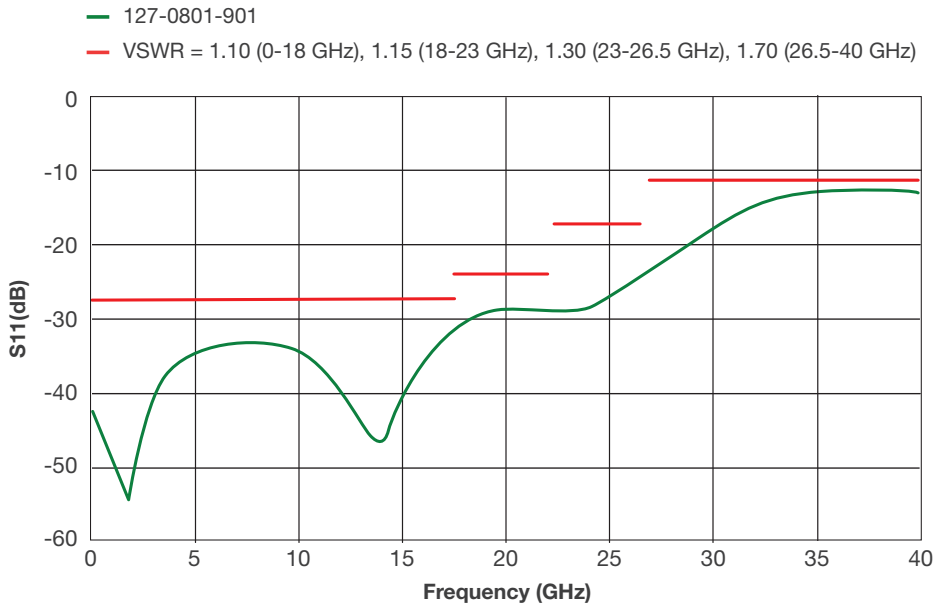
## TypicalMeasured Return Loss
## Bullet Adapter 127-0901-801



# SPECIFICATIONS

## ENVIRONMENTAL SPECIFICATIONS

(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

**Shock (specified pulse):** MIL-STD-202, Method 213, Condition I

**Vibration:** MIL-STD-202, Method 204, Condition D

**Moisture Resistance:** MIL-STD-202, Method 106 (except step 7b omitted)

## MATERIAL SPECIFICATIONS

**Spring Finger (female) and End Launch (male) Bodies:** Beryllium Copper per ASTM B196, Gold* plated per MIL-DTL-45204 (.00005" min)

**Hermetic Seal Bodies (male):** Kovar Alloy per ASTM F15, Gold* plated per MIL-DTL-45204 (.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 (.00005" min)

**Hermetic Seal Center Pins:** Kovar Alloy per ASTM F15, Gold* plated per MIL-DTL-45204 (.00005" min)

**EMI/Anti-Rock Rings:** Beryllium Copper per ASTM B196, Gold* plated per MIL-DTL-45204 (.00003" min)

**PC Mount Legs:** Brass per ASTM B16, Gold* plated per MIL-DTL-45204 (.00003" min)

**Connector and Adapter Insulators:** PTFE per ASTM D1710

**Hermetic Seal Glass:** Corning 7070

*All gold plated parts include a .00005" min nickel barrier layer.

# MOUNTING HOLES

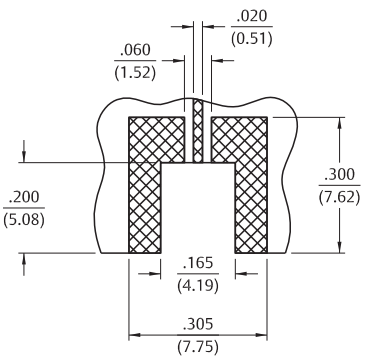



Fig 1

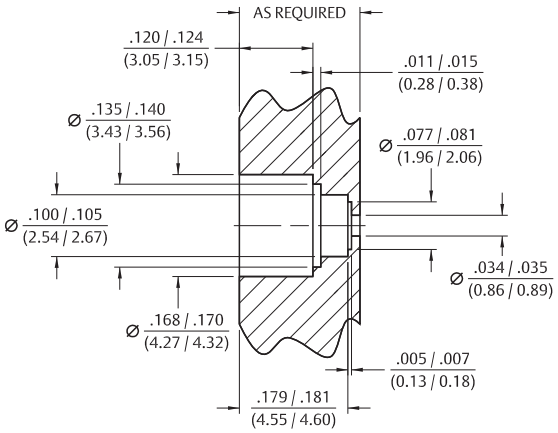



Fig 2

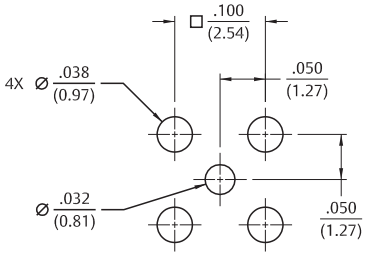
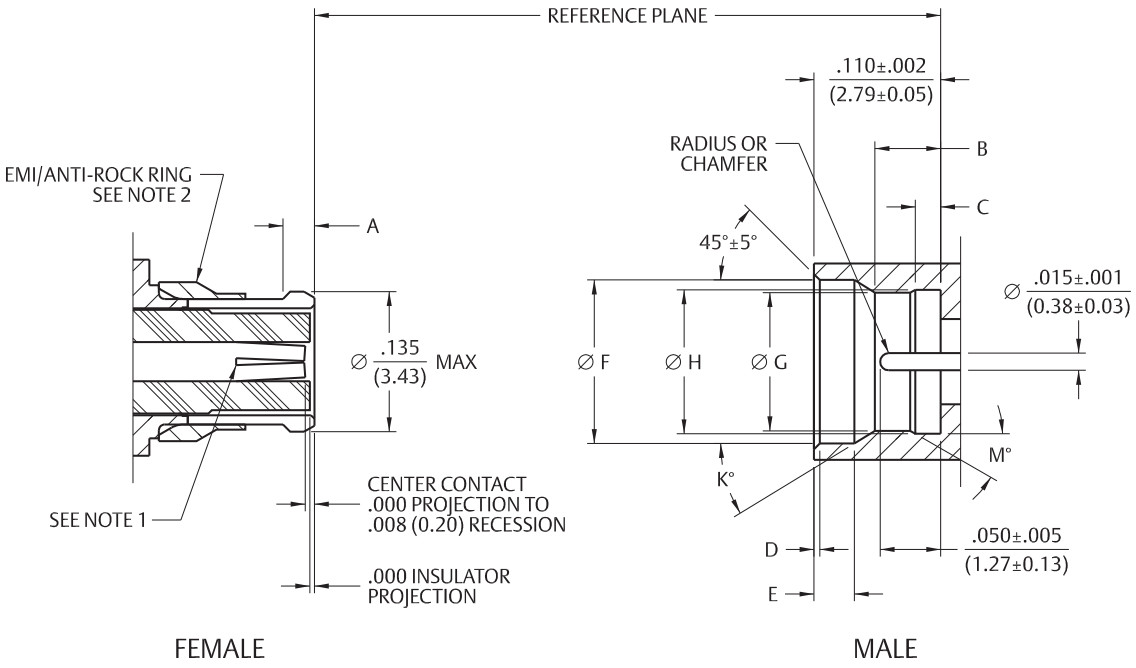



Fig 3

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

## Mating Engagement for SMP Series perMIL-STD-348A




Notes:

1. Socket to accept mating pin Ø.015±.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 | .025 (0.64) | .035 (0.89) | .018 (0.46) | .025 (0.64) |

## SMP Male Connector Interface

| Dimension | Full Detent | | Limited Detent | | Smooth Bore | | Catcher's Mit | |
|---|---|---|---|---|---|---|---|---|
| | Minimum | Maximum | Minimum | Maximum | Minimum | Maximum | Minimum | Maximum |
| B | .051 (1.30) | .057 (1.45) | .054 (1.37) | .060 (1.52) | .059 (1.50) | .065 (1.65) | N/A | N/A |
| C | .0205 (0.52) | .0235 (0.60) | .0205 (0.52) | .0235 (0.60) | N/A | N/A | N/A | N/A |
| D | .003 (0.08) | .008 (0.20) | .003 (0.08) | .008 (0.20) | .003 (0.08) | .008 (0.20) | .043 (1.09) | .047 (1.19) |
| E | .033 (0.84) | .037 (0.94) | .033 (0.84) | .037 (0.94) | .033 (0.84) | .037 (0.94) | N/A | N/A |
| F | .139 (3.53) | .145 (3.68) | .139 (3.53) | .145 (3.68) | .139 (3.53) | .145 (3.68) | .123 (3.12) | .127 (3.23) |
| G | .114 (2.90) | .118 (3.00) | .118 (3.00) | .122 (3.10) | .123 (3.12) | .127 (3.23) | N/A | N/A |
| H | .124 (3.15) | .126 (3.20) | .124 (3.15) | .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 |

# APPLICATION

## Straight Solder Type Cabled Female

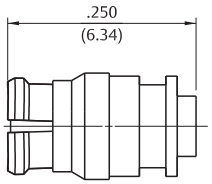



Fig 1

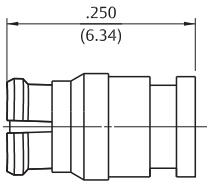
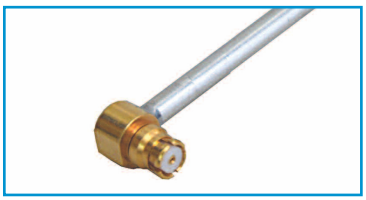


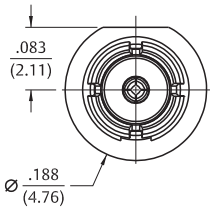

Fig 2

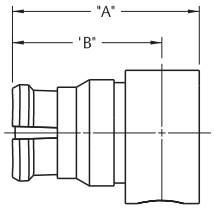
| Cable Type | VSWR & Freq. Range* | Gold Plated | Figure |
|---|---|---|---|
| M17/151, .047 Semi-Rigid | 1.20 Max 0-18 GHz,<br>1.35 Max 18-26.5 GHz,<br>1.70 Max 26.5-40 GHz | 127-0692-001 | 1 |
| RG-405, .086 Semi-Rigid | 1.20 Max 0-18 GHz,<br>1.35 Max 18-26.5 GHz,<br>1.70 Max 26.5-40 GHz | 127-0693-001 | 2 |

* Specifications dependant on cable ratings

## Right Angle Solder Type Cabled Female

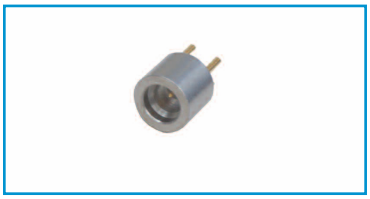


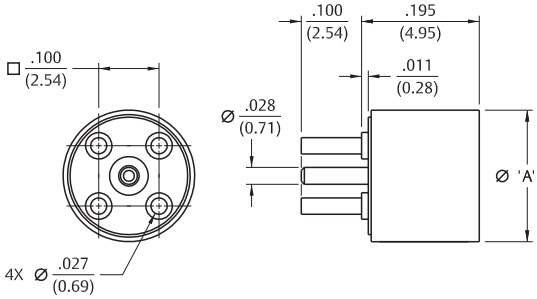



| Cable Type | VSWR & Freq. Range | Gold Plated | "A" | "B" |
|---|---|---|---|---|
| M17/151, .047 Semi-Rigid | 1.20 Max 0-18 GHz | 127-0692-101 | .248 (6.30) | .197 (5.00) |
| RG-405, .086 Semi-Rigid | 1.20 Max 0-18 GHz | 127-0693-101 | .271 (6.88) | .209 (5.31) |

## Straight PCMountMale Receptacle






| Interface | Freq. Range | Passivated* | "A" |
|---|---|---|---|
| Full Detent | 0-12 GHz | 127-0701-201 | .218 (5.54) |
| Limited Detent | 0-12 GHz | 127-1701-201 | .218 (5.54) |
| Smooth Bore | 0-12 GHz | 127-2701-201 | .218 (5.54) |
| Catcher's Mit | 0-12 GHz | 127-3701-201 | .234 (5.94) |

* Base and legs Gold plated brass

Mounting hole layout figure 3 on page 7.

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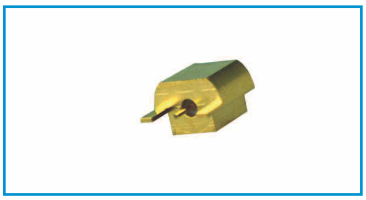
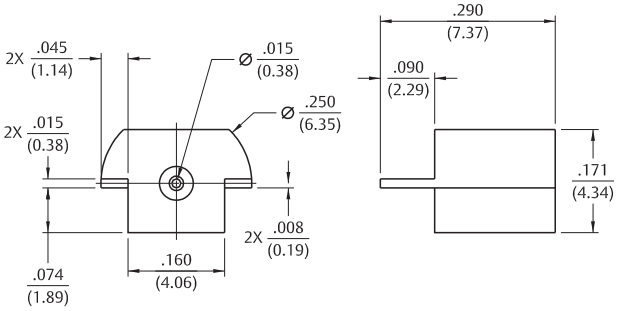
# APPLICATION

## End Launch Male Receptacle – Surface Mount

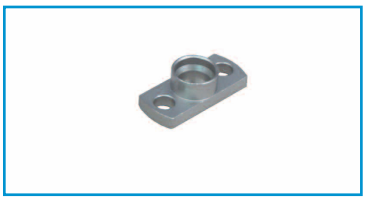


| Interface | Freq. Range | Gold Plated | Figure |
|---|---|---|---|
| Full Detent | 0-18 GHz | 127-0701-801 | Stock |
| Full Detent | 0-18 GHz | 127-0701-802 | Tape and Reel -1000 pieces |
| Limited Detent | 0-18 GHz | 127-1701-801 | Stock |
| Limited Detent | 0-18 GHz | 127-1701-802 | Tape and Reel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

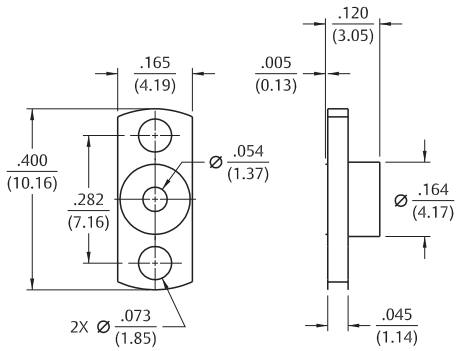



Mounting hole layout figure 1 on page 7.

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

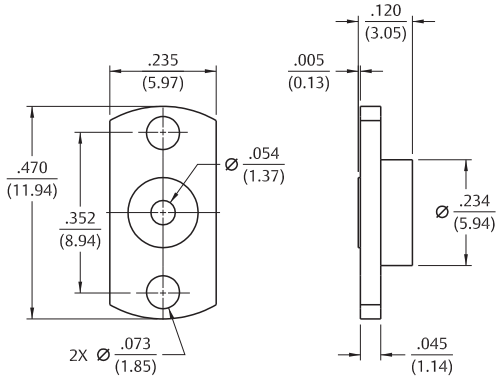


| Interface | Passivated |
|---|---|
| Full Detent | 127-0701-602 |
| Limited Detent | 127-1701-602 |
| Smooth Bore | 127-2701-602 |



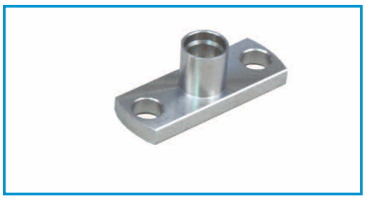

## 2-Hole Flange Mount Male Catcher's Mit Shroud - Without Contact

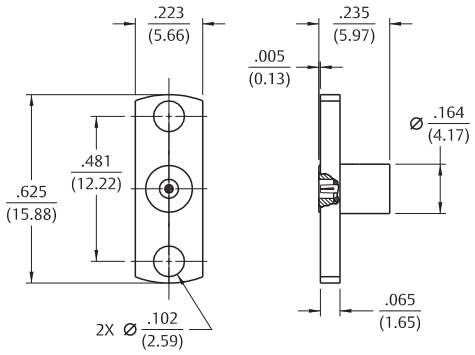
| Interface | Passivated |
|---|---|
| Catcher's Mit | 127-3701-602 |



# APPLICATION

## 2-Hole Flange Mount Male Field Replaceable

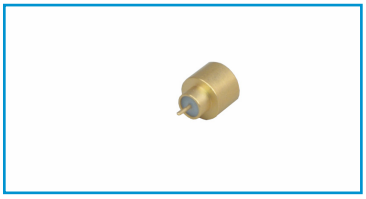


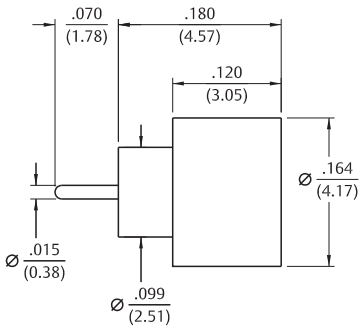



| Interface | VSWR & Freq. Range* | Passivated | Accepts Pin Size |
|---|---|---|---|
| Full Detent | 1.15 Typical 0-18 GHz | 127-0701-612 | .012 (.030) |
| Limited Detent | 1.15 Typical 0-18 GHz | 127-1701-612 | .012 (.030) |
| Smooth Bore | 1.15 Typical 0-18 GHz | 127-2701-612 | .012 (.030) |

* Two connectorsmated back to back with hermetic seal fixture

## Hermetic Seal Male

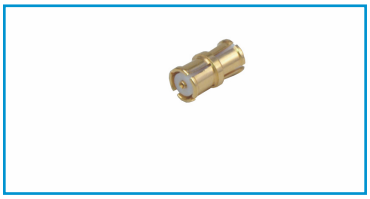


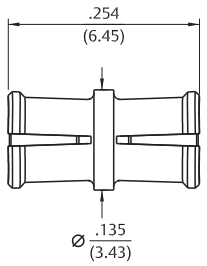



| Interface | Freq. Range | Gold plated |
|---|---|---|
| Full Detent | 0-18 GHz | 127-0701-601 |
| Limited Detent | 0-18 GHz | 127-1701-601 |
| Smooth Bore | 0-18 GHz | 127-2701-601 |

Mounting hole layout figure 2 on page 7.

## Female to Female Bullet Adapter






| VSWR & Freq. Range | Gold plated |
|---|---|
| 1.10 Max 0-18 GHz,<br>1.15 Max 18-23 GHz,<br>1.30 Max 23-26.5 GHz,<br>1.70 Max 26.5-40 GHz | 127-0901-801 |

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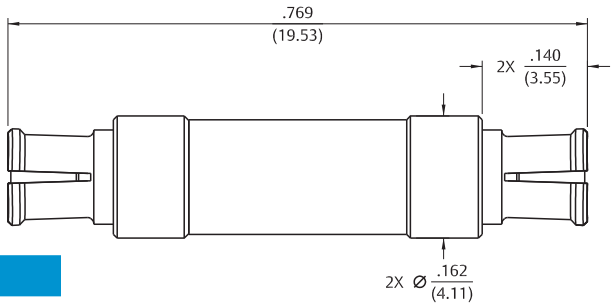
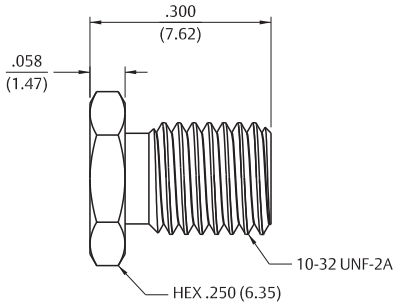
# APPLICATION

## Female to Female Adapter




| VSWR & Freq. Range | Gold plated |
|---|---|
| 1.10 Max 0-4 GHz,<br>1.15 Max 4-12 GHz,<br>1.20 Max 12-18 GHz | 127-0901-811 |

## Male to Male Catcher's Mit Adapter

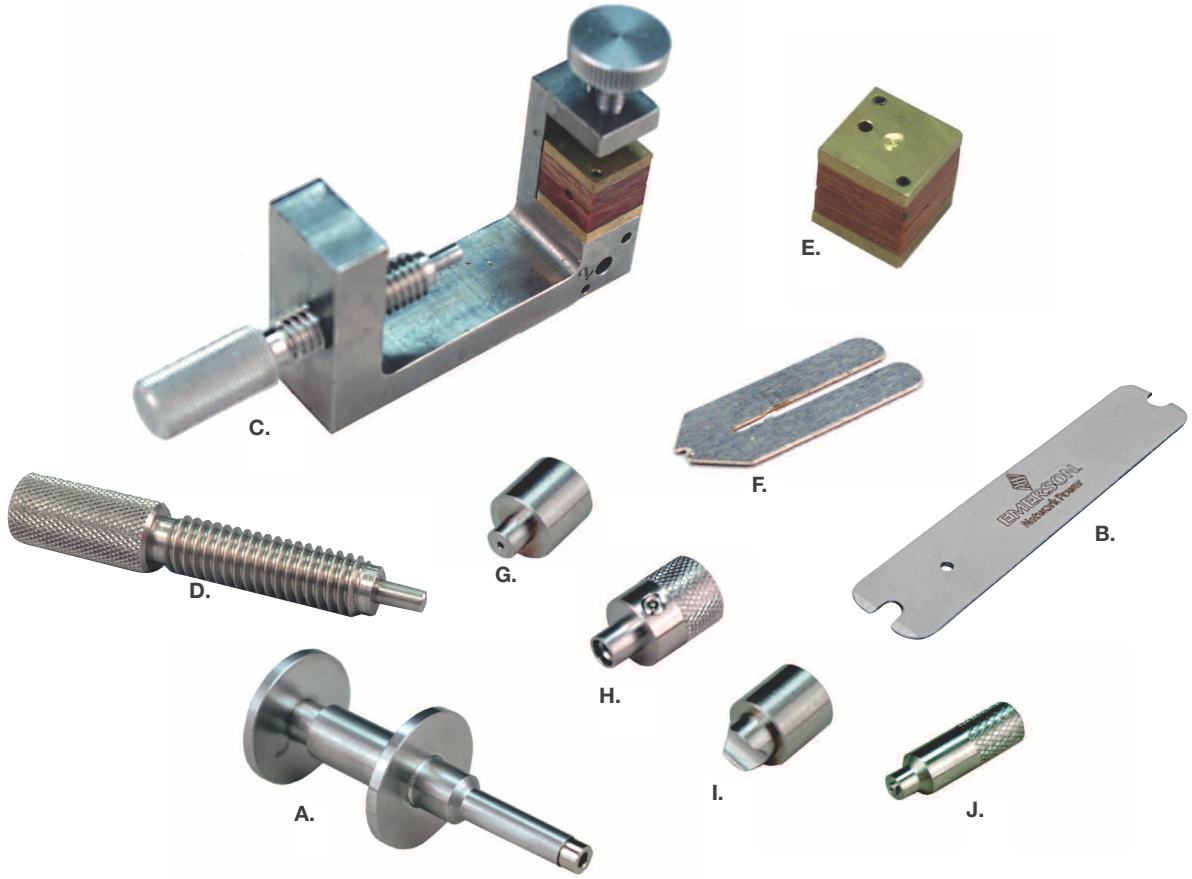



| Interface | VSWR & Freq. Range | Passivated |
|---|---|---|
| Full Detent | 1.10 Max 0-4 GHz,<br>1.15 Max 4-12 GHz,<br>1.20 Max 12-18 GHz | 127-0901-821 |
| Limited Detent | 1.10 Max 0-4 GHz,<br>1.15 Max 4-12 GHz,<br>1.20 Max 12-18 GHz | 127-1901-822 |
| Smooth Bore | 1.10 Max 0-4 GHz,<br>1.15 Max 4-12 GHz,<br>1.20 Max 12-18 GHz | 127-2901-821 |

# ASSEMBLY TOOLS

## SMP Customer Tooling

Accurate assembly of the Semi-Rigid Cabled Connectors is obtained with the tools listed below. Industry standard devices are used if possiblefor customer convenience and tool compatibility.




| Item | Description | Park 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 .086” OD Cable<br>Semi-Rigid Cable Clamp Inserts for .047” OD Cable | 140-0000-964<br>140-0000-997 |
| F | Solder Shim for .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<br>SMP LD Shroud Centering Tool<br>SMP SB Shroud Centering Tool | 127-0000-905<br>127-0000-906<br>127-0000-907 |

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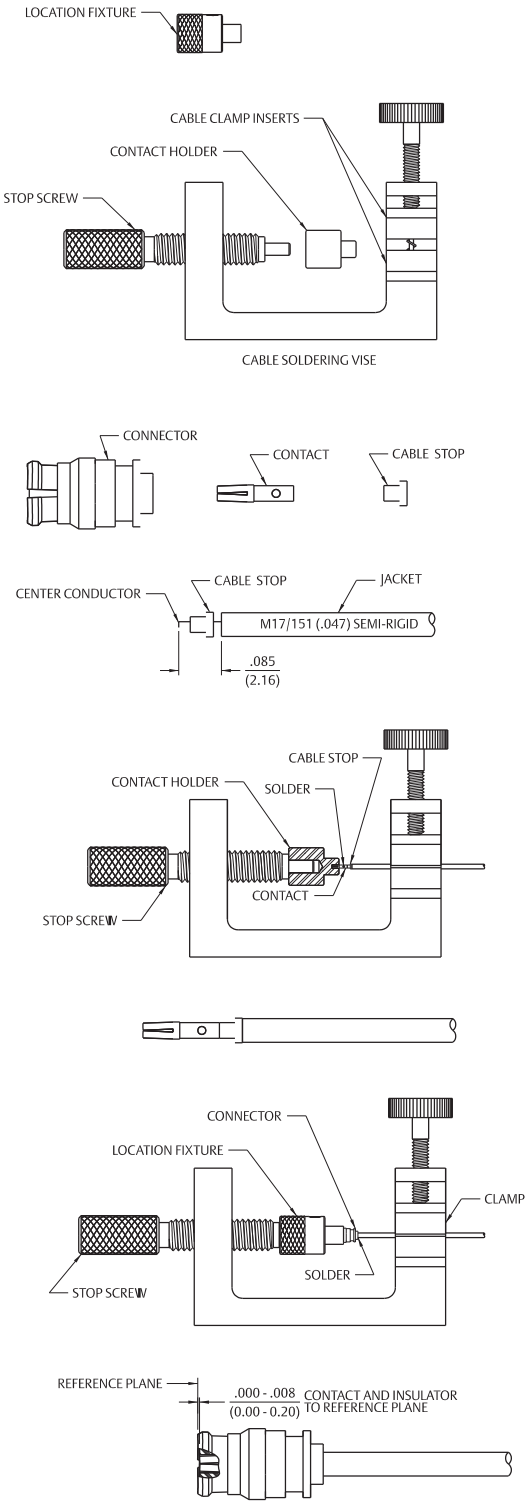
# ASSEMBLY INSTRUCTIONS

## SMP Straight Female Solder Style for .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 debrisfrom prepared cable.
3. Insert center conductor into cable stop as shown and place contact onto center conductor.
4. Insert contact into contact holderfixture and clamp cable in vise. Tighten stop screw until light pressure is applied between con-tact, cable stop and cable jacket.
5. Solder contact to center conductor through solder hole using .016 (0.41) diameterflux core solder wire or solder paste. Use a minimum amount of solder and heatfor a good joint. Do not allow heat to build upfor a long period of time as cable stop may melt.
6. After solder joint has cooled, remove cablefrom vise. Remove any excess solderfrom contact with a sharp blade and clean all debrisfrom 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 locationfixture and clamp cable in vise. Make sure connector assembly isfully engaged within locationfixture. 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 heatfor afullfillet joint. Allow assembly to cool before removing connectorfrom vise and locationfixture. Best results are obtained when contact location isflush to .004 (0.10) recessedfrom reference plane. Interface locationfixture is pre-set atfactory, but can be adjusted to control location.

| Cable Group | Part Number |
|---|---|
| MIL-C-17/151, .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 |



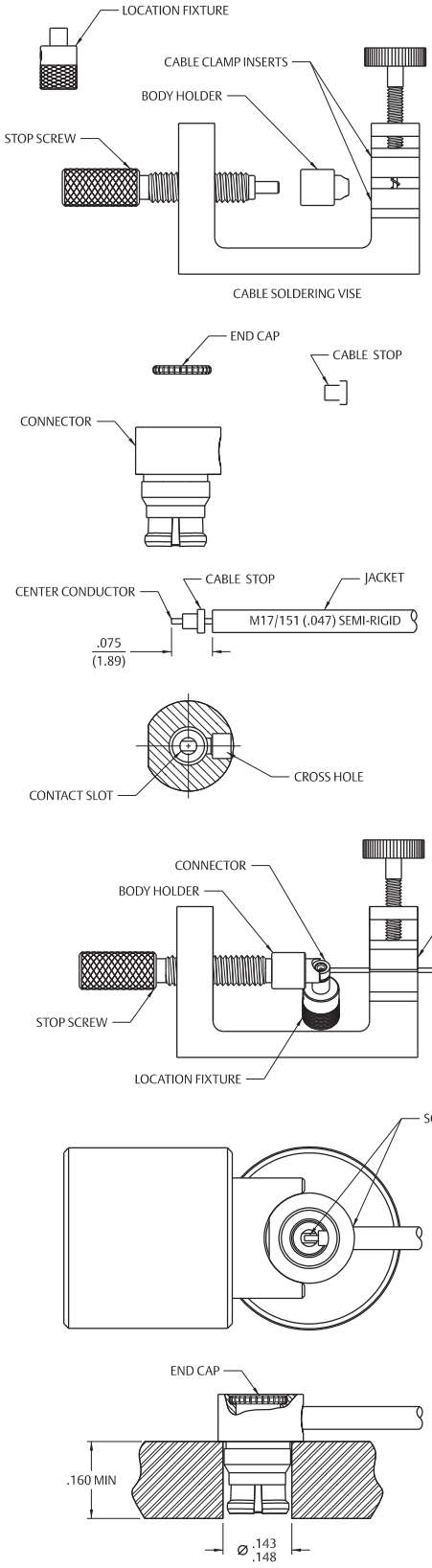
# ASSEMBLY INSTRUCTIONS

## SMP Right Angle Female Solder Style for .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 debrisfrom 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 locationfixture and clamp cable in vise using body holderfixture 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 heatfor 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 afullfillet joint. Take care so that solder does notflow onto anti-rock ring or into rear access port. Allow assembly to cool before removing connectorfrom vise and locationfixture.
7. Using afixture plate as shown, press end cap into rear access port using a .156 (3.96) diameterflat punch untilfully seated within body counter bore.
8. Best results are obtained when contact location isflush to .004 (0.10) recessedfrom reference plane. Interface locationfixture is pre-set atfactory, but can be adjusted to control location.

| Cable Group | Part Number |
|---|---|
| MIL-C-17/151, .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 |



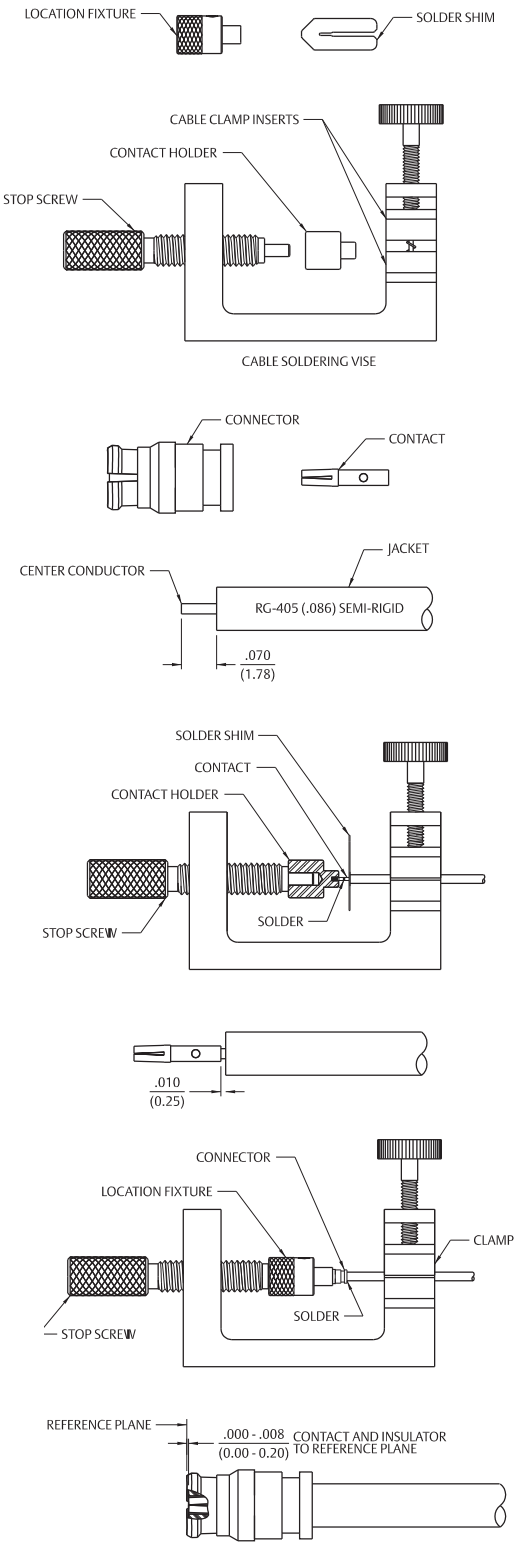
# ASSEMBLY INSTRUCTIONS

## SMP Straight Female Solder Style for .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 debrisfrom prepared cable.
3. Place contact onto center conductor, insert solder shim between cable jacket and contact.
4. Insert contact into contact holderfixture and clamp cable in vise. Tighten stop screw until light pressure is applied between con-tact, solder shim and cable jacket.
5. Solder contact to center conductor through solder hole using .016 (0.41) diameterflux core solder wire or solder paste. Use a minimum amount of solder and heatfor a good joint. Do not allow heat to build upfor a long period of time as cable dielectric will expand.
6. After solder joint has cooled, remove solder shim and cablefrom vise. Remove any excess solderfrom contact with a sharp blade and clean all debrisfrom 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 locationfixture and clamp cable in vise. Make sure connector assembly isfully en-gaged within locationfixture. Tighten stop screw until light pres-sure is applied between connector assembly and cable jacket.
8. 8. Solder end of connector body to cable jacket, using a minimum amount of solder and heatfor afullfillet joint. Allow assembly to cool before removing connectorfrom vise and locationfixture. Best results are obtained when contact location isflush to .004 (0.10) recessedfrom reference plane. Interface locationfixture is pre-set atfactory, but can be adjusted to control location.

| Cable Group | Part Number |
|---|---|
| RG-405, .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 |



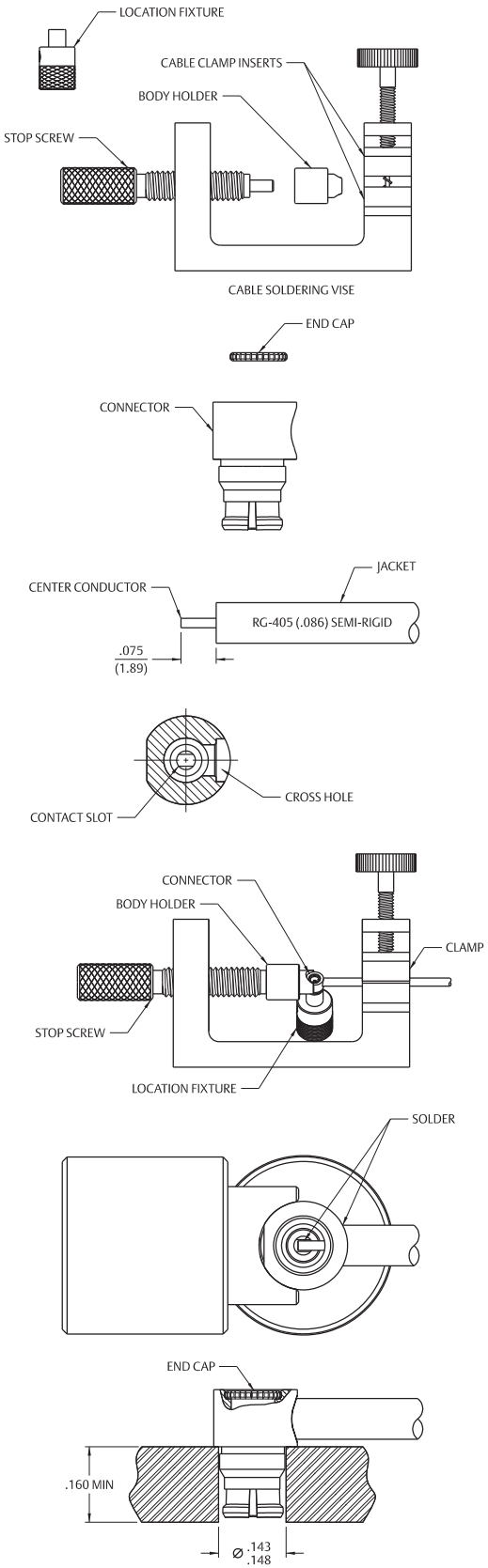
# ASSEMBLY INSTRUCTIONS

## SMP Right Angle Female Solder Style for .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 debrisfrom 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 locationfixture and clamp cable in vise using body holderfixture 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 heatfor 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 afullfillet joint. Take care so that solder does notflow onto anti-rock ring or into rear access port. Allow assembly to cool before removing connectorfrom vise and locationfixture.
7. Using afixture plate as shown, press end cap into rear access port using a .156 (3.96) diameterflat punch untilfully seated within body counter bore.
8. Best results are obtained when contact location isflush to .004 (0.10) recessedfrom reference plane. Interface locationfixture is pre-set atfactory, but can be adjusted to control location.

| Cable Group | Part Number |
|---|---|
| RG-405, .086 Semi-Rigid | 127-0693-101 |

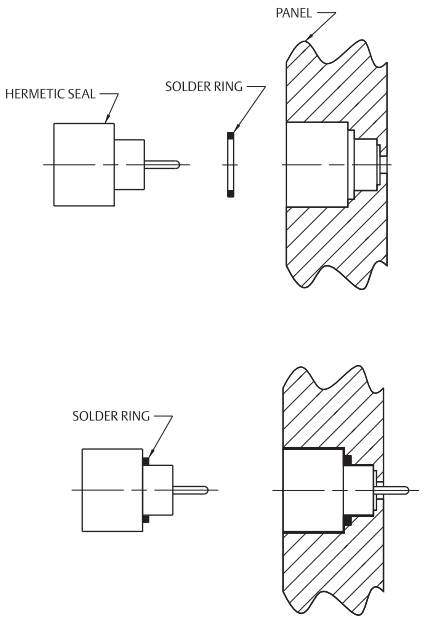
| Tool | Part Number |
|---|---|
| Cable Vise | 140-0000-962 |
| Stop Screw | 140-0000-981 |
| Clamp Inserts | 140-0000-964 |
| Body Holder | 127-0000-904 |
| Interface Location Fixture | 127-0000-903 |



# ASSEMBLY INSTRUCTIONS

## SMP Hermetic Seal Installation

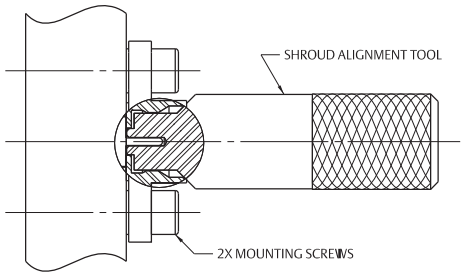
1. Prepare housing panel perfigure 2 as shown on page 7.
2. Install solder ring on hermetic seal as shown. Recommended ring size is .103 (2.62) ID x .128 (3.25) OD x .015 (0.38) Thick.
3. Solder in place as shown.




| 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, alignflange mount with mounting holes in panel. Installfasteners 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 |

# COMPETITOR CROSS REFERENCE

| Description | Johnson | Tensolite | Corning Gilbert | Micro-Mode | SV Microwave | AEP | Rosenberger |
|---|---|---|---|---|---|---|---|
| Straight FemaleM17/151 (.047 SR) Cabled | 127-0692-001 | P651-1CC | A014-B11-01 | MMSP-6120 | 1203-4000 | 7500-1582-011 | 19K101-270E4 |
| Straight Female RG 405 (.086 SR) Cabled | 127-0693-001 | P651-2CC | A014-D11-01 | MMSP-2508 | 1204-4000 | 7500-1562-010 | 19K101-271E4 |
| Right Angle FemaleM17/151 (.047 SR) Cabled | 127-0692-101 | P652-1CC | A015-B11-01 | MMSP-6968 | 1213-4006 | 7501-1562-011 | 19K202-270E4 |
| Right Angle Female RG 405 (.086 SR) Cabled | 127-0693-101 | P652-2CC | A015-D11-01 | MMSP-2598 | 1214-4001 | 7501-1562-010 | 19K202-271E4 |
| Field Replaceable .012 Socket 2 Hole Flange Male FD | 127-0701-612 | P836-4CCF | | | SF1250-6000 | | |
| Field Replaceable .012 Socket 2 Hole Flange Male LD | 127-1701-612 | P836-5CCF | | | | | |
| Field Replaceable .012 Socket 2 Hole Flange Male SB | 127-2701-612 | P836-6CCF | | | | | |
| Adapter Bullet Female/Female .254 | 127-0901-801 | P650-1CC | A1A1-0001-01 | MMSP-2500 | 1290-4004 | 5280-1502-000 | 19K101-K00E4 |
| Adapter Female/Female .769 | 127-0901-811 | P617-1CC | | MMSP-3829 | 1290-4007 | 5280-1502-001 | 19K115-K00E4 |
| Adapter Male CM/Male FD | 127-0901-822 | P912-1CCSF | A3A6-0539-01 | | | | |
| Adapter Male CM/Male LD | 127-1901-822 | P912-2CCSF | | | | | |
| Adapter Male CM/Male SB | 127-2901-822 | P912-3CCSF | | | SF1293-6004 | | |
| Shroud 2 Hole Flange .165 Wide x .400 High FD | 127-0701-602 | P670-3SF | A001-A23-04 | MMSP-2514 | SF1254-6006 | | |
| Shroud 2 Hole Flange .165 Wide x .400 High LD | 127-1701-602 | P672-3SF | A001-A24-04 | MMSP-6095 | SF1254-6007 | | |
| Shroud 2 Hole Flange .165 Wide x .400 High SB | 127-2701-602 | P673-3SF | A001-A25-04 | MMSP-6067 | SF1254-6008 | | |
| Shroud 2 Hole Flange .235 Wide x .470 High CM | 127-3701-602 | P671-1SF | | | | | |
| PCMount Straight .218 OD .100 Legs Male FD | 127-0701-201 | P654-5CC | A008-L33-01 | MMSP-7448 | SF1287-6001 | | |
| PCMount Straight .218 OD .100 Legs Male LD | 127-1701-201 | P654-6CC | A008-L34-01 | MMSP-7449 | | | |
| PCMount Straight .218 OD .100 Legs Male SB | 127-2701-201 | P654-7CC | A008-L35-01 | | | | |
| PCMount Straight .235 OD .100 LegsMale CM | 127-3701-201 | P654-8CC | | | | | |
| End Launch SurfaceMountMale FD | 127-0701-801 | P606-1CC | A010-L13-02 | MMSP-7457 | | | |
| End Launch SurfaceMountMale LD | 127-1701-801 | P606-2CC | A010-L14-02 | MMSP-3805 | | | 19S202-40ME4 |
| End Launch SurfaceMountMale SB | 127-2 701-801 | P606-3CC | A010-L15-02 | MMSP-7347 | | | |
| Hermetic Feedthrough ShroudMale FD | 127-0711-601 | P840-9CC | A007-L43-01-70 | MMSP-2771 | | | |
| Hermetic Feedthrough ShroudMale LD | 127-1711-601 | P794-2CC | A007-L44-01-70 | MMSP-2875 | | | |
| Hermetic Feedthrough ShroudMale SB | 127-2711-601 | | A007-L45-01-70 | MMSP-2979 | | | |

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