



## SMB/SMB-LOCK/SMC

R114/R117/R112



Mob: +91 7217885948

[www.rfconnector.in](http://www.rfconnector.in)

[pradeep@rfconnector.in](mailto:pradeep@rfconnector.in)



[www.rfconnector.in](http://www.rfconnector.in)

Plot no. 845, DSIIDC Industrial Area KHASRA NO. 33/23 (0-7) & 37/4 (0-10) Gali no. 6, near Harnandi dharam kanta  
Mundka Industrial Area, New Delhi, Delhi, 110041



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*Section 6 Table of Contents***SMB**

|                            |              |
|----------------------------|--------------|
| Introduction.....          | 6-4 to 6-5   |
| Interface.....             | 6-6          |
| Characteristics.....       | 6-7 to 6-8   |
| Plugs.....                 | 6-8 to 6-11  |
| Jacks.....                 | 6-10 to 6-12 |
| Bulkhead Jacks.....        | 6-12 to 6-14 |
| Receptacles.....           | 6-14 to 6-15 |
| PCB Receptacles.....       | 6-15 to 6-16 |
| Adapters.....              | 6-17         |
| Panel Drilling.....        | 6-22         |
| Assembly Instructions..... | 6-22         |

**SMB-LOCK**

|                      |      |
|----------------------|------|
| Introduction.....    | 6-18 |
| Interface.....       | 6-18 |
| Characteristics..... | 6-19 |
| Plugs.....           | 6-20 |

**SMB LIMITED DETENT (SMB-A)**

|                  |      |
|------------------|------|
| Receptacles..... | 6-21 |
|------------------|------|

**SMB SLIDE-ON (SUBGLIS)**

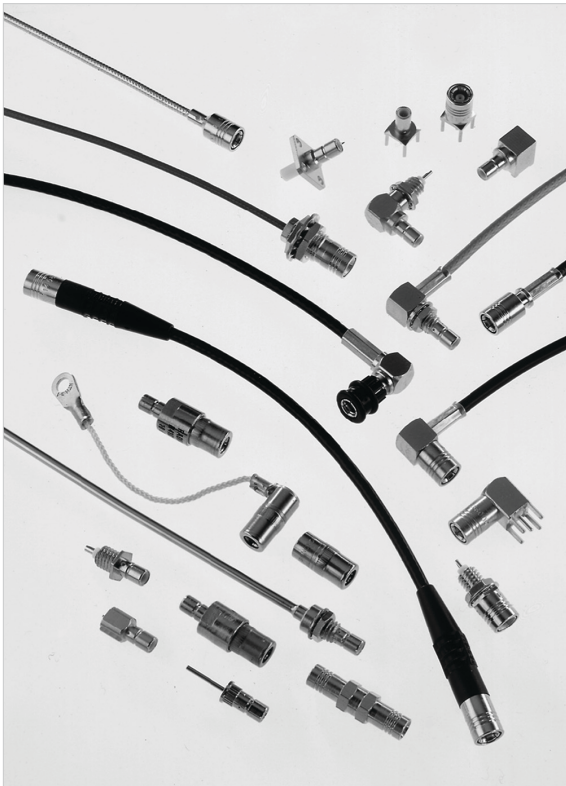
|                            |      |
|----------------------------|------|
| Plugs and Receptacles..... | 6-21 |
|----------------------------|------|

**SMC**

|                      |              |
|----------------------|--------------|
| Introduction.....    | 6-23         |
| Interface.....       | 6-23         |
| Characteristics..... | 6-24         |
| Plugs.....           | 6-25         |
| Jacks.....           | 6-25 to 6-27 |
| Receptacles.....     | 6-27 to 6-28 |
| Adapters.....        | 6-28         |
| Panel Drilling.....  | 6-28         |



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|     |            |
|-----|------------|
| 50Ω | DC - 4 GHz |
|-----|------------|

## INTRODUCTION

### GENERAL

- Subminiature coaxial connectors
- Snap-on coupling
- Plugs have female contacts
- Jacks have male contacts
- Low weight and reduced outline dimensions
- Captive contact (except contrary specification)

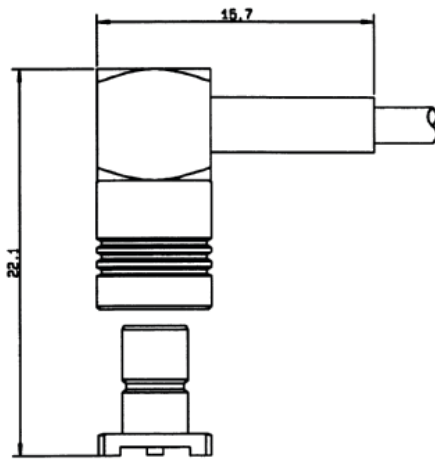
### APPLICABLE STANDARDS

- SMB series MIL-C-39012  
MIL-C-39012/67-72
- IEC 169-10
- CECC 22130
- BS 9210 N0007

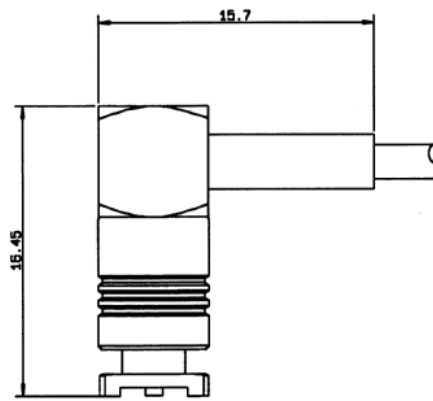
### APPLICATIONS

- Mobile communication systems
- Civil and military telecommunications
- Aeronautics
- Automotive

## PROFILE



UNMATED



MATED



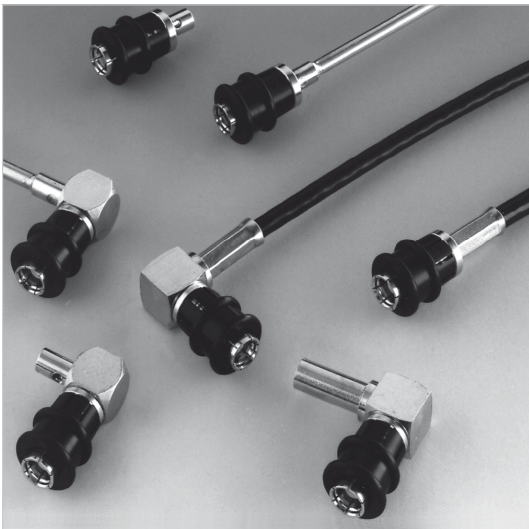
## SMB

SMB snap-on subminiature coaxial connectors provide a fast and reliable connection for high density packaging for applications up to 4 GHz.

Radiall offers a very large range of SMB connectors, including cable plugs and jacks with bulkhead and panel mount configurations, bulkhead and panel mount receptacles; through hole, SMT and edge card receptacles and in-series and between series adapters.

SMB series also features versions with lower mating forces than standard. Four types of interconnection mechanisms are available:

- **SMB: Standard** snap-on connection  
The design permits quick engagement and disengagement.
- **SMB limited detent (SMB-A):** Snap-on connection with low mating force  
The design permits quick engagement and disengagement, and is suitable for printed circuit boards. Radiall offers a range of PCB and bulkhead receptacles with female center contact. The SMB-A receptacles are completely intermateable with standard SMB jacks.
- **SMB slide-on (SUBGLIS):** Slide-on connection  
The design is suitable for back plane and blind mate applications. In this case, we recommend the association of a mobile connector (floating jack / receptacle) with a fixed connector (panel plug / jack, receptacle). The SUBGLIS connectors are completely intermateable with standard SMB and SMB-A connectors and for that, they can be used for test applications.
- **SMB Lock:**  
Plugs (with female center contact) have a coupling nut allowing a reliable lock-on connection (50 N min). This range allows a visual control of the locking system.

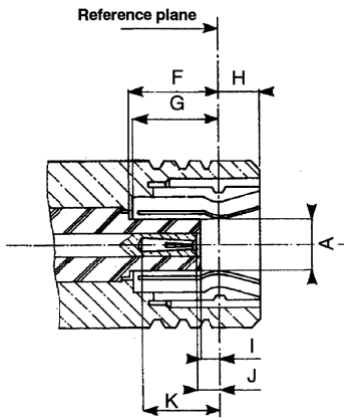


These four types of SMB connectors have the same electrical performance.

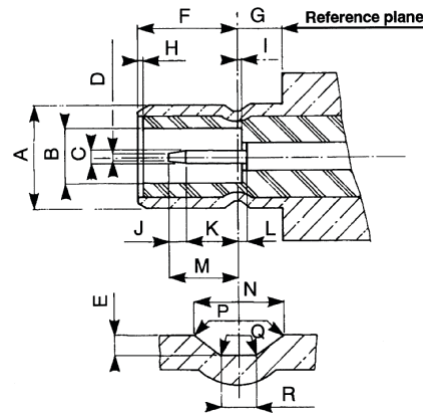


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INTERFACE



**PLUG**  
(with Female Contact)



**JACK**  
(with Male Contact)

| LETTER | MM   |      | INCH |      |
|--------|------|------|------|------|
|        | MIN  | MAX  | MIN  | MAX  |
| A DIA  | -    | 2.06 | -    | .081 |
| F      | 3.58 | -    | .141 | -    |
| G      | 3.58 | -    | .141 | -    |
| H      | -    | 1.63 | -    | .064 |
| I      | 0.18 | -    | .007 | -    |
| J      | 0.18 | 0.94 | .007 | .037 |
| K      | 2.97 | -    | .117 | -    |

| LETTER | MM   |      | INCH |      |
|--------|------|------|------|------|
|        | MIN  | MAX  | MIN  | MAX  |
| A DIA  | -    | 3.71 | -    | .146 |
| B DIA  | 2.08 | -    | .082 | -    |
| C DIA  | 0.48 | 0.53 | .019 | .021 |
| D DIA  | -    | 0.25 | -    | .010 |
| E      | 0.15 | 0.25 | .006 | .010 |
| F      | 3.33 | 3.58 | .131 | .141 |
| G      | 1.65 | -    | .065 | -    |
| I      | -    | 0.18 | -    | .007 |
| J      | 0.25 | -    | .010 | -    |
| K      | 1.32 | -    | .052 | -    |
| L      | -    | 0.18 | -    | .007 |
| M      | -    | 2.97 | -    | .117 |
| N      | 0.69 | 0.94 | .027 | .037 |
| P      | 0.05 | 0.15 | .002 | .006 |
| Q      | -    | 0.13 | -    | .005 |
| R      | 0.28 | 0.38 | .011 | .015 |

CLAMP TYPE CONNECTORS: R 114 xxx 000 = braid retention with cylindrical gasket  
 R 114 xxx 133 = braid retention with V groove gasket



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## CHARACTERISTICS

| TEST / CHARACTERISTICS | MIL-C-39012 A | VALUES / REMARKS |
|------------------------|---------------|------------------|
|------------------------|---------------|------------------|

### ELECTRICAL CHARACTERISTICS

| Impedance                                     |              |       | -    | 50Ω                        |         |            |
|---|--------------|-------|------|----------------------------|---------|------------|
| Frequency Range                               |              |       | -    | DC - 4 GHz                 |         |            |
| V.S.W.R. (typ.)<br>• Straight Models          | Cable Group: | .085" | 3-14 | 1 GHz                      | 2.5 GHz | 4 GHz      |
|   |              | 2     | -    | 1.12                       | 1.22    | 1.33       |
| • Right Angle Models                          | Cable Group: | 2.6   | -    | 1.10                       | 1.22    | 1.33       |
|   |              | .085" | -    | 1.12                       | 1.22    | 1.35       |
| • Right Angle Models                          | Cable Group: | 2     | -    | 1.10                       | 1.18    | 1.26       |
|   |              | 2     | -    | 1.10                       | 1.20    | 1.25       |
| Insertion Loss (typ.) dB<br>• Straight Models | Cable Group: | .085" | 3-27 | 0.05                       | 0.07    | 0.15       |
|   |              | 2     | -    | 0.05                       | 0.10    | 0.25       |
| • Right Angle Models                          | Cable Group: | 2.6   | -    | 0.05                       | 0.05    | 0.05       |
|   |              | .085" | -    | 0.05                       | 0.07    | 0.12       |
| RF Leakage                                    |              |       | 3-26 | -55 dB min from 2 to 3 GHz |         |            |
| Insulation Resistance                         |              |       | 3-11 | 1000 MΩ min                |         |            |
| Contact Resistance                            |              |       | 3-16 | Initial                    |         | After Test |
| • Center Contact (mΩ)                         |              |       | -    | 6                          |         | 8          |
| • Outer Contact (mΩ)                          |              |       | -    | 1                          |         | 1.5        |
| Working Voltage                               |              |       | -    | 2/50                       |         |            |
| • Cable Group                                 |              |       | -    | 250 V rms                  |         |            |
| • At Sea Level                                |              |       | -    | 60 V rms                   |         |            |
| • At 70000 ft (21000 m)                       |              |       | -    | 2.6/50                     |         |            |
| Dielectric Withstanding Voltage               |              |       | 3-17 | 2/50                       |         | 2.6/50     |
| • Cable Group                                 |              |       | -    | 750 V rms                  |         | 1000 V rms |
| • At Sea Level                                |              |       | -    | 185 V rms                  |         | 250 V rms  |
| • At 70000 ft (21000 m)                       |              |       | -    |                            |         |            |
| RF Withstanding Voltage (5 MHz Sine Wave)     |              |       | 3-23 | 2/50                       |         | 2.6/50     |
| • Cable Group                                 |              |       | -    | 500 V rms                  |         | 700 V rms  |
| • At Sea Level                                |              |       | -    |                            |         |            |

### MECHANICAL CHARACTERISTICS

|                          |                    |       |                                |
|--------------------------|--------------------|-------|--------------------------------|
| Durability               |                    | 3-15  | 500 Matings                    |
| Mating / Unmating        |                    | 3-5-1 | Axial force: 62 N max (14 Lbf) |
| Cabling Retention Force  | Cable Group:       | 3-24  | 58 N (13Lbf)<br>110 N (25Lbf)  |
|                          | • 2/50<br>• 2.6/50 |       |                                |
| Center Contact Retention |                    | -     | Axial: 10 N (2.25 Lbf)         |

### ENVIRONMENTAL CHARACTERISTICS

|                            |                                |      |   |
|----------------------------|--------------------------------|------|---|
| Temperature Range          | • Standard Models              | -    | -65 °C / + 165 °C   |
|                            | • Hermetic Sealed Models       | -    | -65 °C / +165 °C  |
|                            | • Models for Semi-Rigid Cables | -    | -65 °C / +105 °C  |
| Combined Climate Tests     |                                | -    | MIL-STD-202, Method 102, Condition C  |
| Thermal Shock              |                                | 3-20 | MIL-STD-202, Method 107, Condition B  |
| High Temperature Endurance |                                | -    | MIL-STD-202, Method 108   |
| Corrosion (Salt Spray)     |                                | 3-13 | MIL-STD-202, Method 101, Condition B, 5%  |
| Vibrations                 |                                | 3-18 | MIL-STD-202, Method 204, Condition B, 15g   |
| Shocks                     |                                | 3-19 | MIL-STD-202, Method 213, Condition B, 75g   |
| Low Pressure               |                                | 3-22 | MIL-STD-202, Method 105, Condition C  |
| Hermetic Seal              |                                | -    | Applied Vacuum 10 <sup>-6</sup> mm of Hg (Torr)<br>Leakage Rate < 10 <sup>-6</sup> atm/cm <sup>3</sup> /s |

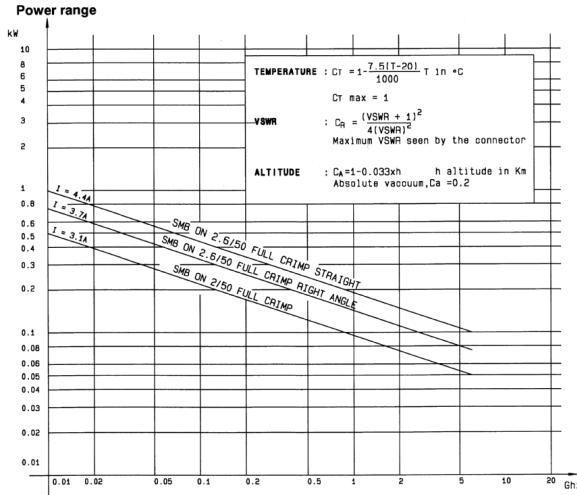
### MATERIALS AND PLATING

|                             | Material                         | Plating               |
|-----------------------------|----------------------------------|-----------------------|
| Body and Center Pin Contact | Half Hard Brass as per QQ-B-626  | Gold or Nickel (Body) |
| Center Socket Contact       | Beryllium Copper as per QQ-C-530 | Gold (Center Contact) |
| Ferrules                    | Brass                            | -                     |
| Insulators                  | PTFE Teflon                      | -                     |
| Gaskets                     | Silicone Elastomer               | -                     |

All dimensions are given in mm.  
Standard packaging: 100 pieces

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### POWER RATING



### PLUGS

#### STRAIGHT PLUGS CRIMP TYPE FOR FLEXIBLE CABLES

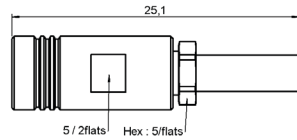


FIG. 1

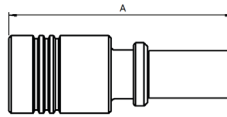


FIG. 2

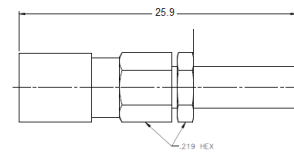


FIG. 3

| CABLE GROUP                           | CABLE GROUP DIA. | PART NUMBER   | FIG. | DIMENSIONS A (MM) | CAPTIVE CENTER CONTACT | FINISH | NOTE       |
|---------------------------------------|------------------|---------------|------|-------------------|------------------------|--------|------------|
| RG178 / RG196                         | 2/50/S           | R114 073 000  | 1    | -                 | Yes                    | Gold   | -          |
| RG174 / RG316 / RG179                 | 2.6/50+75/S      | R114 075 000  |      | -                 |                        |        |            |
|                                       |                  | R114 082 000  | 19.8 |                   |                        |        |            |
| RD316                                 | 2.6/50/D         | R114 083 000  | 2    | 18.4              |                        |        | Full Crimp |
| RG188 / RG179 / RG187 / RG316 / RG174 | 2.6/50+75/S      | R114 086 200  | 3    | 21.35             |                        | -      |            |
| RG178 / RG196                         | 2/50/S           | 2002-1571-002 |      | -                 |                        |        |            |
|                                       |                  | 2002-7571-002 |      | -                 |                        |        |            |
| RD178                                 | 2/50/D           | 2002-1571-005 |      | -                 |                        |        |            |
|                                       |                  | 2002-7571-005 |      | -                 |                        |        |            |
| RG174 / RG316                         | 2.6/50/S         | 2002-1571-003 |      | -                 |                        |        |            |
|                                       |                  | 2002-7571-003 |      | -                 |                        |        |            |
| RD316                                 | 2.6/50/D         | 2002-1571-019 |      | -                 |                        |        |            |
|                                       |                  | 2002-7571-019 | -    |                   |                        |        |            |



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## PLUGS AND JACKS

### STRAIGHT PLUGS CLAMP TYPE FOR FLEXIBLE CABLES

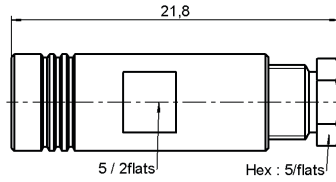
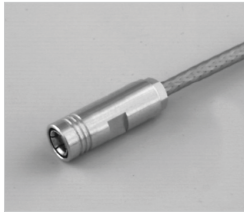


FIG. 1

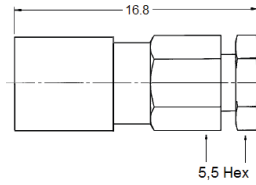


FIG. 2

| CABLE GROUP           | CABLE GROUP DIA. | PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | CAPTIVE CENTER CONTACT |
|-----------------------|------------------|--------------------|----------------------|------|------------------------|
| RG178 / RG196         | 2/50/S           | R114 003 000       | N/A                  | 1    | Yes                    |
| RG174 / RG316 / RG179 | 2.6/50+75/S      | R114 005 000       |                      |      |                        |
| RG178 / RG196         | 2/50/S           | 2002-1551-002      | 2002-7551-002        | 2    |                        |
| RD178                 | 2/50/D           | 2002-1551-005      | -                    |      |                        |
| RG174 / RG316         | 2.6/50/S         | 2002-7551-003      | 2002-7551-003        |      |                        |
| RD316                 | 2.6/50/D         | 2002-7551-019      | 2002-7551-019        |      |                        |

### STRAIGHT PLUG FOR SEMI RIGID CABLES

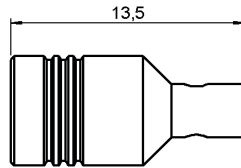


FIG. 1

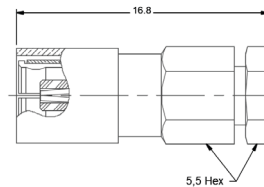


FIG. 2

| CABLE GROUP | CABLE GROUP DIA. | PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | CAPTIVE CENTER CONTACT | NOTE         |
|-------------|------------------|--------------------|----------------------|------|------------------------|--------------|
| RG405       | .085"            | R114 053 000       | -                    | 1    | No                     | Solder Type  |
|             |                  | 2002-1541-010      | 2002-7541-010        |      | Yes                    | Solder Clamp |
| RG402       | .141"            | 2002-1541-003      | 2002-7541-009        | 2    |                        |              |



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**RIGHT ANGLE PLUGS AND JACKS CRIMP TYPE FOR FLEXIBLE CABLES**

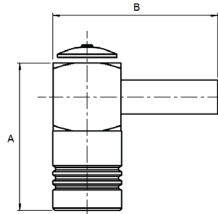
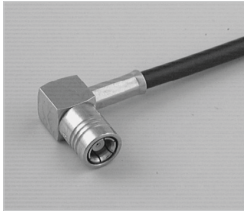


FIG. 1

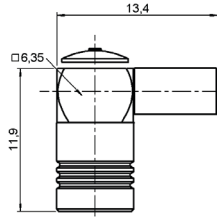


FIG. 2

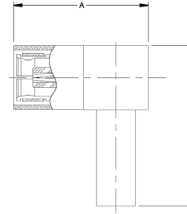


FIG. 3

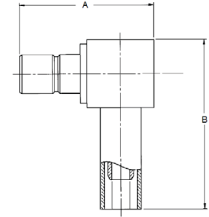


FIG. 4

| CABLE GROUP           | CABLE GROUP DIA. | PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | DIMENSIONS (MM) |      | CAPTIVE CENTER CONTACT | NOTE          |
|-----------------------|------------------|--------------------|----------------------|------|-----------------|------|------------------------|---------------|
|                       |                  |                    |                      |      | A               | B    |                        |               |
| RG178 / RG196         | 2/50/S           | R114 183 000       |                      | 1    | 13.7            | 15.3 |                        | -             |
| RG174 / RG316 / RG179 | 2.6/50+75/S      | R114 185 000       | N/A                  | 2    | -               | -    |                        | Short Version |
|                       |                  | R114 186 000       |                      | 1    | 13.7            | 15.3 |                        | -             |
|                       |                  | R114 186 100       |                      |      | 15.1            | 15.4 |                        | Full Crimp    |
|                       |                  | R114 187 000       |                      |      | 13.7            |      |                        | -             |
| RD316                 | 2.6/50/D         | R114 182 000       |                      |      |                 |      | -                      |               |
| RG178 / RG196         | 2/50/S           | 2105-1521-002      | 2105-7521-002        | 3    | 13.2            | 16   | Yes                    | -             |
|                       |                  | 2141-1521-002      | -                    | 4    | 12.7            |      |                        | -             |
| RD178                 | 2/50/D           | 2105-1521-005      | 2105-7521-005        | 3    | 13.2            |      |                        | -             |
| RG174 / RG316 / RG179 | 2.6/50/S         | 2105-1521-003      | 2105-7521-003        | 3    | 12.7            |      |                        | -             |
|                       |                  | 2141-1521-003      | 2141-7521-003        | 4    | 12.7            |      |                        | -             |
| RD316                 | 2.6/50/D         | 2105-1521-019      | 2105-7521-019        | 3    | 13.2            |      |                        | -             |
|                       |                  | 2141-1521-019      | 2141-7521-019        | 4    | 12.7            |      |                        | -             |



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**RIGHT ANGLE PLUGS AND JACKS CLAMP TYPE FOR FLEXIBLE CABLES**

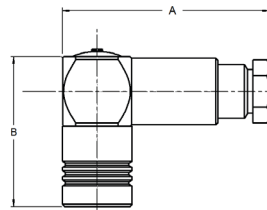


FIG. 1

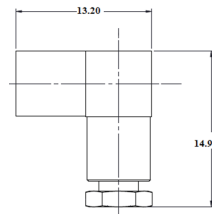


FIG. 2

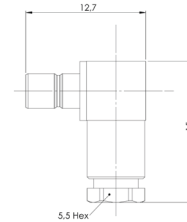


FIG. 3

| CABLE GROUP           | CABLE GROUP DIA. | PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | DIMENSIONS (MM) |      | CAPTIVE CENTER CONTACT |
|-----------------------|------------------|--------------------|----------------------|------|-----------------|------|------------------------|
|                       |                  |                    |                      |      | A               | B    |                        |
| RG178 / RG196         | 2/50/S           | R114 163 000       | N/A                  | 1    | 19              | 13.7 | Yes                    |
|                       | 2.2/50/D         | R114 163 420       |                      |      | 16.7            |      |                        |
| RG174 / RG316 / RG179 | 2.6/50+75/S      | R114 165 000       |                      |      | 19              |      |                        |
| RG178 / RG197         | 2/50/S           | 2005-1551-002      | 2005-7551-002        | 2    | -               | -    |                        |
|                       |                  | 2041-1551-002      | -                    | 3    | -               | -    |                        |
| RG174 / RG316 / RG179 | 2.6/50/S         | 2005-1551-003      | 2005-7551-003        | 2    | -               | -    |                        |
|                       |                  | 2041-1551-003      | 2041-7551-003        | 3    | -               | -    |                        |
| RD316                 | 2.6/50/D         | 2005-1551-019      | -                    | 2    | -               | -    |                        |

**RIGHT ANGLE PLUGS AND JACKS FOR SEMI RIGID CABLES**

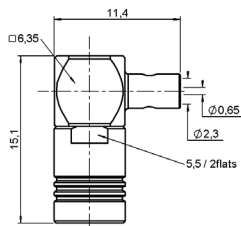


FIG. 1

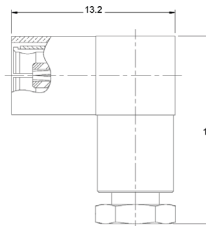


FIG. 2

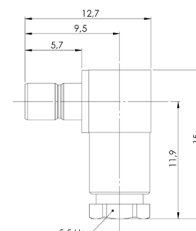


FIG. 3

| CABLE GROUP | CABLE GROUP DIA. | PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | CAPTIVE CENTER CONTACT | NOTE  |
|-------------|------------------|--------------------|----------------------|------|------------------------|---|
| RG405       | .085"            | R114 169 000       | N/A                  | 1    | Yes                    | Cable Bending Required Solder Type for Semi Rigid Cable |
|             |                  | 2005-1541-010      | 2005-7541-010        | 2    |                        |   |
|             |                  | 2041-1541-010      | 2041-7541-010        | 3    |                        |   |
| RG402       | .141"            | 2005-1541-009      | 2005-7541-009        | 2    | Yes                    | Solder Clamp  |
|             |                  | 2041-1541-009      | -                    | 3    |                        |   |



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## JACKS AND BULKHEAD JACKS

### STRAIGHT JACKS CRIMP TYPE FOR FLEXIBLE CABLES

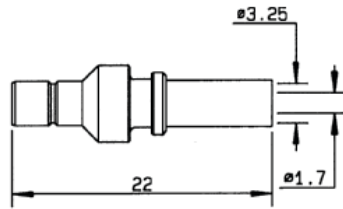


FIG. 1

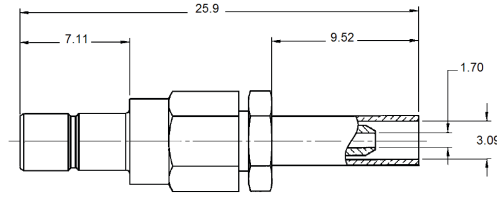


FIG. 2

| CABLE GROUP           | CABLE GROUP DIA. | PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | CAPTIVE CENTER CONTACT | NOTE       |
|-----------------------|------------------|--------------------|----------------------|------|------------------------|------------|
| RG174 / RG316 / RG179 | 2.6/50+75/S      | R114 238 000       | -                    | 1    | Yes                    | Full Crimp |
| RG178 / RG197         | 2/50/S           | 2001-1571-002      | 2001-7571-002        | 2    |                        | Crimp Type |
| RD178                 | 2/50/D           | 2001-1571-005      | -                    |      |                        |            |
| RG174 / RG316 / RG179 | 2.6/50/S         | 2001-1571-003      | 2001-7571-003        |      |                        |            |
| RD316                 | 2.6/50/D         | 2001-1571-019      | 2001-7571-019        |      |                        |            |

### STRAIGHT BULKHEAD JACKS CRIMP TYPE FOR FLEXIBLE CABLES

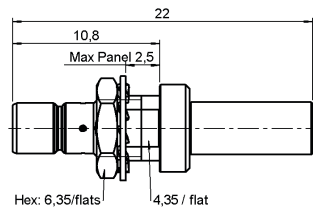


FIG. 1

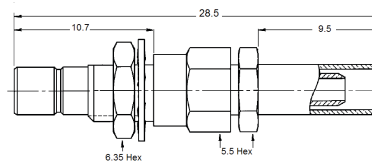


FIG. 2

| CABLE GROUP           | CABLE GROUP DIA. | PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | CAPTIVE CENTER CONTACT | PANEL DRILLING | NOTE                    |
|-----------------------|------------------|--------------------|----------------------|------|------------------------|----------------|-------------------------|
| RG174 / RG316 / RG179 | 2.6/50+75/S      | R114 313 000       | N/A                  | 1    | Yes                    | P08            | Rear Mount / Fill Crimp |
| RG178 / RG197         | 2/50/S           | 2003-1571-002      | 2003-7571-002        | 2    |                        |                |                         |
| RD178                 | 2/50/D           | 2003-1571-005      | 2003-7571-005        |      |                        |                |                         |
| RG174 / RG316 / RG179 | 2.6/50/S         | 2003-1571-003      | 2003-7571-003        |      |                        |                |                         |
| RD316                 | 2.6/50/D         | 2003-1571-019      | 2003-7571-019        |      |                        |                |                         |



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## BULKHEAD JACKS

### STRAIGHT BULKHEAD JACKS CLAMP TYPE FOR FLEXIBLE CABLES

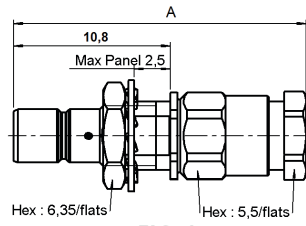


FIG. 1

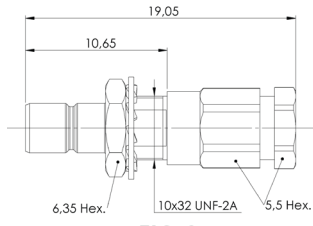


FIG. 2

| CABLE GROUP           | CABLE GROUP DIA. | PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | DIMENSIONS A (MM) | CAPTIVE CENTER CONTACT | PANEL DRILLING | NOTE       |
|-----------------------|------------------|--------------------|----------------------|------|-------------------|------------------------|----------------|------------|
| RG178 / RG196         | 2/50/S           | R114 303 000       | N/A                  | 1    | 25.3              | Yes                    | P08            | Rear Mount |
|                       |                  | R114 303 313       |                      |      | 20.1              |                        |                |            |
| RG174 / RG316 / RG179 | 2.6/50+75/S      | R114 305 000       | 25.3                 |      |                   |                        |                |            |
| RG178 / RG197         | 2/50/S           | 2003-1551-002      | 2003-7551-002        | 2    | -                 |                        |                |            |
| RD178                 | 2/50/D           | 2003-1551-005      | -                    |      | -                 |                        |                |            |
| RG174 / RG316 / RG179 | 2.6/50/S         | 2003-1551-003      | 2003-7551-003        |      | -                 |                        |                |            |
| RD316                 | 2.6/50/D         | 2003-1551-019      | -                    |      | -                 |                        |                |            |

### STRAIGHT BULKHEAD JACK SOLDER TYPE FOR SEMI-RIGID CABLE

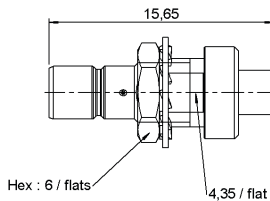
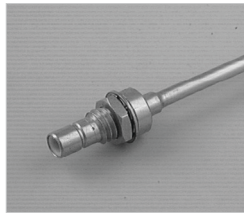


FIG. 1

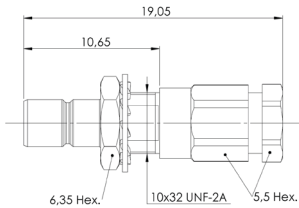
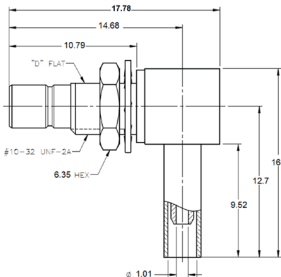


FIG. 2

| CABLE GROUP | CABLE GROUP DIA. | PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | CAPTIVE CENTER CONTACT | PANEL DRILLING | NOTE              |
|-------------|------------------|--------------------|----------------------|------|------------------------|----------------|-------------------|
| RG405       | .085"            | R114 222 000       | -                    | 1    | Yes                    | P08            | -                 |
|             |                  | 2003-1541-010      | 2003-7541-010        | 2    |                        |                |                   |
| RG402       | .141"            | 2003-1541-009      | -                    |      |                        |                | Solder Clamp Type |

### RIGHT ANGLE BULKHEAD CRIMP TYPE FOR FLEXIBLE CABLES



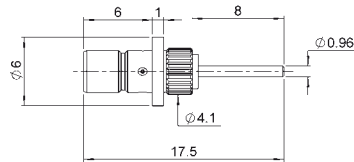
| CABLE GROUP           | CABLE GROUP DIA. | PART NUMBER (GOLD) | PART NUMBER (NICKEL) | CAPTIVE CENTER CONTACT | PANEL DRILLING |
|-----------------------|------------------|--------------------|----------------------|------------------------|----------------|
| RG178 / RG197         | 2/50/S           | 2106-1521-002      | 2106-7521-002        | Yes                    | P08            |
| RD178                 | 2/50/D           | 2106-1521-005      | -                    |                        |                |
| RG174 / RG316 / RG179 | 2.6/50/S         | 2106-1521-003      | 2106-7521-003        |                        |                |
| RD316                 | 2.6/50/D         | 2106-1521-019      | 2106-7521-019        |                        |                |





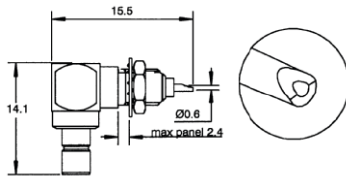
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**STRAIGHT PRESS IN RECEPTACLE (MALE)**



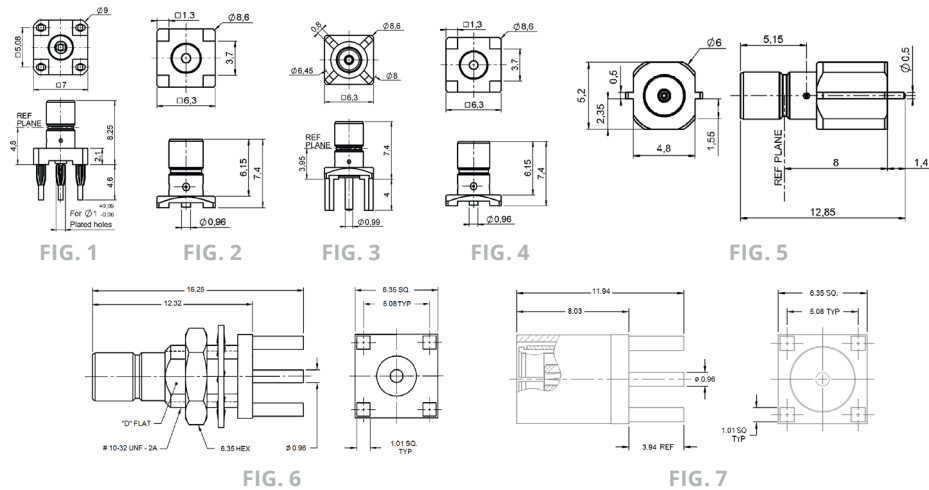
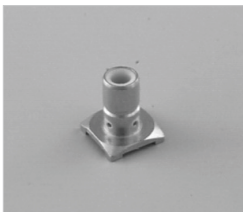
| PART NUMBER  | CAPTIVE CENTER CONTACT | PANEL DRILLING | FINISH |
|--------------|------------------------|----------------|--------|
| R114 504 225 | Yes                    | P10            | Nickel |

**RIGHT ANGLE BULKHEAD RECEPTACLES (MALE CENTER CONTACT)**



| PART NUMBER   | CAPTIVE CENTER CONTACT | PANEL DRILLING | FINISH | NOTE               |
|---------------|------------------------|----------------|--------|--------------------|
| R114 670 000  | Yes                    | P08            | Gold   | Solder Pot Contact |
| 2012-1511-000 |                        |                | Nickel |                    |
| 2012-7511-000 |                        |                |        |                    |

**STRAIGHT PCB RECEPTACLES (MALE AND FEMALE)**



| PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | CAPTIVE CENTER CONTACT | ASSEMBLY INSTRUCTION | PANEL DRILLING | NOTE           |               |               |                              |     |               |
|--------------------|----------------------|------|------------------------|----------------------|----------------|----------------|---------------|---------------|------------------------------|-----|---------------|
| R114 416 020       | N/A                  | 1    | Yes                    | -                    | P02            | Press Fit Pins |               |               |                              |     |               |
| R114 423 000       |                      | 5    |                        | M01                  | -              | -              | SMT Edge Card |               |                              |     |               |
| R114 424 000       |                      | 2    |                        |                      |                |                | -             | -             | SMT                          |     |               |
| R114 424 100       |                      |      |                        |                      |                |                |               |               | SMT / Tape & Reel 100 Pieces |     |               |
| R114 424 120       |                      |      |                        |                      |                |                |               |               | SMT / Tape & Reel 500 Pieces |     |               |
| R114 425 000       |                      | 4    |                        |                      |                |                | -             | P05           | Female Plug                  |     |               |
| R114 426 000       |                      | 3    |                        | -                    | -              | -              | -             |               |                              |     |               |
| R114 426 064       |                      |      |                        |                      |                |                |               |               |                              |     |               |
| 2009-1511-000      |                      |      |                        |                      |                |                |               | 2009-7511-000 | -                            | P04 | No Standoff   |
| 2009-1511-050      |                      |      |                        |                      |                |                |               | 2009-7511-050 | -                            |     | Standoff Legs |
| 2025-1511-000      | 2025-7511-000        | 7    | No Standoff            |                      |                |                |               |               |                              |     |               |
| 2109-1511-000      | 2109-7511-000        | 6    | -                      | -                    | -              | No Standoff    |               |               |                              |     |               |



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RIGHT ANGLE PCB RECEPTACLES (MALE CENTER CONTACT)

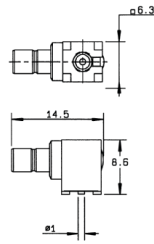
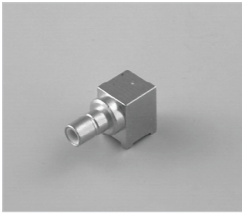


FIG. 1

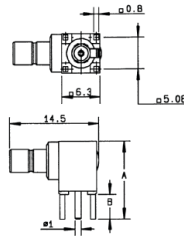


FIG. 2

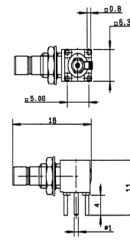


FIG. 3

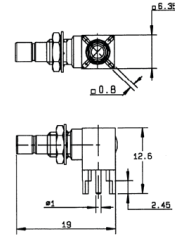


FIG. 4

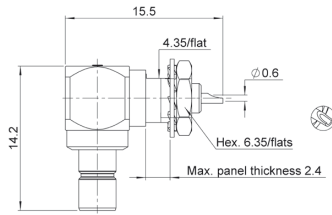


FIG. 5

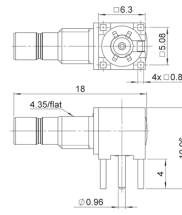


FIG. 6

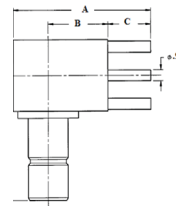


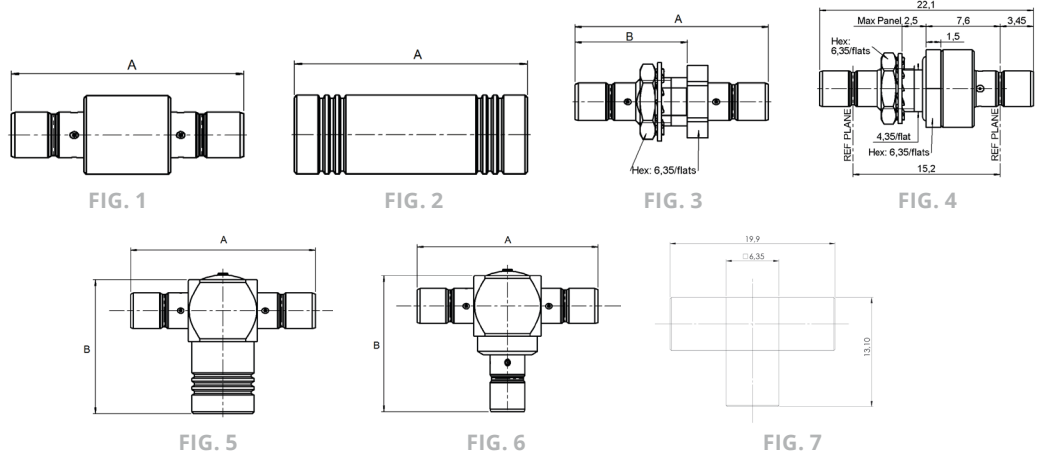
FIG. 7

| PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | DIMENSIONS (MM)            |     |     |      | CAPTIVE CENTER CONTACT | ASSEMBLY INSTRUCTIONS | PANEL DRILLING       | NOTE                      |
|--------------------|----------------------|------|----------------------------|-----|-----|------|------------------------|-----------------------|----------------------|---------------------------|
|                    |                      |      | A                          | B   | C   | D    |                        |                       |                      |                           |
| R114 664 000       | N/A                  | 1    | -                          | -   | -   | -    | Yes                    | M01                   | Packaging 100 / Reel |                           |
| R114 664 120       |                      |      | SMT / Packaging 500 / Reel |     |     |      |                        |                       |                      |                           |
| R114 665 000       |                      | 2    | 12.6                       | 4   | -   | -    |                        | -                     | P03                  | -                         |
| R114 665 020       |                      |      | -                          | -   | -   | -    |                        |                       |                      | Packaging Unit Rear Mount |
| R114 673 020       |                      | 3    | -                          | -   | -   | -    |                        | -                     | P08                  | Packaging 100 Pieces      |
| R114 673 120       |                      |      | -                          | -   | -   | -    |                        |                       |                      | Packaging 200 Pieces      |
| R114 670 000       |                      | 4    | -                          | -   | -   | -    |                        | -                     | P09                  | -                         |
| R114 673 823       | -                    |      | -                          | -   | -   | -    |                        |                       |                      |                           |
| 2010-1511-000      | 2010-7511-000        | 7    | 10.7                       | 3.8 | 3.9 | 12.7 | -                      | P04                   | -                    |                           |
| 2010-1511-002      | 2010-7511-002        |      | 12.7                       | 5.5 |     | 14.2 |                        |                       | -                    |                           |



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**ADAPTERS**  
**IN SERIES ADAPTERS**



| PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | DIMENSIONS |      | CAPTIVE CENTER CONTACT | PANEL DRILLING | NOTE                            |                              |
|--------------------|----------------------|------|------------|------|------------------------|----------------|---------------------------------|------------------------------|
|                    |                      |      | A          | B    |                        |                |                                 |                              |
| R114 703 000       | N/A                  | 1    | 19         | -    | Yes                    | -              | Male - Male                     |                              |
| R114 704 000       |                      | 2    |            | -    |                        | -              | -                               | Female - Female              |
| R114 720 000       |                      | 3    |            | 11   |                        | -              | -                               | Bulkhead Male - Male         |
| R114 753 000       |                      | 4    | -          | -    |                        | P08            | Hermetically Sealed Male - Male |                              |
| R114 780 000       |                      | 5    | 19         | 14   |                        | -              | -                               | Tee Female / Male - Male     |
| R114 781 000       |                      | 6    |            | 12.7 |                        | -              | -                               | Tee Male / Male - Male       |
| 5207-1501-000      | 5207-7501-000        | 3    | 17.5       | 10.7 |                        | -              | -                               | Bulkhead Male - Male         |
| 5222-1501-000      | 5222-7501-000        | 1    |            | -    |                        | -              | -                               | Male - Male                  |
| 5213-1501-000      | 5213-7501-000        | 5    | 19         | 12.9 |                        | -              | -                               | Tee Female / Male - Male     |
| 5215-1501-000      | 5215-7501-000        | 2    | 17.5       | -    |                        | -              | -                               | Female - Female              |
| 5216-1501-000      | 5216-7501-000        | 7    | -          | -    |                        | -              | -                               | Tee Female / Female - Female |



SMB-LOCK

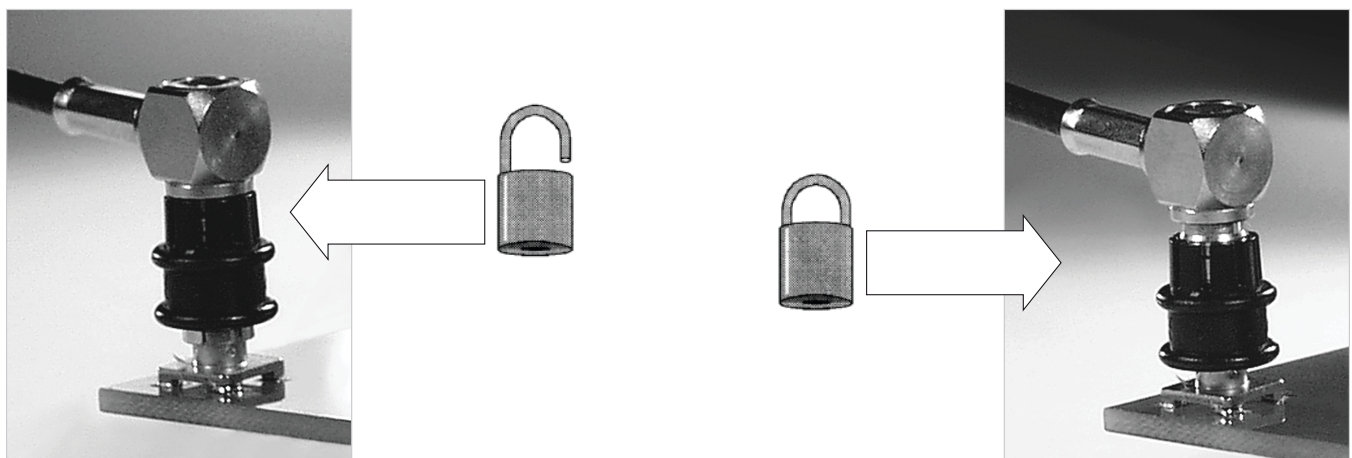
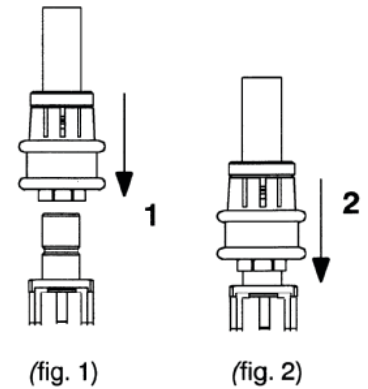
**INTRODUCTION**

Radiall offers SMB LOCK plugs with a 2-step connection system:

1. Snap the plug on the male connector (fig. 1)
2. Lock by pushing down the coupling nut (fig. 2)

This range:

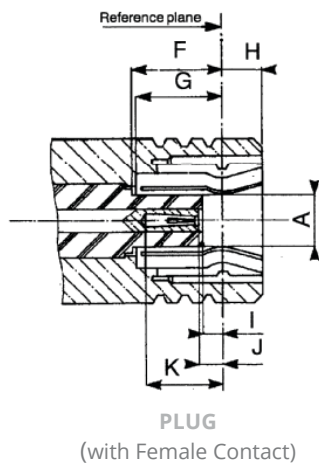
- Is intermateable with the standard SMB male connectors
- Benefits from a low intermodulation
- Replaces the standard SMB and screw-on connectors in all applications requiring:
  - A fast connection • A reliable lock-on connection • Long durability
- Possibility to visually control the locking system



- The connector allows a 360° cable rotation
- Coupling nut

The coupling nut is made with POM (halogen free). Its standard color is black.

**INTERFACE**



| LETTER | MM   |      | INCH |      |
|--------|------|------|------|------|
|        | MIN  | MAX  | MIN  | MAX  |
| A DIA  | -    | 2.06 | -    | .081 |
| F      | 3.58 | -    | .141 | -    |
| G      | 3.58 | -    | .141 | -    |
| H      | -    | 1.63 | -    | .064 |
| I      | 0.18 | -    | .007 | -    |
| J      | 0.18 | 0.94 | .007 | .037 |
| K      | 2.97 | -    | .117 | -    |



SMB-LOCK

## CHARACTERISTICS

| TEST / CHARACTERISTICS | VALUES / REMARKS |
|------------------------|------------------|
|------------------------|------------------|

### ELECTRICAL CHARACTERISTICS

| Impedance                              |          | 50Ω          |       |
|--|----------|--------------|-------|
| Operating Frequency                    |          | DC to 4 GHz  |       |
| Typical V.S.W.R.<br>• Straight Models  | .085"    | 2 GHz        | 4 GHz |
|  | ∅ 2.6/50 | 1.15         | 1.20  |
| • Right Angle Models                   | .085"    | 1.20         | 1.25  |
|  | ∅ 2.6/50 | 1.05         | 1.15  |
|  |          | 1.15         | 1.25  |
| RF Insertion Loss<br>• Straight Models | .085"    | 0.20vF (GHz) |       |
|  | ∅ 2.6/50 | 0.25vF (GHz) |       |
| • Right Angle Models                   | .085"    | 0.25vF (GHz) |       |
|  | ∅ 2.6/50 | 0.50vF (GHz) |       |
| Testing Voltage (V RMS)                | .085"    | 750          |       |
|  | ∅ 2.6/50 | 1000         |       |
| Working Voltage (V RMS)                | .085"    | 335          |       |
|  | ∅ 2.6/50 | 335          |       |
| Insulation Resistance (MΩ)             |          | 1000         |       |

### MECHANICAL CHARACTERISTICS

| Life                         |          | 500 Matings min                        |  |
|------------------------------|----------|--|--|
| Cable Retention Force        | .085"    | 220 N                                  |  |
|                              | ∅ 2.6/50 | 110 N                                  |  |
|                              | ∅ 5/50/S | 110 N                                  |  |
| Coupling Nut Retention Force |          | 50 N min                               |  |
| Vibrations                   |          | MIL STD 202 F Method 240D, Condition B |  |

### ENVIRONMENTAL CHARACTERISTICS

|                   |                   |
|-------------------|-------------------|
| Temperature Range | -35 °C / + 125 °C |
|-------------------|-------------------|

### MATERIALS AND PLATING

|                | Material           | Plating |
|----------------|--------------------|---------|
| Bodies         | Brass              | BBR     |
| Center Contact | Beryllium Copper   | Gold    |
| Outer Contact  | Bronze             | -       |
| Insulator      | PTFE               | -       |
| Coupling Nut   | POM (Halogen Free) | -       |

#### Notes

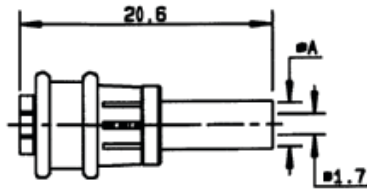
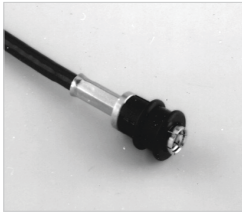
Standard packaging: 100 pieces (For unit packaging, add "W" after the P/N).



SMB-LOCK

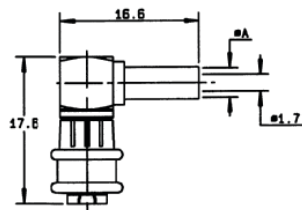
**PLUGS**

**STRAIGHT PLUG FULL CRIMP TYPE FOR FLEXIBLE CABLES**



| CABLE GROUP           | CABLE GROUP DIA. | PART NUMBER  | DIMENSIONS A (MM) | CAPTIVE CENTER CONTACT |
|-----------------------|------------------|--------------|-------------------|------------------------|
| RG174 / RG188 / RG316 | 2.6/50/S         | R117 082 807 | 3.25              | Yes                    |

**RIGHT ANGLE PLUG CRIMP TYPE FOR FLEXIBLE CABLES**



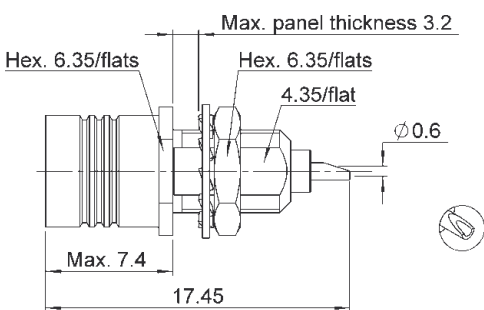
| CABLE GROUP           | CABLE GROUP DIA. | PART NUMBER  | DIMENSIONS A (MM) | CAPTIVE CENTER CONTACT |
|-----------------------|------------------|--------------|-------------------|------------------------|
| RG174 / RG188 / RG316 | 2.6/50/S         | R117 186 807 | 3.25              | Yes                    |

**RECEPTACLES**

- Lower mating/unmating force (from 2.5 N to 6N)
- Receptacles intermateable with SMB connectors
- Gold finish

The SMB limited detent connectors have the same electrical characteristics as standard SMB connectors.

**BULKHEAD PLUG RECEPTACLE (REAR FIXING)**



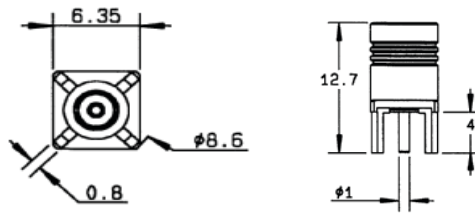
| PART NUMBER  | PANEL DRILLING | FINISH |
|--------------|----------------|--------|
| R115 556 000 | P08            | Gold   |



SMB-A and SUBGLIS

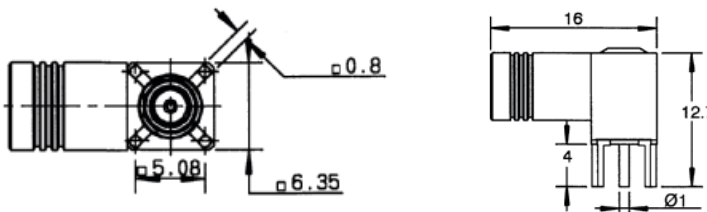
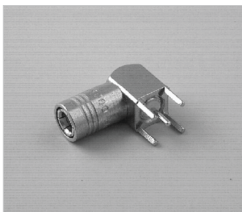
**SMB LIMITED DETENT (SMB-A)**

**STRAIGHT PCB RECEPTACLES (FEMALE CENTER CONTACT)**



| PART NUMBER  | CAPTIVE CENTER CONTACT | PANEL DRILLING | FINISH | PACKAGING |
|--------------|------------------------|----------------|--------|-----------|
| R115 427 000 | Yes                    | P05            | Gold   | Unit      |

**RIGHT ANGLE PCB RECEPTACLE (FEMALE CENTER CONTACT)**



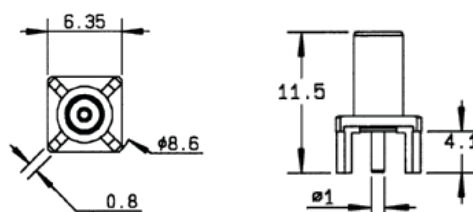
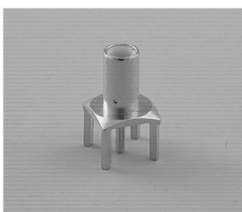
| PART NUMBER  | CAPTIVE CENTER CONTACT | PANEL DRILLING | FINISH | PACKAGING |
|--------------|------------------------|----------------|--------|-----------|
| R115 666 000 | Yes                    | P04            | Gold   | Unit      |

**SMB SLIDE-ON (SUBGLIS)**

Slide-on connectors (mating/unmating force: 2.2 N to 4.9 N)

The SMB slide-on connectors are completely intermateable with standard SMB and SMB limited detent connectors and can be used for test applications. The SMB slide-on connectors have the same electrical characteristics as standard SMB connectors.

**PCB RECEPTACLES**



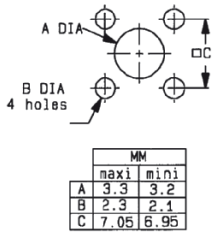
| PART NUMBER  | CAPTIVE CENTER CONTACT | PANEL DRILLING | FINISH | PACKAGING | NOTE                |
|--------------|------------------------|----------------|--------|-----------|---------------------|
| R116 426 000 | Yes                    | P03            | Gold   | Unit      | Male Center Contact |



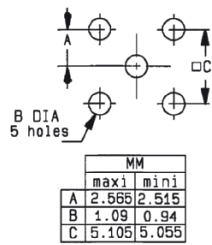
SMB

**PANEL DRILLING**

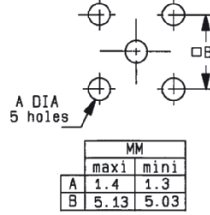
**P01**



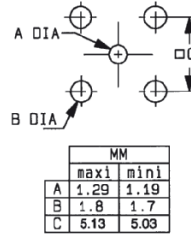
**P02**



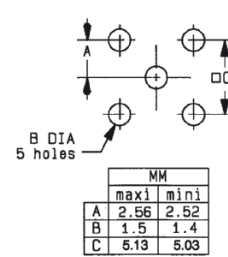
**P03**



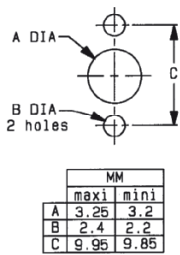
**P04**



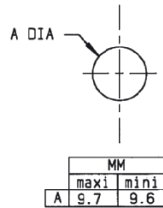
**P05**



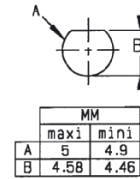
**P06**



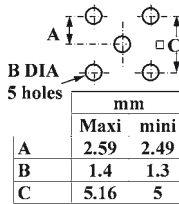
**P07**



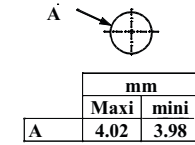
**P08**



**P09**



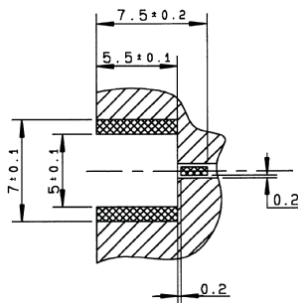
**P10**



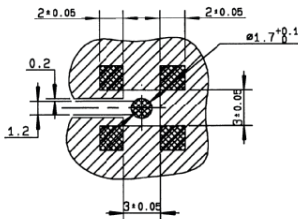
**ASSEMBLY INSTRUCTIONS**

**M01**

| PART NUMBER  |
|--------------|
| R114 423 000 |

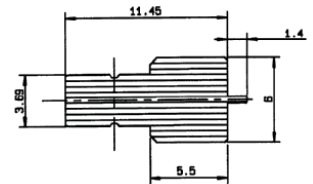


| PART NUMBER  |
|--------------|
| R114 424 000 |
| R114 424 100 |
| R114 664 000 |
| R114 664 120 |

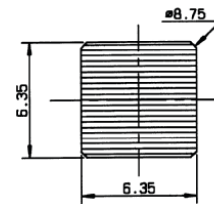


**VIDEO SHADOW**

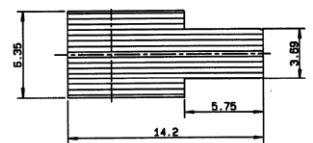
| PART NUMBER  |
|--------------|
| R113 423 000 |



| PART NUMBER  |
|--------------|
| R114 424 000 |
| R114 424 100 |

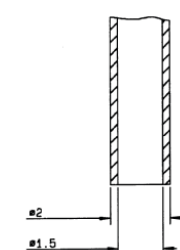


| PART NUMBER  |
|--------------|
| R114 664 000 |
| R114 664 120 |



**VACCUM NOZZLE DIMENSIONS:**

| PART NUMBER  |
|--------------|
| R114 424 000 |





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|     |             |
|-----|-------------|
| 50Ω | DC - 10 GHz |
|-----|-------------|

## INTRODUCTION

### GENERAL

- Subminiature coaxial connectors
- Screw-on coupling
- Plugs have female contacts
- Jacks have male contacts
- Low weight
- Reduced outline dimensions

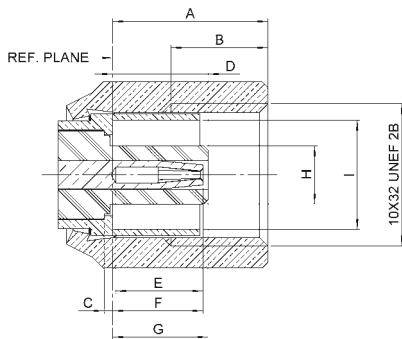
### APPLICABLE STANDARDS

- MIL-C-39012

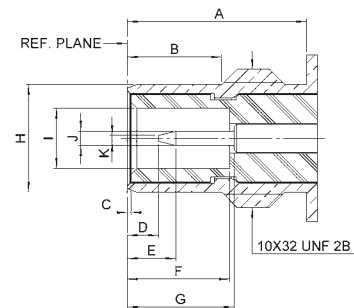
### APPLICATIONS

- Civil and military telecommunications
- Aeronautics
- Missiles
- Edge mounting applications

## INTERFACE



PLUG



JACK

| LETTER | MM   |      | INCH |      |
|--------|------|------|------|------|
|        | MIN  | MAX  | MIN  | MAX  |
| A      | 5.14 | 5.55 | .202 | .219 |
| B      | 3.20 | 4.20 | .126 | .165 |
| C      | 0.25 | 0.35 | .010 | .014 |
| D      | 2.95 | 3.00 | .116 | .118 |
| E      | 2.80 | 3.20 | .110 | .126 |
| F      | 2.80 | 3.40 | .110 | .134 |
| G      | 3.15 | 3.40 | .124 | .134 |
| H      | 2.00 | 2.05 | .079 | .081 |
| I      | 3.75 | 3.80 | .148 | .150 |

| LETTER | MM   |      | INCH |      |
|--------|------|------|------|------|
|        | MIN  | MAX  | MIN  | MAX  |
| A      | 6.00 | 6.20 | .236 | .244 |
| B      | 3.15 | 3.35 | .124 | .132 |
| C      | 0.05 | 0.20 | .002 | .008 |
| D      | 0.65 | 1.50 | .026 | .059 |
| E      | 1.30 | 2.05 | .051 | .081 |
| F      | 3.40 | 3.71 | .134 | .146 |
| G      | 3.40 | 3.95 | .134 | .156 |
| H      | 3.65 | 3.69 | .144 | .145 |
| I      | 2.08 | 2.13 | .082 | .084 |
| J      | 0.48 | 0.52 | .019 | .020 |
| K      | -    | 0.20 | -    | .008 |



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## CHARACTERISTICS

| TEST / CHARACTERISTICS | MIL-C-39012 PARAGRAPH | VALUES / REMARKS |
|------------------------|-----------------------|------------------|
|------------------------|-----------------------|------------------|

### ELECTRICAL CHARACTERISTICS

|  |               |  |
|--|---------------|--|
| Impedance  | -             | 50Ω  |
| Frequency Range  | -             | DC - 10 GHz  |
| V.S.W.R. (typ.)<br>• Straight<br>• Right Angle                               | Cable<br>3-14 | 2/50<br>1.25 + 0.04 F (GHz)<br>1.40 + 0.06 F (GHz)   |
| Insertion Loss<br>• Straight<br>• Right Angle                                | 3-27          | 2.6/50<br>1.20 + 0.04 F (GHz)<br>1.30 + 0.04 F (GHz) |
| RF Leakage   | 3-26          | 0.25 dB max. at 4 GHz<br>0.5 dB max. at 4 GHz        |
| Insulation Resistance  | 3-11          | -60 dB min between 2 and 3 GHz<br>1000 MΩ min        |
| Contact Resistance<br>• Center Contact (mΩ)<br>• Outer Contact (mΩ)          | 3-16          | Initial<br>6<br>1                                    |
| Voltage Rating (volts RMS)<br>• At Sea Level<br>• At 70000 ft (21000 m)      | Cable<br>-    | After Environment<br>8<br>1.5                        |
| Dielectric Withstanding Voltage<br>• At Sea Level<br>• At 70000 ft (21000 m) | Cable<br>3-17 | 2/50<br>250 V rms<br>60 V rms                        |
| RF High Potential Withstanding Voltage (Frequency 5 MHz)<br>• At Sea Level   | Cable<br>3-23 | 2.6/50<br>750 V rms<br>185 V rms                     |
|  | -             | 2/50<br>500 V rms                                    |
|  | -             | 2.6/50<br>700 V rms                                  |

### MECHANICAL CHARACTERISTICS

|                               |               |  |
|-------------------------------|---------------|--|
| Durability                    | 3-15          | 500 Matings                                      |
| Force to Engage and Disengage | 3-5-1         | Torque: 16 inch-ounces max - 11.3 Ncm            |
| Mating Torque                 | -             | 35 to 50 inch-ounces - 25 to 35 Ncm              |
| Coupling Nut Proof Torque     | -             | 100 inch-ounces - 71 Ncm                         |
| Coupling Nut Retention Force  | 3-25          | 35 lbs min - 156 N min                           |
| Cabling Retention Force       | Cable<br>3-24 | 2/50<br>13 lbs - 58 N                            |
| Contact Captivation           | -             | 2.6/50<br>25 lbs - 110 N                         |
|                               | -             | Axial Force: 4 lbs - 18 N Torque: Not Applicable |

### ENVIRONMENTAL CHARACTERISTICS

|   |      |   |
|---|------|---|
| Operating Temperature Range<br>• Standard Models and Hermetic<br>• Models for Semi-Rigid Cables | -    | -65 °C / + 165 °C<br>-65 °C / +105 °C   |
| Temperature Cycling   | -    | MIL-STD-202, Method 102, Condition C  |
| Thermal Shock   | 3-20 | MIL-STD-202, Method 107, Condition B  |
| High Temperature Test   | -    | MIL-STD-202, Method 108   |
| Corrosion (Salt Spray)  | 3-13 | MIL-STD-202, Method 101, Condition B, 5%  |
| Vibration   | 3-18 | MIL-STD-202, Method 204, Condition D, 20g   |
| Shock   | 3-19 | MIL-STD-202, Method 213, Condition C, 100g  |
| Moisture Resistance   | 3-21 | Not Applicable  |
| Barometric Pressure   | 3-22 | MIL-STD-202, Method 105, Condition C  |
| Hermetic Test   | -    | Down to 10 <sup>-6</sup> mm Hg (Torr)<br>Leak rate <1 x 10 <sup>-6</sup> atm/cm <sup>3</sup> /sec |

### MATERIALS AND PLATING

|                                | Material                      | Plating   |
|--------------------------------|-------------------------------|---|
| Bodies and Male Contacts       | Brass, Half Hard per QQ-B-626 | Gold to Satisfy the Corrosion Requirements (Bodies) |
| Female Contacts and Interfaces | Beryllium Copper per QQ-C-530 | Gold (Center contact)                               |
| Ferrules                       | Brass                         | -   |
| Insulators                     | PTFE Teflon                   | -   |
| Gasket                         | Silicone Rubber               | -   |

All dimensions are given in mm.



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## PLUGS AND JACK STRAIGHT PLUGS

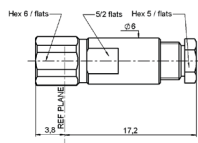


FIG. 1

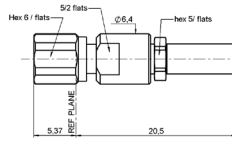


FIG. 2

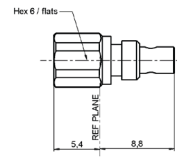


FIG. 3

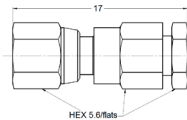


FIG. 5

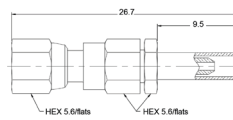


FIG. 6

| CABLE GROUP           | CABLE GROUP DIA. | PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | NOTE         |
|-----------------------|------------------|--------------------|----------------------|------|--------------|
| RG178 / RG196         | 2/50/S           | R112 003 000       | N/A                  | 1    | Clamp Type   |
| RG174 / RG316 / RG179 | 2.6/50+75/S      | R112 005 000       |                      |      |              |
| RG405                 | .085"            | R112 075 000       |                      | 2    | Crimp Type   |
| RG405                 | .085"            | R112 053 000       |                      | 3    | Solder Type  |
| RG178 / RG196         | 2/50/S           | 1002-1571-002      | 1002-7571-002        | 5    | Crimp Type   |
|                       |                  | 1002-1551-002      | 1002-7551-002        |      |              |
| RD178                 | 2/50/D           | 1002-1551-005      | 1002-7551-005        | 4    | Clamp Type   |
|                       |                  | 1002-1571-005      | 1002-7571-005        |      |              |
| RG174 / RG316 / RG179 | 2.6/50/S         | 1002-1551-003      | 1002-7551-003        | 4    | Clamp Type   |
|                       |                  | 1002-1571-003      | 1002-7571-003        |      |              |
| RD316                 | 2.6/50/D         | 1002-1551-019      | 1002-7551-019        | 4    | Clamp Type   |
|                       |                  | 1002-1571-019      | 1002-7571-019        |      |              |
| RG405                 | .085"            | 1002-1541-010      | 1002-7541-010        | 4    | Solder Clamp |
| RG402                 | .141"            | 1002-1541-009      | 1002-7541-009        |      |              |

## RIGHT ANGLE PLUGS

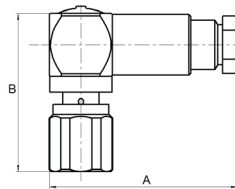


FIG. 1

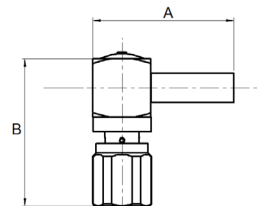


FIG. 2

| CABLE GROUP           | CABLE GROUP DIA. | PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | DIMENSIONS (MM) |              | NOTE       |
|-----------------------|------------------|--------------------|----------------------|------|-----------------|--------------|------------|
|                       |                  |                    |                      |      | A DIA           | B DIA        |            |
| RG174 / RG316 / RG179 | 2.6/50+75/S      | R112 165 000       | N/A                  | 1    | 19              | 15.9         | Crimp Type |
| RG178 / RG196         | 2/50/S           | R112 183 000       |                      |      | 16              | 15.5         |            |
| RG174 / RG316 / RG179 | 2.6/50+75/S      | R112 186 000       |                      | 2    | 15.3            | 15.9         |            |
| RG178 / RG196         | 2/50/S           | 1005-1551-002      | 1005-7551-002        | 1    | 14.9            | 13.9         | Clamp Type |
|                       |                  | 1105-1521-002      | 1105-7521-002        | 2    | 16              |              | Crimp Type |
| RD178                 | 2/50/D           | 1005-1551-005      | 1005-7551-005        | 1    | 14.9            |              | Clamp Type |
|                       |                  | 1105-1521-005      | 1105-7521-005        | 2    | 16              |              | Crimp Type |
| RG174 / RG316 / RG179 | 2.6/50/S         | 1005-1551-003      | 1005-7551-003        | 1    | 14.9            |              | Clamp Type |
|                       |                  | 1105-1521-003      | 1105-7521-003        | 2    | 16              |              | Crimp Type |
| RD316                 | 2.6/50/D         | 1005-1551-019      | 1005-7551-019        | 1    | 14.9            |              | Clamp Type |
|                       |                  | 1105-1521-019      | 1105-7521-019        | 2    | 16              |              | Crimp Type |
| RG405                 | .085"            | 1005-1541-010      | 1005-7541-010        | 1    | 14.9            | Solder Clamp |            |
| RG402                 | .141"            | 1005-1541-009      | 1005-7541-009        |      |                 |              |            |



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## JACKS AND RECEPTACLES

### STRAIGHT JACK

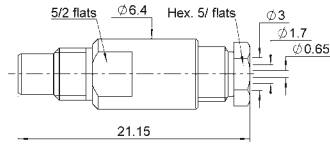


FIG. 1

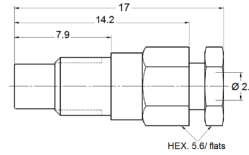


FIG. 2

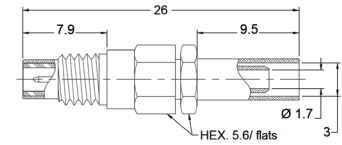


FIG. 3

| CABLE GROUP           | CABLE GROUP DIA. | PART NUMBER (GOLD) | PART NUMBER (NICKEL) | NOTE         |
|-----------------------|------------------|--------------------|----------------------|--------------|
| RG178 / RG196         | 2.6/50+75/S      | R112 205 000       | -                    | Clamp Type   |
| RG178 / RG196         | 2/50/S           | 1001-1551-002      | 1001-7551-002        |              |
| RD178                 | 2/50/D           | 1001-1571-002      | 1001-7571-002        | Crimp Type   |
|                       |                  | 1001-1551-005      | 1001-7551-005        | Clamp Type   |
| RG174 / RG316 / RG179 | 2.6/50/S         | 1001-1571-005      | 1001-7571-005        | Crimp Type   |
|                       |                  | 1001-1551-003      | 1001-7551-003        | Clamp Type   |
| RD316                 | 2.6/50/D         | 1001-1571-003      | 1001-7571-003        | Crimp Type   |
|                       |                  | 1001-1551-019      | 1001-7551-019        | Clamp Type   |
| RG405                 | .085"            | 1001-1571-019      | 1001-7571-019        | Crimp Type   |
| RG402                 | .141"            | 1001-1571-010      | 1001-7571-010        | Solder Clamp |
|                       |                  | 1001-1571-009      | 1001-7571-009        |              |

### BULKHEAD STRAIGHT AND RIGHT ANGLE JACKS

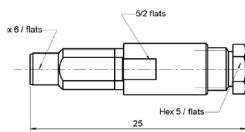


FIG. 1

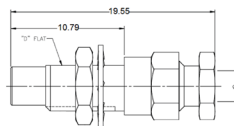


FIG. 2

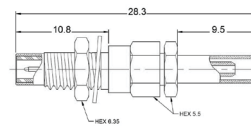


FIG. 3

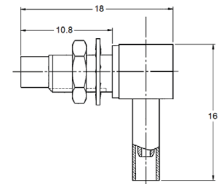


FIG. 4

| CABLE GROUP           | CABLE GROUP DIA. | PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | PANEL DRILLING | NOTE       |
|-----------------------|------------------|--------------------|----------------------|------|----------------|------------|
| RG178 / RG196         | 2/50/S           | R112 303 000       | -                    | 1    | P03            | -          |
| RG174 / RG316 / RG179 | 2.6/50+75/S      | R112 305 000       | -                    |      |                |            |
| RG178 / RG196         | 2/50/S           | 1003-1551-002      | 1003-7551-002        | 2    |                | Clamp Type |
|                       |                  | 1003-1571-002      | 1003-7571-002        | 3    |                | Crimp Type |
|                       |                  | 1006-1551-002      | 1006-7551-002        | 4    |                | Clamp Type |
|                       |                  | 1106-1521-002      | 1106-7521-002        |      |                | Crimp Type |
| RD178                 | 2/50/D           | 1003-1551-005      | 1003-7551-005        | 2    |                | Clamp Type |
|                       |                  | 1003-1571-005      | 1003-7571-005        | 3    |                | Crimp Type |
|                       |                  | 1006-1551-005      | 1006-7551-005        | 4    |                | Clamp Type |
|                       |                  | 1106-1521-005      | 1106-7521-005        |      |                | Crimp Type |
| RG174 / RG316 / RG179 | 2.6/50/S         | 1003-1551-003      | 1003-7551-003        | 2    |                | Clamp Type |
|                       |                  | 1003-1571-003      | 1003-7571-003        | 3    |                | Crimp Type |
|                       |                  | 1006-1551-003      | 1006-7551-003        | 4    | Clamp Type     |            |
|                       |                  | 1106-1521-003      | 1106-7521-003        |      | Crimp Type     |            |



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**BULKHEAD STRAIGHT AND RIGHT ANGLE JACKS (CONTINUED)**

| CABLE GROUP | CABLE GROUP DIA. | PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | PANEL DRILLING | NOTE         |
|-------------|------------------|--------------------|----------------------|------|----------------|--------------|
| RD316       | 2.6/50/D         | 1003-1551-019      | 1003-7551-019        | 2    | P03            | Clamp Type   |
|             |                  | 1003-1571-019      | 1003-7571-019        | 3    |                | Crimp Type   |
|             |                  | 1006-1551-019      | 1006-7551-019        | 4    |                | Clamp Type   |
|             |                  | 1106-1521-019      | 1106-7521-019        |      |                | Crimp Type   |
| RG405       | .085"            | 1003-1541-010      | 1003-7541-010        | 2    |                | Solder Clamp |
|             |                  | 1006-1541-010      | 1006-7541-010        | 4    |                |              |
| RG402       | .141"            | 1003-1541-009      | 1003-7541-009        | 2    |                |              |
|             |                  | 1006-1541-009      | 1006-7541-009        | 4    |                |              |

**SQUARE FLANGE RECEPTACLES**

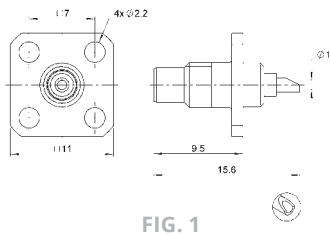


FIG. 1

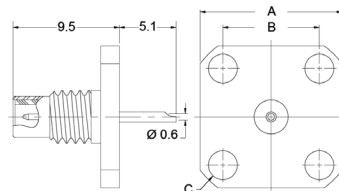


FIG. 2

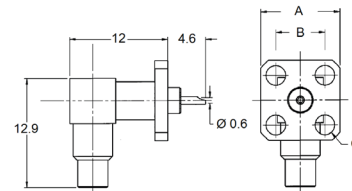


FIG. 3

| PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | DIMENSIONS (MM) |     |     | PANEL DRILLING |
|--------------------|----------------------|------|-----------------|-----|-----|----------------|
|                    |                      |      | A               | B   | C   |                |
| R112 403 000       | N/A                  | 1    | -               | -   | -   | P01            |
| 1484-1511-000      | 1484-7511-000        | 2    | 9.5             | 5.9 | 2.4 | -              |
| 1486-1511-000      | 1486-7511-000        |      | -               |     |     |                |
| 1490-1511-000      | 1490-7511-000        | 3    | 12.7            | 8.6 | 2.6 | -              |
| 1488-1511-000      | 1488-7511-000        |      | 9.5             | 5.9 | 2.4 | -              |

**BULKHEAD RECEPTACLES WITH SOLDER POT CONTACT**

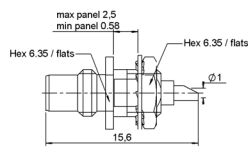


FIG. 1

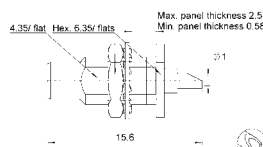


FIG. 2

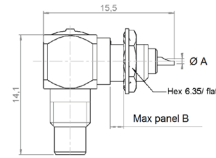


FIG. 3

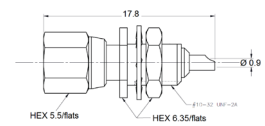


FIG. 4

| PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | DIMENSIONS (MM) |      | PANEL DRILLING | NOTE        |
|--------------------|----------------------|------|-----------------|------|----------------|-------------|
|                    |                      |      | A               | B    |                |             |
| R112 553 000       | N/A                  | 1    | -               | -    | P03            | Front Mount |
| R112 554 000       |                      | 2    | -               | -    |                | Rear Mount  |
| R112 670 000       |                      | 3    | 0.6             | 1.55 |                | Front Mount |
| 1004-1511-000      | 1004-7511-000        | 2    | -               | -    |                | Rear Mount  |
| 1019-1511-000      | 1019-7511-000        | 1    | -               | -    |                | Front Mount |
| 1012-1511-000      | 1012-7511-000        | 3    | 0.9             | 2.4  |                |             |
| 1017-1511-000      | 1017-7511-000        | 4    | -               | -    |                |             |



SMC

## RECEPTACLES AND ADAPTERS

### PCB RECEPTACLES

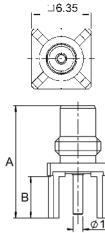
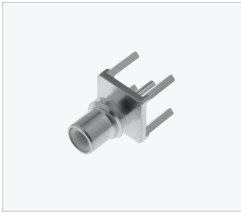


FIG. 1

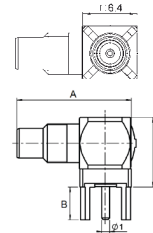


FIG. 2

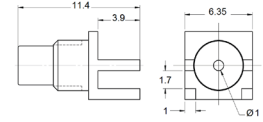


FIG. 3

| PART NUMBER (GOLD) | PART NUMBER (NICKEL) | FIG. | DIMENSIONS (MM) |     |      | PANEL DRILLING | NOTE                       |
|--------------------|----------------------|------|-----------------|-----|------|----------------|----------------------------|
|                    |                      |      | A               | B   | C    |                |                            |
| R112 426 000       | N/A                  | 1    | 11.8            | 4.4 | -    | P02            | Standoff Legs              |
| R112 665 000       |                      | 2    | 14.2            | -   | 12.7 |                |                            |
| 1009-1511-000      | 1009-7511-000        | 1    | 11.4            | 4   | -    | P04            | No Standoff                |
| 1010-1511-000      | 1010-7511-000        | 2    | 14              |     | 7    |                |                            |
| 1010-1511-001      | 1010-7511-001        |      |                 |     | 8.8  |                |                            |
| 1109-1511-000      | 1109-7511-000        | 1    | 16.3            |     | -    |                |                            |
| 1110-1511-000      | 1110-7511-000        | 2    | 18              | -   | 7    | P04 + P03      | No Standoff, Bulkhead Type |
| 1009-1511-005      | 1009-7511-005        | 3    | -               | -   | -    | P04            | End Launch Type            |

### IN SERIES ADAPTERS

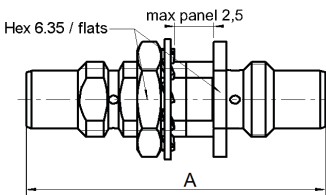


FIG. 1

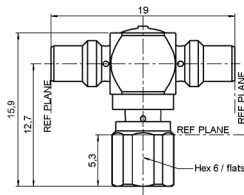
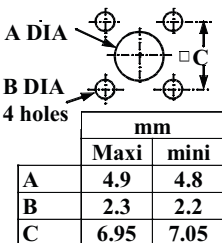


FIG. 2

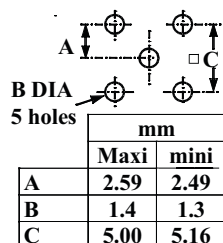
| PART NUMBER (GOLD) | FIG. | DIMENSIONS A (MM) | PANEL DRILLING | NOTE                     |
|--------------------|------|-------------------|----------------|--------------------------|
| R112 720 000       | 1    | 19                | P03            | Male - Male Bulkhead     |
| R112 780 000       | 2    | -                 | -              | Tee Male - Male / Female |
| 5822-1501-000      | 1    | 17.5              | P03            | Female - Female          |

### PANEL DRILLING

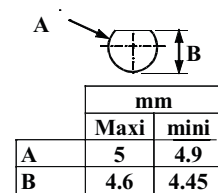
#### P01



#### P02



#### P03



#### P04

