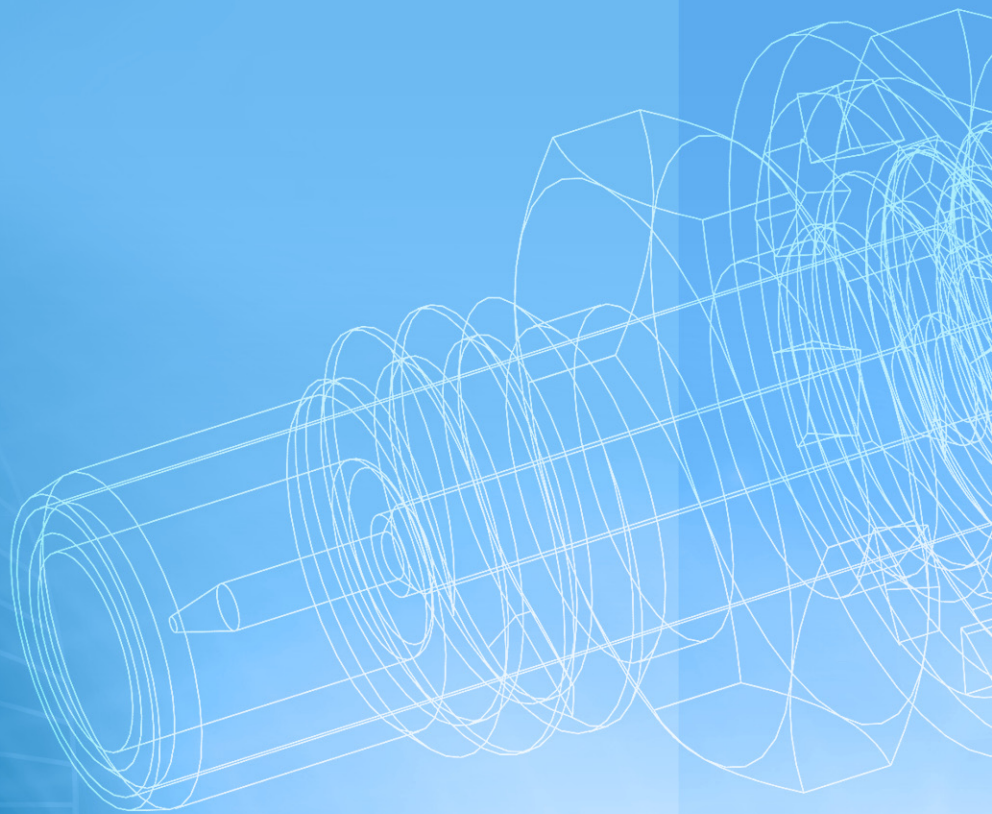


SMC



**SMC Connectors**

## **SMC Connectors**

### **Description**

The SMC name derives from SubMiniature C (the third subminiature design). The SMC design was developed in the 1960's. SMC has threaded coupling with 10-32 threads. Available in 50  $\Omega$  impedance, the SMC Series utilizes die cast components on non-critical areas to provide a low cost solution.

### **Features/Benefits**

- Broadband performance with low reflection DC to 10 GHz.
- Conforms to the interface dimensions of MIL-STD-348.
- 10-32 screw-on (threaded) coupling mechanism allows performance to 10 GHz with low reflection.
- Right Angle connectors available in one piece construction.

### **Applications**

- Antennas
- Automotive (GPS)
- Base Stations
- Cable Assemblies
- Instrumentation
- Video Systems
- Process Controls
- Radio Boards
- Telecom
- Test and Measurement

## SMC Specifications

### Electrical

|                                 |                                                                                   |
|---------------------------------|-----------------------------------------------------------------------------------|
| Impedance                       | 50 $\Omega$                                                                       |
| Frequency range                 | DC - 10 GHz                                                                       |
| VSWR                            | 1.25 + .04 f (GHz)                                                                |
| RF-leakage                      | 55 dB minimum @ 2-3 GHz                                                           |
| Voltage rating (at sea level)   | $\geq 250$ Vrms (depending on cable)                                              |
| Contact resistance              | center contact: $\leq 6$ m $\Omega$<br>$\leq 1$ m $\Omega$<br>$\leq 1$ m $\Omega$ |
| Insulation resistance           | 5,000 M $\Omega$ minimum                                                          |
| Insertion loss maximum          | 0.25 dB max. @ 4 GHz (straight)<br>0.5 dB max. @ 4 GHz (right-angle)              |
| Dielectric withstanding voltage | 1,000 Vrms (at sea level)                                                         |

### Mechanical

|                                  |                                 |
|----------------------------------|---------------------------------|
| Mating                           | Threaded coupling (MIL-STD-348) |
| Coupling nut retention force     | 35 lbs (156N) min.              |
| Braid/Jacket cable affixment     | Hex crimp                       |
| Center conductor cable affixment | Crimp                           |
| Durability (matings)             | 500 cycles minimum              |

### Environmental

|                   |                                     |
|-------------------|-------------------------------------|
| Temperature range | -65°C to +165°C                     |
| Thermal shock     | MIL-STD-1344, method 1003, cond. A  |
| Corrosion         | MIL-STD-1344, method 1001, cond. B  |
| Vibration         | MIL-STD-1344, method 2005, cond. IV |

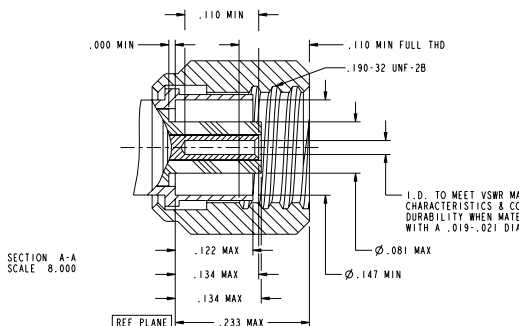
### Material

|                         |                                                          |
|-------------------------|----------------------------------------------------------|
| Body and outer contacts | Brass or zinc alloy (ASTM-B86-71), gold or nickel plated |
| Male contact            | Brass, gold plated                                       |
| Female contact          | Beryllium copper center, gold plated                     |
| Crimp ferrule           | Copper or brass, nickel or gold plated                   |
| Insulator               | PTFE                                                     |

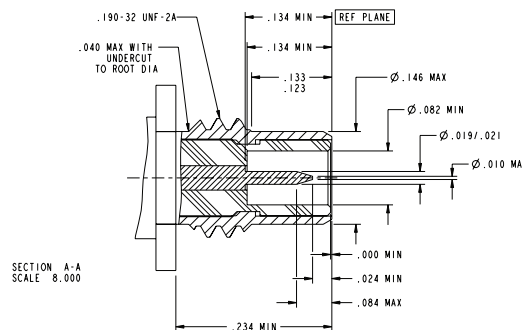
### Military

|             |                  |
|-------------|------------------|
| MIL-C-39012 | where applicable |
|-------------|------------------|

### Plug



### Jack



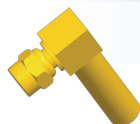
## Cable Connectors

### Straight Plugs



| Cable |               | Plating |         | Termination |         |
|-------|---------------|---------|---------|-------------|---------|
| Group | Part Number   | Body    | Contact | Body        | Contact |
| B     | 903-284P-52S  | Gold    | Gold    | Crimp       | Solder  |
| B     | 903-284P-52S1 | Nickel  | Gold    | Crimp       | Solder  |

### Angle Plugs



| Cable |               | Plating |         | Termination |         |
|-------|---------------|---------|---------|-------------|---------|
| Group | Part Number   | Body    | Contact | Body        | Contact |
| B     | 903-288P-52A  | Gold    | Gold    | Crimp       | Solder  |
| B2    | 903-362P-52A1 | Nickel  | Gold    | Crimp       | Solder  |

## Receptacles

### Straight Bulkhead Jacks

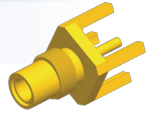


|              |      | Plating |  | Description         |
|--------------|------|---------|--|---------------------|
| Part Number  | Body | Contact |  |                     |
| 903-408J-52R | Gold | Gold    |  | Panel mount, 4-Hole |

## Printed Circuit Board Connectors

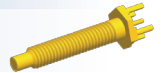
### Straight Jacks

| Part Number  | Body | Plating | Contact | Terminal Type |
|--------------|------|---------|---------|---------------|
| 903-420J-52P | Gold |         | Gold    | Blunt Post    |



### Straight Bulkhead Jacks

| Part Number  | Body | Plating | Contact | Terminal Type |
|--------------|------|---------|---------|---------------|
| 903-421J-52P | Gold |         | Gold    | Blunt Post    |



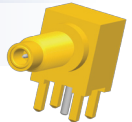
### Angle Jacks

| Part Number  | Body | Plating | Contact | Terminal Type |
|--------------|------|---------|---------|---------------|
| 903-378J-52A | Gold |         | Gold    | Blunt Post    |



### Angle Bulkhead Jacks

| Part Number  | Body | Plating | Contact | Terminal Type |
|--------------|------|---------|---------|---------------|
| 903-419J-52A | Gold |         | Gold    | Blunt Post    |



## Accessories

### SMB/SMC Accessories: Jam Nuts

| Part Number | Description                                    |
|-------------|------------------------------------------------|
| 903-10408-1 | SMB/SMC Gold Plated Nut Hex, Bulk pack version |



### SMB/SMC Accessories: Lockwashers

| Part Number | Description                                       |
|-------------|---------------------------------------------------|
| 903-10409-1 | SMB/SMC Gold Plated Lockwasher, Bulk pack version |



# Cable Group Listing

| Cable Group | Cable Type                                                       |
|-------------|------------------------------------------------------------------|
| A           | RG-178, 196                                                      |
| B           | RG-174, 188A, 316, Belden 7805                                   |
| B1          | RG-179, 187, Belden 9221                                         |
| B2          | RD-188/U, RD-316/U                                               |
| B3          | RD-179/U, AT&T 19224L2                                           |
| C           | RG-58, 58A, 58C, 141, 303, LMR195, Belden 7806A, 9907            |
| C1          | RG-55, 142, 223, 400                                             |
| C2          | LMR200, Belden 7807A                                             |
| D           | RG-58/U Plenum, Thinnnet, RG-122/U, Belden 88240, 89907          |
| E           | RG-59, 62, 140, 210, Belden 8241, 8263, 8279, 9209               |
| E1          | RG-59/U 20 AWG center conductor, Belden 1426A, 1505A, 9100, 9278 |
| E2          | RD-59/U, Belden 8281, 9141, 9231                                 |
| E3          | RG-59/U Quad Shield, Belden 1152A                                |
| F           | RG-59/U Plenum, Belden 1560A, 9259, 82259, 89259, 88241          |
| F1          | RG-59/U Plenum 20 AWG center conductor, Belden 82108             |
| G1          | RG-6, 143, 212                                                   |
| G2          | 8X, LMR240, Belden 7808A, 9258                                   |
| G3          | LMR400, Belden 7810A, 8214, 9913                                 |
| G4          | RG-8, 8A, 9, 87A, 213, 214, 225, 393                             |
| G5          | RD-6/U                                                           |
| H           | RG-11                                                            |
| H1          | Belden 1694A, 9248                                               |
| H2          | Belden 1859A, 7731, 8213, 9292                                   |
| H3          | RG-54A/U                                                         |
| I           | AT&T 734A, Belden 1505A                                          |
| I2          | AT&T 735A, Belden 735A1                                          |
| J           | Quad 59 headend cable                                            |
| K           | LMR600                                                           |
| K2          | Belden 1695A                                                     |
| K3          | RG-122, 180, 195, Belden 1855, 1865A, 8218                       |
| L           | .141 semi-rigid, RG-402/U                                        |
| L2          | .085, .086, .087 semi-rigid, RG-405/U                            |
| L3          | .250 semi-rigid                                                  |
| L4          | .047 semi-rigid, Belden 1674                                     |
| M           | 1/2 inch annular corrugated                                      |
| M1          | 1 1/4 inch annular corrugated                                    |
| M2          | 1 5/8 inch annular corrugated                                    |
| M3          | 7/8 inch annular corrugated                                      |
| N           | 1/4 Helical                                                      |
| N1          | 3/8 Helical                                                      |
| N2          | 1/2 Helical                                                      |
| N3          | 7/8 inch SFC                                                     |
| P1          | .81 mm OD micro-cable                                            |
| P2          | 1.13 mm OD micro-cable, TCB-068                                  |
| P3          | 1.32 mm OD micro-cable                                           |
| P4          | 1.37 mm OD micro-cable                                           |



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- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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