# Amphenol<sup>®</sup>Connex A New Kind of RF Solution

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|---|--------------------|---|---------------|--------------------------------------|-----------|------------|-------|-----------------|
| Our Products           7/16           BNC   |                    | Search Results for: Right Angle Cable Plug - Flexible Cable Please note: Images are for reference only  |               |                                      |           |            |       |                 |
| D-Sub<br>FME<br>MCX<br>MMCX<br>SMA<br>SMB<br>SMC<br>TNC<br>Twin BNC<br>Type F<br>Type N |                    | Part Number: 142221-75Family/Series: SMB/SMC Coaxial<br>ConnectorsProduct Type: CRIMP ATTACHMENTS<br>FOR FLEXIBLE & SEMI-RIGID CABLE<br>Description: Right Angle Cable Plug -<br>Flexible Cable<br>Mini 75 Ohm<br>SMB CONNECTORS<br>Cable: AT&T735A/B735A1 ** |               | AI Fi<br>In:<br>MENTS In:<br>ABLE Cr | •         |            |       |                 |
| <u>UHF</u>  |                    | Add to Cart   F   | Product Specs | Customer Dra                         | awing     |            |       |                 |
| Between-Serie<br>Shielded Term<br>Strain-Relief B<br>Tools                              | hinations<br>Boots |   |               |                                      |           |            |       |                 |

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### Our Products

<u>7/16</u> **BNC** D-Sub FME <u>MCX</u> MMCX <u>SMA</u> <u>SMB</u> <u>SMC</u> <u>TNC</u> Twin BNC Type F Type N <u>UHF</u> Between-Series Adapters **Shielded Terminations** 

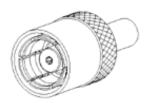
Strain-Relief Boots Tools

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## SMB connector series

Features & Benefits | Applications | 50 Ω Specs | 75 Ω Specs | 75 Ω High Density Specs | Assembly Instructions

The SMB name derives from SubMiniature B (the second subminiature design). Developed in the 1960's, the SMB is a smaller version of the SMA with snap-on coupling. Amphenol's SMB connectors conform to the requirements of MIL-C-39012, and the interface is in compliance with MIL-STD-348. Available in 50  $\Omega$  and 75  $\Omega$  impedance, the SMB provides broadband capability through 4 GHz with a snap-on connector design and utilizes die cast components on non-critical areas to provide a low-cost solution.



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### **SMB/SMC** Coaxial Connectors

| CRIMP ATTACHMENTS FOR FLEXIBLE & SEMI-RIGID CABLE       |  |
|---|--|
| Straight Crimp Plug - Flexible Cable                    |  |
| Straight Solder Plug - Semi-Rigid Cable                 |  |
| Straight Crimp Jack - Flexible Cable                    |  |
| Straight Crimp Jack - Flexible Cable                    |  |
| Straight Solder Jack - Semi-Rigid Cable                 |  |
| Right Angle Cable Plug - Flexible Cable                 |  |
| Right Angle Cable Plug - Semi-Rigid Cable               |  |
| Bulkhead Feedthrough Cable Jack — Flexible Cable        |  |
| Bulkhead Feedthrough Cable Jack — Flexible Cable        |  |
| Right Angle Crimp Jack - Flexible & Semi-Rigid Cable    |  |
| Right Angle Bulkhead Crimp Jack — Flexible Cable        |  |
| <u> </u>  |  |
| CRIMP ATTACHMENTS FOR FLEXIBLE CABLE - 75 OHM SNAP LOCK |  |
| Straight Crimp Plug - Snap Lock                         |  |
| Right Angle Crimp Plug - Snap Lock                      |  |
| CLAMP TERMINATIONS FOR FLEXIBLE CABLE                   |  |
| Straight Cable Plug                                     |  |
| Straight Cable Jack                                     |  |
| Bulkhead Feedthrough Cable Jack                         |  |
| Right Angle Cable Plug                                  |  |
| <u> </u>  |  |
| PRINTED CIRCUIT BOARD/STRAIGHT TERMINALS                |  |
| Straight Plug For P.C. Board                            |  |
| Straight Jack For P.C. Board                            |  |
| Straight Bulkhead Jack For P.C. Board                   |  |
| Right Angle Plug For P.C. Board                         |  |
| Right Angle Jack For P.C. Board                         |  |
| Right Angle Bulkhead Jack For P.C. Board                |  |
| BULKHEAD MOUNT/SOLDER POT TERMINALS                     |  |
| Bulkhead Jack Receptacle - Front Mount                  |  |
| Bulkhead Jack Receptacle - Rear Mount                   |  |
| Bulkhead Recessed Jack Receptacle                       |  |
| Press Fit Jack Receptacle                               |  |
|   |  |
| PANEL MOUNT/SOLDER POT TERMINALS                        |  |
| Panel Mount Jack Receptacle - 4 Hole Square Flange      |  |
| Panel Mount Jack Receptacle — 2 Hole Flange             |  |
| I   |  |
| ADAPTERS  |  |
| Plug-To-Plug Adapter                                    |  |
| Jack-To-Jack Adapter                                    |  |

#### Plug-To-Jack Adapter - Right Angle

Jack-To-Jack Adapter - Bulkhead

#### **Features & Benefits**

- Broadband performance with low reflection DC to 4 GHz provides low cost connector combined with high quality.
- Quick connect/disconnect snap-on mating reduces installation time.
- Various plating options in nickel, gold, and tin lead. Selective plating provides corrosion resistance finish as well as good solderability characteristics.
- SMB PCB slide-on plug and jack allows board-to-board mounting with a low insertion force. This is ideal for mating a high number of connectors on a pair of PCB's.

#### **Applications**

- Automotive
- Cable Assemblies
- PC/LAN

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- Surge Protection
- Video Systems
- Automotive (GPS)
- Components
- Process Controls
- Telecom

- Base Stations
- Instrumentation
- Radio Boards
- Test and Measurement

#### 50 $\Omega$ SMB Specifications

| luce a deve a c                   |  |  |  |
|-----------------------------------|--|--|--|
| Impedance                         | 50 Ω   |  |  |
| Frequency Range                   | 0-4 GHz with low reflection; usable to 10.0 GHz  |  |  |
| Voltage Rating for RG-188/U Cable | 335 volts at sea level and 85 volts at 70,000 feet   |  |  |
| Dielectric Withstanding Voltage   | RG-196: 750 VRMS; RG-188: 1,000 VRMS   |  |  |
| VSWR                              | Straight connector, RG-196/U: 1.30 + .04 f (GHz)<br>Right angle connector, RG-196/U: 1.45 + .06 f (GHz)<br>Straight connector, RG-188/U: 1.25 + .04 f (GHz)<br>Right angle connector, RG-188/U: 1.35 + .04 f (GHz) |  |  |
| Contact Resistance                | Center contact: 6.0 m $\Omega$ initial, 8.0 after environmental;<br>Outer contact: 1.0 m $\Omega$ initial, 1.5 after environmental<br>Braid to body: 1.0 m $\Omega$ initial, after environmental N/A               |  |  |
| Insulation Resistance             | 1,000 MΩ minimum   |  |  |
| Insertion Loss                    | Straight connector: 0.30 dB @ 1.5 GHz<br>Right angle connector: 0.60 dB @ 1.5 GHz  |  |  |
| RF Leakage                        | -55 dB minimum @ 2-3 GHz   |  |  |
| Mechanical                        |  |  |  |
| Mating                            | Snap-on coupling per MIL-STD-348   |  |  |
| Braid/Jacket Cable Affixment      | Hex crimp  |  |  |
| Center Conductor Cable Affixment  | Solder   |  |  |
| Contact Captivation               | All types unless noted otherwise   |  |  |
| Cable Retention                   | Equal to breaking strength of cable employed   |  |  |
| Engagement Forces                 | Engagement: 14 lbs maximum<br>Disengagement: 2 lbs minimum<br>After 500 matings, 14 lbs maximum engagement and<br>disengagement  |  |  |
| Connector Durability              | 500 mating cycles minimum  |  |  |
| Material                          |  |  |  |
| Center Contact                    | Female: beryllium copper, gold-plated<br>Male: brass or beryllium copper, gold-plated  |  |  |
| Outer Contact Plating             | Nickel or gold plating as indicated  |  |  |
| Body                              | Brass per QQB-626, or zinc per ASTM B86-71   |  |  |
| Body Plating                      | Nickel or gold plating as indicated  |  |  |
| Insulator                         | TFE  |  |  |
| Crimp Ferrule                     | Annealed copper alloy  |  |  |

| Environmental     |   |  |  |  |  |
|-------------------|---|--|--|--|--|
| Temperature Range | - 65°C to +165°C  |  |  |  |  |
| Thermal Shock     | MIL-STD-202 method 107, test condition B (except high temperatures @ 200°C                      |  |  |  |  |
| Shock             | MIL-STD-202 method 202, method 13, snap-on, test condition B;<br>75 G's @ 6 milliseconds ½ sine |  |  |  |  |
| Vibration         | MIL-STD-202 method 204, snap-on, test condition B; (15 G's)                                     |  |  |  |  |
| Corrosion         | MIL-STD-202 method 101, test condition B. 5% salt solution                                      |  |  |  |  |

Note: These characteristics are typical but may not apply to all connectors.

### **75** $\Omega$ SMB Specifications

| Electrical                             |  |  |  |
|--|--|--|--|
| Impedance                              | 75 Ω   |  |  |
| Frequency Range                        | 0-4 GHz with low reflection; usable to 10.0 GHz  |  |  |
| Voltage Rating for RG-188/U Cable      | 335 volts at sea level and 85 volts at 70,000 feet   |  |  |
| Dielectric Withstanding Voltage        | 1,000 VRMS   |  |  |
| RF High Potential Withstanding Voltage | RF-195/U series: 500 VRMS  |  |  |
| Corona Level                           | RG-195/U series: 400 volts minimum @ 70,000 ft   |  |  |
| VSWR                                   | Straight connector, RG-196/U: 1.30 + .04 f (GHz)<br>Right angle connector, RG-196/U: 1.45 + .06 f (GHz)<br>Straight connector, RG-188/U: 1.25 + .04 f (GHz)<br>Right angle connector, RG-188/U: 1.35 + .04 f (GHz) |  |  |
| Contact Resistance                     | Center contact: 6.0 m $\Omega$ initial, 8.0 after environmental;<br>Outer contact: 1.0 m $\Omega$ initial, 1.5 after environmental<br>Braid to body: 1.0 m $\Omega$ initial, after environmental N/A               |  |  |
| Insulation Resistance                  | 1,000 MΩ minimum   |  |  |
| Insertion Loss                         | Straight connector: 0.30 dB @ 1.5 GHz<br>Right angle connector: 0.60 dB @ 1.5 GHz  |  |  |
| RF Leakage                             | -55 dB minimum @ 2-3 GHz   |  |  |
| Mechancial                             |  |  |  |
| Mating                                 | Snap-on coupling per MIL-STD-348   |  |  |
| Braid/Jacket Cable Affixment           | Hex crimp  |  |  |
| Center Conductor Cable Affixment       | Solder   |  |  |
| Contact Captivation                    | All types unless noted otherwise   |  |  |
| Cable Retention                        | Equal to breaking strength of cable employed   |  |  |
| Engagement Forces                      | Engagement: 14 lbs maximum<br>Disengagement: 2 lbs minimum<br>After 500 matings, 14 lbs maximum engagement and<br>disengagement  |  |  |
| Connector Durability                   | 500 mating cycles minimum  |  |  |
| Material                               | 1  |  |  |
| Center Contact                         | Female: beryllium copper, gold-plated<br>Male: brass or beryllium copper, gold-plated  |  |  |
| Outer Contact Plating                  | Nickel or gold plating as indicated  |  |  |
| Body                                   | Brass per QQB-626  |  |  |
| Body Plating                           | Nickel or gold plating as indicated  |  |  |
| Insulator                              | TFE  |  |  |
| Crimp Ferrule                          | Annealed copper alloy  |  |  |
| Environmental                          | 5  |  |  |
| Temperature Range                      | - 65°C to +165°C   |  |  |
| Thermal Shock                          | MIL-STD-202 method 107, test condition B (except high temperatures @ 200°C   |  |  |
| Shock                                  | MIL-STD-202 method 213, snap-on, test condition B; 75 G<br>@ 6 milliseconds ½ sine   |  |  |
| Vibration                              | MIL-STD-202 method 202, snap-on, test condition B; (15 0   |  |  |
| Corrosion                              | MIL-STD-202 method 101, test condition B. 5% salt solution   |  |  |