

SMA Brass Coaxial Connectors

Amphenol has developed a line of 50 ohm SMA brass connectors as a cost effective solution for solutions where stainless steel construction is not required. This gives the design engineer flexibility with performance to complete projects with world class components.

Amphenol series 901 SMA brass connectors are semi-precision, subminiature units which provide electrical performance from DC to 18 GHz. These high performance connectors are compact in size and mechanically have outstanding durability.

Amphenol brass SMA connectors feature pre-assembled captive center contacts, brass body and coupling nuts. These connectors are built in accordance with MIL-C-39012 and can be mated with all connectors which meet the military specification mating diameters regardless of manufacturer.

Amphenol SMA designs are available for .085" and .141" diameter semi-rigid cables as well as all the standard flexible cables including double shielded RG-316. These connectors are adaptable to the interconnection requirements of both systems and components.

Complete mechanical and environmental specifications and specification drawings are shown on pages 2 and 3.

SPECIFICATIONS*

ELECTRICAL

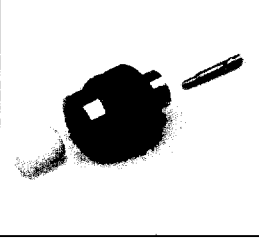
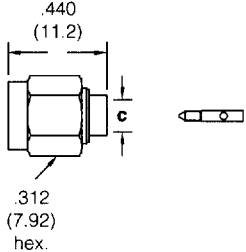
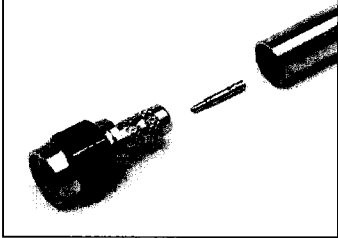
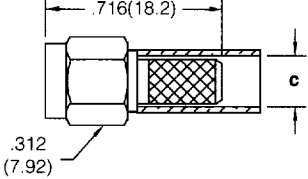
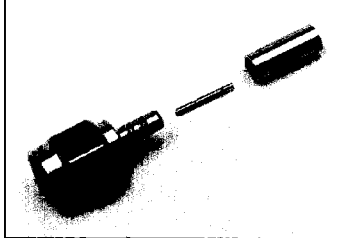
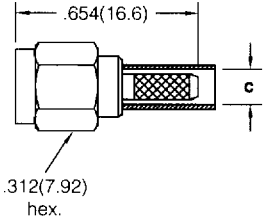
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|---------------------------------|--|
| Impedance | 50 ohms |
| Frequency range | .141" & .085" O.D. copper jacket semi-rigid cable. 0-18GHz. Flexible cables: 0-12.4 GHz. |
| Voltage rating | RG-58, 141, 142: 500 volts peak RG-174, 188, 316, 375 volts peak |
| Dielectric withstanding voltage | .141" & RG-58 group: 1,000 VRMS. .085" & RG-316 group: 750 VRMS. |
| VSWR (straight connectors) | .141" O.D. semi-rigid cable: 1.05 + .005 f RG-174 group: 1.15 + .02 f RG-58 group: 1.15 + .01 f RG-178 group: 1.20 + .025 f |
| Contact resistance | Center: 2.0 milliohms Body: 2.0 milliohms Braid to body: 0.5 milliohms |
| Insulation resistance: | 5000 megohms |
| RF leakage | -90 dB min. at 2.3 GHz |
| Insertion loss: | dB max. = $.06 \sqrt{f}$ (GHz) Test frequency @ 6.0 GHz |

MATERIAL

| | |
|--|--------------------------------|
| Bodies, coupling nuts, other metal parts (except as noted) | Brass |
| Contacts | |
| Male: | Brass |
| Female: | Beryllium copper, heat treated |
| Plating: Center contacts | .00003* min. gold |
| Plating: Other metal parts | Gold plated or nickel plated |
| Insulators | TFE fluorocarbon |
| Gaskets | Silicone rubber |
| Crimp ferrules | Seamless copper tubing alloy |

* These characteristics are typical and may not apply to all connectors.

NEW SMA Brass Coaxial Connectors

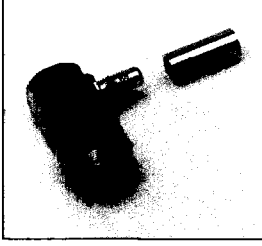
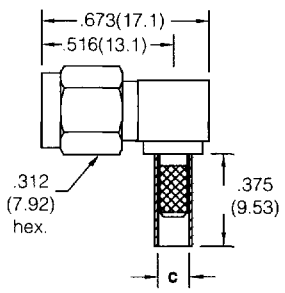
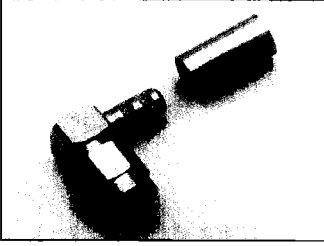
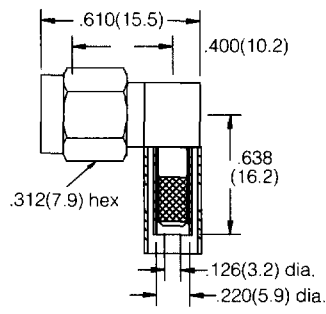
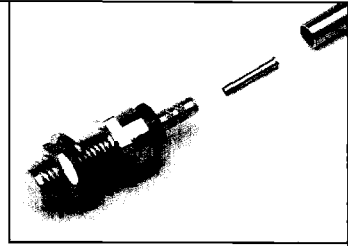
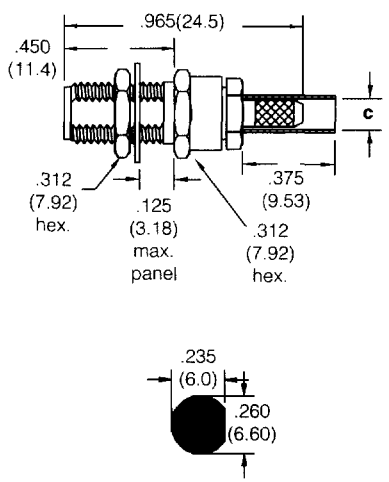
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| <p>Fig. 1</p>  <p style="text-align: center;">NEW</p>  <p style="text-align: center;">.440 (11.2)</p> <p style="text-align: center;">.312 (7.92) hex.</p> <p style="text-align: center;">SMA Solder Plug 901-9868 Plated for .141" S/R 901-9867 Plated for .085" S/R</p> | <p>Fig. 2</p>  <p style="text-align: center;">NEW</p>  <p style="text-align: center;">.716(18.2)</p> <p style="text-align: center;">.312 (7.92)</p> <p style="text-align: center;">SMA Crimp Plug Captivated Center Contact 901-9870 Gold Plated for RG-58 901-9871 Gold Plated for RG-223, 141 901-9876 Nickel Plated for RG-58</p> | <p>Fig. 3</p>  <p style="text-align: center;">NEW</p>  <p style="text-align: center;">.654(16.6)</p> <p style="text-align: center;">.312(7.92) hex.</p> <p style="text-align: center;">SMA Crimp Plug Captivated Center Contact 901-9877 Nickel Plated for RG-174, 188, 316 901-9916 Gold Plated for RG-174, 188, 316</p> |
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NEW SMA BRASS PLUGS

| Cable RG-/U | Connector Description | Cable Attachment | | c Dia In. (mm) | CAI | Ins. | Notes | Amphenol Number | Fig. |
|----------------|--------------------------|------------------|--------|-------------------|-----|------|-----------------|--------------------|------|
| | | Outer | Inner | | | | | | |
| 58 | Plug | Crimp | Solder | .210(5.3) | C53 | D1 | Captive Contact | 901-9870 | 2 ▲ |
| 58 | Plug | Crimp | Solder | .210(5.3) | C53 | D1 | Captive Contact | 901-9876 | 2 ▲ |
| 174, 188, 316 | Plug | Crimp | Solder | .128(3.3) | C57 | D1 | Captive Contact | 901-9877 | 3 ▲ |
| 174, 188, 316 | Plug | Crimp | Solder | .128(3.3) | C57 | D1 | Captive Contact | 901-9916 | 3 ▲ |
| 141, 223 | Plug | Crimp | Solder | .220(5.6) | C53 | D1 | Captive Contact | 901-9871 | 2 ▲ |
| .085" S/R | Plug | Solder | Solder | .090(2.3) | C47 | D1 | --- | 901-9867 | 1 ▲ |
| .141" S/R | Plug | Solder | Solder | .145(3.7) | C47 | D1 | --- | 901-9868 | 1 ▲ |

▲ distributor stocked

NEW SMA Brass Coaxial Connectors

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| <p>Fig. 1</p>  <p style="text-align: center;">NEW</p>  <p>SMA Angle Plug, Crimp 901-9872 Gold Plated for RG-174, 188, 316 901-9873 Gold Plated for RG-58 901-9874 Gold Plated for RG-141, 223 901-9880 Nickel Plated for RG-58 901-9881 Nickel Plated for RG-174, 188, 316</p> | <p>Fig. 2</p>  <p style="text-align: center;">NEW</p>  <p>SMA Low Profile Angle Plug, Crimp 901-9902 Plated for RG-141, 223</p> | <p>Fig. 3</p>  <p style="text-align: center;">NEW</p>  <p>SMA Bulkhead Jack, Crimp 901-9875 Gold Plated for RG-174, 188, 316 901-9879 Nickel Plated for RG-174, 188, 316</p> |
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NEW SMA BRASS ANGLE PLUGS

| Cable RG-U | Connector Description | Cable Attachment | | c Dia In. (mm) | CAI | Ins. | Notes | Amphenol Number | Fig. | |
|---------------|------------------------|------------------|--------|----------------|-----|------|--------------------|-----------------|------|---|
| | | Outer | Inner | | | | | | | |
| 58 | Angle Plug | Crimp | Solder | .210(5.3) | C53 | D1 | Gold Plated Body | 901-9873 | 1 | ▲ |
| | Angle Plug | Crimp | Solder | .210(5.3) | C53 | D1 | Nickel Plated Body | 901-9880 | 1 | ▲ |
| 174, 188, 316 | Angle Plug | Crimp | Solder | .128(3.3) | C57 | D1 | Nickel Plated Body | 901-9881 | 1 | ▲ |
| | Angle Plug | Crimp | Solder | .128(3.3) | C57 | D1 | Gold Plated Body | 901-9872 | 1 | ▲ |
| 141, 223 | Angle Plug | Crimp | Solder | .220(5.6) | C53 | D1 | Gold Plated Body | 901-9874 | 1 | ▲ |
| 141, 223 | Low Profile Angle Plug | Crimp | Solder | .220(5.6) | C53 | D1 | Plated Body | 901-9902 | 2 | |

NEW SMA BRASS BULKHEAD JACKS

| Cable RG-U | Connector Description | Cable Attachment | | c Dia. In. (mm) | CAI | Ins. | Notes | Amphenol Number | Fig. | |
|---------------|-----------------------|------------------|--------|-----------------|------|------|--------------------|-----------------|------|---|
| | | Outer | Inner | | | | | | | |
| 174, 188, 316 | Bulkhead Jack | Crimp | Solder | .128(3.3) | C58a | D1 | Gold Plated Body | 901-9875 | 3 | ▲ |
| | Bulkhead Jack | Crimp | Solder | .128(3.3) | C58a | D1 | Nickel Plated Body | 901-9879 | 3 | ▲ |

▲ distributor stocked

NEW SMA Brass Coaxial Connectors

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| <p>Fig. 1</p> <p style="text-align: center;">SMA Panel Receptacle (Jack) Solder Cup terminal 901-9893 Nickel Plated</p> | <p>Fig. 2</p> <p style="text-align: center;">SMA Panel Receptacle (Jack) Post terminal 901-9891 Nickel Plated</p> |
| <p>Fig. 3</p> <p style="text-align: center;">SMA Panel Receptacle (Jack) Solder Cup terminal 901-9892 Nickel Plated</p> | <p>Fig. 4</p> <p style="text-align: center;">SMA Panel Receptacle (Jack) Post terminal 901-9887 Nickel Plated</p> |

NEW SMA BRASS PANEL PLUG RECEPTACLES

| Connector Description | Terminal Type | Ins | Construction Notes | Amphenol Number | Fig. |
|-------------------------|---------------|-----|--------------------|-----------------|------|
| Panel Receptacle (Jack) | Solder Cup | D1 | Nickel Plated Body | 901-9893 | 1 ▲ |
| Panel Receptacle (Plug) | Post | D1 | Nickel Plated Body | 901-9891 | 2 ▲ |
| Panel Receptacle (Plug) | Solder Cup | D1 | Nickel Plated Body | 901-9892 | 3 ▲ |
| Panel Receptacle (Plug) | Post | D1 | Nickel Plated Body | 901-9887 | 4 ▲ |

▲ distributor stocked

NEW SMA Brass Coaxial Connectors

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| <p>Fig. 1</p> <p>SMA Panel Receptacle (P) Post terminal 901-9888 Gold Plated</p> | <p>Fig. 2</p> <p>SMA Bulkhead Receptacle (J) Solder Cup terminal 901-9889 Nickel Plated Front Mount</p> | <p>Fig. 3</p> <p>SMA Bulkhead Receptacle (J) Solder Cup terminal 901-9890 Nickel Plated Rear Mount</p> |
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NEW SMA BRASS PANEL PLUG RECEPTACLES

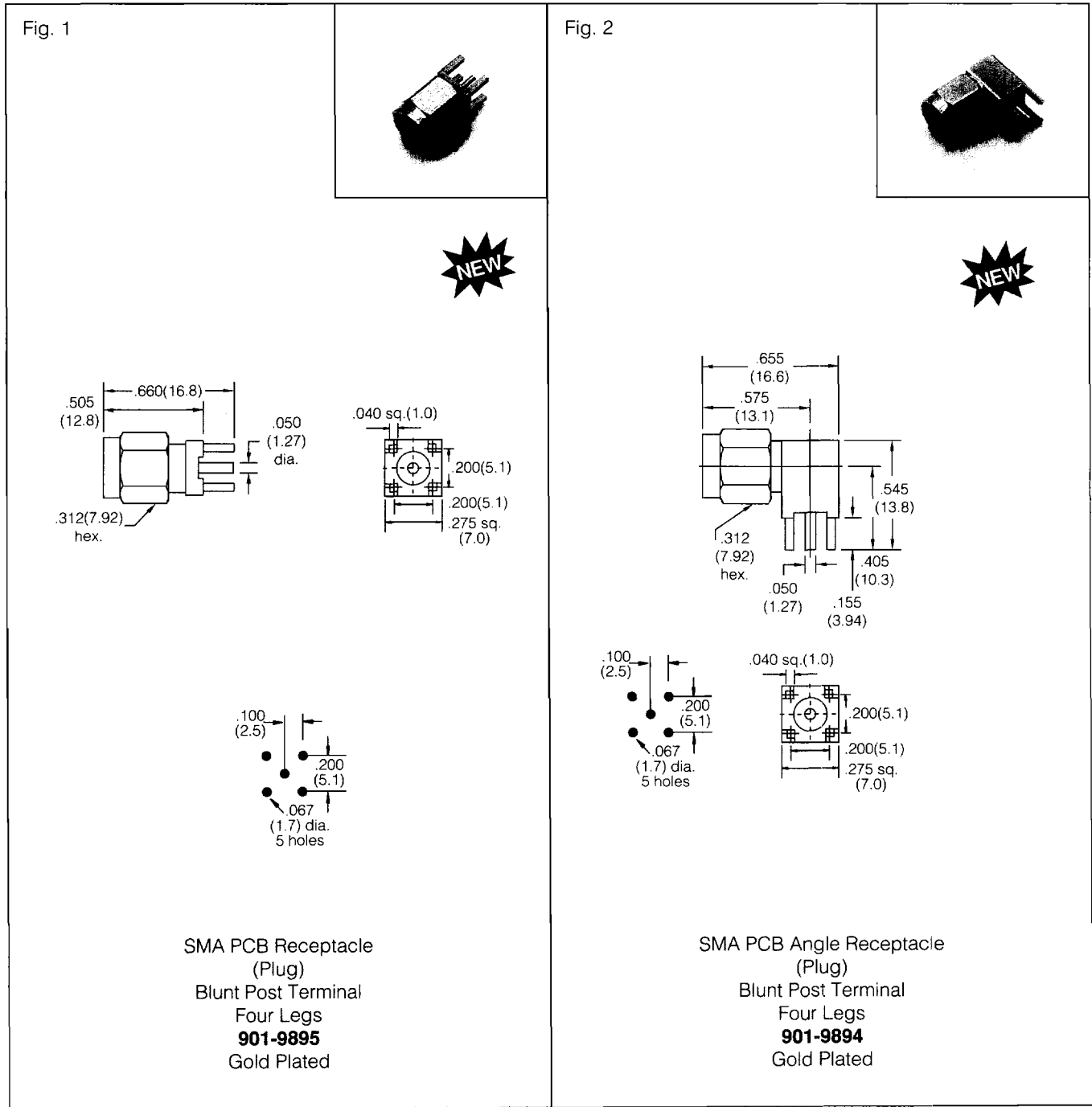
| Connector Description | Terminal Type | Ins | Construction Notes | Amphenol Number | Fig. |
|-------------------------|---------------|-----|--------------------|-----------------|------|
| Panel Receptacle (Plug) | Post | D1 | Gold Plated Body | 901-9988 | 1 |

NEW SMA BRASS BULKHEAD RECEPTACLES

| Connector Description | Terminal Type | Ins | Construction Notes | Amphenol Number | Fig. |
|---|---------------|-----|--------------------|-----------------|------|
| Bulkhead Receptacle (Jack), Front Mount | Solder Cup | D1 | Nickel Plated Body | 901-9889 | 2 ▲ |
| Bulkhead Receptacle (Jack), Rear Mount | Solder Cup | D1 | Nickel Plated Body | 901-9890 | 3 ▲ |

▲ distributor stocked

NEW SMA Brass Coaxial Connectors

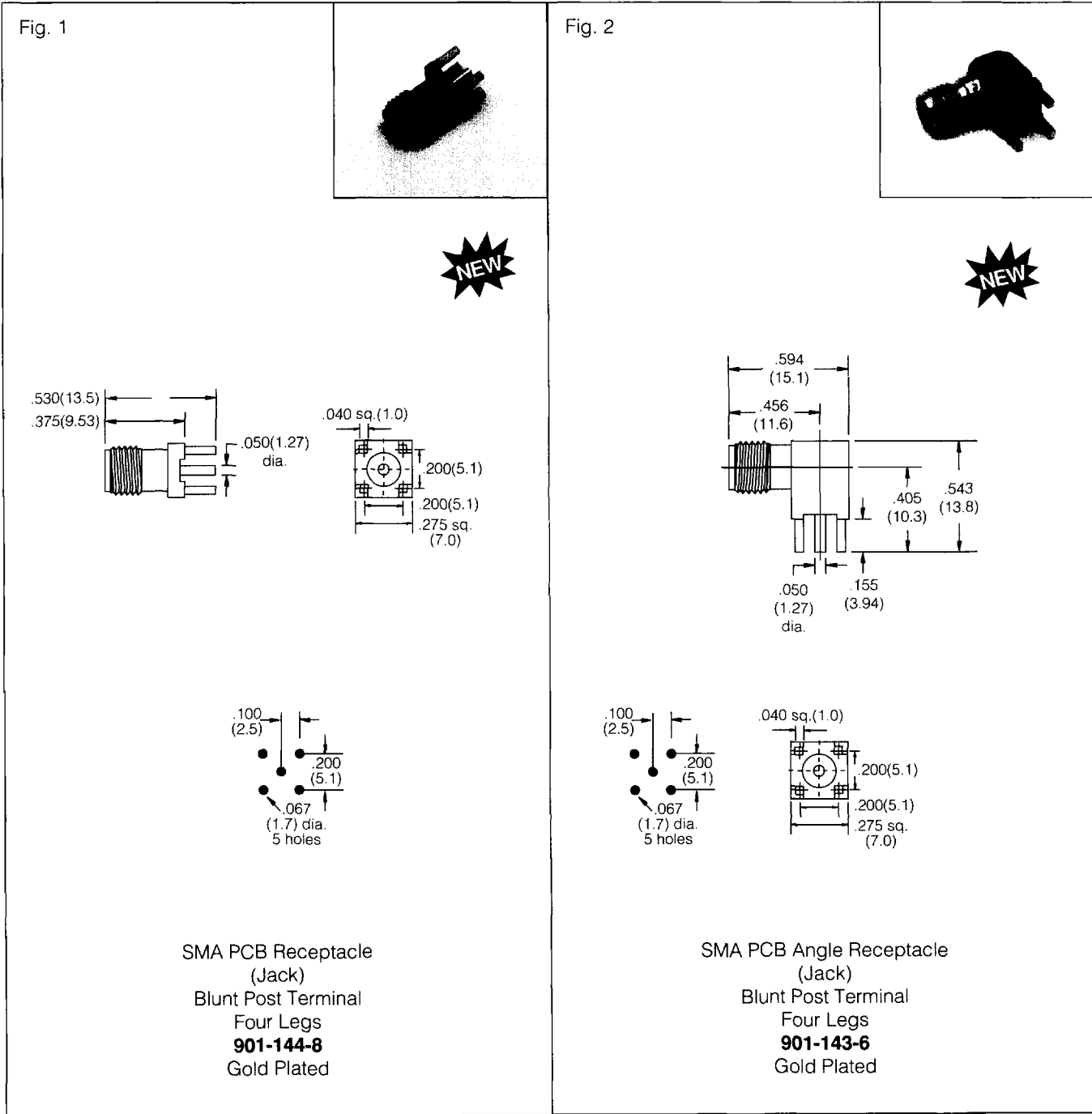


NEW SMA BRASS PRINTED CIRCUIT BOARD PLUG RECEPTACES

| Connector Description | Terminal Type | Ins | Construction Notes | Amphenol Number | Fig. |
|-------------------------------------|---------------|-----|--------------------|-----------------|------|
| PCB Receptacle (P)/ Four Legs | Blunt Post | D1 | Gold Plated Body | 901-9895 | 1 ▲ |
| PCB Angle Receptacle (P)/ Four Legs | Blunt Post | D1 | Gold Plated Body | 901-9894 | 2 ▲ |

▲ distributor stocked

NEW SMA Brass Coaxial Connectors



NEW SMA BRASS PRINTED CIRCUIT BOARD JACK RECEPTACLES

| Connector Description | Terminal Type | Ins | Construction Notes | Amphenol Number | Fig. |
|-------------------------------------|---------------|-----|--------------------|------------------|------|
| PCB Receptacle (J)/ Four Legs | Blunt Post | D1 | Gold Plated Body | 901-144-8 | 1 ▲ |
| PCB Angle Receptacle (J)/ Four Legs | Blunt Post | D1 | Gold Plated Body | 901-143-6 | 2 ▲ |

▲ distributor stocked