## SMA Connectors



## **General Description**

Delta SMA connectors are subminiature, precision, 50  $\Omega$  impedance connectors with 1/4"-36 threaded coupling. They are best suited for use with high-frequency semi-rigid cables in demanding applications up to 18 GHz, or miniature flexible cables up to 12.4 GHz. Our extensive line of SMA receptacles includes configurations for virtually any packaging requirement, and we can supply any adapter or accessory you may need to complete your system design. Adapters between SMA and other series are shown starting on page 176. Many of our SMA connectors are available as MIL-PRF-39012 QPL versions. These types are listed starting on page 195.

As with our other connector series, Delta's customer-driven design results in SMA series connectors with practical and unique features that make your design and assembly process easier. Some of these include:

- One-Step cable connectors for guick, accurate assembly to semi-rigid cable.
- PressMount receptacles (page 115) mount securely in a single round hole, saving space on your components and reducing your housing fabrication costs.
- Panel receptacles with flange sizes to match the same hole pattern as standard BNC, TNC or N connectors, letting you drill one hole pattern and mount BNC, N, SMA, TNC, or 7/16 series connectors as needed.
- Edge-mount P.C. board receptacles (page 114).

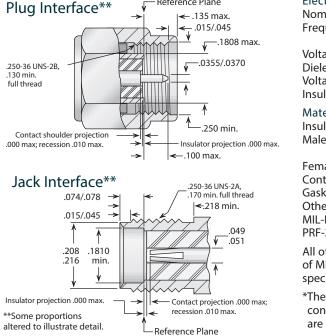
• Our new E-Line brass SMA connectors provide a lower-cost alternative for commercial applications (page 123). Our SMA series product line is still growing, so please call if you don't see what you need.

### **SMA** Configuration

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### SMA Specifications\*



Reference Plane

### Electrical:

Nominal Impedance: 50 ohms. DC-18 GHz (with semi-rigid cable); Frequency Range: DC-12.4 GHz (with flexible cable). Voltage Rating: 335–500 volts RMS (dependent on cable). **Dielectric Withstanding** Voltage : 500–1500 volts RMS (dependent on cable). Insulation Resistance: 5,000 megohms. Materials/Finishes: Insulators: Teflon per ASTM D1710. Male Contacts: Brass per ASTM B16, or Beryllium Copper per ASTM B196.

Female Contacts: Beryllium Copper per ASTM B196.

Contact Plating : Gold per MIL-DTL-45204.

Gaskets: Silicone rubber per ZZ-R-765, Class II, Grade 50. Other Metal Parts: Stainless steel per ASTM A582, plated gold per MIL-DTL-45204 or passivated to meet corrosion requirements of MIL-PRF-39012; or Brass per ASTM B16: plated gold per MIL-DTL-45204.

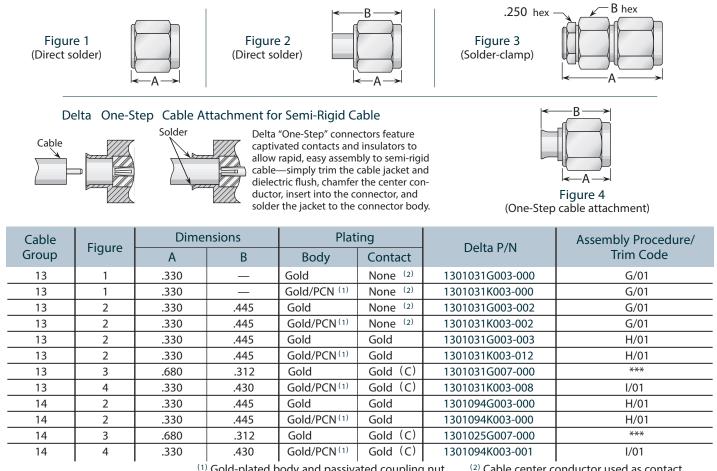
All other specifications are in accordance with the latest issues of MIL-PRF-39012, or MIL-A-55339, or other applicable MIL specifications, and interfaces are in accordance with MIL-STD-348.

\*These specifications are typical and may not apply to all connectors. Detailed specifications for individual connectors are available on request.



## **SMA** Cable Plugs

### Straight Plug - For Semi-Rigid Cable



<sup>(1)</sup> Gold-plated body and passivated coupling nut. <sup>(2)</sup> Cable center conductor used as contact.

### **Right Angle Plug - For Semi-Rigid Cable**

Figure 1 (Direct solder)

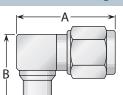
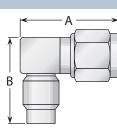


Figure 2 (One-Step cable attachment)



Cable	Cable		Dimensions		ting	Delta P/N	Assembly Procedure/
Group	Figure	А	В	Body	Contact	Della P/N	Trim Code
13	1	.680	.430	Gold	Gold (C)	1305031G003-000	J/01
13	1	.680	.430	Gold/PCN <sup>(1)</sup>	Gold (C)	1305031K003-000	J/01
13	2	.570	.580	Gold	Gold (C)	1305031G003-002	I/01
13	2	.570	.580	Gold/PCN <sup>(1)</sup>	Gold (C)	1305031K003-004	I/01
14	1	.680	.430	Gold	Gold (C)	1305025G003-000	J/01
14	1	.680	.430	Gold/PCN <sup>(1)</sup>	Gold (C)	1305025K003-000	J/01
14	2	.570	.580	Gold	Gold (C)	1305094G003-003	I/01
14	2	.570	.580	Gold/PCN <sup>(1)</sup>	Gold (C)	1305094K003-005	I/01

<sup>(1)</sup> Gold-plated body and passivated coupling nut.

• See page 209 for cable groups.

 Assembly procedures start on page 210.
 \*\*\*Contact factory for cable assembly instructions. • (C) in contact plating column indicates captive contact.



## SMA Cable Plugs

## Straight Plug - For Flexible Cable

Figure 1 (Crimp type, shown with supplied heat-shrink tubing)

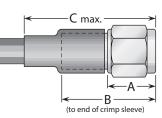
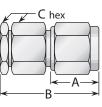


Figure 2 (Clamp type)

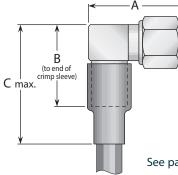


### See page 194 for MIL-PRF-39012 QPL version.

Cable	L Linung	D	imensio	ns	Plat	ting	Delta P/N	Assembly Procedure/	
Group	Figure	Α	В	С	Body	Contact	Della P/N	Trim Code	
5	1	.330	.700	1.187	Gold	Gold	1303017G000-000	K/02	
5	1	.330	.700	1.187	Passivated	Gold	1303017K000-000	K/02	
6	1	.330	.700	1.187	Gold	Gold	1303013G000-000	K/02	
6	1	.330	.700	1.187	Passivated	Gold	1303013K000-002	K/02	
9	1	.330	.700	1.187	Gold	Gold	1303036G000-000	K/02	
9	1	.330	.700	1.187	Passivated	Gold	1303036K000-000	K/02	
10	1	.330	.700	1.187	Gold	Gold	1303100G000-002	K/02	
10	1	.330	.700	1.187	Passivated	Gold	1303100K000-002	K/02	
5, 6	2	.330	.750	.312	Gold	Gold (C)	1301015G005-000	***	
5, 6	2	.330	.750	.312	Passivated	Gold (C)	1301015K005-000	***	
9	2	.330	.750	.312	Gold	Gold (C)	1301037G005-000	***	
9	2	.330	.750	.312	Passivated	Gold (C)	1301037K005-000	***	

## **Right Angle Plug - For Flexible Cable**

Figure 1 (Crimp type, shown with supplied heat-shrink tubing)



See page 195 for MIL-PRF-39012 QPL version.

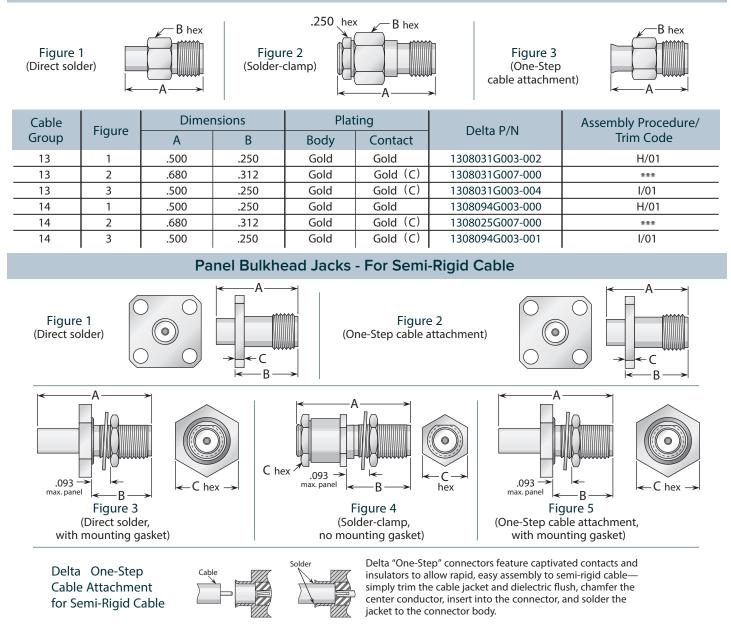
Cable	Eiguro	D	imensior	าร	Plat	ing	Delta P/N	Assembly Procedure/	
Group	Figure	А	В	С	Body	Contact	Della F/IN	Trim Code	
5	1	.680	.600	1.06	Gold	Gold (C)	1307017G001-000	L/03	
5	1	.680	.600	1.06	Passivated	Gold (C)	1307017K001-000	L/03	
6	1	.680	.600	1.06	Gold	Gold (C)	1307013G001-000	L/03	
6	1	.680	.600	1.06	Passivated	Gold (C)	1307013K001-000	L/03	
9	1	.680	.600	1.06	Gold	Gold (C)	1307036G001-000	L/03	
9	1	.680	.600	1.06	Passivated	Gold (C)	1307036K001-000	L/03	
10	1	.680	.600	1.06	Gold	Gold (C)	1307100G001-000	L/03	
10	1	.680	.600	1.06	Passivated	Gold (C)	1307100K001-000	L/03	
11	1	.680	.600	1.06	Gold	Gold (C)	1307038G001-000	L/03	
11	1	.680	.600	1.06	Passivated	Gold (C)	1307038K001-000	L/03	

See page 209 for cable groups.
 Assembly procedures start on page 210.
 \*\*\*\*Contact factory for cable assembly instructions.
 (C) in contact plating column indicates captive contact.



## **SMA** Cable Jacks

## Straight Jack - For Semi-Rigid Cable



Cable		Dimensions			Mounting	Pla	ting	Delta P/N	Assembly Procedure/
Group	Fig.	А	В	С	Figure Body Contact		Della P/N	Trim Code	
13	1	.560	.375	.065	05	Gold	Gold	1311031G053-000	H/01
13	2	.500	.375	.065	05	Gold	Gold (C)	1311031G053-003	I/01
13	3	.750	.415	.437	67	Gold	Gold	1317031G673-000	H/02
13	4	.750	.440	.312	67	Gold	Gold (C)	1317031G677-000	***
13	5	.700	.415	.437	67	Gold	Gold (C)	1317031G673-003	I/01
14	1	.500	.375	.065	05	Gold	Gold	1311025G053-000	H/01
14	2	.500	.375	.065	05	Gold	Gold (C)	1311025G053-001	I/01
14	3	.750	.415	.437	67	Gold	Gold	1317025G673-000	H/02
14	4	.750	.440	.312	67	Gold	Gold (C)	1317025G677-000	***
14	5	.750	.415	.437	67	Gold	Gold (C)	1317025G673-001	I/01

• See page 209 for cable groups. • Assembly procedures start on page 210. • \*\*\*Contact factory for cable assembly instructions. • See page 208 for mounting dimensions. • (C) in contact plating column indicates captive contact.

## SMA Cable Jacks



## Straight Jack - For Flexible Cable

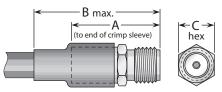


Figure 1 (Crimp type, shown with supplied heat-shrink tubing)

See page 195 for MIL-PRF-39012 QPL version.

Cable	Dimensions			Plating		Delta P/N	Assembly Procedure/	
Group	Figure	А	В	С	Body	Contact	Della P/IN	Trim Code
5	1	.800	1.125	.250	Gold	Gold	1308017G000-000	K/03
5	1	.800	1.125	.250	Passivated	Gold	1308017K000-000	K/03
6	1	.800	1.125	.250	Gold	Gold	1308013G000-000	K/03
6	1	.800	1.125	.250	Passivated	Gold	1308013K000-000	K/03
9	1	.800	1.125	.250	Gold	Gold	1308037G000-000	K/03
9	1	.800	1.125	.250	Passivated	Gold	1308037K000-000	K/03

**Bulkhead Jack - For Flexible Cable** 

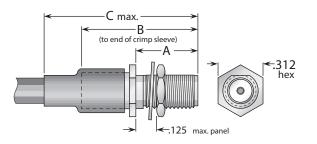


Figure 1 (Crimp type, shown with supplied heat-shrink tubing)

See page 196 for MIL-PRF-39012 QPL version.

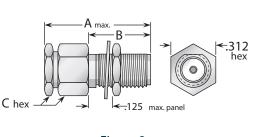


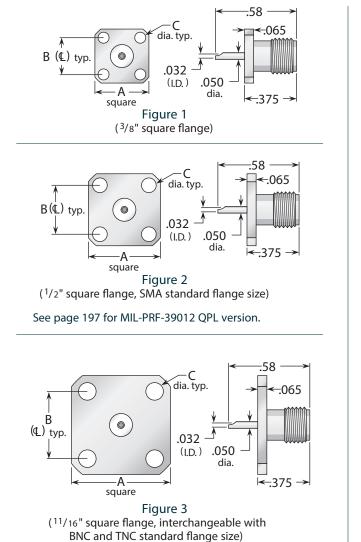
Figure 2 (Clamp type)

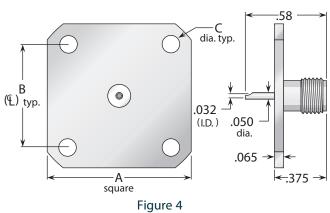
Cable	Fig	D	imensior	IS	Mounting	Plat	ing	Delta P/N	Assembly Procedure/	
Group	Fig.	А	В	С	Figure	Body	Contact	Della P/N	Trim Code	
5	1	.450	.940	1.25	67	Gold	Gold	1319017G670-000	K/04	
5	1	.450	.940	1.25	67	Passivated	Gold	1319017K670-000	K/04	
6	1	.450	.940	1.25	67	Gold	Gold	1319013G670-000	K/04	
6	1	.450	.940	1.25	67	Passivated	Gold	1319013K670-000	K/04	
9	1	.450	.940	1.25	67	Gold	Gold	1319037G670-000	K/04	
9	1	.450	.940	1.25	67	Passivated	Gold	1319037K670-000	K/04	
10	1	.450	.940	1.25	67	Gold	Gold	1319100G670-000	K/04	
10	1	.450	.940	1.25	67	Passivated	Gold	1319100K670-000	K/04	
5, 6	2	.850	.450	.312	67	Gold	Gold (C)	1316015G675-000	***	
5, 6	2	.850	.450	.312	67	Passivated	Gold (C)	1316015K675-000	***	
9	2	.850	.450	.312	67	Gold	Gold (C)	1316037G675-000	***	
9	2	.850	.450	.312	67	Passivated	Gold (C)	1316037K675-000	***	

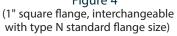
See page 209 for cable groups.
 Assembly procedures start on page 210.
 \*\*\*Contact factory for cable assembly instructions.
 (C) in contact plating column indicates captive contact.

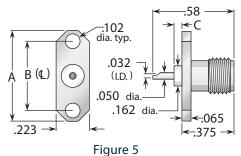


### Panel Jack Receptacle - Solder Pot Contact









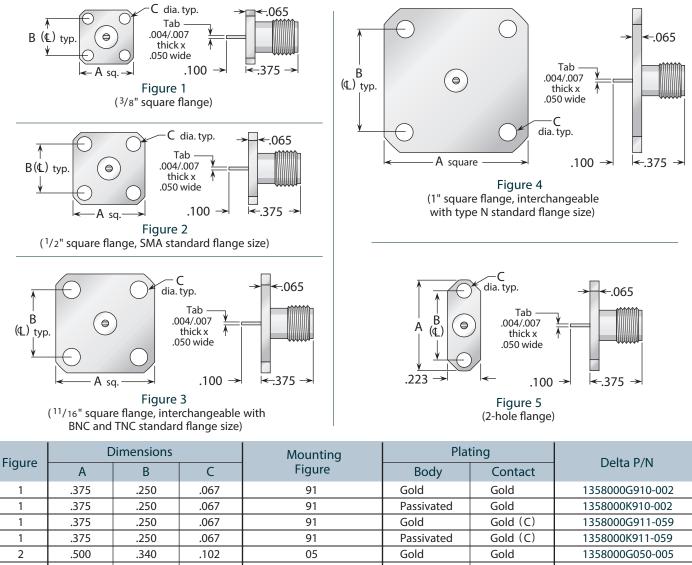
(2-hole flange)



<b>Figure</b>		Dimensions		Mounting	Plat	ting	Delta P/N
Figure	А	В	С	Figure	Body	Contact	Della P/N
1	.375	.250	.067	91	Gold	Gold (C)	1313000G911-000
1	.375	.250	.067	91	Passivated	Gold (C)	1313000K911-000
2	.500	.340	.102	05	Gold	Gold (C)	1313000G051-000
2	.500	.340	.102	05	Passivated	Gold (C)	1313000K051-002
3	.687	.500	.125	09	Gold	Gold (C)	1313000G091-000
3	.687	.500	.125	09	Passivated	Gold (C)	1313000K091-000
4	1.00	.718	.125	33	Gold	Gold (C)	1313000G331-000
4	1.00	.718	.125	33	Passivated	Gold (C)	1313000K331-000
5	.625	.481	.025	92	Gold	Gold (C)	1313000G921-000
5	.625	.481	.025	92	Passivated	Gold (C)	1313000K921-000
5	.625	.481	.000	92	Gold	Gold (C)	1313000G921-002
5	.625	.481	.000	92	Passivated	Gold (C)	1313000K921-002



### Panel Jack Receptacle - Tab Contact



1	.375	.250	.067	91	Passivated	Gold	1358000K910-002
1	.375	.250	.067	91	Gold	Gold (C)	1358000G911-059
1	.375	.250	.067	91	Passivated	Gold (C)	1358000K911-059
2	.500	.340	.102	05	Gold	Gold	1358000G050-005
2	.500	.340	.102	05	Passivated	Gold	1358000K050-005
2	.500	.340	.102	05	Gold	Gold (C)	1358000G051-003
2	.500	.340	.102	05	Passivated	Gold (C)	1358000K051-003
3	.687	.500	.125	09	Gold	Gold	1358000G090-001
3	.687	.500	.125	09	Passivated	Gold	1358000K090-001
3	.687	.500	.125	09	Gold	Gold (C)	1358000G091-008
3	.687	.500	.125	09	Passivated	Gold (C)	1358000K091-008
4	1.00	.718	.125	33	Gold	Gold	1358000G330-001
4	1.00	.718	.125	33	Passivated	Gold	1358000K330-001
4	1.00	.718	.125	33	Gold	Gold (C)	1358000G331-002
4	1.00	.718	.125	33	Passivated	Gold (C)	1358000K331-002
5	.625	.481	.102	92	Gold	Gold	1358000G920-003
5	.625	.481	.102	92	Passivated	Gold	1358000K920-003
5	.625	.481	.102	92	Gold	Gold (C)	1358000G921-063
5	.625	.481	.102	92	Passivated	Gold (C)	1358000K921-063



### Panel Jack Receptacle - Slotted Contact

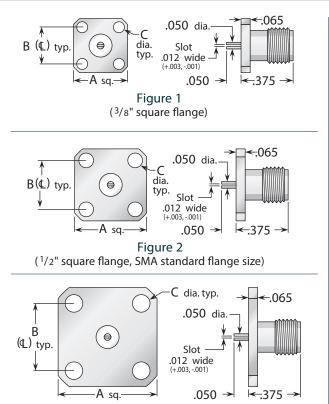
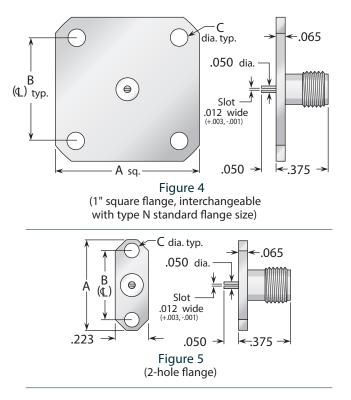


Figure 3 (<sup>11</sup>/<sub>16</sub>" square flange, interchangeable with BNC and TNC standard flange size)

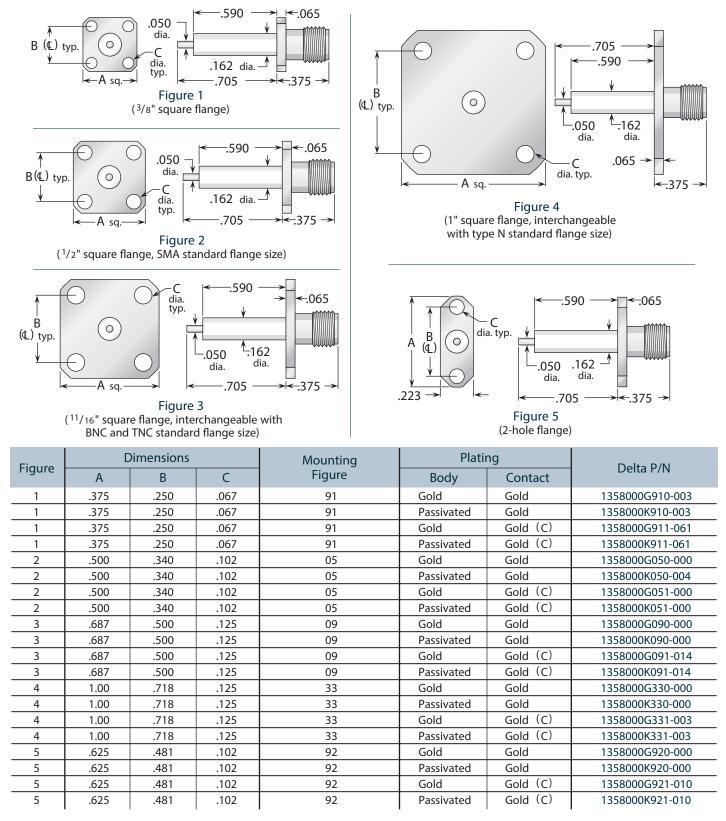


Other Standard Slot Widths Our other standard slot widths for these connectors (.018" and .036") are readily available—call for part numbers.

<b>F</b> :		Dimensions		Mounting	Plat	ting	
Figure	А	В	С	Figure	Body	Contact	Delta P/N
1	.375	.250	.067	91	Gold	Gold	1343000G910-003
1	.375	.250	.067	91	Passivated	Gold	1343000K910-003
1	.375	.250	.067	91	Gold	Gold (C)	1343000G911-006
1	.375	.250	.067	91	Passivated	Gold (C)	1343000K911-006
2	.500	.340	.102	05	Gold	Gold	1343000G050-006
2	.500	.340	.102	05	Passivated	Gold	1343000K050-006
2	.500	.340	.102	05	Gold	Gold (C)	1343000G051-021
2	.500	.340	.102	05	Passivated	Gold (C)	1343000K051-021
3	.687	.500	.125	09	Gold	Gold	1343000G090-001
3	.687	.500	.125	09	Passivated	Gold	1343000K090-001
3	.687	.500	.125	09	Gold	Gold (C)	1343000G091-006
3	.687	.500	.125	09	Passivated	Gold (C)	1343000K091-006
4	1.00	.718	.125	33	Gold	Gold	1343000G330-006
4	1.00	.718	.125	33	Passivated	Gold	1343000K330-006
4	1.00	.718	.125	33	Gold	Gold (C)	1343000G331-011
4	1.00	.718	.125	33	Passivated	Gold (C)	1343000K331-011
5	.625	.481	.102	92	Gold	Gold	1343000G920-004
5	.625	.481	.102	92	Passivated	Gold	1343000K920-004
5	.625	.481	.102	92	Gold	Gold (C)	1343000G921-006
5	.625	.481	.102	92	Passivated	Gold (C)	1343000K921-006



### Panel Jack Receptacle - Post Contact





.687

.687

.687

.687

1.00

1.00

1.00

1.00

.625

.625

.625

.625

3

3

3

3

4

4

4

4

5

5

5

5

.500

.500

.500

.500

.718

.718

.718

.718

.481

.481

.481

.481

.057

.057

.125

.125

.057

.057

.125

.125

.057

.057

.125

.125

## **SMA Receptacles**

1358000G091-015

1358000K091-015

1358000G091-016

1358000K091-016

1358000G331-004

1358000K331-004

1358000G331-005

1358000K331-005

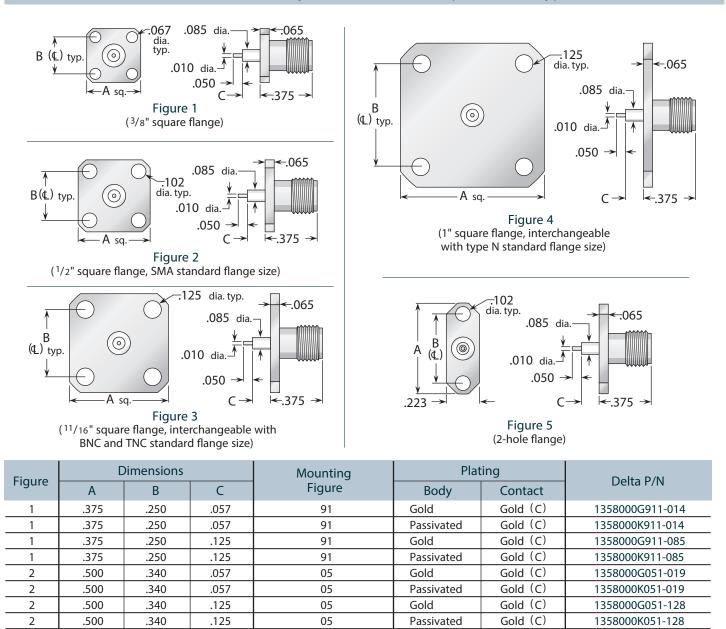
1358000G051-035

1358000K051-035

1358000G051-034

1358000K051-034

### Panel Jack Receptacle - Post Contact (For Microstrip)



See page 208 for mounting dimensions.
 (C) in contact plating column indicates captive contact (epoxy captivated).
 All items available with other flange, contact, and insulator configurations.

09

09

09

09

33

33

33

33

92

92

92

92

Gold

Gold

Gold

Gold

Gold

Gold

Passivated

Passivated

Passivated

Passivated

Passivated

Passivated

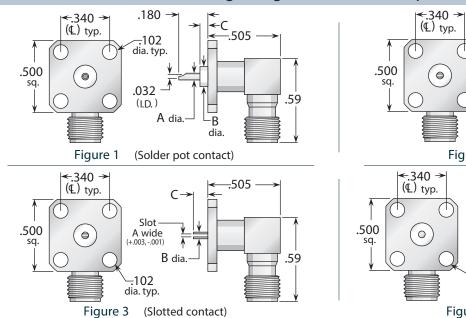
Gold (C)

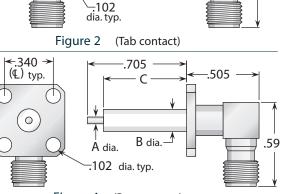
.505

.59



## **Right Angle Panel Jack Receptacle**





C→

Tab A thick

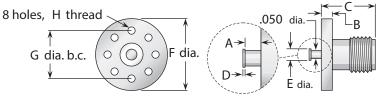
x B wide

Figure 4 (Post contact)

	5						
Figure		Dimensions		Mounting	Plat	ing	Delta P/N
Figure	А	В	С	Figure	Body	Contact	Della P/N
1	.050	.162	.062	05	Gold	Gold (C)	1315000G050-000
1	.050	.162	.062	05	Passivated	Gold (C)	1315000K050-000
2	.004/.007	.050	.100	05	Gold	Gold (C)	1364000G051-015
2	.004/.007	.050	.100	05	Passivated	Gold (C)	1364000K051-015
3	.012	.050	.102	05	Gold	Gold (C)	1366000G051-017
3	.012	.050	.050	05	Passivated	Gold (C)	1366000K051-017
3	.018	.050	.050	05	Gold	Gold (C)	1366000G051-018
3	.018	.050	.050	05	Passivated	Gold (C)	1366000K051-018
3	.036	.050	.050	05	Gold	Gold (C)	1366000G051-019
3	.036	.050	.050	05	Passivated	Gold (C)	1366000K051-019
4	.050	.162	.590	05	Gold	Gold (C)	1364000G051-016
4	.050	.162	.590	05	Passivated	Gold (C)	1364000K051-016

### **Stripline Receptacle**

Figure 1

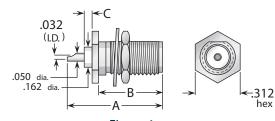


Figuro				Dimens	sions				Plat	ing	Delta P/N
Figure	А	В	С	D	E	F	G	Н	Body	Contact	Della P/N
1	.031	.085	.375	.010	.072	.562	.438	#2-56	Gold	Gold	1357000G000-012
1	.031	.085	.375	.010	.072	.562	.438	#2-56	Passivated	Gold	1357000K000-012
1	.063	.085	.375	.010	.072	.562	.438	#2-56	Gold	Gold	1357000G000-002
1	.063	.085	.375	.010	.072	.562	.438	#2-56	Passivated	Gold	1357000K000-002
1	.125	.085	.375	.010	.072	.562	.438	#2-56	Gold	Gold	1357000G000-006
1	.125	.085	.375	.010	.072	.562	.438	#2-56	Passivated	Gold	1357000K000-006



## **Bulkhead Jack Receptacles**

QPL version.





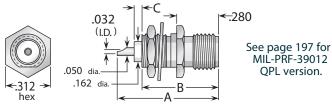
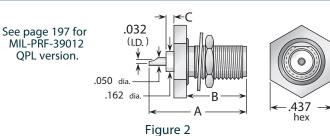


Figure 3 (Front mount, solder pot contact, no mounting gasket)



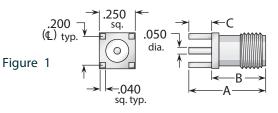
(Rear mount, solder pot contact, with mounting gasket)

.160 → .162 dia. .050 dia. 0 250 dia B

Figure 4 (Round body, post contact)

Figure		Dimensions		Max.	Mounting	Plat	ing	
Figure	А	В	С	Panel	Figure	Body	Contact	Delta P/N
1	.670	.450	.000	.125	67	Gold	Gold (C)	1320000G671-000
1	.670	.450	.000	.125	67	Passivated	Gold (C)	1320000K671-000
1	.670	.450	.062	.125	67	Gold	Gold (C)	1320000G821-002
1	.670	.450	.062	.125	67	Passivated	Gold (C)	1320000K821-000
2	.670	.415	.062	.093	67	Gold	Gold (C)	1320000G821-000
2	.670	.415	.062	.093	67	Passivated	Gold (C)	1320000K821-011
3	.670	.500	.062	.125	67	Gold	Gold (C)	1320000G671-005
3	.670	.500	.062	.125	67	Passivated	Gold (C)	1320000K671-005
4	.660	.500	.076	.125	82	Gold	Gold	1321000G820-003
4	.660	.500	.076	.125	82	Passivated	Gold	1321000K820-003
4	.660	.500	.076	.125	82	Gold	Gold (C)	1321000G821-000
4	.660	.500	.076	.125	82	Passivated	Gold (C)	1321000K821-014
4	.660	.500	.000	.125	82	Gold	Gold (C)	1321000G821-065
4	.660	.500	.000	.125	82	Passivated	Gold (C)	1321000K821-065

## Printed-Circuit Board Receptacles - Through-Hole Mount



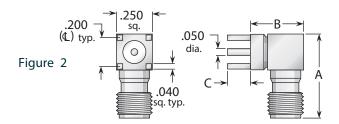


Figure		Dimensions		Max. Mounting		Plat	ing	Delta P/N
Figure	A	В	С	Board	Figure	Body	Contact	Della P/N
1	.530	.375	.155	.125	PCB05	Gold	Gold (C)	1367000G911-000
2	.583	.375	.155	.125	PCB05	Gold	Gold (C)	1369000G000-000



## **Delta Edge Mount Receptacles**

These connectors eliminate the need for drilling P.C. boards for mounting. Edge mounting provides design versatility, particularly in daughterboard configurations.

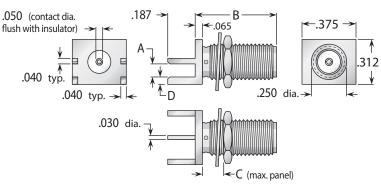
In addition, styles with bulkhead mounting allow P.C. boards to be attached directly to component housings or panels, eliminating the expense of adapters, cable assemblies, and/or additional board mounting hardware. Bulkhead mounted types are available with mounting gaskets as an option (see picture).

Delta SMA edge mount receptacles feature gold-plated brass bodies for low cost, with goldplated beryllium copper center contacts. Insulators and contacts are mechanically captivated to meet MIL-PRF-39012 requirements. All are available with stainless-steel bodies.



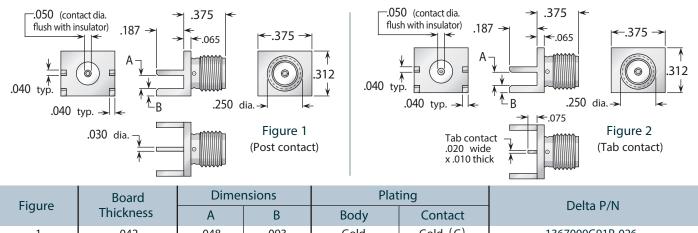
Bulkhead jack with mounting gasket

### Edge Mount P.C. Board Receptacles - Bulkhead Jack



Board	Dimensions			Plat	ing	Delta P/N	
Thickness	А	В	С	D	Body	Contact	Delta P/N
.042	.048	.500	.125	.093	Gold	Gold (C)	1367000G91P-021
.047	.053	.500	.125	.088	Gold	Gold (C)	1367000G91P-022
.062	.068	.500	.125	.073	Gold	Gold (C)	1367000G91P-006
.062	.068	.820	.425	.073	Gold	Gold (C)	1367000G91P-023

### Edge Mount P.C. Board Receptacles - Straight Jack



riguie	Thickness	А	В	Body	Contact	Delta F/N
1	.042	.048	.093	Gold	Gold (C)	1367000G91P-026
1	.047	.053	.088	Gold	Gold (C)	1367000G91P-027
1	.062	.068	.073	Gold	Gold (C)	1367000G91P-000
2	.042	.048	.103	Gold	Gold (C)	1367000G91P-024
2	.047	.053	.098	Gold	Gold (C)	1367000G91P-025
2	.062	.068	.083	Gold	Gold (C)	1367000G91P-020

• (C) in contact plating column indicates captive contact (mechanical captivation).

• See page 114 for plug types.



1

2

3

4

5

6

6

7

8

.100

.120

.200

.465

.425

.100

.062

.005/.008

.005/.008

.032

.250

.250

.005/.008

.050

.100

.100

.100

.100

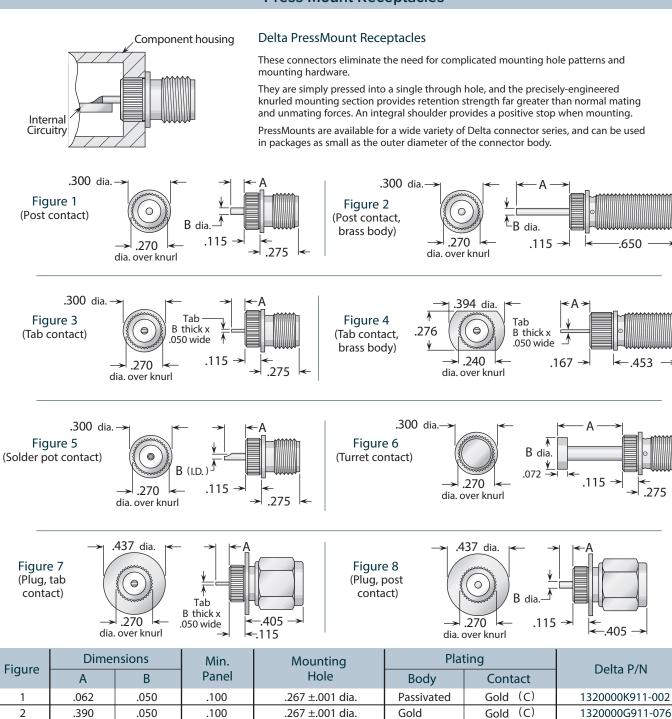
.100

.100

.100

## **SMA** Receptacles

### **Press Mount Receptacles**



(C) in contact plating column indicates captive contact (mechanical captivation).

.267 ±.001 dia.

.237 ±.001 dia.

.267 ±.001 dia.

Passivated

Passivated

Passivated

Passivated

Gold

(C)

(C)

(C)

(C)

(C)

(C)

(C)

1320000K911-003

1320000G911-084

1320000K911-004

1320000G911-085

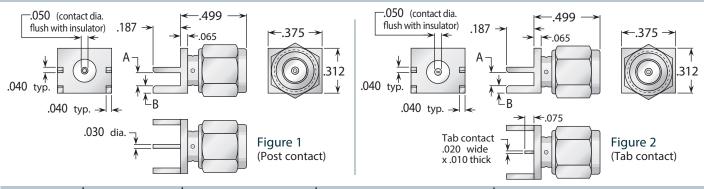
1320000G911-078

1324000K911-003

1324000K911-002

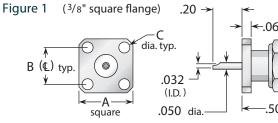


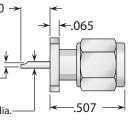


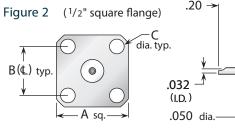


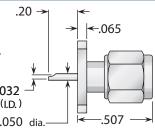
Figuro	Board	Dimensions		Pla	ting	Delta P/N	
Figure	Thickness	А	В	Body	Contact	Delta P/N	
1	.042	.048	.093	Gold	Gold (C)	1368000G91P-004	
1	.047	.053	.088	Gold	Gold (C)	1368000G91P-005	
1	.062	.068	.073	Gold	Gold (C)	1368000G91P-006	
2	.042	.048	.103	Gold	Gold (C)	1368000G91P-001	
2	.047	.053	.098	Gold	Gold (C)	1368000G91P-002	
2	.062	.068	.083	Gold	Gold (C)	1368000G91P-003	

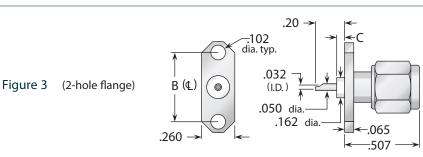
**Panel Plug Receptacles - Solder Pot Contact** 









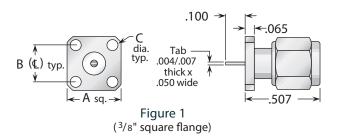


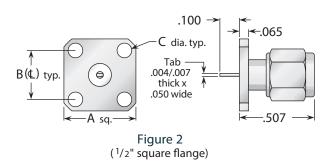
Figuro		Dimensions	5	Mounting	Plati	ng	Delta P/N
Figure	А	В	С	Figure	Body	Contact	Della P/N
1	.375	.250	.067	91	Gold	Gold (C)	1359000G911-013
1	.375	.250	.067	91	Passivated	Gold(C)	1359000K911-013
2	.500	.340	.102	05	Gold	Gold(C)	1359000G051-010
2	.500	.340	.102	05	Passivated	Gold(C)	1359000K051-010
3	.625	.481	.000	92A	Gold	Gold(C)	1359000G921-017
3	.625	.481	.000	92A	Passivated	Gold (C)	1359000K921-017
3	.625	.481	.025	92A	Passivated	Gold(C)	1359000G921-018
3	.625	.481	.025	92A	Passivated	Gold(C)	1359000K921-018

• See page 208 for mounting dimensions. • (C) in contact plating column indicates captive contact.



## Panel Plug Receptacles - Tab Contact





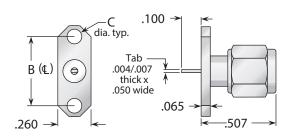
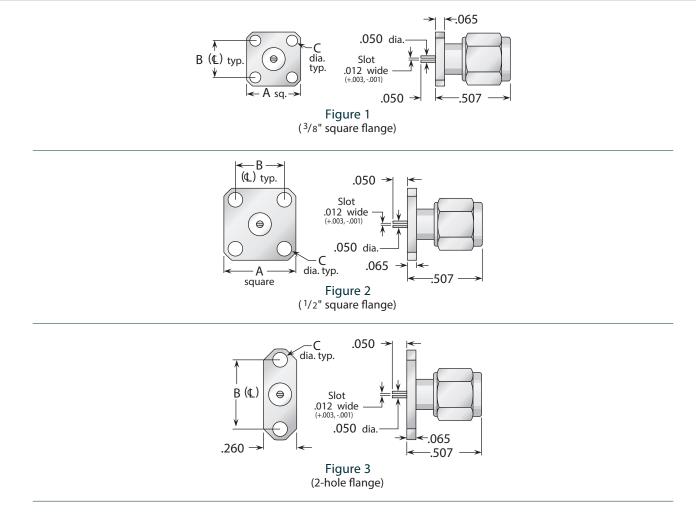


Figure 3 (2-hole flange)

Figuro	C	Dimensions		Mounting	Plat	ing	Delta P/N
Figure	А	В	С	Figure	Body	Contact	Della P/N
1	.375	.250	.067	91	Gold	Gold	1359000G910-002
1	.375	.250	.067	91	Passivated	Gold	1359000K910-002
1	.375	.250	.067	91	Gold	Gold (C)	1359000G911-014
1	.375	.250	.067	91	Passivated	Gold (C)	1359000K911-014
2	.500	.340	.102	05	Gold	Gold	1359000G050-005
2	.500	.340	.102	05	Passivated	Gold	1359000K050-005
2	.500	.340	.102	05	Gold	Gold (C)	1359000G051-045
2	.500	.340	.102	05	Passivated	Gold (C)	1359000K051-045
3	.625	.481	.102	92A	Gold	Gold	1359000G920-001
3	.625	.481	.102	92A	Passivated	Gold	1359000K920-001
3	.625	.481	.102	92A	Gold	Gold (C)	1359000G921-019
3	.625	.481	.102	92A	Passivated	Gold (C)	1359000K921-019



## **Panel Plug Receptacles - Slotted Contact**



#### Other Standard Slot Widths

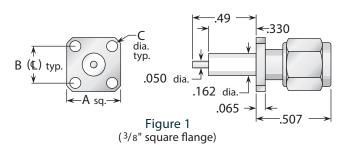
Our other standard slot widths for these connectors (.018" and .036") are readily available—call for part numbers.

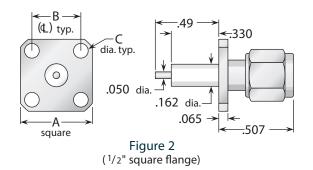
<b>Figure</b>		Dimensions		Mounting	Pla	ting	Delta P/N
Figure	А	В	С	Figure	Body	Contact	Della P/N
1	.375	.250	.067	91	Gold	Gold	1359000G910-004
1	.375	.250	.067	91	Passivated	Gold	1359000K910-004
1	.375	.250	.067	91	Gold	Gold (C)	1359000G911-023
1	.375	.250	.067	91	Passivated	Gold (C)	1359000K911-023
2	.500	.340	.102	05	Gold	Gold	1359000G050-007
2	.500	.340	.102	05	Passivated	Gold	1359000K050-007
2	.500	.340	.102	05	Gold	Gold (C)	1359000G051-038
2	.500	.340	.102	05	Passivated	Gold (C)	1359000K051-038
3	.625	.481	.102	92A	Gold	Gold	1359000G920-002
3	.625	.481	.102	92A	Passivated	Gold	1359000K920-002
3	.625	.481	.102	92A	Gold	Gold (C)	1359000G921-020
3	.625	.481	.102	92A	Passivated	Gold (C)	1359000K921-020

## DELTA Electronics Mfg. Corp.

## **SMA Receptacles**

## Panel Plug Receptacle - Post Contact





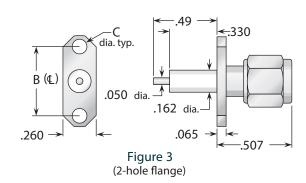
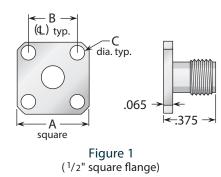


Figure		Dimensions	i	Mounting	Pla	ting	Delta P/N
Figure	А	В	С	Figure	Body	Contact	Della P/N
1	.375	.250	.067	91	Gold	Gold	1359000G910-003
1	.375	.250	.067	91	Passivated	Gold	1359000K910-003
1	.375	.250	.067	91	Gold	Gold (C)	1359000G911-015
1	.375	.250	.067	91	Passivated	Gold (C)	1359000K911-015
2	.500	.340	.102	05	Gold	Gold	1359000G050-000
2	.500	.340	.102	05	Passivated	Gold	1359000K050-002
2	.500	.340	.102	05	Gold	Gold (C)	1359000G051-004
2	.500	.340	.102	05	Passivated	Gold (C)	1359000K051-004
3	.625	.481	.102	92A	Gold	Gold	1323000G920-000
3	.625	.481	.102	92A	Passivated	Gold	1323000K920-000
3	.625	.481	.102	92A	Gold	Gold (C)	1323000G921-001
3	.625	.481	.102	92A	Passivated	Gold (C)	1323000K921-001



## **Dummy Receptacles**



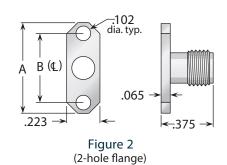


Figure		Dimensions		Mounting	Plat	ing	Delta P/N	
Figure	A	В	С	Figure	Body	Contact	Delta F/N	
1	.500	.340	.102	05	Gold	—	1363000G050-001	
1	.500	.340	.102	05	Passivated	—	1363000K050-002	
2	.625	.481	.102	92	Gold	—	1363000G920-000	
2	.625	.481	.102	92	Passivated	_	1363000K920-000	

## **Dust Caps**

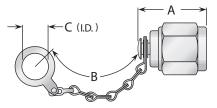


Figure 1 (Shown with safety chain)

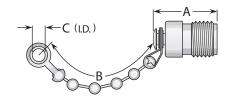


Figure 2 (Shown with bead chain)

See page 195 for MIL-PRF-39012 QPL versions.

<b>F</b> igure	C	Dimensions	5	Footures	Plat	ing	Delta P/N
Figure	A	В	С	Features	Body	Contact	Della P/N
1	.500	2.25	.144	Bead chain	Gold	—	1332000G000-000
1	.500	2.25	.144	Bead chain	Passivated	—	1332000K000-000
1	.275	—	—	No chain	Passivated	—	1332000K00A-001
1	.500	3.25	.281	Safety chain	Passivated	—	1332000K00B-003
1	.330	—	—	No chain / shorting type	Passivated	Passivated	1332000K00C-000
2	.500	2.25	.144	Bead chain	Gold	—	1333000G000-000
2	.500	2.25	.144	Bead chain	Passivated	_	1333000K000-000
2	.390	_	—	No chain	Passivated	_	1333000K00A-000

• See page 208 for mounting dimensions. • Dust caps are available with other chain styles and lengths.



## **SMA Adapters**

### Bulkhead Mounted Jack-Jack Adapters (Connects Two Plugs)

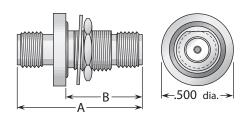


Figure 1 (Hermetically sealed, with mounting gasket)

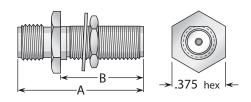


Figure 2 (Non-hermetic, no mounting gasket)

	Figure	Dimensions		Max. Mounting		Plat	ing	Delta P/N
		A	В	Panel	Figure	Body	Contact	Della P/N
	1	.875	.555	.190	66	Gold	Gold (C)	1326000G678-000
	2	.875	.575	.250	67	Gold	Gold (C)	1326000G821-000
	2	.875	.575	.250	67	Passivated	Gold (C)	1326000K821-001

## **Straight Adapters**

Figure 1 (Straight jack–jack; connects two plugs)



Figure 2 (Straight plug–plug; connects two jacks)

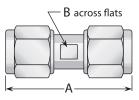


Figure 3 (Straight jack–plug; connects one plug and one jack)



Figure	Dimer	nsions	Plat	ing	Delta P/N	
Figure	A B		Body Contact		Dena P/N	
1	.500	.218	Gold	Gold (C)	1328000G000-000	
1	.500	.218	Passivated	Gold (C)	1328000K000-001	
2	.875	.218	Gold	Gold (C)	1327000G000-000	
2	.875	.218	Passivated	Gold (C)	1327000K000-002	
3	.720	_	Gold	Gold (C)	1334000G000-000	
3	.720	—	Passivated	Gold (C)	1334000K000-000	

• (C) in contact plating column indicates captive contact.

See page 208 for mounting dimensions.



## **SMA Adapters**

## **Right Angle & Tee Adapters**

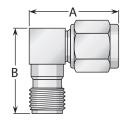


Figure 1 (Right angle plug–jack; connects one plug and one jack)

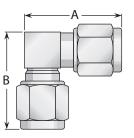


Figure 2 (Right angle plug–plug; connects two jacks)

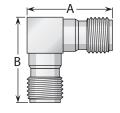


Figure 3 (Right angle jack–jack; connects two plugs)

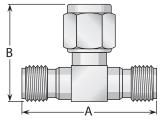


Figure 4 (Tee jack–plug–jack; connects two plugs and one jack)

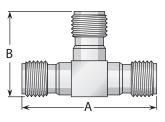


Figure 5 (Tee jack–jack–jack; connects three plugs)

Figure	Dime	nsions	Plat	ting	Delta P/N	
Figure	A B		Body	Contact	Delta P/N	
1	.625	.585	Gold	Gold (C)	1329000G000-000	
1	.625	.585	Passivated	Gold (C)	1329000K000-000	
2	.675	.675	Gold	Gold (C)	1337000G000-001	
2	.675	.675	Passivated	Gold (C)	1337000K000-001	
3	.585	.585	Gold	Gold (C)	1395000G000-000	
3	.585	.585	Passivated	Gold (C)	1395000K000-000	
4	.920	.630	Gold	Gold (C)	1330000G000-000	
4	.920	.630	Passivated	Gold (C)	1330000K000-000	
5	1.00	.590	Gold	Gold (C)	1349000G000-000	
5	1.00	.590	Passivated	Gold (C)	1349000K000-000	

(C) in contact plating column indicates captive contact.



## E-Line Brass SMA Connectors

### **General Description**

Delta E-Line brass SMA connectors are subminiature, 50  $\Omega$  impedance connectors with 1/4"-36 threaded coupling. Their use of brass for body parts provides lower cost while retaining electrical performance similar to that of stainless steel SMA counterparts.

If your application does not require the 500 mating cycles of service life provided by stainless steel SMA connectors, E-Line SMAs can fulfill your needs at a reduced cost. For additional economy, nickel-plated bodies can be specified instead of gold plating.

E-Line brass SMA connectors can be used with semi-rigid cables in applications up to 18 GHz, or miniature flexible cables up to 12.4 GHz.

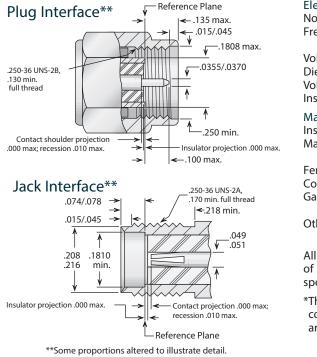
Our E-Line brass SMA product line is still growing, so please call if you don't see what you need.

### **E-Line Brass SMA Configurations**

Cable Plugs for Semi-Rigid Cable	124
Straight Cable Jacks for Semi-Rigid Cable	124
Bulkhead Cable Jacks for Semi-Rigid Cable	124
Panel Cable Jacks for Semi-Rigid Cable	124
Cable Plugs for Flexible Cable	125
Straight Cable Jacks for Flexible Cable	125
Bulkhead Cable Jacks for Flexible Cable	125
Panel Jack Receptacles (Solder Pot Contact)	126

Panel Jack Receptacles (Post Contact)......126 Panel Jack Receptacles (Tab Contact)......126 Bulkhead Jack Receptacles .....127 Printed-Circuit Board Receptacles ......127 Panel Plug Receptacles (Solder Pot Contact) ......128 Panel Plug Receptacles (Post Contact) ......128 Panel Plug Receptacles (Tab Contact) ......128 In-Series Adapters.....129

### E-Line Brass SMA Specifications\*



#### Electrical:

Nominal Impedance: 50 ohms. Frequency Range: DC-18 GHz (with semi-rigid cable); DC-12.4 GHz (with flexible cable). Voltage Rating: 335–500 volts RMS (dependent on cable). **Dielectric Withstanding** Voltage : 500-1500 volts RMS (dependent on cable). Insulation Resistance: 5,000 megohms.

#### Materials/Finishes:

Insulators: Teflon per ASTM D1710. Male Contacts: Brass per ASTM B16, or

Beryllium Copper per ASTM B196.

Female Contacts: Beryllium Copper per ASTM B196.

Contact Plating : Gold per MIL-DTL-45204.

Gaskets: Silicone rubber per ZZ-R-765,

Class II, Grade 50.

Other Metal Parts: Brass per ASTM B16 or equivalent; gold plated per MIL-DTL-45204, or nickel plated per AMS-QQ-N-290.

All other specifications are in accordance with the latest issues of MIL-PRF-39012, or MIL-A-55339, or other applicable MIL specifications, and interfaces are in accordance with MIL-STD-348.

\*These specifications are typical and may not apply to all connectors. Detailed specifications for individual connectors are available on request.



## E-Line Brass SMA Cable Plugs

## Straight & Right Angle Plugs - For Semi-Rigid Cable



Figure 1 (Straight plug—direct solder)



Figure 2 (Straight plug—direct solder)

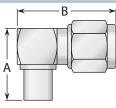


Figure 3 (Right angle plug—direct solder)

Cable	Figuro	Dimensions		Plat	ting	Delta P/N	Assembly Procedure/	
Group	Figure	А	В	Body	Contact	Della P/N	Trim Code	
13	1	.330	.344	Gold*	None (1)	1301031G003-502	G/01	
13	2	.459	.330	Gold*	None (1)	1301031G003-501	G/01	
13	2	.330	.459	Gold*	Gold	1301031G003-500	H/03	
13	3	.460	.630	Gold*	Gold (C)	1305031G003-500	J/02	
14	2	.330	.459	Gold*	Gold	1301025G003-500	H/03	
14	3	.460	.630	Gold*	Gold (C)	1305025G003-500	J/02	

<sup>(1)</sup> Cable center conductor used as contact.

### Straight, Panel & Bulkhead Jacks - For Semi-Rigid Cable

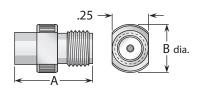


Figure 1 (Straight jack, direct solder)

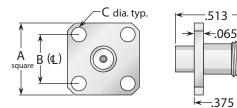


Figure 3 (4-hole flange, direct solder)

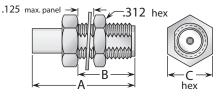


Figure 2 (Bulkhead mount, direct solder)

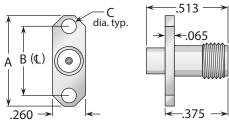


Figure 4 (2-hole flange, direct solder)

Cable	Fig.	Di	mensions	;	Mounting	Plat	ing	Delta P/N	Assembly Procedure/	
Group	FIG.	А	В	С	Figure	Body	Contact	Della P/IN	Trim Code	
13	1	.500	.335	—	-	Gold*	Gold	1308031G003-500	H/01	
13	2	.850	.500	.312	67	Gold*	Gold	1317031G673-500	H/04	
13	3	.500	.340	.102	05	Gold*	Gold	1311031G053-500	H/01	
13	4	.625	.481	.102	92A	Gold*	Gold	1311031G923-500	H/01	
14	1	.500	.335	—	_	Gold*	Gold	1308025G003-500	H/01	
14	2	.850	.500	.312	67	Gold*	Gold	1317025G673-500	H/04	
14	3	.500	.340	.102	05	Gold*	Gold	1311025G053-500	H/01	
14	4	.625	.481	.102	92A	Gold*	Gold	1311025G923-500	H/01	

\* Also available with nickel-plated body—change G in Delta part number to N.
 • (C) in contact plating column indicates captive contact.
 • See page 209 for cable groups.
 • Assembly procedures start on page 210.
 • See page 208 for mounting dimensions.



## E-Line Brass SMA Cable Plugs / Jacks

## Straight & Right Angle Plugs - Crimp Type For Flexible Cable

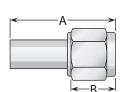


Figure 1 (Straight plug)

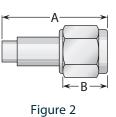


Figure 2 (Straight plug)

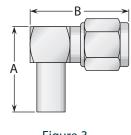


Figure 3 (Right angle plug)

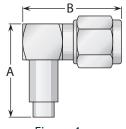
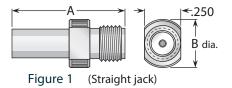


Figure 4 (Right angle plug)

Cable	Figure	Dimensions		Plating		Delta P/N	Assembly Procedure/
Group	Figure	А	В	Body	Contact	Della P/N	Trim Code
5	1	.880	.330	Gold*	Gold	1303017G000-500	K/05
5	3	.650	.630	Gold*	Gold (C)	1307017G001-500	L/03
6	1	.880	.330	Gold*	Gold	1303013G000-500	K/05
6	3	.650	.630	Gold*	Gold (C)	1307013G001-500	L/03
9	1	.750	.330	Gold*	Gold	1303037G000-500	K/03
9	3	.650	.630	Gold*	Gold (C)	1307037G001-500	L/03
10	1	.750	.330	Gold*	Gold	1303100G000-500	K/06
10	3	.650	.630	Gold*	Gold (C)	1307100G001-500	L/03
11	2	.760	.330	Gold*	Gold	1303038G000-500	***
11	4	.650	.630	Gold*	Gold (C)	1307038G001-500	L/03

## Straight & Bulkhead Jacks - Crimp Type For Flexible Cable



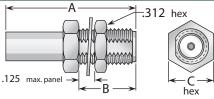
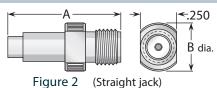


Figure 3 (Bulkhead jack)



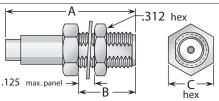


Figure 4 (Bulkhead jack)

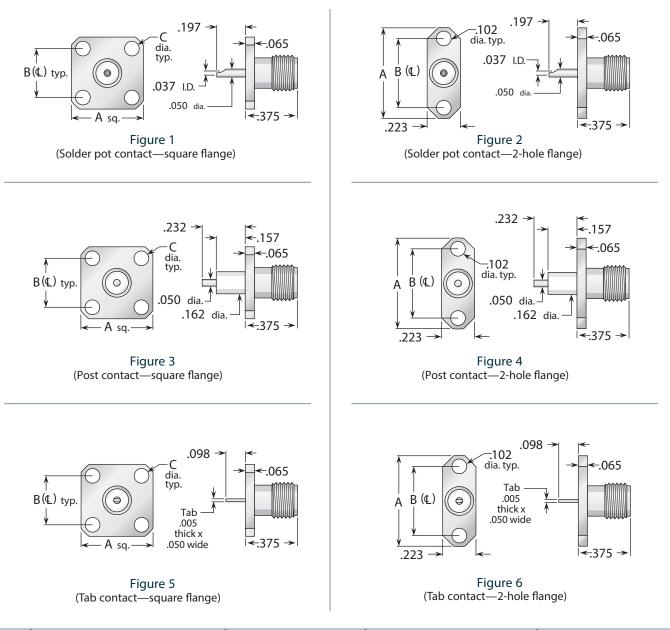
Cable	Fig.	Di	mensions	;	Mounting	Plating		Delta P/N	Assembly Procedure/
Group	гıg.	А	В	С	Figure	Body	Contact	Della P/IN	Trim Code
5	1	.760	.335	—	—	Gold*	Gold	1310017G000-500	K/08
5	3	.990	.500	.312	67	Gold*	Gold	1319017G670-500	K/10
6	1	.760	.335	—	—	Gold*	Gold	1310013G000-500	K/08
6	3	.990	.500	.312	67	Gold*	Gold	1319013G670-500	K/10
9	1	.740	.335	—	—	Gold*	Gold	1310037G000-500	K/08
9	3	.990	.500	.312	67	Gold*	Gold	1319037G670-500	K/10
10	1	.740	.335	—	—	Gold*	Gold	1310100G000-500	K/08
10	3	.990	.500	.312	67	Gold*	Gold	1319100G670-500	K/10
11	2	.740	.335	_	_	Gold*	Gold	1310038G000-500	***
11	4	.990	.500	.312	67	Gold*	Gold	1319038G670-500	***

\* Also available with nickel-plated body—change G in Delta part number to N.
 • (C) in contact plating column indicates captive contact.
 • See page 209 for cable groups.
 • Assembly procedures start on page 210.
 • See page 208 for mounting dimensions.



## **E-Line Brass SMA Receptacles**

### **Panel Jack Receptacles**



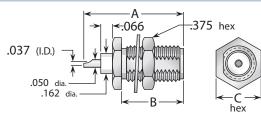
<b>Figure</b>		Dimensions		Mounting	Pla	ting	Delta P/N
Figure	A	В	С	Figure	Body	Contact	Della P/N
1	.500	.340	.102	05	Gold*	Gold (C)	1313000G051-500
2	.625	.481	.102	92	Gold*	Gold (C)	1313000G921-500
3	.500	.340	.102	05	Gold*	Gold (C)	1358000G051-500
4	.625	.481	.102	92	Gold*	Gold (C)	1358000G921-500
5	.500	.340	.102	05	Gold*	Gold (C)	1358000G051-501
6	.625	.481	.102	92	Gold*	Gold (C)	1358000G921-501

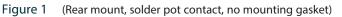
• \* Also available with nickel-plated body—change G in Delta part number to N.



## **E-Line Brass SMA Receptacles**

## **Bulkhead Jack Receptacles**





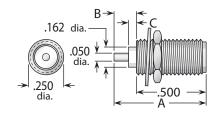


Figure 2 (Round body, post contact)

В

В

Figure	Dimensions			Max.	Mounting	Plat	ing	Delta P/N
Figure	A	В	С	Panel	Figure	Body	Contact	Della P/IN
1	.670	.450	.375	.125	67	Gold	Gold (C)	1321000G671-500
2	.660	.157	.075	.125	82	Gold	Gold(C)	1321000G821-500
2	.620	.118	.000	.125	82	Gold	Gold (C)	1321000G821-501

### **Printed-Circuit Board Receptacles**

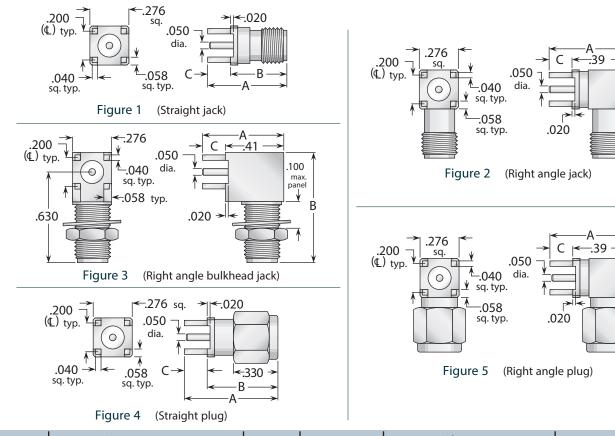


Figure	Dimensions			Max. Mounting		Plat	ing	Delta P/N
Figure	А	В	С	Board	Figure	Body	Contact	Della P/N
1	.550	.394	.155	.125	PCB05	Gold*	Gold (C)	1367000G001-500
2	.540	.594	.155	.125	PCB05	Gold*	Gold (C)	1369000G001-500
3	.560	.756	.155	.125	PCB05/82	Gold*	Gold (C)	1369000G821-500
4	.650	.494	.155	.125	PCB05	Gold*	Gold (C)	1368000G001-500
5	.540	.650	.155	.125	PCB05	Gold*	Gold (C)	1370000G001-500

• \* Also available with nickel-plated body—change G in Delta part number to N.

• See page 208 for mounting dimensions. • (C) in contact plating column indicates captive contact (mechanical captivation).



## **E-Line Brass SMA Receptacles**

**Panel Plug Receptacles** 

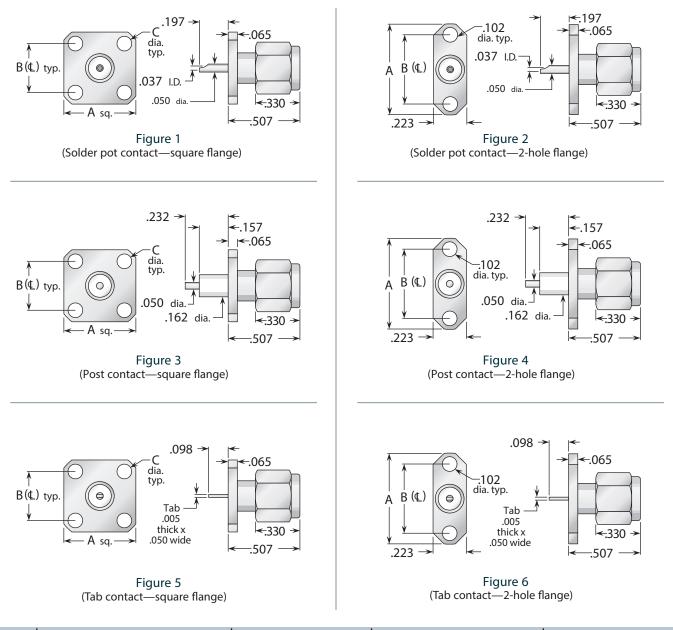


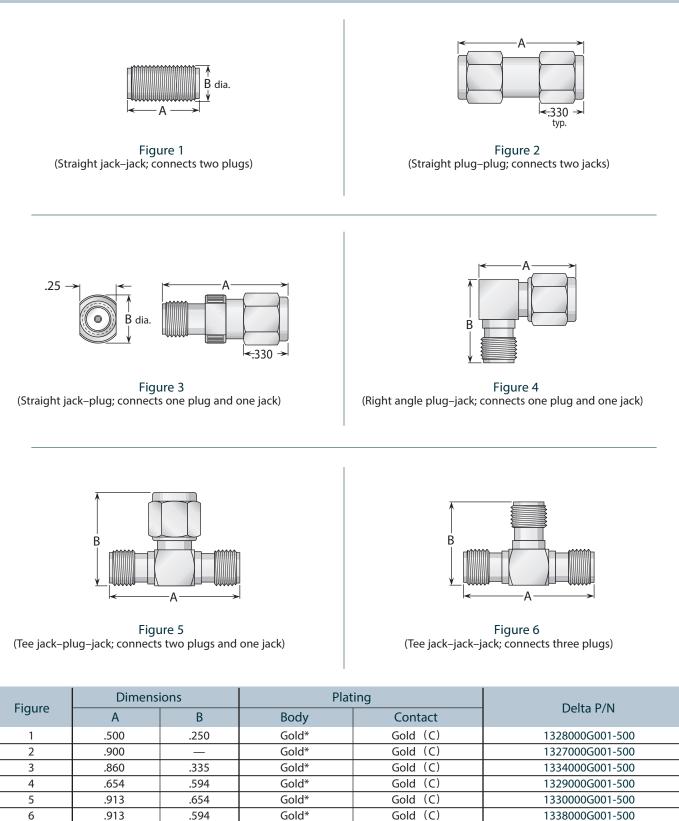
Figure		Dimensions		Mounting	Plat	ting	Delta P/N
Figure	А	В	С	Figure	Body	Contact	Della P/N
1	.500	.340	.102	05	Gold*	Gold (C)	1323000G051-500
2	.625	.481	.102	92	Gold*	Gold (C)	1323000G921-500
3	.500	.340	.102	05	Gold*	Gold (C)	1359000G051-500
4	.625	.481	.102	92	Gold*	Gold (C)	1359000G921-500
5	.500	.340	.102	05	Gold*	Gold (C)	1359000G051-501
6	.625	.481	.102	92	Gold*	Gold (C)	1359000G921-501

• \* Also available with nickel-plated body—change G in Delta part number to N.



## **E-Line Brass SMA Adapters**

## Straight, Right Angle, & Tee Adapters



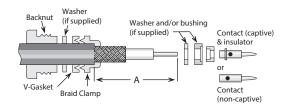
• \* Also available with nickel-plated body—change G in Delta part number to N.

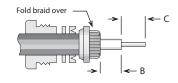
• (C) in contact plating column indicates captive contact (mechanical captivation).

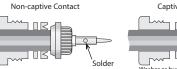


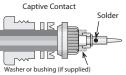


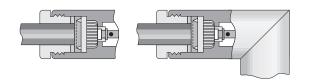
- 1) Trim cable jacket to dimension A. Slide backnut, washer, V-gasket, and braid clamp onto cable as shown. Cable jacket should bottom on step in braid clamp.
- 2) Comb braid wires out straight and fold back over front shoulder of braid clamp (braid wires should not overlap one another after folding). Trim braid wires flush with step of braid clamp. Trim cable dielectric and center conductor to dimensions B and C.
- 3) If support insulator is provided for RG-62 or 71 cable, insert into hollow in dielectric. Assemble rear bushing or washer (if supplied), rear insulator (if captive contact) and contact, and solder contact to center conductor. Rear of contact should be flush with cable dielectric end. For right angle connectors with access cap, omit this step entirely.
- 4) Insert prepared cable and hardware into body and tighten backnut. For right angle connectors with access cap, solder center conductor into slot in contact and tighten access cap.









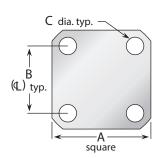


			III Codes For		ASSEMBLY I			
Code	A	В	с		Code	A	В	С
A/01	.375 (3/8)	.047 (3/64)	.203 (13/64)		A/20	.375 (3/8)	.047 (3/64)	.172 (11/64
A/02	.375 (3/8)	.109 (7/64)	.203 (13/64)		A/21	.500 (1/2)	.313 (5/16)	.172 (11/64
A/03	.438 (7/16)	.250 (1/4)	.188 (3/16)		A/22	.375 (3/8)	.188 (3/16)	.141 (9/64)
A/04	.281 (9/32)	.047 (3/64)	.125 (1/8)		A/23	.438 (7/16)	.078 (5/64)	.172 (11/64
A/05	.313 (5/16)	.125 (1/8)	.109 (7/64)		A/24	.500 (1/2)	.094 (3/32)	.141 (9/64)
A/06	.594 (19/32)	.391 (25/64)	.156 (5/32)		A/25	.438 (7/16)	.141 (9/64)	.172 (11/64
A/07	.375 (3/8)	.047 (3/64)	.125 (1/8)		A/26	.625 (5/8)	.281 (9/32)	.250 (1/4)
A/08	.281 (9/32)	.109 (7/64)	.094 (3/32)		A/27	.688 (11/16)	.281 (9/32)	.125 (1/8)
A/09	.344 (11/32)	.109 (7/64)	.094 (3/32)		A/28	.656 (21/32)	.297 (19/64)	.250 (1/4)
A/10	.406 (13/32)	.109 (7/64)	.203 (13/64)		A/29	.688 (11/16)	.125 (1/8)	.313 (5/16)
A/11	.500 (1/2)	.281 (9/32)	.156 (5/32)		A/30	.688 (11/16)	.469 (15/32)	.156 (5/32)
A/12	.343	.040	.219		A/31	.700 (21/32)	.453 (29/64)	.250 (1/4)
A/13	.375 (3/8)	.125 (1/8)	.156 (5/32)		A/32	.313 (5/16)	.078 (5/64)	.188 (3/16)
A/14	.355	.090	.188 (3/16)		A/33	.250 (1/4)	.078 (5/64)	.094 (3/32)
A/15	.425	.094 (3/32)	.259		A/34	.250 (1/4)	.062 (1/16)	.109 (7/64)
A/16	.328 (21/64)	.094 (3/32)	.188 (3/16)		A/35	.837	.575	.150
A/17	.375 (3/8)	.109 (7/64)	.125 (1/8)		A/36	.450	.250	.150
A/18	.375 (3/8)	.062 (1/16)	.172 (11/64)		A/37	.281	.038	.188
A/19	.375 (3/8)	.188 (3/16)	.094 (3/32)	ſ	A/38	.281	.069	.156

Trim Codes For Assembly Procedure A



## Connector Flanges (Panel Mounted Connectors)

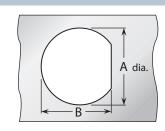


4-hole flanges					
Figure	А	В	C		
04	1/2	.360	.089		
05	1/2	.340	.102		
07	11/16	.500	#3-56 tap		
08	11/16	.500	.136		
09	11/16	.500	.125		
10	11/16	.500	.120		
12	11/16	.500	.109		
18	3/4	.531	.136		
26	1	.718	#6-32 tap		
27	1	.718	#4-40 tap		
30	1	.718	.166		
32	1	.718	.136		
32A	1	.718	.136*		
33	1	.718	.125		
34	1 <sup>3</sup> /32	.812	.150		
36	1 <sup>3</sup> /16	.906	#6-32 tap		
39	1 <sup>3</sup> /16	.906	.152		
40	1 <sup>3</sup> /16	.906	.125		
45	2	1.437	.257		
91	.375	.250	.067		
91A	.375	.232	.093		
* Countersunk to .245 dia.					

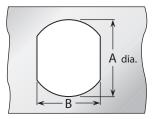
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2-hole flanges						
Figure	А	В	С	D		
92	.223	.481	.625	.102		
92A	.260	.481	.625	.102		
95	.640	1.015	1.30	.125		

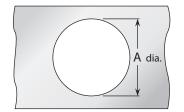
### Panel Cutouts (Bulkhead Mounted Connectors)



D-Hole						
Figure	А	В				
51	.755	.723				
54	.630	.598				
55	.630	.583				
57	.557	.531				
59	.505	.473				
62	.442	.410				
63	.407	.362				
65	.380	.348				
66	.319	.292				
67	.255	.236				
68	.195	.176				



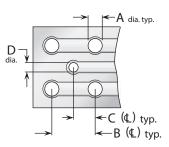
Double D-Hole						
Figure	A	В				
69	.755	.692				
72	.630	.536				
75	.380	.341				
84	.319	.278				



	Round Hole
Figure	А
82	.255
89	.380

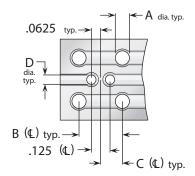
## **Mounting Figures**

## P.C. Board Drilling



(PCB traces are shown for illustrative purpose only, and are not representative of actual circuitry.)

Coaxial connectors							
Figure	А	В	С	D			
PCB01	.067	.400	.200	.045			
PCB02	.045	.500	.250	.045			
PCB03	.067	.300	.150	.035			
PCB05	.067	.200	.100	.055			
PCB06	.067	.200	.100	.045			
PCB07	.045	.177	.088	.045			
PCB08	.032	.100	.050	.032			



(PCB traces are shown for illustrative purpose only, and are not representative of actual circuitry.)

Twinax Connectors						
Figure	А	В	С	D		
PCB04	.045	.500	.250	.045		



## Cable Groups

### **Delta Cable Groups**

Gro	oup	Cables				
1A		RG-5, 5A, 5B, 21, 21A; M17/73, /162				
1 1B		RG-6, 6A; M17/2				
т <u>тв</u> 1С						
		RG-143, 143A, 212, 222; M17/73, /112, /162				
2	2A	RG-8, 8A, 213; M17/74				
	2B	RG-11, 11A; M17/6				
2	3A	RG-9, 9A, 9B, 214; M17/75				
3	3B	RG-13A, 216; M17/77				
	3C	RG-225; M17/127				
	4	RG-393; M17/127				
	5	RG-58, 58A, 58C, 141, 141A; M17/28, /111				
6	6A	RG-55A, 142, 142A, 223, 400; M17/60, /84, /128				
	6B	RG-55, 55B, 142B; M17/60, /84				
7	7A	RG-59, 59A, 59B, 62, 62A, 62B, 62C, 210; M17/29, /30, /97				
	7B	RG-71, 71A, 71B; M17/90				
8	8A	RG-122; M17/54				
	8B	RG-180, 180A, 180B, 195; M17/95, /137				
9	9A	RG-174, 188, 188A, 316; M17/152				
	9B	RG-179A, 179B, 187, 187A; M17/94, /136				
1	0	Double-Shielded RG-174, 316; M17/152				
1	1	RG-178, 178A, 178B, 196, 196A; M17/93				
1.	2	.250" semi-rigid; RG-401; M17/129				
1	3	.141" semi-rigid; RG-402; M17/130				
1	4	.085" semi-rigid; RG-405; M17/133				
1	5	RG-10, 12, 215; M17/6, /74				
1	б	RG-14A, 217; M17/78, /165				
1	7	RG-17A, 218				
1	8	RG-18A, 219				
1	9	RG-115A				
2	0	RG-118A, 228A				
21		RG-126				
22		RG-302				
23		RG-303				
24		RG-304				
25		Special 8X cable; contact factory for details.				
26		Belden 8281				
27		RG-108, 108A; M17/45				
28		RG-22, 22A, 22B; M17/15				
2	9	Belden 9207; Dearborn 6207; IBM 7362211				
30		M17/176				
3	1	AT&T 735A				

Cable	Group	Cable	Group
RG-5, 5A, B	1A .	RG-225	3C
RG-6, 6A	1B	RG-228A	20
RG-8, 8A	2A	RG-302	22
RG-9, 9A, B	3A	RG-303	23
RG-10	15	RG-304	24
RG-11, 11A	2B	RG-316	9A
RG-12	15	RG-316DS	10
RG-13A	3B	RG-393	4
RG-14A	16	RG-400	6A
RG-17A	17	RG-401	12
RG-18A	18	RG-402	13
RG-21, 21A	1A	RG-405	14
RG-22, 22A, B	28	M17/2	1B
RG-55, 55B	6B	M17/6	2B
RG-55A	6A	M17/15	28
RG-58, 58A, C	5	M17/28	5
RG-59, 59A, B	7A	M17/29	7A
RG-62, 62A, B, C	7A	M17/30	7A
RG-71, 71A, B	7B	M17/45	27
RG-108, 108A	27	M17/73	1A
RG-115A	19	M17/162	1A
RG-118A	20	M17/112	1C
RG-122	8A	M17/74	2A
RG-126	21	M17/75	3A
RG-141, 141A	5	M17/127	3C
RG-142, 142A	6A	M17/77	3B
RG-142B	6B	M17/60	6A
RG-143, 143A	1C	M18/84	6A
RG-174	9A	M17/128	6A
RG-174DS	10	M17/97	7A
RG-178, 178A, B	11	M17/54	8A
RG-179A, 179B	9B	M17/95	8B
RG-180, 180A, B	8B	M17/137	8B
RG-187, 187A	9B	M17/152	9A
RG-188, 188A	9A	M17/93	11
RG-195	8B	M17/129	12
RG-196, 196A	11	M17/130	13
RG-210	7A	M17/133	14
RG-212	1C	M17/78	16
RG-213	2A	M17/165	16
RG-214	3A	M17/176	30
RG-215	15	AT&T 735A	31
RG-217	16	Belden 8281	26
RG-218	17	Belden 9207	20
RG-219	18	Dearborn 6207	29
RG-222	10 1C	IBM 7362211	29

Note: MIL-PRF-39012 QPL connectors have cable groups defined by the MIL specification, not the Delta cable groups shown here. See page 185 for M39012 cable groups.



## **Ordering & Warranty Information**

### Warranty

We warrant our parts to be free of defects and workmanship for one year from purchase. During that time we will repair or replace (at our option) any parts found to be defective. The warranty does not apply to parts that have been modified, used in conditions exceeding Seller's, or military specifications, or disassembled. We will not, under any circumstances, be responsible for consequential or incidental damages or installation costs. No other warranties apply, and no other liability may be assumed or extended by representatives or distributors. The terms of the applicable warranty or warranties, as the case may be, as set forth herein are the sole and exclusive warranty terms that shall have any force or effect in the any product order, resulting from the quotation and such terms and in lieu of all other warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose, which are hereby expressly excluded.



### Returns

Returns will be accepted only with a Return Authorization number issued by Delta, and are subject to inspection and acceptance upon arrival. Restocking charges will be determined prior to issusnce of Return Authorization. All claims for shortages must be made within 30 days of receipt by customer.

### **Ordering Information**

Orders are subject to the terms and conditions on our order acknowledgement, which may only be modified by written agreement prior to sale. Order changes, cancellation, or termination will be accepted only with written approval from Delta Electronics Manufacturing.

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Delta Electronics Manufacturing Corporation 416 Cabot Street, P.O. Box 53 Beverly, MA 01915 FSCM/CAGE 00795









# COLLABORATE

# CONNECT



## Delta Electronics Mfg. Corp.

www.deltarf.com 978-927-1060 sales@deltarf.com

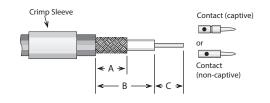
PO Box 53 416 Cabot St. Beverly, MA 01915





### **Assembly Procedure B**

1) Trim cable per chart. Slide crimp sleeve back onto cable.



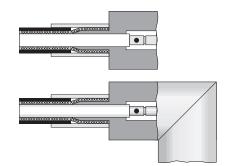
 If support insulator is provided for RG-62 or 71 cable, insert into hollow in dielectric. Solder contact onto center conductor; back of contact flush with trimmed end of cable dielectric (omit this step for right angle connectors with access caps).
 Flare cut end of braid slightly by rotating dielectric.



- Insert cable/contact into rear of body, with all braid wires on outside of crimp tail.
  a) For captive contact connectors, push cable in until contact snaps into insulator.
  - b) For noncaptive contact connectors, push cable in until cable dielectric bottoms in connector.
  - c) For right angle or tee connectors with access caps, push cable in until end of braid touches connector body shoulder, and cable center conductor rests in contact slot.

Trim excess braid wires even with shoulder of body. Slide crimp sleeve forward until flush with body and crimp (see page 211 for hex die sizes).

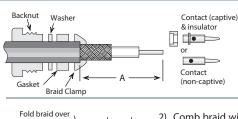
For right angle or tee connectors with access caps: Solder center conductor into contact slot, assemble insulator disc (if supplied), then press cap into body until seated or screw into place.



Trim Codes For Assembly Procedure B							
Code	A	В	с	Code	A	В	С
B/01	.320	.470	.140	B/20	.250	.375	.156
B/02	.422	.578	.172	B/21	.425	.550	.156
B/03	.406	.500	.187	B/22	.375	.500	.156
B/04	.285	.505	.140	B/23	.281	.469	.125
B/05	.335	.460	.140	B/24	.250	.700	.109
B/06	.187	.437	.219	B/25	.343	.775	.125
B/07	.422	.610	.156	B/26	.343	.437	.109
B/08	.422	.562	.219	B/27	.313	.437	.187
B/09	.313	.610	.203	B/28	.219	.271	.078
B/10	.280	.436	.187	B/29	.200	.320	.060
B/11	.430	.542	.156	B/30	.500	.650	.219
B/12	.300	.434	.156	B/31	.350	.840	.150
B/13	.300	.447	.156	B/32	.175	.260	.095
B/14	.420	.645	.187	B/33	.195	.270	.045
B/15	.300	.420	.120	B/34	.150	.250	.105
B/16	.312	.609	.125	B/35	.195	.280	.170
B/17	.250	.500	.156	B/36	.150	.325	.090
B/18	.437	.562	.109	B/37	.195	.295	.075
B/19	.343	.437	.156	B/38	.150	.225	.095
			•	B/39	.250	.300	.135



## **Assembly Procedure C**



B

Non-captive

olde

Captive

C→

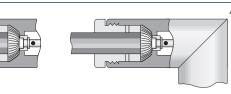
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1) Trim cable jacket to dimension A. Slide backnut, washer, gasket, and braid clamp onto cable as shown. Cable jacket should bottom on step in braid clamp.

2) Comb braid wires out straight and fold back over front
shoulder of braid clamp (braid wires should not overlap
one another after folding). Trim braid wires flush with
edge of braid clamp. Trim cable dielectric and center
conductor to dimensions B and C.

3) If support insulator is provided for RG-62 or 71 cable, insert into hollow in dielectric. Assemble rear insulator (if captive contact) and contact, and solder contact to center conductor. Rear of contact should be flush with cable dielectric end.

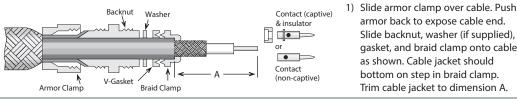


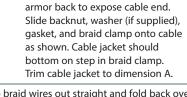
B

oldei

Captive 4) Insert prepared cable and hardware into body and tighten backnut. For right angle connectors with access cap, solder cable center conductor to slot in contact and tighten access cap.

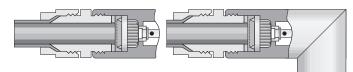
## **Assembly Procedure D**





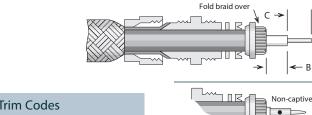
2) Comb braid wires out straight and fold back over front shoulder of braid clamp (braid wires should not overlap one another after folding). Trim braid wires flush with edge of braid clamp. Trim cable dielectric and center conductor to dimensions B and C.

3) Assemble rear insulator (if captive contact) and contact, and solder contact to center conductor. Rear of contact should be flush with cable dielectric end.



4) Insert prepared cable and hardware into body and tighten backnut. Trim armor to fit between armor clamp and braid clamp. Tighten armor clamp.

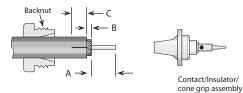
Trim Codes					
Code	А	A B			
C/01	.656 (21/32)	.141 (9/64)	.250 (1/4)		
C/02	.500 (1/2)	.125 (1/8)	.250 (1/4)		
C/03	.450	.136	.187		
C/04	.375 (3/8)	.109 (7/64)	.125 (1/8)		
C/05	.375 (3/8)	.062 (1/16)	.250 (1/4)		
C/06	.500 (1/2)	.188 (3/16)	.125 (1/8)		
C/07	.575	.438	.094		
C/08	.625 (5/8)	.141 (9/64)	.219 (7/32)		



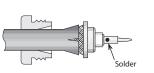
Trim Codes					
Code	А	В	С		
D/01	.375 (3/8)	.047 (3/64)	.250 (1/4)		
D/02	.500 (1/2)	.188 (3/16)	.219 (7/32)		
D/03	.344 (11/32)	.047 (3/64)	.219 (7/32)		
D/04	.313 (5/16)	.047 (3/64)	.172 (11/64)		
D/05	.625 (5/8)	.281 (9/32)	.250 (1/4)		
D/06	.313 (5/16)	.062 (1/16)	.109 (7/64)		



### **Assembly Procedure E**

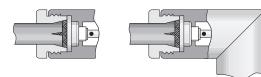


 Slide backnut onto cable as shown. Trim cable to dimensions A and B as shown. Slit jacket to dimension C in two places, 180° apart.



Trim Codes Code В С А E/01 .250 (1/4) .141 (9/64) .313 (5/16) .250 (1/4) E/02 .219 (7/32) .063 (1/16) E/03 .250 (1/4) .031 (1/32) .250 (1/4)

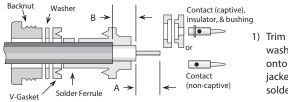
 Slide cone/insulator/contact assembly under braid until braid is flush with shoulder. Solder contact to center conductor.

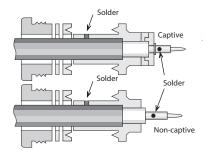


 Insert prepared cable and hardware into body; tighten assembly by holding nut stationary and turning body.

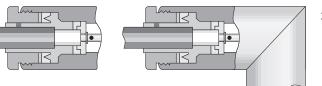
### Assembly Procedure F

Trim Codes				
Code	A	В		
F/01	.250 (1/4)	.219 (7/32)		
F/02	.250 (1/4)	.172 (11/64)		
F/03	.188 (3/16)	.188 (3/16)		
F/04	.109 (7/64)	.265 (17/64)		
F/05	.156 (5/32)	.250 (1/4)		
F/06	.219 (7/32)	.250 (1/4)		
F/07	.156 (5/32)	.172 (11/64)		
F/08	.109 (7/64)	.219 (7/32)		





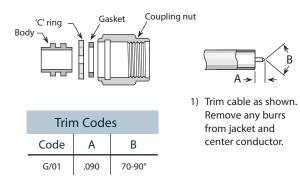
- Trim cable per chart. Slide backnut, washer, v-gasket, and solder ferrule onto cable. Trimmed end of cable jacket should bottom on step in solder ferrule.
- 2) Solder ferrule to cable jacket as shown. Retrim cable dielectric to proper length if it has extruded from soldering heat. Slide bushing and rear insulator over cable dielectric if captive contact. Solder contact onto center conductor; back of contact flush with trimmed end of cable dielectric.

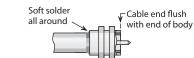


 Insert prepared cable and hardware into body and tighten backnut.

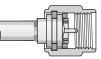


### **Assembly Procedure G**

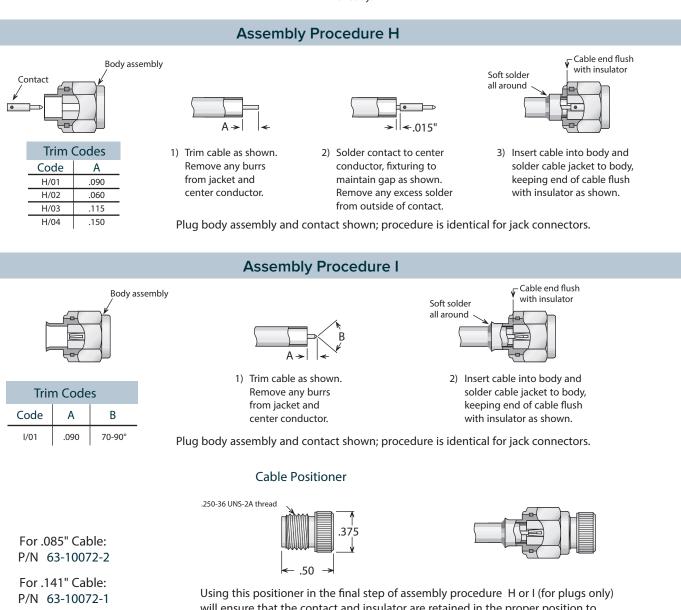




 Soft solder cable jacket to body, making sure that end of cable is flush with end of body. After solder joint has cooled, retrim any protruding dielectric flush with end of body.



 Assemble 'C' ring and gasket to body. Compress 'C' ring and slide body assembly into coupling nut until ring is seated in groove.



Using this positioner in the final step of assembly procedure H or I (for plugs only) will ensure that the contact and insulator are retained in the proper position to meet MIL-C-39012 requirements. The positioner should be screwed finger-tight into the mating end of the connector (as shown at right) before the cable jacket is soldered to the body assembly.

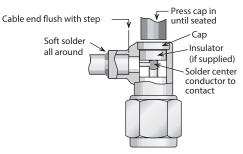


### Assembly Procedure J

Trim Codes				
Code	А	В		
J/01	.109	.047		
J/02	.059	.039		
J/03	.059	.079		
J/04	.050	.059		

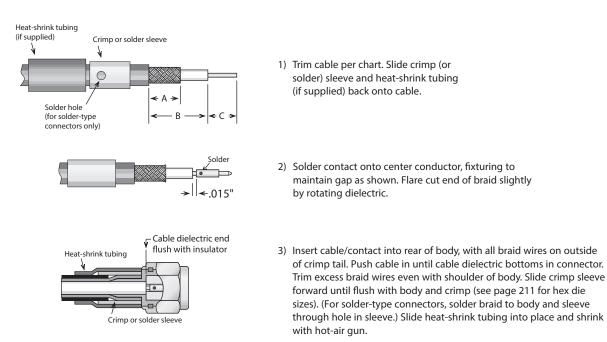
→ | < B

 Trim cable as shown. Remove any burrs from jacket and center conductor.



 Soft solder cable jacket to body, making sure that end of cable is flush with step in body.
 Solder center conductor into contact slot, assemble insulator disc (if supplied), then press cap into body until seated or screw into place.

### **Assembly Procedure K**



Plug body assembly and contact shown; procedure is identical for jack connectors.

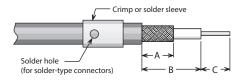
	Trim Codes						
Code	А	В	С	Code	А	В	С
K/01	.250	.270	.110	K/07	.220	.290	.135
K/02	.200	.270	.140	K/08	.420	.620	.090
K/03	.225	.290	.110	K/09	.090	.135	.160
K/04	.225	.330	.110	K/10	.250	.415	.115
K/05	.250	.330	.110	K/11	.250	.400	.150
K/06	.250	.315	.095	K/12	.282	.390	.140



### Assembly Procedure L

Trim Codes				
Code	А	В	С	
L/01	.250	.438	.109	
L/02	.125	.219	.109	
L/03	.234	.344	.109	
L/04	.195	.270	.050	
L/05	.095	.155	.050	
L/06	.281	.390	.070	

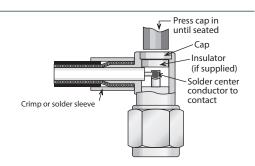
1) Trim cable per chart. Slide crimp (or solder) sleeve onto cable.



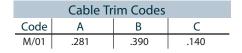
 Insert cable into rear of body, with all braid wires on outside of crimp tail. Push cable in until end of braid touches connector body shoulder and center conductor rests in contact slot.

Slide crimp sleeve forward until flush with body and crimp (see page 211 for hex die sizes). (For solder-type connectors, solder braid to body and sleeve through hole in sleeve.)

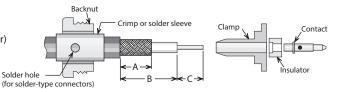
Solder center conductor into contact slot, assemble insulator disc (if supplied), then press cap into body until seated or screw into place.



### Assembly Procedure M



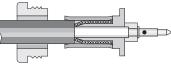
 Trim cable per chart. Slide crimp (or solder) sleeve and backnut onto cable.



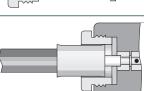
2) Flare cut end of braid slightly by rotating dielectric. Insert cable into rear of clamp, with all braid wires on outside of crimp tail.Slide insulator over cable dielectric until it is flush with front of clamp, and cable insulation bottoms inside insulator. Slide contact onto center conductor, with contact shoulder flush with front of insulator. Solder contact to center conductor.



 Slide crimp sleeve forward until flush with clamp shoulder; crimp as close to shoulder as possible. (see page 211 for hex die sizes). (For solder-type connectors, solder braid to body and sleeve through hole in sleeve.)



4) Insert prepared cable into back of body. Slide nut forward and tighten to 12–15 inch-pounds.





\* For Delta cable groups. See MIL-PRF-39012 specifications for dies sizes used with M39012 cable groups.

### Crimp Tools For Flexible Cable

Frame only—P/N M22520/5-01 —Use with interchangeable dies listed below. Cable Group\* Hex Die Size Die Set P/N Closure 2, 3, 4 .429 hex, .400 wide M22520/5-61 А 5,6 .213 hex, .400 wide M22520/5-19 В 7 .255 hex, .400 wide M22520/5-19 A 9 .128 hex, .400 wide M22520/5-35 В В 10 .151 hex, .400 wide M22520/5-37 11 .105 hex, .400 wide M22520/5-33 В