

Series 806 Mil-Aero Connectors



806-025 Glass-to-Metal Hermetic Receptacles, Solder Cup/PC Tail



Features

- Glass-to-metal seal
- Non-removable solder cup or PC tail contacts
- High density #20HD and #22HD arrangements for reduced size and weight plus #16, #12, #8 standard and hybrid arrangements
- Aerospace-grade materials, construction

Specifications

- Operating temperature: -65°C to +200°C
- Leak Rate: 1E-7 cm³/s at 1 ATM pressure differential
- Dielectric withstanding voltage
#22HD contacts: 1300 VAC
#20HD contacts: 1800 VAC
#16 contacts: contact factory
#12 contacts: contact factory
#8 contacts: contact factory
- Shell-to-Shell Conductivity: 10 mV max.
- Mating durability: 500 cycles
- Mechanical shock: EIA-364-27, 300g.
- Vibration (sine): MIL-DTL-38999M, 60g.
- Vibration (random) EIA-364-28 Condition VI, Letter J, 43.92 Grms, +200°C
- High Impact shock: MIL-S-901 Grade A
- Indirect Lightning Strike: EIA-364-75 Type B Level 2 10kA Peak

Connector Construction

- Shell and jam-nut: 316L CRES
- Shell (-13 only): 304L CRES
- Hermetic contacts: nickel-iron alloy, gold plated
- Socket contacts: copper alloy, gold plated
- Insulator, hermetic: vitreous glass
- Interfacial seal, peripheral seal, O-ring: fluorosilicone
- Insulator, socket: high grade rigid dielectric

Series 806 hermetic receptacles feature 304L stainless steel shells and glass-to-metal seals. Rated for -65°C to +200°C temperature range. Micro miniature Series 806 connectors save size and weight compared to legacy aerospace-grade hermetic connectors. These high performance, parylene compatible connectors are suitable for pressurized bulkhead applications subject to vibration, moisture, and temperature extremes. Equipped with low-profile, non-threaded standoff. Available receptacle shell styles include square flange, jam-nut, and weld mount.

How To Order						
SAMPLE PART NUMBER	806-025	-07	Z1	8-3	C	A
Product	806-025 = Hermetic Receptacle					
Mounting Type	02 = Square Flange 07 = Jam-nut 13 = Weld Mount					
Shell Finish	Z1 = Passivated ZL = Nickel Plated					
Arrangement Number (Shell Size - Insert Arr.)	See Table 1					
Contact Type	C = Pin, PC Terminal D = Socket, PC Terminal			P = Pin, Solder Cup S = Socket, Solder Cup		
Polarization	A B C D E F					

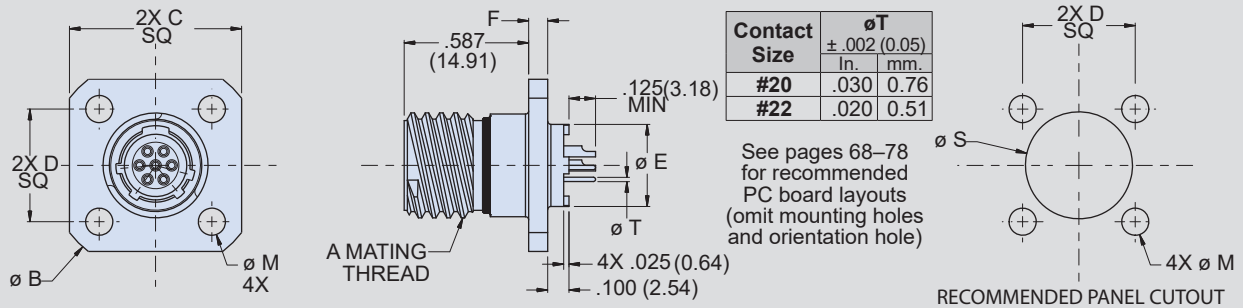
Table I: Shell Size - Insert Arrangement																	
Contact Layout	Number of Contacts					Contact Layout	Number of Contacts					Contact Layout	Number of Contacts				
	22HD	20HD	16	12	8		22HD	20HD	16	12	8		22HD	20HD	16	12	8
7-3	3					22-69	69				16-2					2	
8-4	4					24-92	92				18-3					3	
8-7	7					8-1		1			20-4					4	
9-11	11					10-2		2			22-5					5	
10-15	15					11-4		4			24-8					8	
11-19	19					12-5		5			10-8A	6		2			
12-26	26					14-7		7			11-13	11		2			
14-39	39					16-12		12			12-27	26		1			
16-60	60					18-15		15			14-21	17		4			
18-85	85					20-22		22			16-41	37		4			
20-110	110					22-24		24			18-59	55		4			
22-140	140					24-35		35			11-14	13			1		
24-186	186					9-1			1		12-14	12			2		
8-3		3				12-2			2		14-22	20			2		
9-5		5				14-3			3		12-14	12			2		
10-8		8				16-4			4		16-42	40			2		
11-10		10				16-7			7		18-62	60			2		
12-15		15				18-8			8		14-20A	19				1	
14-20		20				20-11			11		16-22	20				2	
16-31		31				22-13			13		18-21	18				3	
18-41		41				24-19			19		20-28	24				4	
20-55		55				10-1				1	22-44	40				4	
											24-97	93				4	

Series 806 Mil-Aero Connectors



806-025 Glass-to-Metal Hermetic Receptacles, Solder Cup/PC Tail

806-025-02 Square Flange Receptacle Dimensions



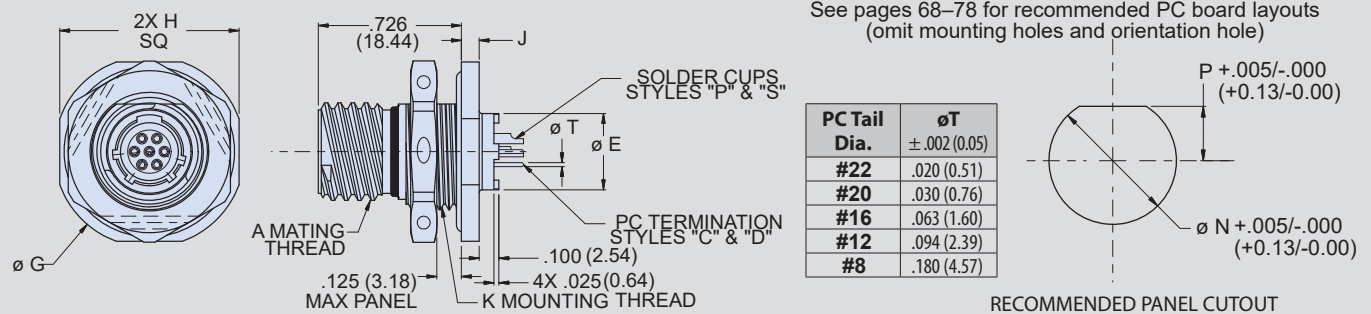
Contact Size	ϕT	
	$\pm .002$ (0.05)	
	In.	mm.
#20	.030	0.76
#22	.020	0.51

See pages 68–78 for recommended PC board layouts (omit mounting holes and orientation hole)

RECOMMENDED PANEL CUTOUT

Shell Size	A Mating Thread	ϕB Max. Flange	C Max Flange Flats	D SQ BSC Mntg Holes	ϕE ± 0.010 (0.25)	F Max Flange	ϕM Thru Mntg Holes	ϕS Thru
7	.4375-.067P-.2L-TS-2A	.968 (24.59)	.750 (19.05)	.469 (11.91)	.306 (7.77)	.100 (2.54)	.128 (3.25)	.445 (11.30)
8	.5000-.067P-.2L-TS-2A	1.040 (26.42)	.822 (20.88)	.531 (13.49)	.387 (9.83)	.100 (2.54)	.128 (3.25)	.509 (12.93)
9	.5625-.067P-.2L-TS-2A	1.130 (28.70)	.885 (22.48)	.594 (15.09)	.468 (11.89)	.100 (2.54)	.128 (3.25)	.577 (14.66)
10	.6250-.067P-.2L-TS-2A	1.174 (29.82)	.913 (23.19)	.625 (15.88)	.546 (13.87)	.100 (2.54)	.128 (3.25)	.645 (16.38)
11	.6875-.067P-.2L-TS-2A	1.240 (31.50)	.960 (24.38)	.670 (17.02)	.586 (14.88)	.100 (2.54)	.128 (3.25)	.712 (18.08)
12	.7500-.067P-.2L-TS-2A	1.354 (34.39)	1.040 (26.42)	.765 (19.43)	.663 (16.84)	.100 (2.54)	.128 (3.25)	.768 (19.51)
14	.8750-.067P-.2L-TS-2A	1.510 (38.35)	1.133 (28.78)	.859 (21.82)	.743 (18.87)	.100 (2.54)	.128 (3.25)	.890 (22.61)
16	1.0000-.067P-.2L-TS-2A	1.620 (41.15)	1.227 (31.17)	.938 (23.83)	.842 (21.39)	.100 (2.54)	.128 (3.25)	1.015 (25.78)
18	1.1250-.067P-.2L-TS-2A	1.784 (45.31)	1.320 (33.53)	1.016 (25.81)	.959 (24.36)	.100 (2.54)	.128 (3.25)	1.125 (28.58)
20	1.2500-.067P-.2L-TS-2A	1.910 (48.51)	1.444 (36.68)	1.109 (28.17)	1.105 (28.07)	.125 (3.18)	.154 (3.91)	1.275 (32.39)
22	1.3750-.067P-.2L-TS-2A	2.083 (52.91)	1.570 (39.88)	1.203 (30.56)	1.215 (30.86)	.125 (3.18)	.154 (3.91)	1.400 (35.56)
24	1.5000-.067P-.2L-TS-2A	2.200 (55.88)	1.696 (43.08)	1.312 (33.32)	1.335 (33.91)	.125 (3.18)	.154 (3.91)	1.525 (38.73)

806-025-07 Jam-nut Receptacle Dimensions



See pages 68–78 for recommended PC board layouts (omit mounting holes and orientation hole)

PC Tail Dia.	ϕT	
	$\pm .002$ (0.05)	
	In.	mm.
#22	.020	0.51
#20	.030	0.76
#16	.063	1.60
#12	.094	2.39
#8	.180	4.57

RECOMMENDED PANEL CUTOUT

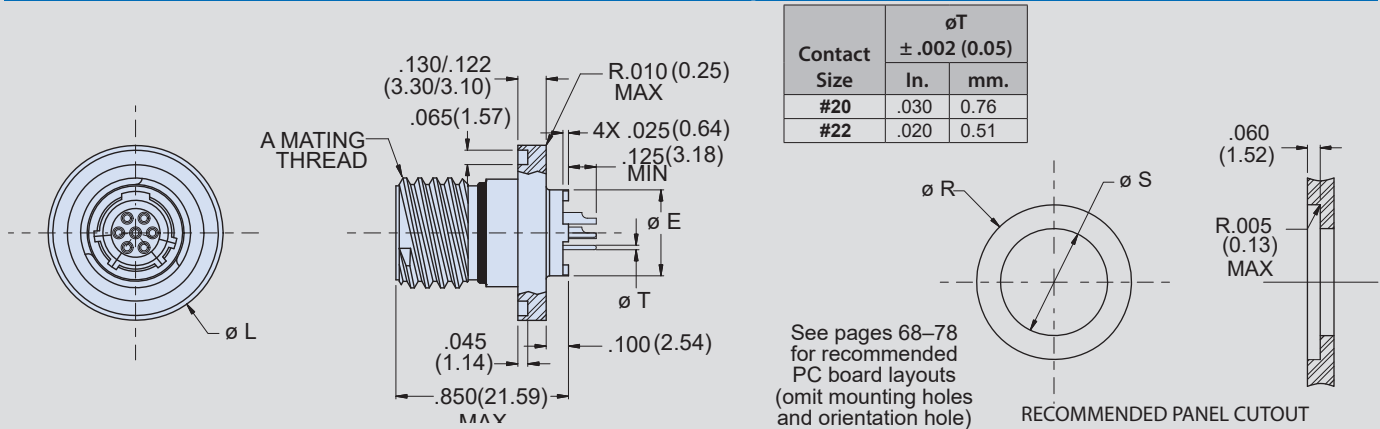
Shell Size	A Mating Thread	ϕE Mntg Boss	G Max Flange	H Max Flange Flats	J Max Flange	K Thread Mounting	ϕN Mntg Hole	P Mntg Flat
7	.4375-.067P-.2L-TS-2A	.306 (7.77)	.848 (21.54)	.908 (23.06)	.100 (2.54)	M13x1.0-6g-0.100R	.522 (13.26)	.224 (5.69)
8	.5000-.067P-.2L-TS-2A	.387 (9.83)	.980 (24.89)	.920 (23.37)	.100 (2.54)	M15x1.0-6g-0.100R	.601 (15.27)	.256 (6.50)
9	.5625-.067P-.2L-TS-2A	.468 (11.89)	1.040 (26.42)	.980 (24.89)	.100 (2.54)	M16x1.0-6g-0.100R	.640 (16.26)	.287 (7.29)
10	.6250-.067P-.2L-TS-2A	.546 (13.87)	1.110 (28.19)	1.050 (26.67)	.100 (2.54)	M18x1.0-6g-0.100R	.719 (18.26)	.318 (8.08)
11	.6875-.067P-.2L-TS-2A	.586 (14.88)	1.160 (29.46)	1.110 (28.19)	.100 (2.54)	M19x1.0-6g-0.100R	.759 (19.28)	.350 (8.89)
12	.7500-.067P-.2L-TS-2A	.663 (16.84)	1.230 (31.24)	1.170 (29.72)	.100 (2.54)	M21x1.0-6g-0.100R	.837 (21.26)	.381 (9.68)
14	.8750-.067P-.2L-TS-2A	.743 (18.87)	1.360 (34.54)	1.320 (33.53)	.100 (2.54)	M24x1.0-6g-0.100R	.955 (24.26)	.443 (11.25)
16	1.0000-.067P-.2L-TS-2A	.842 (21.39)	1.515 (38.48)	1.444 (36.68)	.100 (2.54)	M27x1.0-6g-0.100R	1.073 (27.25)	.505 (12.83)
18	1.1250-.067P-.2L-TS-2A	.959 (24.36)	1.610 (40.89)	1.570 (39.88)	.100 (2.54)	M30x1.0-6g-0.100R	1.192 (30.28)	.568 (14.43)
20	1.2500-.067P-.2L-TS-2A	1.105 (28.07)	1.850 (46.99)	1.760 (44.70)	.128 (3.25)	M34x1.0-6g-0.100R	1.349 (34.26)	.630 (16.00)
22	1.3750-.067P-.2L-TS-2A	1.215 (30.86)	2.010 (51.05)	1.913 (48.59)	.128 (3.25)	M37x1.0-6g-0.100R	1.467 (37.26)	.693 (17.60)
24	1.5000-.067P-.2L-TS-2A	1.335 (33.91)	2.195 (55.75)	2.070 (52.58)	.128 (3.25)	M41x1.0-6g-0.100R	1.624 (41.25)	.755 (19.18)

Series 806 Mil-Aero Connectors



806-025 Glass-to-Metal Hermetic Receptacles, Solder Cup/PC Tail

806-025-13 Weld Mount Receptacle Dimensions



Shell Size	A Mating Thread	ϕE	L $\pm .002 (0.05)$	$\phi R \pm .002 (0.05)$	ϕS
7	.4375-.067P-2L-TS-2A	.306 (7.77)	.725 (18.42)	.730 (18.54)	.445 (11.30)
8	.5000-.067P-2L-TS-2A	.387 (9.83)	.788 (20.02)	.793 (20.14)	.509 (12.93)
9	.5625-.067P-2L-TS-2A	.468 (11.89)	.912 (23.16)	.917 (23.29)	.577 (14.66)
10	.6250-.067P-2L-TS-2A	.546 (13.87)	.975 (24.76)	.980 (24.89)	.645 (16.38)
11	.6875-.067P-2L-TS-2A	.586 (14.88)	1.038 (26.37)	1.043 (26.49)	.712 (18.08)
12	.7500-.067P-2L-TS-2A	.663 (16.84)	1.100 (27.94)	1.105 (28.07)	.768 (19.51)
14	.8750-.067P-2L-TS-2A	.743 (18.87)	1.225 (31.12)	1.230 (31.24)	.890 (22.61)
16	1.0000-.067P-2L-TS-2A	.842 (21.39)	1.350 (34.29)	1.355 (34.42)	1.015 (25.78)
18	1.1250-.067P-2L-TS-2A	.959 (24.36)	1.475 (37.47)	1.480 (37.59)	1.125 (28.58)
20	1.2500-.067P-2L-TS-2A	1.105 (28.07)	1.600 (40.64)	1.605 (40.77)	1.275 (32.39)
22	1.3750-.067P-2L-TS-2A	1.215 (30.86)	1.725 (43.82)	1.730 (43.94)	1.400 (35.56)
24	1.5000-.067P-2L-TS-2A	1.335	1.850	1.855	1.525