

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: 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 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, solder mount, 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 = Box Mount 03 = Solder Mount 07 = Jam-nut Mount 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 | | | | | |

Please visit the hermetic catalog for a complete offering of our connectors.

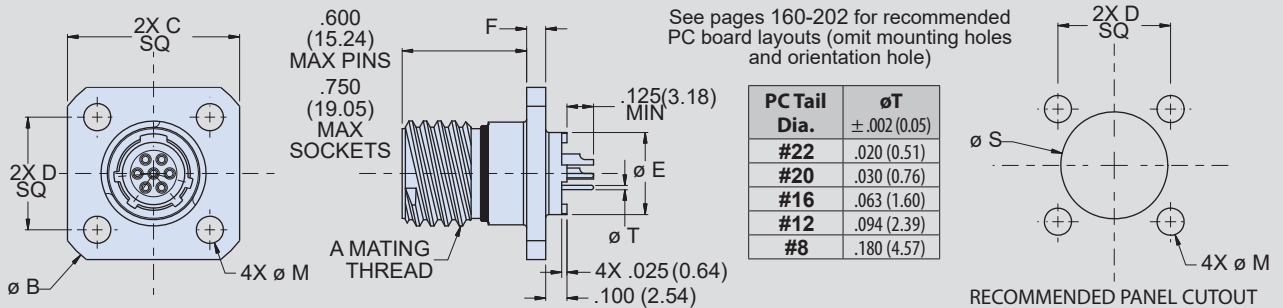
| Table I: Shell Size - Insert Arrangement | | | | | | | | | | | | | | | | | |
|--|--------------------|------|----|----|---|----------------|--------------------|------|----|----|--------|----------------|--------------------|------|----|----|---|
| Contact Layout | Number of Contacts | | | | | Contact 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



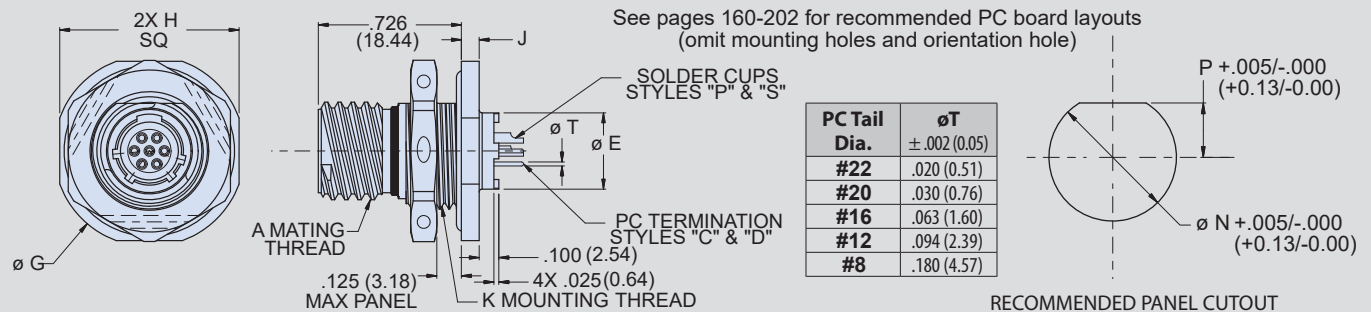
806-025 Glass-to-Metal Hermetic Receptacles, Solder Cup/PC Tail

806-025-02 Square Flange Receptacle Dimensions



| Shell Size | A Mating Thread | ØB Max. Flange | C Max Flange Flats | D SQ BSC Mntg Holes | ±0.010(0.25) ØE | F Max Flange | Ø M Thru Mntg Holes | Ø S 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



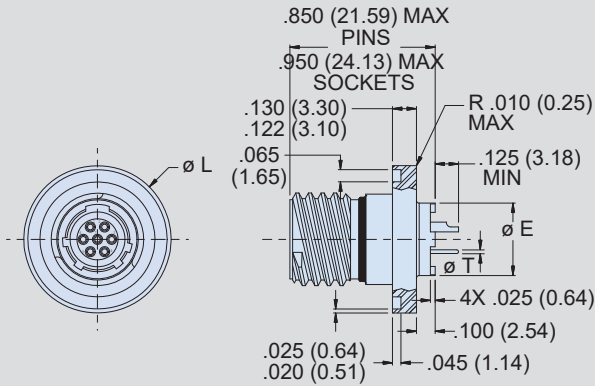
| Shell Size | A Mating Thread | ±0.010(0.25) ØE Mntg Boss | G Max Flange | H Max Flange Flats | J Max Flange | K Thread Mounting | Ø N Mntg Hole | P Mntg Flat |
|------------|------------------------|---------------------------|---------------|--------------------|--------------|-------------------|---------------|--------------|
| 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



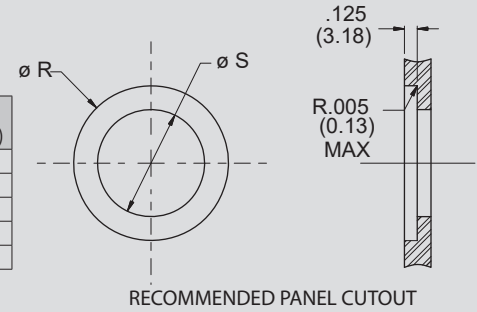
806-025 Glass-to-Metal Hermetic Receptacles, Solder Cup/PC Tail

806-025-13 Weld Mount Receptacle Dimensions



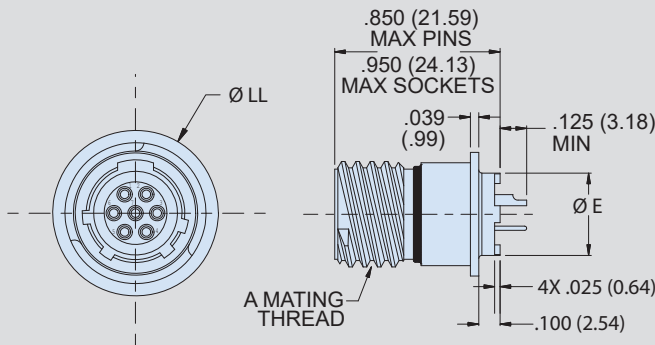
See pages 160-202 for recommended PC board layouts (omit mounting holes and orientation hole)

| PC Tail Dia. | øT ±.002 (0.05) |
|--------------|-----------------|
| #22 | .020 (0.51) |
| #20 | .030 (0.76) |
| #16 | .063 (1.60) |
| #12 | .094 (2.39) |
| #8 | .180 (4.57) |



| Shell Size | A Mating Thread | Ø E ±.010 Mounting Boss | L ± .002 (0.05) | Ø R ± .002 (0.05) | Ø S ±.005 |
|------------|------------------------|----------------------------|-----------------|-------------------|---------------|
| 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 (33.91) | 1.850 (46.99) | 1.855 (47.12) | 1.525 (38.73) |

806-025-03 Solder Mount Receptacle Dimensions



See pages 160-202 for recommended PC board layouts (omit mounting holes and orientation hole)

| PC Tail Dia. | øT ±.002 (0.05) |
|--------------|-----------------|
| #22 | .020 (0.51) |
| #20 | .030 (0.76) |
| #16 | .063 (1.60) |
| #12 | .094 (2.39) |
| #8 | .180 (4.57) |

| Shell Size | A Mating Thread | Ø E ±.010 Mounting Boss | Ø LL Flange |
|------------|------------------------|----------------------------|---------------|
| 7 | .4375-.067P-.2L-TS-2A | .306 (7.77) | .520 (13.21) |
| 8 | .5000-.067P-.2L-TS-2A | .387 (9.83) | .581 (14.76) |
| 9 | .5625-.067P-.2L-TS-2A | .468 (11.89) | .649 (16.48) |
| 10 | .6250-.067P-.2L-TS-2A | .546 (13.87) | .717 (18.21) |
| 11 | .6875-.067P-.2L-TS-2A | .586 (14.88) | .784 (19.91) |
| 12 | .7500-.067P-.2L-TS-2A | .663 (16.84) | .841 (21.36) |
| 14 | .8750-.067P-.2L-TS-2A | .743 (18.87) | .962 (24.43) |
| 16 | 1.0000-.067P-.2L-TS-2A | .842 (21.39) | 1.087 (27.61) |
| 18 | 1.1250-.067P-.2L-TS-2A | .959 (24.36) | 1.197 (30.40) |
| 20 | 1.2500-.067P-.2L-TS-2A | 1.105 (28.07) | 1.347 (34.21) |
| 22 | 1.3750-.067P-.2L-TS-2A | 1.215 (30.86) | 1.472 (37.39) |
| 24 | 1.5000-.067P-.2L-TS-2A | 1.335 (33.91) | 1.597 (40.56) |