

# PSMP

## Board to Board Solutions

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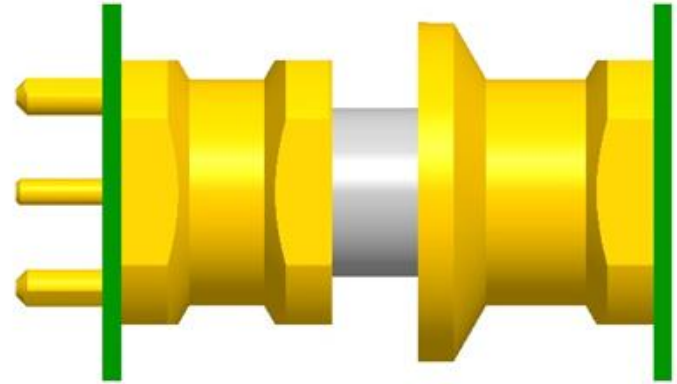
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# Overview

- Perfect solution for board-to-board applications requiring high power
- Three-piece design
  - Limited Detent PCB
  - Smooth Bore PCB
  - Buller Adapter
- Maximizes PCB density
- Ideal for blindmating
- 50 Ohm
- 10 GHz operation
- 200 W @ 2.2 GHz
- 12.6 mm minimum board spacing
- Axial misalignment:  $\pm 1$  mm
- Radial misalignment:  $4^\circ$

# Applications

- Base Stations
- Filters
- Amplifiers
- Handheld Radio
- Anywhere SMPs are used



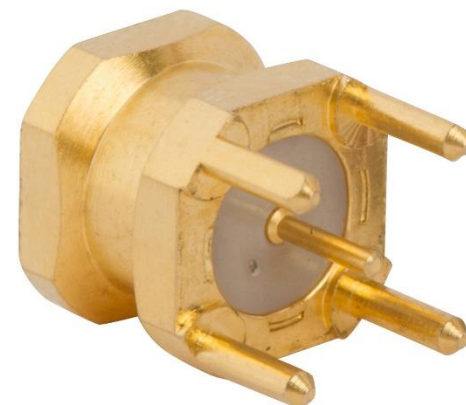
# Ordering Information

## ■ Limited Detent Parts

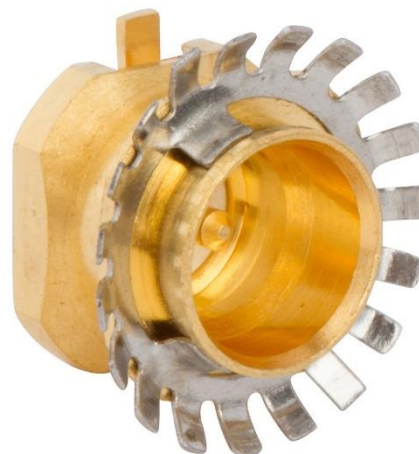
| Part Number     | Description                                                                            |
|-----------------|----------------------------------------------------------------------------------------|
| PSMP-MSLD-PCT25 | PSMP PCB Jack, Male Contact, Through-Hole 2.5mm Legs, Limited Detent, 50 Ohm           |
| PSMP-MSLD-PCT35 | PSMP PCB Jack, Male Contact, Through-Hole 3.5mm Legs, Limited Detent, 50 Ohm           |
| PSMP-MSLD-PCT1R | PSMP PCB Jack, Male SMT R/A Contact, Through-Hole 1.0mm Legs, Limited Detent, 50 Ohm   |
| PSMP-MSLD-PCTEM | PSMP PCB Jack, Male Contact, Through-Hole 2.5mm Legs, Limited Detent, EMI Ring, 50 Ohm |
| PSMP-MSLD-PCSEM | PSMP PCB Jack, Male Contact, Surface Mount, Limited Detent, EMI Ring, 50 Ohm           |
| PSMP-MSLD-PCS   | PSMP PCB Jack, Male Contact, Surface Mount, Limited Detent, 50 Ohm                     |
| PSMP-MSLD-PCE   | PSMP PCB Jack, Male Contact, Edge Mount, Limited Detent, 50 Ohm                        |
| PSMP-MSLD-CSB   | PSMP PCB Jack, Male Contact, Bulkhead Mount, Post Termination, Limited Detent, 50 Ohm  |



Actual Size



PSMP-MSLD-PCT35



Actual Size

PSMP-MSLD-PCSEM

# Ordering Information

## ■ Smooth Bore Parts

| Part Number     | Description                                                                        |
|-----------------|------------------------------------------------------------------------------------|
| PSMP-MSSB-PCT1R | PSMP PCB Jack, Male SMT R/A Contact, Through-Hole 1.0mm Legs, Smooth Bore, 50 Ohm  |
| PSMP-MSSB-PCT35 | PSMP PCB Jack, Male Contact, Through-Hole 3.5mm Legs, Smooth Bore, 50 Ohm          |
| PSMP-MSSB-PCS   | PSMP PCB Jack, Male Contact, Surface Mount, Smooth Bore, 50 Ohm                    |
| PSMP-MSSB-CSB   | PSMP PCB Jack, Male Contact, Bulkhead Mount, Post Termination, Smooth Bore, 50 Ohm |



PSMP-MSSB-PCS





# Ordering Information

## ■ Bullet Adapters

| Part Number    | Description                                       | Length   |
|----------------|---------------------------------------------------|----------|
| PSMP-FSBA-1000 | PSMP Bullet Adapter, Plug to Plug, Female Contact | 10.00 mm |
| PSMP-FSBA-1042 | PSMP Bullet Adapter, Plug to Plug, Female Contact | 10.42 mm |
| PSMP-FSBA-1175 | PSMP Bullet Adapter, Plug to Plug, Female Contact | 11.75 mm |
| PSMP-FSBA-1755 | PSMP Bullet Adapter, Plug to Plug, Female Contact | 17.55 mm |
| PSMP-FSBA-1970 | PSMP Bullet Adapter, Plug to Plug, Female Contact | 19.70 mm |
| PSMP-FSBA-2380 | PSMP Bullet Adapter, Plug to Plug, Female Contact | 23.80 mm |
| PSMP-FSBA-2580 | PSMP Bullet Adapter, Plug to Plug, Female Contact | 25.80 mm |



PSMP-FSBA-1755



PSMP-FSBA-1970

# Board to Board Products Comparison

|                                                                                                         |                                                      | AFI-50                     | AFI-75                 | HD-AFI-75             | HD-AFI-50             | AFI-Dart-75                   | AFI-Dart-50                   | SMP                        | SMPM                       | P-SMP                               |
|---------------------------------------------------------------------------------------------------------|------------------------------------------------------|----------------------------|------------------------|-----------------------|-----------------------|-------------------------------|-------------------------------|----------------------------|----------------------------|-------------------------------------|
| Electrical                                                                                              | Frequency (GHz)                                      | DC - 6                     | DC - 3                 | DC - 18               | DC - 18               | DC - 18                       | DC - 18                       | DC - 40                    | DC - 65                    | DC-10                               |
|                                                                                                         | Return Loss [VSWR]<br>(frequency in GHz)<br>Range #1 | -25 dB [1.12]<br>DC-3      | -26 dB [1.11]<br>DC-1  | -30 dB [1.11]<br>DC-1 | -23 dB [1.15]<br>DC-3 | -30 dB [1.11]<br>DC-1         | -23 dB [1.15]<br>DC-3         | -23 dB [1.15]<br>DC - 26.5 | -23 dB [1.15]<br>DC - 26.5 | -32 dB [1.05]<br>DC - 3<br>(Cabled) |
|                                                                                                         | Return Loss [VSWR]<br>(frequency in GHz)<br>Range #2 | -17.7 dB [1.3] 3<br>6      | -17.7 dB [1.3]<br>DC-3 | -22 dB [1.17]<br>DC-3 | -19 dB [1.25] 3<br>6  | -22 dB [1.17]<br>DC-3         | -19 dB [1.25]<br>3-6          |                            |                            | -26 dB [1.11]<br>3 - 6<br>(Cabled)  |
|                                                                                                         | Isolation [ @ min<br>pitch] (@ Frequency<br>GHz)     |                            |                        |                       |                       | -90 dB<br>[4.5 mm]<br>[1 GHz] | -70 dB [4.5<br>mm] [4<br>GHz] |                            |                            |                                     |
|                                                                                                         | Nominal Impedance (Ohm)                              | 50                         | 75                     | 75                    | 50                    | 75                            | 50                            | 50                         | 50                         | 50                                  |
|                                                                                                         | RF Leakage (dB) (@<br>frequency GHz)                 | -70 (3)                    | -70 (3)                | -70 (3)               | -70 (3)               | -70 (3)                       | -70 (3)                       | -80                        | -80                        | -75 (4)                             |
|                                                                                                         | Power Handling (Watts)                               | 200<br>DC-2 GHz            | 95<br>DC-1 GHz         | 10<br>DC-2 GHz        | 20<br>DC-3 GHz        | 10<br>DC-2 GHz                | 20<br>DC-3 GHz                | 30<br>1 GHz                |                            | 200 DC-<br>2.2 GHz                  |
|                                                                                                         | Intermodulation 3rd Order                            | < -150 dBc (2<br>x 43 dBm) |                        |                       |                       |                               |                               |                            |                            | < -160 dBc<br>(2 x 43 dBm)          |
| Mechanical<br>(Note: Total<br>Misalignment<br>includes +/-<br>tolerance, e.g. total<br>1.0 = +/-0.5 mm) | Mating Cycles                                        | 100                        | 100                    | 200                   | 200                   | 200                           | 200                           | 100-1000                   | 100-1000                   | 100-1000                            |
|                                                                                                         | Engagement force (N)                                 | 22 Max.                    | 22 Max.                | 6 Max.                | 6 Max.                | 6 Max.                        | 6 Max.                        | 40 Max.                    | 11-19 Max.                 | 10-68 Max                           |
|                                                                                                         | Disengagement Force (N)                              | 2 Min.                     | 2 Min.                 | 1 Min.                | 1 Min.                | 1 Min.                        | 1 Min.                        | 2 Min.                     |                            | 2.2-25 Min                          |
|                                                                                                         | Total Max. Axial Misalignment (mm)                   | 1                          | 1                      | 2                     | 2                     | 2                             | 2                             | 0.25                       | 0.25                       | 2                                   |
|                                                                                                         | Total Max. Radial Misalignment (mm)                  | 0.8                        | 0.8                    | 0.8                   | 1                     | 1                             | 1                             | 0.51                       | 0.51                       | 1.32                                |
|                                                                                                         | Total Max. Radial Gathering (mm)                     | 2                          | 2                      | 2                     |                       |                               |                               |                            |                            |                                     |
|                                                                                                         | Total Min. Board to Board Spacing (mm)               | 12.7                       | 12.7                   | 12                    | 12                    | 10                            | 10                            | 9                          | 7.95                       | 12.6                                |
|                                                                                                         | Protective Shroud                                    | Y                          | Y                      | Y                     | Y                     | N                             | N                             | N                          | N                          | N                                   |
|                                                                                                         | Variable Bullet Length                               | N                          | N                      | Y                     | Y                     | Y                             | Y                             | Y                          | Y                          | Y                                   |
| Manufacturing<br>methods                                                                                | Body Construction                                    | Machined/<br>Die-cast      | Machined/<br>Die-cast  | Machined/<br>Die-cast | Machined/<br>Die-cast | Stamped/<br>Molded            | Stamped/<br>Molded            | Machined                   | Machined                   | Machined                            |
|                                                                                                         | Bullet Construction                                  | Sheet Metal<br>Stamped     | Sheet metal<br>Stamped | Machined              | Machined              | Stamped/<br>Molded            | Stamped/<br>Molded            | Machined                   | Machined                   | Machined                            |