OSP Miniature Modular Blind Mate Connectors

Product Facts

- Interface designed for multiple interconnects
- For high performance microwave system requirements
- Module to module, module to motherboard, fixed and float mount
- Bulkhead or panel mount
- For flexible and semi-rigid cable

OSP miniature connectors for semi-rigid cable meet high performance requirements for microwave multiple interconnects. Standard units are available in bulkhead or panel mount designs for either direct solder or solderless compression crimp attachment. Complete tooling for both versions is located in the Tooling Section of this catalog.

Jack connectors are available in either float or rigid mount. Rigid mount units will function to specifications up to ±.10 [0.004] radial misalignment with the mating plug connector. Applications requiring greater than ±.10 [0.004] radial misalignment can use either the float design or floating connector plates with guide pins. The solderless compression crimp attachment meets high performance requirements for microwave system applications. The cable attachment is permanent and highly reliable.

Ease of assembly permits users unskilled in soldering techniques to rapidly produce cable assemblies with consistently excellent mechanical and electrical performance.
OSP Miniature Modular Blind Mate Connectors (Continued)

**Engineering Data**
- Impedance — 50 ohms
- Frequency — dc to 22.0 GHz
- Temperature Rating — -65° to 125° C

**Electrical**
- VSWR —
  - dc - 18.0 GHz: 1.02 + .005f (GHz)
  - 18.0 - 22.0 GHz: 1.02 + .008f (GHz)
- RF Transmission Loss —
  - .03 x √f (GHz)
- Insulation Resistance — 5,000 megohms min.
- Contact Resistance —
  - Center Contact: 2.0 milliohms max.
  - Outer Contact: 2.0 milliohms max.
  - Outer Contact to Cable: 0.5 milliohms max.
- Dielectric Withstanding Voltage —
  - 1500 volts RMS
- Corona Extinction Voltage at 70,000 Ft. —
  - 375 volts min.
- RF High Potential at 5 MHz —
  - 1,000 volts RMS
- RF Leakage Interface Only —
  - -(90-fGHz) dB min. (fully mated)
- Power Handling — 300W at 3 GHz (sea level) and room temperature

**Environmental**
- Vibration — Method 204, Condition D, 20G's, MIL-STD-202
- Shock — Method 213, Condition I, 100G's, MIL-STD-202
- Temperature Cycling — Method 107, Condition B, MIL-STD-202

**Material**
- Housing — Corrosion resistant steel Type 303 (stainless) per ASTM A484 and A582
- Center Contact — Beryllium copper per ASTM-B-196
- Dielectric — TFE fluorocarbon per ASTM-D-1457
- Gasket (O'Ring) — MIL-P-25732

**Mechanical**
- Force to Engage — 3 pounds max.
- Force to Disengage — 1.5 pounds max.
- Center Contact Retention — 6 pounds min.
- Durability — 5,000 Cycles
- Radial Misalignment —
  - Rigid Mount: ±.10 [±.004]
  - Float Mount: ±.51 [±.020]

**Mating Characteristics**
- Jack Connector —
  - Center Contact Socket
  - Oversize test Pin — .945 + .003 [.0372 + .0001] dia.
  - Test Pin Finish — 16 micro inch
  - Insertion Depth — .76/1.14 [.030/.045]
  - Number of Insertions — 3
  - Insertion Force —
    - Test Pin — .940 + .003 [.0370 + .0001] dia.
    - Test Pin Finish — 16 micro inch
    - Insertion Depth — 1.27/1.91 [.050/.075]
    - Insertion Force — 3 pounds max.
  - Withdrawal Force —
    - Test Pin — .90 + .003 [.0355 + .0001] dia.
    - Test Pin Finish — 16 micro inch
    - Insertion Depth — 1.27/1.91 [.050/.075]
  - Withdrawal — 1 ounce min.

**Finish**
- Center Contact — Gold plate per MIL-G-45204, Type II, Class 1 over copper plate per MIL-C-14550
- Housing — Gold plate per MIL-G-45204, Type II, Class 0 over nickel plate per QQ-N-290, Class 2 or passivate per ASTM-A380

All dimensions shown are nominal. Contact the factory for specific tolerances.

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are standard equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.
OSP Miniature Modular Blind Mate Connectors (Continued)

Interface Mating Dimensions

The connector interface, specifically designed for multiple interconnects, maintains reliable performance over the typical mechanical tolerance required in cost effective packaging.

The interface test data shows excellent performance is maintained with mating gaps up to 0.38 [.015].

Meets MIL-STD-348 Figure 321. Intermateable to BMA Connectors.

<table>
<thead>
<tr>
<th>Letter</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1.78 .070  Nom.</td>
</tr>
<tr>
<td>B</td>
<td>5.72 .225  Min.</td>
</tr>
<tr>
<td>C</td>
<td>7.62 .300  Ref.</td>
</tr>
<tr>
<td>D</td>
<td>5.00 .197  Nom.*</td>
</tr>
<tr>
<td>E</td>
<td>5.08 .200  Max.*</td>
</tr>
<tr>
<td>F</td>
<td>3.23 .127  Max.*</td>
</tr>
</tbody>
</table>

*With spring bottomed

<table>
<thead>
<tr>
<th>Letter</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1.78 .070  Nom.</td>
</tr>
<tr>
<td>B</td>
<td>5.33 .210  Nom.</td>
</tr>
<tr>
<td>C</td>
<td>7.62 .300  Ref.</td>
</tr>
<tr>
<td>D</td>
<td>5.05 .199  Min.</td>
</tr>
<tr>
<td>E</td>
<td>0.91 .036  Nom.</td>
</tr>
<tr>
<td>F</td>
<td>3.25 .128  Min.</td>
</tr>
</tbody>
</table>

Jack

Plug

![](image)

VSWR

Flush .015 Gap

FREQUENCY

2.0 GHz

18.0 GHz

USA: 1-800-522-6752
Canada: 1-905-470-4425
Mexico: 01-800-733-8926
C. America: 52-55-1106-0803

South America: 55-11-2103-6000
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-8706-080-208

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are standard equivalents. Specifications subject to change.
OSP Miniature Modular Blind Mate Connectors (Continued)
For Semi-Rigid Cable, Direct Solder Attachment

Bulkhead Feedthrough
Cable Plug
Rear Mount

<table>
<thead>
<tr>
<th>Cable</th>
<th>Plating</th>
<th>Dimensions (A)</th>
<th>Dimensions (B)</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG 402/U</td>
<td>Gold</td>
<td>3.7 ± 0.03</td>
<td>4.6 ± 0.10</td>
<td>1059402-1</td>
</tr>
<tr>
<td>3.58</td>
<td>.141</td>
<td>1.144</td>
<td>1.180</td>
<td></td>
</tr>
<tr>
<td>RG 405/U</td>
<td>Gold</td>
<td>2.3 ± 0.03</td>
<td>3.0 ± 0.10</td>
<td>1059404-1</td>
</tr>
<tr>
<td>2.16</td>
<td>.085</td>
<td>0.089</td>
<td>0.120</td>
<td></td>
</tr>
</tbody>
</table>

Bulkhead Feedthrough
Cable Jack Rigid
Rear Mount

<table>
<thead>
<tr>
<th>Cable</th>
<th>Plating</th>
<th>Dimensions (A)</th>
<th>Dimensions (B)</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG 402/U</td>
<td>Gold</td>
<td>3.7 ± 0.03</td>
<td>4.6 ± 0.10</td>
<td>1059410-1</td>
</tr>
<tr>
<td>3.58</td>
<td>.141</td>
<td>1.144</td>
<td>1.180</td>
<td></td>
</tr>
<tr>
<td>RG 405/U</td>
<td>Gold</td>
<td>2.3 ± 0.03</td>
<td>3.0 ± 0.10</td>
<td>1059412-1</td>
</tr>
<tr>
<td>2.16</td>
<td>.085</td>
<td>0.089</td>
<td>0.120</td>
<td></td>
</tr>
</tbody>
</table>

Flange Mount Cable Jack
Floating Rear Mount

<table>
<thead>
<tr>
<th>Cable</th>
<th>Dimensions (A)</th>
<th>Dimensions (B)</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG 402/U</td>
<td>3.7 ± 0.03</td>
<td>4.6 ± 0.10</td>
<td>1059453-1</td>
</tr>
<tr>
<td>3.58</td>
<td>1.144</td>
<td>1.180</td>
<td></td>
</tr>
<tr>
<td>RG 405/U</td>
<td>2.3 ± 0.03</td>
<td>3.0 ± 0.10</td>
<td>1059456-1</td>
</tr>
<tr>
<td>2.16</td>
<td>0.089</td>
<td>0.120</td>
<td></td>
</tr>
</tbody>
</table>

Finish: Inner housing that is soldered to cable is gold plated. Outer housing is passivated stainless steel.
When using semi-rigid cable, it is recommended that a service loop be used to facilitate the float features of the connector.

Note:Part Numbers are RoHS compliant except: Indicates non-RoHS compliant.
### OSP Miniature Modular Blind Mate Connectors
#### (Continued)

#### For Semi-Rigid Cable, Direct Solder Attachment
(Continued)

#### Low Profile — Bulkhead
Feedthrough Cable Jack — Floating Rear Mount

![Image of OSP Miniature Modular Blind Mate Connectors]

When using semi-rigid cable, it is recommended that a service loop be used to facilitate the float features of the connector.

#### Low Profile — Panel
Feedthrough Cable Jack — Floating Rear Mount

![Image of OSP Miniature Modular Blind Mate Connectors]

Recommended removal tool part number 1059774-1 is described in the Tooling Section of this catalog.

When using semi-rigid cable, it is recommended that a service loop be used to facilitate the float features of the connector.

#### Table: Cable Plating Dimensions Part No.

<table>
<thead>
<tr>
<th>Cable</th>
<th>Plating</th>
<th>Dimensions</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG 402/U</td>
<td>Gold</td>
<td>3.7</td>
<td>.144</td>
</tr>
<tr>
<td>3.58</td>
<td>.141</td>
<td>4.6</td>
<td>.180</td>
</tr>
<tr>
<td>RG 405/U</td>
<td>Gold</td>
<td>2.3</td>
<td>.089</td>
</tr>
<tr>
<td>2.16</td>
<td>.085</td>
<td>3.0</td>
<td>.120</td>
</tr>
</tbody>
</table>

#### Recommended Mounting Detail

<table>
<thead>
<tr>
<th>Panel A</th>
<th>Panel B</th>
<th>Stand-Off Panel C +.050/–.000</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3</td>
<td>9.5</td>
<td>7.2</td>
</tr>
<tr>
<td>.090</td>
<td>.375</td>
<td>.283</td>
</tr>
<tr>
<td>2.3</td>
<td>11.1</td>
<td>5.6</td>
</tr>
<tr>
<td>.090</td>
<td>.438</td>
<td>.222</td>
</tr>
<tr>
<td>2.3</td>
<td>12.7</td>
<td>4.1</td>
</tr>
<tr>
<td>.090</td>
<td>.500</td>
<td>.160</td>
</tr>
<tr>
<td>3.2</td>
<td>9.5</td>
<td>6.4</td>
</tr>
<tr>
<td>.125</td>
<td>.375</td>
<td>.250</td>
</tr>
<tr>
<td>3.2</td>
<td>11.1</td>
<td>4.7</td>
</tr>
<tr>
<td>.125</td>
<td>.438</td>
<td>.187</td>
</tr>
<tr>
<td>3.2</td>
<td>12.7</td>
<td>3.2</td>
</tr>
<tr>
<td>.125</td>
<td>.500</td>
<td>.125</td>
</tr>
</tbody>
</table>

**Note:** Part Numbers are RoHS compliant except: ◆ Indicates non-RoHS compliant.
**OSP Miniature Modular Blind Mate Connectors (Continued)**

**For Semi-Rigid Cable, Solderless Compression Crimp Attachment**

---

### Bulkhead Feedthrough

**Cable Plug**

**Fixed Rear Mount**

![Image](https://via.placeholder.com/150)

---

**Dimensions**

<table>
<thead>
<tr>
<th>Cable</th>
<th>Plating</th>
<th>Dim. A</th>
<th>Before Crimping</th>
<th>After Crimping</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG 405/U</td>
<td>Passivated Stainless Steel</td>
<td>2.2</td>
<td>19.8</td>
<td>17.2</td>
<td>1059399-1</td>
</tr>
<tr>
<td>RG 402/U</td>
<td>Passivated Stainless Steel</td>
<td>3.6</td>
<td>21.1</td>
<td>18.2</td>
<td>1059408-1</td>
</tr>
<tr>
<td>RG 405/U</td>
<td>Passivated Stainless Steel</td>
<td>2.2</td>
<td>22.6</td>
<td>19.8</td>
<td>1059451-1</td>
</tr>
<tr>
<td>RG 405/U</td>
<td>Passivated Stainless Steel</td>
<td>2.2</td>
<td>22.6</td>
<td>19.8</td>
<td>1059452-1</td>
</tr>
</tbody>
</table>

Note: Outline drawing shows after crimp dimensions.

---

### Bulkhead Feedthrough

**Cable Jack**

**Fixed Rear Mount**

![Image](https://via.placeholder.com/150)

---

**Dimensions**

<table>
<thead>
<tr>
<th>Cable</th>
<th>Plating</th>
<th>Dim. A</th>
<th>Before Crimping</th>
<th>After Crimping</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG 405/U</td>
<td>Passivated Stainless Steel</td>
<td>2.2</td>
<td>19.8</td>
<td>17.2</td>
<td>1059399-1</td>
</tr>
<tr>
<td>RG 402/U</td>
<td>Passivated Stainless Steel</td>
<td>3.6</td>
<td>21.1</td>
<td>18.2</td>
<td>1059408-1</td>
</tr>
<tr>
<td>RG 405/U</td>
<td>Passivated Stainless Steel</td>
<td>2.2</td>
<td>22.6</td>
<td>19.8</td>
<td>1059451-1</td>
</tr>
<tr>
<td>RG 405/U</td>
<td>Passivated Stainless Steel</td>
<td>2.2</td>
<td>22.6</td>
<td>19.8</td>
<td>1059452-1</td>
</tr>
</tbody>
</table>

Note: Outline drawing shows after crimp dimensions.

---

### Flange Mount Cable Jack

**Floating Rear Mount**

![Image](https://via.placeholder.com/150)

---

**Dimensions**

<table>
<thead>
<tr>
<th>Cable</th>
<th>Plating</th>
<th>Dim. A</th>
<th>Before Crimping</th>
<th>After Crimping</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG 402/U</td>
<td>Passivated Stainless Steel</td>
<td>3.6</td>
<td>22.6</td>
<td>19.8</td>
<td>1059451-1</td>
</tr>
<tr>
<td>RG 405/U</td>
<td>Passivated Stainless Steel</td>
<td>2.2</td>
<td>22.6</td>
<td>19.8</td>
<td>1059452-1</td>
</tr>
</tbody>
</table>

Note: Outline drawing shows after crimp dimensions.

When using semi-rigid cable, it is recommended that a service loop be used to facilitate the float features of the connector.

**Note:** Part Numbers are RoHS compliant except: ◆ Indicates non-RoHS compliant.

---

Dimensions are shown for reference purposes only. Specifications subject to change.
OSP Miniature Modular Blind Mate Connectors (Continued)

For Flexible Cable, Crimp Attachment

Bulkhead Feedthrough
Cable Plug
Rear Mount

Bulkhead Feedthrough
Cable Jack
Rigid Rear Mount

Flange Mount Cable Jack
Floating Rear Mount

Low Profile — Panel
Feedthrough Cable Jack —
Rear Mount

Note: Part Numbers are RoHS compliant except ● Indicates non-RoHS compliant.

Refer to Recommended Mounting Hole Detail for Semi-Rigid Cable Low Profile Feedthrough Cable Jack.
Recommended removal tool part number 1059774-1 as described in the Tooling Section of this catalog.
RF Coax Connectors

OSP Miniature Modular Blind Mate Connectors (Continued)

Panel Mount

**Straight Terminal**

2-Hole Flange Mount Plug Receptacle

![Image](image)

<table>
<thead>
<tr>
<th>Plating</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passivated</td>
<td>1059566-1</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td></td>
</tr>
</tbody>
</table>

2-Hole Flange Mount Jack Receptacle

![Image](image)

<table>
<thead>
<tr>
<th>Plating</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passivated</td>
<td>1059596-1</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td></td>
</tr>
</tbody>
</table>

4-Hole Flange Mount Plug Receptacle

![Image](image)

<table>
<thead>
<tr>
<th>Plating</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passivated</td>
<td>1059563-1</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td></td>
</tr>
</tbody>
</table>

4-Hole Flange Mount Jack Receptacle

![Image](image)

<table>
<thead>
<tr>
<th>Plating</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passivated</td>
<td>1059594-1</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Part Numbers are RoHS compliant except: ● Indicates non-RoHS compliant.
RF Coax Connectors

OSP Miniature Modular Blind Mate Connectors (Continued)

Panel Mount (Continued)

Straight Terminal

Threaded Installation — Panel Feedthrough Plug Receptacle

![Image of Straight Terminal Panel Feedthrough Plug Receptacle]

Panel Feedthrough Plug Receptacle

![Image of Panel Feedthrough Plug Receptacle]

Threaded Installation — Panel Feedthrough Jack Receptacle

![Image of Threaded Installation Panel Feedthrough Jack Receptacle]

Panel Feedthrough Jack Receptacle

![Image of Panel Feedthrough Jack Receptacle]

Press Fit Installation — Panel Feedthrough Plug Receptacle

![Image of Press Fit Installation Panel Feedthrough Plug Receptacle]

Panel Feedthrough Plug Receptacle

![Image of Panel Feedthrough Plug Receptacle]

Press Fit Installation — Panel Feedthrough Jack Receptacle

![Image of Press Fit Installation Panel Feedthrough Jack Receptacle]

Panel Feedthrough Jack Receptacle

![Image of Panel Feedthrough Jack Receptacle]

<table>
<thead>
<tr>
<th>Plating</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passivated</td>
<td>1059617-1</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>1059675-1</td>
</tr>
<tr>
<td>Passivated</td>
<td>1059651-1</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>1059654-1</td>
</tr>
</tbody>
</table>

Note: Part Numbers are RoHS compliant except: * Indicates non-RoHS compliant.

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are standard equivalents.

USA: 1-800-522-6752
Canada: 1-905-470-4425
Mexico: 01-800-733-8926
C. America: 52-55-1106-0803
South America: 55-11-2103-6000
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-8706-080-208

Downloaded from Arrow.com.
RF Coax Connectors

OSP Miniature Modular Blind Mate Connectors

(Continued)

Printed Circuit Board Mount

Straight Plug Receptacle — Captured Contact

![Image of Straight Plug Receptacle]

1.7 + .08 – .000
Dia. [.067 + .003]
Typ.

Recommended
Mounting Hole

Plating Part No.
Gold 1059684-1

12.7 [.500] 5.1 [.200] 1.3 [.050]

1.0 Sq. [.040] 4 Pcs.

6.4 [.250] Sq.

9.5 [.375] Dia.

Straight Jack Receptacle — Captured Contact

![Image of Straight Jack Receptacle]

1.7 + .08 – .000
Dia. [.067 + .003]
Typ.

Recommended
Mounting Hole

Plating Part No.
Gold 1059681-1

13.5 [.530] 5.1 [.200] 1.3 [.050]

1.0 Sq. [.040] 4 Pcs.

9.5 [.375] Dia.

Right-Angle Plug Receptacle — Captured Contact

![Image of Right-Angle Plug Receptacle]

1.7 + .08 – .000
Dia. [.067 + .003]
Typ.

Recommended
Mounting Hole

Plating Part No.
Gold 1059691-1

15.0 [.590] 5.1 [.200] 1.3 [.050]

1.0 Sq. [.040] 4 Pcs.

6.4 [.250] Sq.

9.4 [.372] Dia.

Surface Mount Vertical Plug with Small Leg

![Image of Surface Mount Vertical Plug]

1.7 + .08 – .000
Dia. [.067 + .003]
Typ.

Recommended
Mounting Hole

Plating Part No.
Gold 1253111-1

1.6 [.062] 4 Pcs.


Note: Part Numbers are RoHS compliant except: † Indicates non-RoHS compliant.
RF Coax Connectors

OSP Miniature Modular Blind Mate Connectors (Continued)

Hermetically Sealed

Metal-To-Metal

Rigid Gasket Seal — Panel Feedthrough Plug Receptacle

<table>
<thead>
<tr>
<th>VSWR (GHz)</th>
<th>RF Leakage (dB)</th>
<th>Plating</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.04 + .009f</td>
<td>— (90-GHz)</td>
<td>Passivated stainless steel</td>
<td>6059632-1</td>
</tr>
</tbody>
</table>

Installation Thermal Limit: 250°C.
Recommended Mounting Hole Detail A follows, pg 168.

Rigid Gasket Seal — Panel Feedthrough Jack Receptacle

<table>
<thead>
<tr>
<th>VSWR (GHz)</th>
<th>RF Leakage (dB)</th>
<th>Plating</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.04 + .009f</td>
<td>— (90-GHz)</td>
<td>Passivated stainless steel</td>
<td>6059665-1</td>
</tr>
</tbody>
</table>

Installation Thermal Limit: 250°C.
Recommended Mounting Hole Detail A follows, pg 168.

Field Replaceable Solder and Braze-In Panel Feedthrough Plug Receptacle

<table>
<thead>
<tr>
<th>VSWR (GHz)</th>
<th>RF Leakage (dB)</th>
<th>Plating</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.06 + .01f</td>
<td>— (90-GHz)</td>
<td>Passivated stainless steel</td>
<td>1059637-1</td>
</tr>
</tbody>
</table>

Recommended Mounting Detail B or E follows, pg 168.

Note: Part Numbers are RoHS compliant except: * Indicates non-RoHS compliant.
Field Replaceable
Solder and Braze-In
(Continued)

Panel Feedthrough Jack
Receptacle

Recommended
Mounting Hole Detail

2-Hole Flange Mount Plug
Receptacle With EMI/RFI
Gasket — 0.5 [.018] Dia.
Contact

Recommended
Mounting Detail B or E follows at bottom of this page.

Recommended
Mounting Detail D follows at bottom of this page.

*Consult appropriate Instruction Sheet for complete mounting details.

Note: Part Numbers are RoHS compliant except: \(\ast\) Indicates non-RoHS compliant.

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are standard equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

Catalog 1307191
Revised 3-07
www.tycoelectronics.com

USA: 1-800-522-6752
Canada: 1-905-470-4425
Mexico: 01-800-733-8926
C. America: 52-55-1106-0803

South America: 55-11-2103-6000
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-8706-080-208

VSWR RF Leakage Plating Part No.
(GHz) (dB) Passivated stainless steel 1059671-1
1.06 + .01f — (90-fGHz)
Recommended Mounting Detail B or E follows at bottom of this page.

VSWR RF Leakage Plating Part No.
(GHz) (dB) Passivated stainless steel 1059572-1
1.06 + .01f — (90-fGHz)
Recommended Mounting Detail D follows at bottom of this page.

Note: Part Numbers are RoHS compliant except: \(\ast\) Indicates non-RoHS compliant.
OSSP Subminiature Modular Blind Mate Connectors

OSSP connectors are a subminiature version of the OSP blind mate series. Connectors in this series incorporate the design elements of the OSP interface including the float and mismate features. OSSP blind mates are about 40% smaller than OSP connectors and are designed to be used in applications where space is at a premium.

A complete family of OSSP connectors and adapters is available including cable connectors, fixed and float mount panel connectors and hermetic connectors. Rigid mount units will function to specifications up to ±.064 [.0025] radial misalignment with the mating plug connector. Applications requiring greater than ±.064 [.0025] radial misalignment can use either the float design or floating connector plates with guide pins.

**Engineering Data**
- **Impedance** — 50 ohms
- **Frequency** — dc to 28.0 GHz
- **Temperature Rating** — -65° to 125° C

**Electrical**
- **SWR** — 1.05 + .01f (GHz)
- **RG 405 (.085) Semi-Rigid**
  - .040 x vT (GHz)
- **Insulation Resistance** — 5,000 megohms min.
- **Contact Resistance** —
  - Center Contact — 6.0 milliohms max.
  - Outer Contact — 3.0 milliohms max.
  - Outer Contact to Cable — 0.5 milliohms max.
- **Dielectric Withstanding Voltage** — 675 volts RMS
- **Corona Extinction Voltage at 70,000 Ft.** — 250 volts min.
- **RF High Potential at 5 MHz** — 675 volts RMS
- **RF Leakage Interface Only** — -90 (GHz) dB min. (fully mated)
- **Power Handling** — 300W at 3 GHz (sea level) and room temperature

**Environmental**
- **Corrosion** — Method 101, Condition B, MIL-STD-202
- **Vibration** — Method 204, Condition D, 20G’s, MIL-STD-202
- **Shock** — Method 213, Condition I, 100G’s, MIL-STD-202
- **Temperature Cycling** — Method 107, Condition B, MIL-STD-202
- **Moisture Resistance** — Method 106, MIL-STD-202

**Material**
- **Housing** — Corrosion resistant steel Type 303 (stainless) per ASTM A484 and AS62
- **Center Contact** — Beryllium copper per ASTM-B-196
- **Dielectric** — TFE fluorocarbon per ASTM-D-1457
- **Gasket (O’Ring)** — MIL-P-25732

**Mechanical**
- **Force to Engage** — 3 pounds max.
- **Force to Disengage** — 1.5 pounds max.
- **Center Contact Retention** — 4 pounds min.
- **Durability** — 1,000 Cycles
- **Radial Misalignment** —
  - Rigid Mount — ±.06 [.0025]
  - Float Mount — ±.1 [.004]

**Mating Characteristics**
- **Jack Connector** —
  - Center Contact Socket —
    - Oversize test Pin — .533 + .003 [.0210 + .0001] dia.
    - Test Pin Finish — 16 micro inch max.
    - Insertion Depth — 1.27/1.91 [.050/.075]
    - Number of Insertions — 3
  - Test Pin Finish — 16 micro inch
- **Insertion Force** — 3 pounds max.
- **Withdrawal Force** —
  - Test Pin — .495 + .003 [.0195 – .0001] dia.
  - Test Pin Finish — 16 micro inch max.
  - Insertion Depth — 1.27/1.91 [.050/.075]
  - Withdrawal — 1/2 ounce min.

**Finish**
- **Center Contact** —
  - Gold plate per MIL-G-45204, Type II, Class 0 over nickel plate per QQ-N-290, Class 2 or passivate per ASTM-A380
- **Housing** —
  - Gold plate per MIL-G-45204, Type II, Class 0 over nickel plate per QQ-N-290, Class 2 or passivate per ASTM-A380

---

**Product Facts**
- **Subminiature version of OSP Blind Mate Connectors**
- **For space savings**
- **Family of connectors and adapters**

OSSP connectors are a subminiature version of the OSP blind mate series. Connectors in this series incorporate the design elements of the OSP interface including the float and mismate features. OSSP blind mates are about 40% smaller than OSP connectors and are designed to be used in applications where space is at a premium.

A complete family of OSSP connectors and adapters is available including cable connectors, fixed and float mount panel connectors and hermetic connectors. Rigid mount units will function to specifications up to ±.064 [.0025] radial misalignment with the mating plug connector. Applications requiring greater than ±.064 [.0025] radial misalignment can use either the float design or floating connector plates with guide pins.
Interface Mating Dimensions

The connector interface, specifically designed for multiple interconnects, maintains reliable performance over the typical mechanical tolerance required in cost effective packaging.

The interface test data shows excellent performance is maintained with mating gaps up to .015 inch.

<table>
<thead>
<tr>
<th>Description</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack</td>
<td>1.22</td>
<td>Nom.</td>
<td>3.91</td>
<td>5.33</td>
<td>Ref.</td>
<td>5.00</td>
</tr>
<tr>
<td></td>
<td>0.48</td>
<td>.154</td>
<td>Min.</td>
<td>.210</td>
<td>.197</td>
<td>Nom.*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plug</td>
<td>1.22</td>
<td>0.48</td>
<td>Nom.</td>
<td>3.56</td>
<td>Nom.</td>
<td>5.33</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.140</td>
<td>Nom.</td>
<td>.210</td>
<td>Ref.</td>
<td>.199</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*With spring bottomed.

---

OSSP Subminiature Modular Blind Mate Connectors (Continued)
OSSP Subminiature Modular Blind Mate Connectors (Continued)
For Semi-Rigid Cable, Direct Solder Attachment

Bulkhead Feedthrough
Cable Plug — Rear Mount

Flange Mount Cable Jack — Floating Rear Mount

Feedthrough Snap-In

<table>
<thead>
<tr>
<th>Cable</th>
<th>Plating</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG 405/U, 2.16</td>
<td>Gold</td>
<td>1059857-1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cable</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG 405/U, 2.16</td>
<td>1059866-1</td>
</tr>
</tbody>
</table>

Finish: Inner housing that is soldered to cable is gold plated. Outer housing is passivated stainless steel. When using semi-rigid cable, it is recommended that a service loop be used to facilitate the float features of the connector.

Note: Part Numbers are RoHS compliant except: Indicates non-RoHS compliant.
OSSP Subminiature Modular Blind Mate Connectors (Continued)
For Flexible Cable, Crimp Attachment

Bulkhead Feedthrough
Cable Plug — Rear Mount

Flange Mount
Cable Jack —
Floating Rear Mount

Feedthrough Snap-In
Cable Jack

Note: Part Numbers are RoHS compliant except: ◆ Indicates non-RoHS compliant.
RF Coax Connectors

OSSP Subminiature Modular Blind Mate Connectors (Continued)

For Panel Mount

Threaded Panel Feedthrough Plug Receptacle, Straight Terminal

Press-Fit Panel Feedthrough Plug Receptacle

Note: Part Numbers are RoHS compliant except: Indicates non-RoHS compliant.
OSSP Subminiature Modular Blind Mate Connectors (Continued)

For Printed Circuit Board Mount

Straight Plug Receptacle — Captured Contact

<table>
<thead>
<tr>
<th>Part No.</th>
<th>1059919-1</th>
</tr>
</thead>
</table>

Right-Angle Plug Receptacle

<table>
<thead>
<tr>
<th>Part Number</th>
<th>1484546-1</th>
</tr>
</thead>
</table>

Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.
OSSP Subminiature Modular Blind Mate Connectors  
Hermetically Sealed

Metal to Metal
Formable Gasket — Panel Feedthrough Plug Receptacle

Solder and Braze-In
Panel Feedthrough Plug Receptacle

Field Replaceable
Solder and Braze-In
2-Hole Flange Mount Plug Receptacle With EMI/RFI Gasket

Recommended Mounting Hole Detail for Hermetically Sealed

Note: Part Numbers are RoHS compliant except /H12135 indicates non-RoHS compliant.

*Consult appropriate Instruction Sheet for complete mounting procedure.