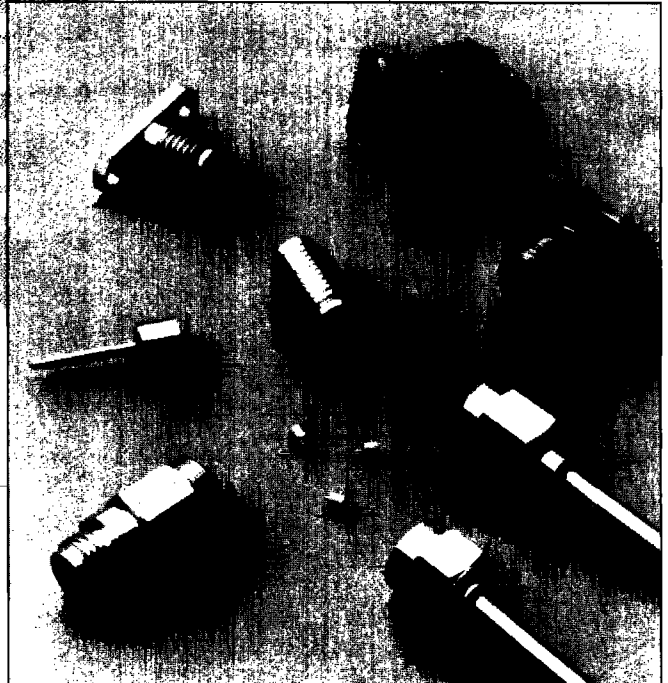
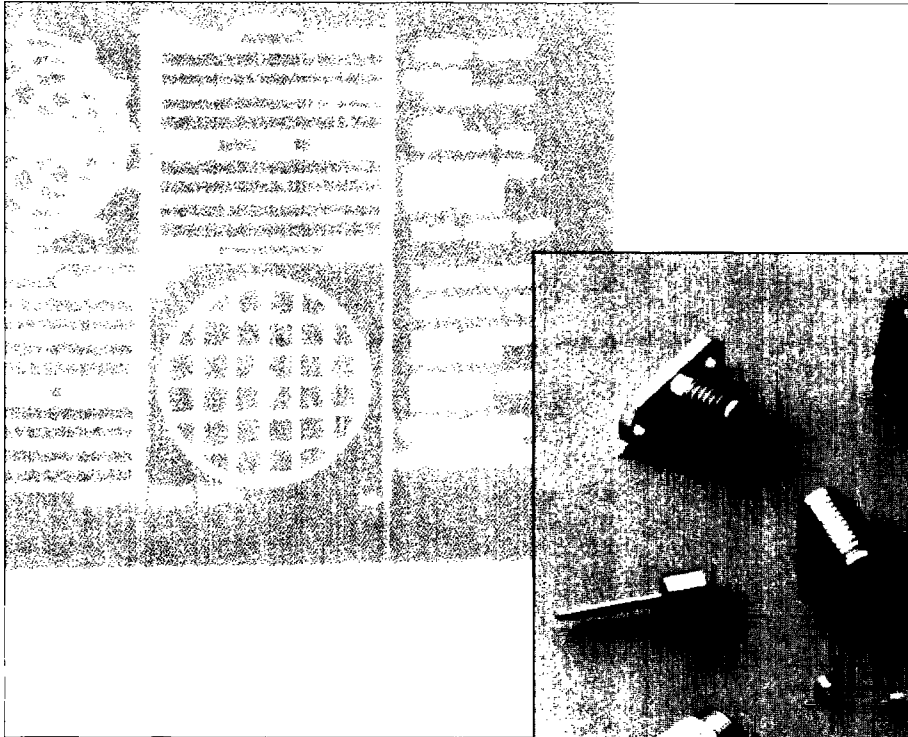


OS-2.9* DC-40 GHz Coaxial Connectors



- Frequency Range: dc - 46 GHz
- Mechanically Compatible with OSM[®] (SMA), 3.5mm and K Connectors[™]
- Excellent reliability and repeatability
- Eliminates size and weight constraints associated with waveguides

M/A-COM's OS-2.9 connectors have been designed for applications requiring superior performance up to 46 GHz and mechanical compatibility with OSM (SMA) 3.5mm and K Connectors. Millimeter wave performance of the connectors is achieved through the special 2.92mm line size and air dielectric design. OS-2.9 compatibility with SMA and 3.5mm connectors eliminates the need for adapters that change connector type or sex to complete your system.

The OS-2.9 outer conductor is four times as thick as that of a standard SMA conductor, guaranteeing reliability and repeatability during mating by offering superior resistance to overtorquing. The female center contacts have four slots to ensure pressure is distributed evenly during mating with the male pin, providing vastly improved repeatability. Misalignment problems

during mating have been minimized by shortening the male center contact preventing damage to the female center contact times, thereby extending connector life. Assembly of the OS-2.9 connector is as easy as standard SMA connectors.

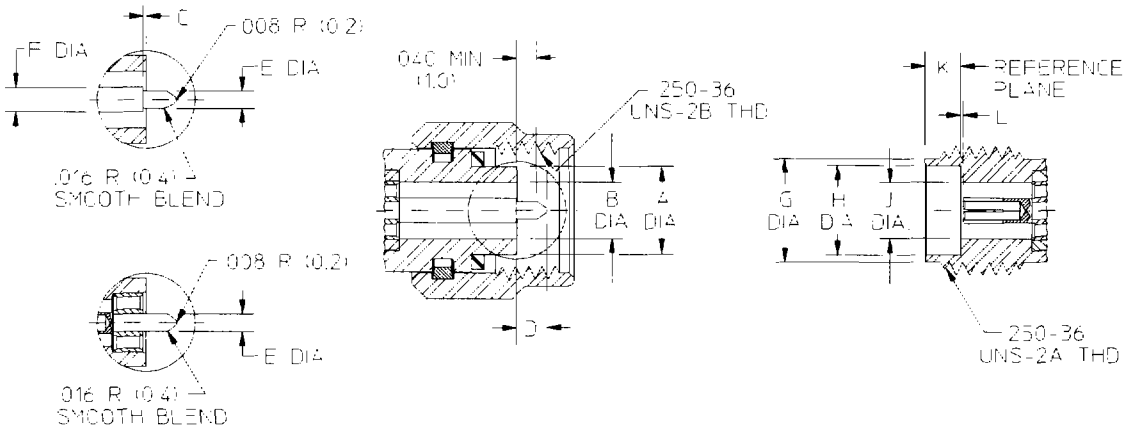
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* M/A-COM Omni Spectra OS-2.9 connectors are equivalent to K Connectors and are built under license from the Wiltron Company, Morgan Hill, California.

OS-2.9

Interface Mating Dimensions



PLUG

Letter	Inches (Millimeters)	
	Minimum	Maximum
A	.178 (4.52)	.180 (4.57)
B	.114 (2.95)	.116 (2.94)
C	.000 (0.00)	.005 (0.13)
D	.056 (1.42)	.066 (1.68)
E	.0355 (0.90)	.0365 (0.93)
F	.0495 (1.26)	.0505 (1.28)

JACK

Letter	Inches (Millimeters)	
	Minimum	Maximum
G	.208 (5.28)	.216 (5.48)
H	.182 (4.62)	.184 (4.67)
J	.114 (2.90)	.116 (2.95)
K	.074 (1.88)	.078 (1.98)
L	.000 (0.00)	.005 (0.13)

OS-2.9 Specifications

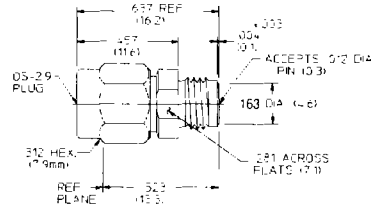
Requirement	Detail
General	
Materials	Steel, corrosion-resistant Type 303 (stainless) per ASTM A484 and A582. Beryllium copper per ASTM-B-196. PPO™ (Polyphenolic Oxide)
Finish	Center contacts shall be gold plated per MIL-G-45204 Type II, Class 1 over nickel plate per QQ-N-290. Launcher connector housing shall be passivated per ASTM A380. Cable connector housing at the point of solder attachment shall be gold plated per MIL-G-45204 Type II, Class 1 over nickel plate per QQ-N-290, other areas passivated per ASTM A380.
Design	The design shall be such that the outline and interface dimensions shown in this catalog are met.
Electrical	
Frequency	dc - 40 GHz (usable to 46 GHz)
VSWR	1.05 + .005(f) Max. dc - 40 GHz
Insertion Loss	.04 \sqrt{f} (GHz) Max.
Mechanical	
Coupling Nut Tightening Torque	8-10 in. lbs.
Environmental	
Temperature Rating	-55°C to +125°C

OS-2.9

Hermetic Launchers with Captured Center Contacts



Plug Receptacle (Sparkplug)
For Use With Glass Bead or Tab Contact

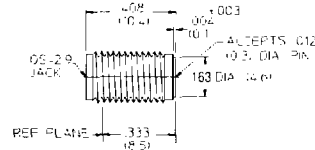


Part Number	4857-3577-02
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Finish: Passivated stainless steel
Recommended Mounting Hole Detail B



Jack Receptacle (Sparkplug)
For Use With Glass Bead or Tab Contact

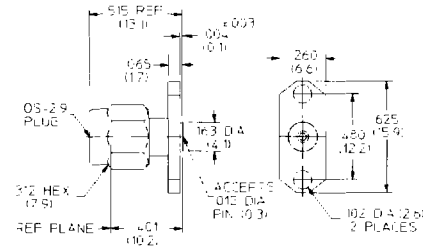


Part Number	4858-3577-02
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Finish: Passivated stainless steel
Recommended Mounting Hole Detail B.



Flange Mount Plug Receptacle
For Use With Glass Bead or Tab Contact

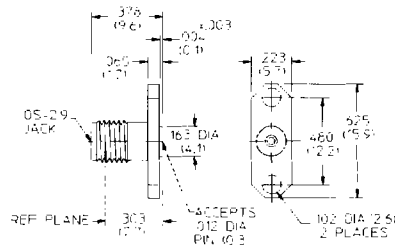


Part Number	4851-3575-02
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Finish: Passivated stainless steel
Recommended Mounting Hole Detail A



Flange Mount Jack Receptacle
For Use With Glass Bead or Tab Contact



Part Number	4852-3575-02
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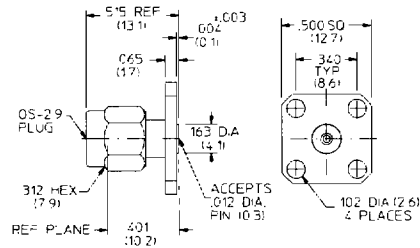
Finish: Passivated stainless steel
Recommended Mounting Hole Detail A

OS-2.9

Hermetic Launchers with Captured Contacts

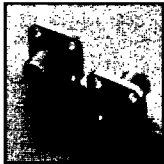


Flange Mount Plug Receptacle For Use With Glass Bead or Tab Contact

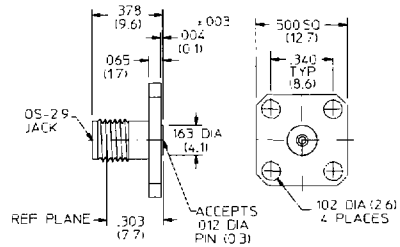


Part Number	4851-3576-02
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Finish: Passivated stainless steel
Recommended Mounting Hole Detail A.



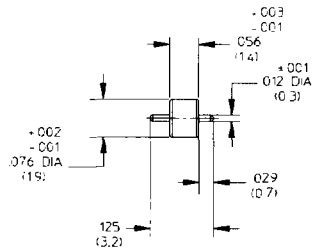
Flange Mount Jack Receptacle For Use With Glass Bead or Tab Contact



Part Number	4852-3576-02
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Finish: Passivated stainless steel
Recommended Mounting Hole Detail A.

Glass Bead For Use With Hermetic Launchers

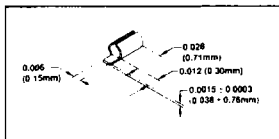


Part Number	8598-0294-00
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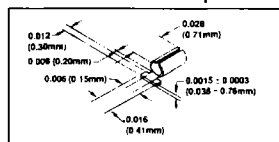
Note: Diameters concentric with .002 T.I.R.
 Required for installation of all launchers for use with hermetic packages.

Stress Relief Contacts

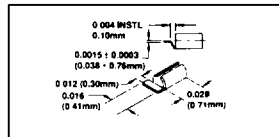
Alumina Microstrip and Coplanar Waveguide



Duroid Microstrip



Duroid Stripline



To relieve stress at the interface of the microcircuit and its connecting coaxial conductor. These contacts simply slide onto the standard glass bead pins. Sold in packages of 25.

Description	Part Number
Microstrip and Coplanar Waveguide Stress Relief Contacts*	2598-5295-54
Stripline Stress Relief Contacts*	2598-5296-54
Microstrip Stress Relief Contacts*	2598-5297-54

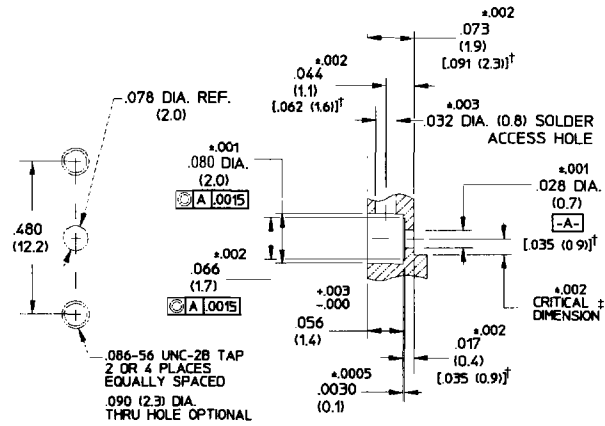
*Packages of 25

OS-2.9

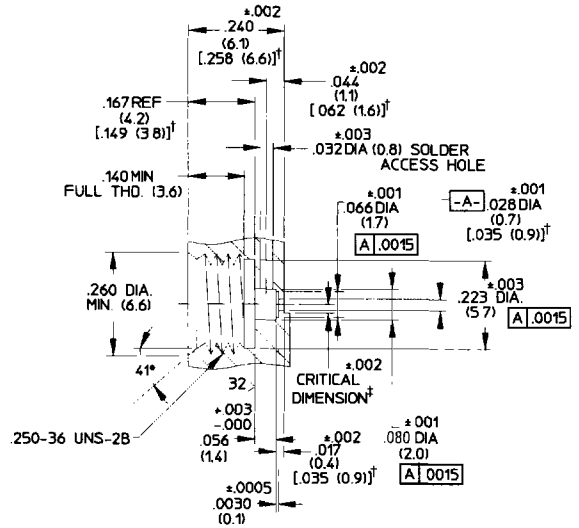
Mounting Hole Details

Detail A

For 2-Hole & 4-Hole Flange Mount
Hermetic Launchers



Detail B

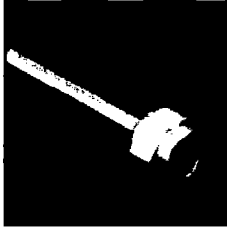


† Dimension in brackets [] applies if stress relief contacts are used
‡ .006 (Pin Radius) plus substrate and solder thickness.

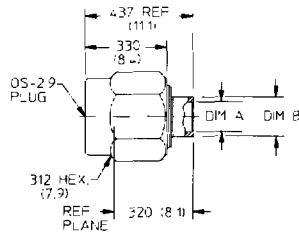
OS-2.9

For Semi-Rigid Cable

Direct Solder Attachment

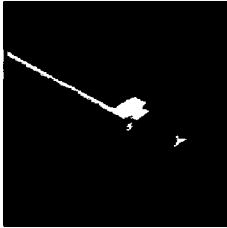


Cable Plug

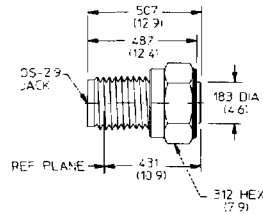


Part Number	Cable	Dim. A Inches (mm)	Dim. B Inches (mm)
4801-7918-02	0.118	.121 Min. (3.1)	.160 (4.1)
4801-7985-02	RG 405/U (.085)	.089 Min. (2.3)	.160 (4.1)

Finish: Passivated stainless steel



Cable Jack

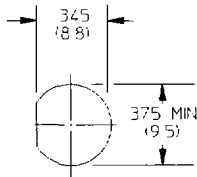
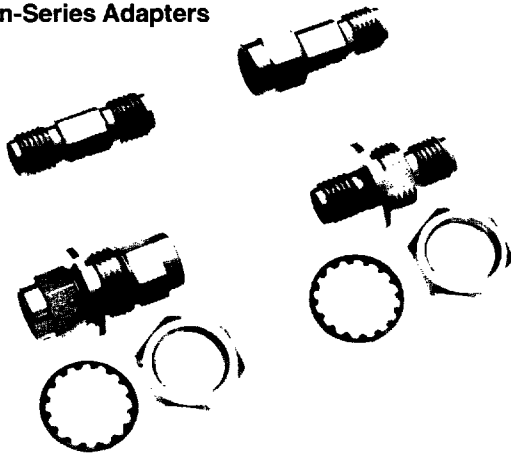


Captured Center Contact	
Part Number	Cable
4802-7918-02	0.118 Inch Dia.

Finish: Passivated stainless steel

OS-2.9 Adapters

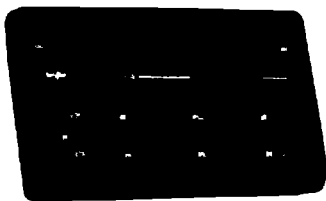
In-Series Adapters



Recommended Bulkhead Mounting Hole

Description	Part Number
OS-2.9 Plug to OS-2.9 Plug	4881-2361-02
OS-2.9 Jack to OS-2.9 Jack	4880-2362-02
OS-2.9 Plug to OS-2.9 Jack	4882-2361-02
OS-2.9 Plug to OS-2.9 Plug Bulkhead Feedthrough	4883-2361-02
OS-2.9 Jack to OS-2.9 Jack Bulkhead Feedthrough	4884-2362-02
OS-2.9 Plug to OS-2.9 Jack Bulkhead Feedthrough	4885-2362-02

Evaluation Kit



Kit contains: one plug/plug cable assembly, two 4858-3577-02 jack sparkplug launchers, two 4852-3576-02 jack flange sparkplug launchers, five 8598-0294-00 glass beads, one 2598-5286-54 drill and tap set, five 2598-5295-54 microstrip stress relief contacts, five 2598-5296-54 stripline stress relief contacts and all other parts and fixtures required to assemble launchers with or without sliding contacts.

Part Number	2598-5294-54
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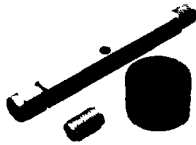
OS-2.9

Tools • Accessories

Tools



Cable Sleeve Soldering Fixture
(Packages of 10)



Connector Cable
Assembling Fixture



Torquing
Tool Kit



Flange Mount
Soldering Fixture
(Packages of 5)



Drill and Tap



Sparkplug Soldering Fixture
(Packages of 10)

Cable assembly tools for installation of OS-2.9 connectors to 0.118 inch semi-rigid cable.

Description	Part Number
Plug Cable Sleeve Soldering Fixtures*	2598-5290-54
Jack Cable Sleeve Soldering Fixtures*	2598-5291-54
Cable Assembling Fixture	2598-5293-54

Hermetic assembly tools.

Description	Part Number
Torquing Tool Kit	2598-5288-54
Flange Mount Soldering Fixtures*	2598-5289-54
Sparkplug Soldering Fixtures*	2598-5285-54
Drill	2598-5286-54
Tap	2598-5287-54
Stress Relief Contact Drill	2598-5292-54

*Packaged in multiples listed.