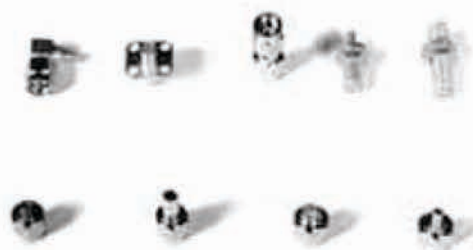


SMA Connectors

❖ SMA Coaxial Connectors - SMA Miniature Coaxial Connectors



ISOTEC micro miniature connectors series are coaxial connectors manufactured in the SMA style meeting MIL-C-39012 specifications.

It is a 50 ohm super miniature with excellent high frequency capabilities when used for telecommunications

It is most suitable in cases where space is limited and solid reliability is required.

It can be combined with a screw-on system and can use flexible cable and semi-rigid cable.

There are two types of cable connectors, crimp and clamp

Standards

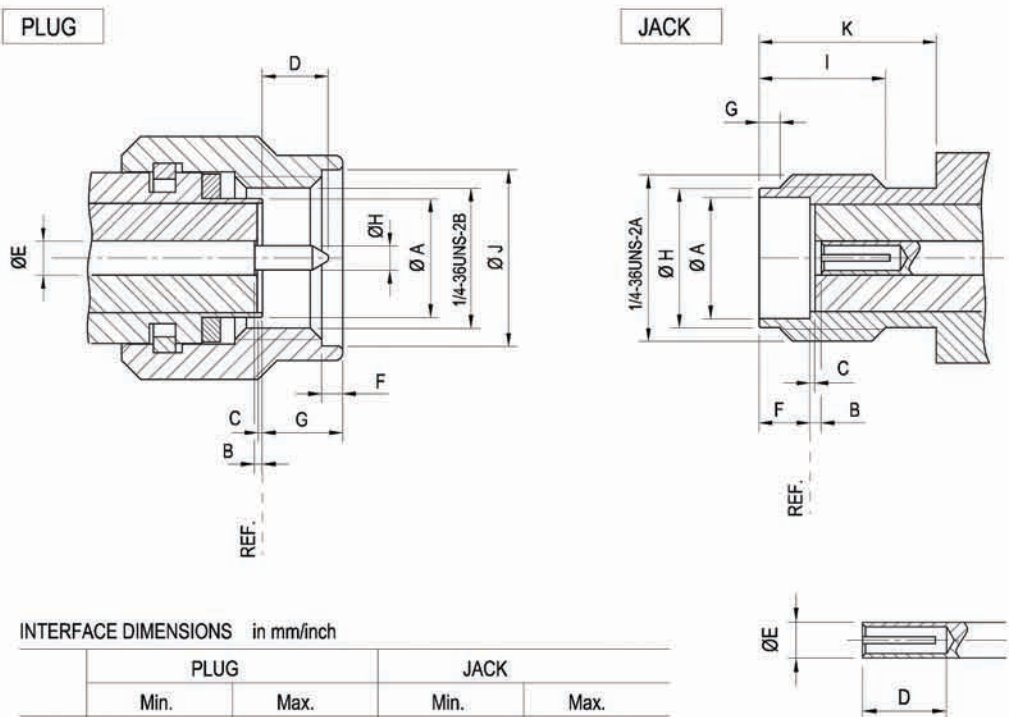
- ▷ MIL-C-39012

❖ Characteristics

Requirement	MIL-C-39012 Paragraph	Specification
ELECTRICAL DATA		
Impedance		50Ω
Frequency range		Semi-rigid cable : DC-18GHz Flexible cable : DC-12.4GHz
Contact current		DC 2.0A max.
Working voltage		Semi-rigid cable : 1000V Flexible cable : 750V
Contact resistance	3-16	Center contacts : 3.0 mΩ Outer contacts : 2.5 mΩ
Insulation resistance	3-11	5000MΩ min.
Insertion loss	3-27	0.05√f(GHz)dB
V.S.W.R	3-14	≤1.15 +0.02f(GHz)
RF leakage	3-26	-60dBm min. between 2~3GHz
MECHANICAL DATA		
Coupling nut torque		12Ncm-170Ncm
Coupling nut retention force	3-25	≥ 200N
Life	3-15	500 matings.
Contact captivation	3-14	≥ 27N
ENVIRONMENTAL DATA		
Temperature range		: -65°C~+125°C
Corrosion resistance	3-13	MIL-STD-202, Method 101, Condition B.
Moisture resistance	3-21	MIL-STD-202, Method 106.
Thermal shock	3-20	MIL-STD-202, Method 107, Condition B.
Vibration	3-18	MIL-STD-202, Method 204, Condition D.
Shock	3-19	MIL-STD-202, Method 213, Condition I.
MATERIALS		
Bodies		Brass or stainless steel
Female contacts		Beryllium copper
Insulators		PTFE Teflon
Gasket		Silicone Rubber
PLATINGS		
Bodies		Gold plated or passivated
Center contacts		Gold plated

SMA Connectors

❖ Interface Dimensions



INTERFACE DIMENSIONS in mm/inch

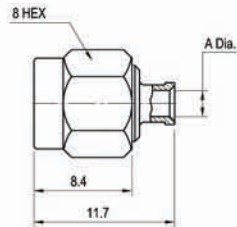
	PLUG		JACK	
	Min.	Max.	Min.	Max.
A	—	4.59/.181	4.59/.181	—
B	0.00/.000	0.25/.010	0.00/.000	0.25/.010
C	0.00/.000	0.25/.010	0.00/.000	0.25/.010
D	—	2.54/.100	2.67/.105	—
E	1.24/.049	1.29/.051	1.24/.049	1.29/.051
F	0.38/.015	1.14/.045	1.88/.074	1.98/.078
G	—	3.43/.135	0.38/.015	1.14/.045
H	0.90/.036	0.94/.037	5.28/.208	5.49/.216
I	—	—	4.32/.170	—
J	6.35/.250	—	—	—
K	—	—	5.54/.218	—

Applicable standards

▷ MIL-C-39012

❖ Semi-Rigid Cables

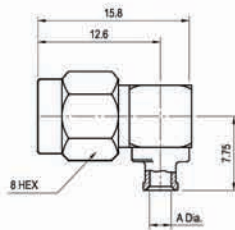
Straight Plug



for cable solder

Part number	1S-101	1S-102
Cable group	U85	U141
Dim. A	2.25(.089)	3.65(.144)

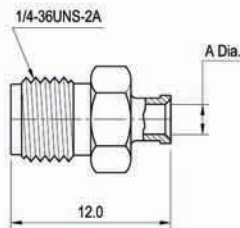
Right angle Plug



for cable solder

Part number	1S-301	1S-302
Cable group	U85	U141
Dim. A	2.25(.089)	3.65(.144)

Straight Jack



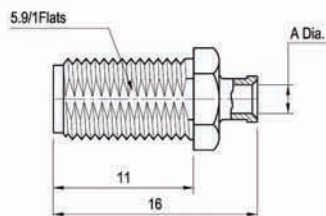
for cable solder

Part number	1S-201	1S-202
Cable group	U85	U141
Dim. A	2.25(.089)	3.65(.144)

SMA Connectors

❖ Semi-Rigid Cables

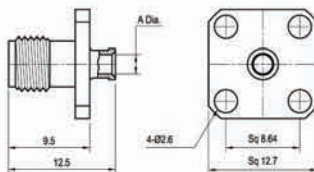
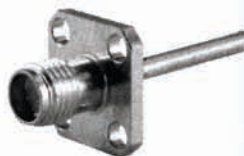
Bulkhead Jack



for cable solder

Part number	1S-401	1S-402
Cable group	U85	U141
Dim. A	2.25(.089)	3.65(.144)

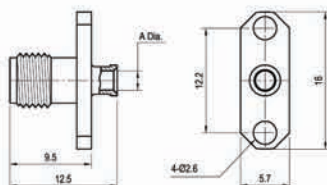
Panel Jack-4hole



for cable solder

Part number	1S-403	1S-404
Cable group	U85	U141
Dim. A	2.25(.089)	3.65(.144)

Panel Jack-2hole

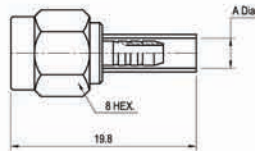


for cable solder

Part number	1S-405	1S-406
Cable group	U85	U141
Dim. A	2.25(.089)	3.65(.144)

❖ Flexible Cables

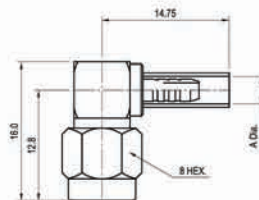
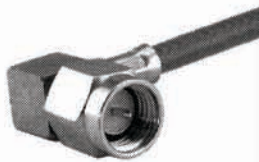
Straight Plug



for cable crimp

Part number	1S-111	1S-112
Cable group	316	400
Dim. A	3.2(.089)	5.5(.144)

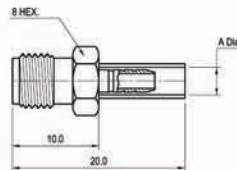
Right angle Plug



for cable crimp

Part number	1S-311	1S-312
Cable group	316	400
Dim. A	3.2(.089)	5.5(.144)

Straight Jack



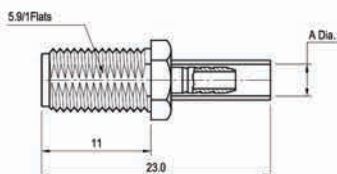
for cable crimp

Part number	1S-211	1S-212
Cable group	316	400
Dim. A	3.2(.089)	5.5(.144)

SMA Connectors

❖ Flexible Cables

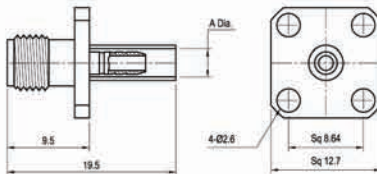
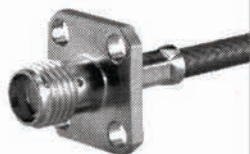
Bulkhead Jack



for cable crimp

Part number	1S-411	1S-412
Cable group	316	400
Dim. A	3.2(.089)	5.5(.144)

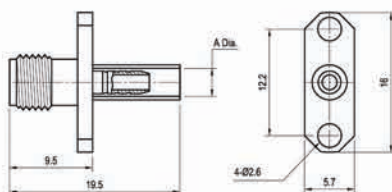
Panel Jack-4hole



for cable crimp

Part number	1S-413	1S-414
Cable group	316	400
Dim. A	3.2(.089)	5.5(.144)

Panel Jack-2hole

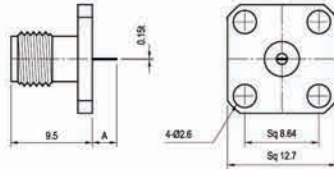
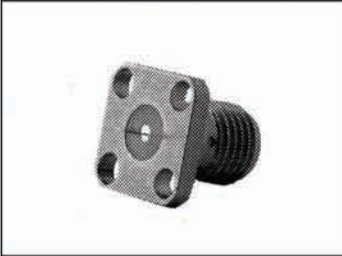


for cable crimp

Part number	1S-415	1S-416
Cable group	316	400
Dim. A	3.2(.089)	5.5(.144)

❖ Receptacles- 50Ω

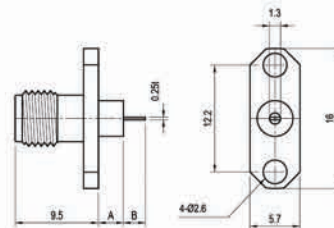
Panel Receptacle Jack-4hole



Stripline Launchers

Part number	1S-501
Cable group	Receptacle

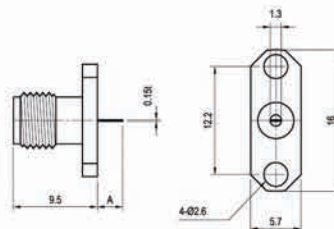
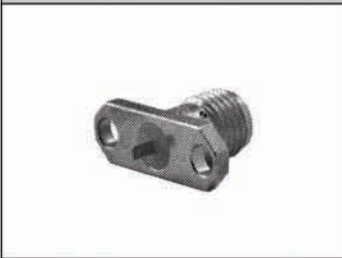
Panel Receptacle Jack-2hole



Stripline Launchers

Part number	1S-502
Cable group	Receptacle

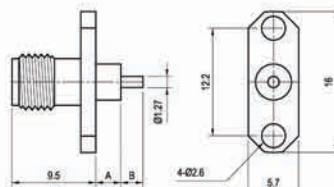
Panel Receptacle Jack-2hole



Stripline Launchers

Part number	1S-503
Cable group	Receptacle

Panel Receptacle Jack-2hole



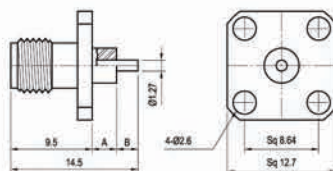
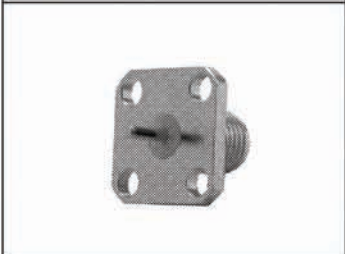
Coaxial End

Part number	1S-504
Cable group	Receptacle

SMA Connectors

❖ Receptacles- 50Ω

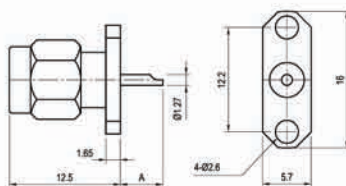
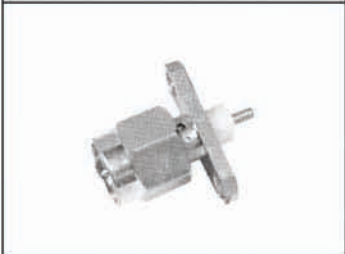
Panel Receptacle Jack-4hole



Coaxial End

Part number	1S-505
Cable group	Receptacle

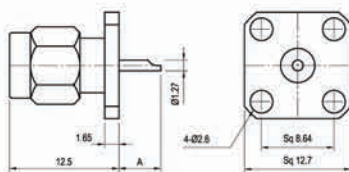
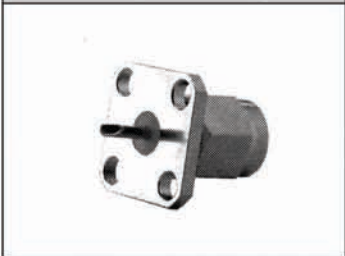
Panel Receptacle Plug-2hole



Solder End

Part number	1S-506
Cable group	Receptacle

Panel Receptacle Plug-4hole

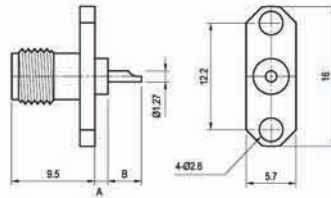


Solder End

Part number	1S-507
Cable group	Receptacle

❖ Receptacles- 50Ω

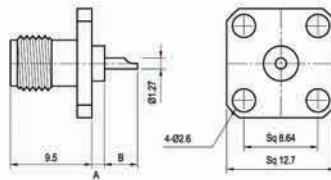
Panel Receptacle Jack-2hole



Solder End

Part number	1S-508
Cable group	Receptacle

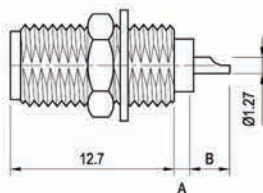
Panel Receptacle Jack-4hole



Solder End

Part number	1S-509
Cable group	Receptacle

Bulkhead Receptacle



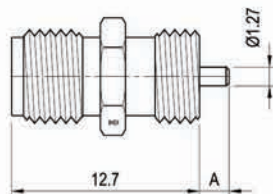
Solder End

Part number	1S-601
Cable group	Receptacle

SMA Connectors

❖ Receptacles- 50Ω

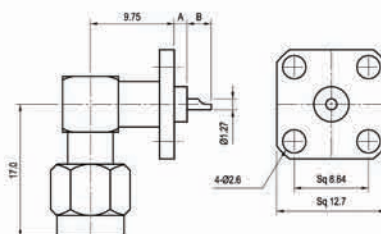
Bulkhead Receptacle



Coaxial End

Part number	1S-602
Cable group	Receptacle

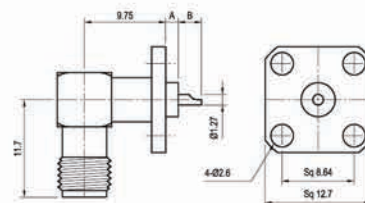
Right Angle Receptacle Plug-4hole



Solder End

Part number	1S-701
Cable group	Receptacle

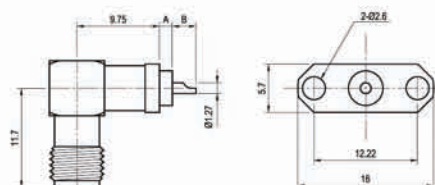
Right Angle Receptacle Jack-4hole



Solder End

Part number	1S-702
Cable group	Receptacle

Right Angle Receptacle Jack-2hole

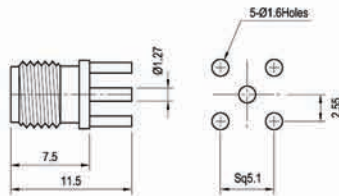


Solder End

Part number	1S-703
Cable group	Receptacle

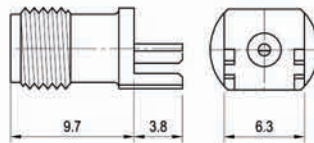
❖ PCB Connectors

Straight PCB Jack



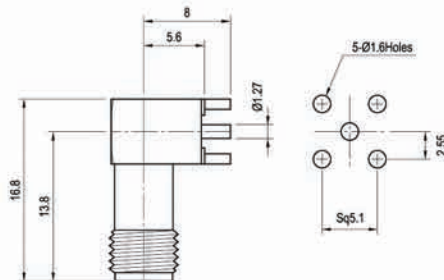
Part number	1S-521
Cable group	PCB Jack

Straight PCB Jack



Part number	1S-522
Cable group	PCB Jack


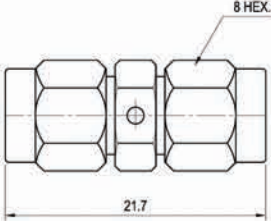

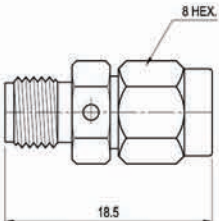

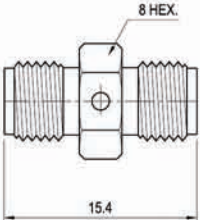

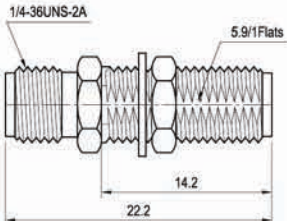
Right Angle PCB Jack



Part number	1S-710
Cable group	PCB Jack

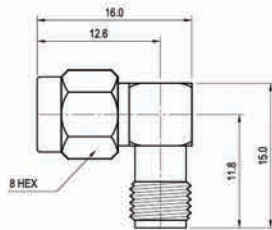
SMA Connectors

❖ Adaptors -50Ω

<p>Plug to Plug</p>			<table border="1"> <tr> <td>Part number</td> <td>1S-801</td> </tr> <tr> <td>Cable group</td> <td>Adaptors</td> </tr> </table>	Part number	1S-801	Cable group	Adaptors
Part number	1S-801						
Cable group	Adaptors						
<p>Plug to Jack</p>			<table border="1"> <tr> <td>Part number</td> <td>1S-802</td> </tr> <tr> <td>Cable group</td> <td>Adaptors</td> </tr> </table>	Part number	1S-802	Cable group	Adaptors
Part number	1S-802						
Cable group	Adaptors						
<p>Jack to Jack</p>			<table border="1"> <tr> <td>Part number</td> <td>1S-803</td> </tr> <tr> <td>Cable group</td> <td>Adaptors</td> </tr> </table>	Part number	1S-803	Cable group	Adaptors
Part number	1S-803						
Cable group	Adaptors						
<p>Jack to Jack-Bulkhead</p>			<table border="1"> <tr> <td>Part number</td> <td>1S-804</td> </tr> <tr> <td>Cable group</td> <td>Adaptors</td> </tr> </table>	Part number	1S-804	Cable group	Adaptors
Part number	1S-804						
Cable group	Adaptors						

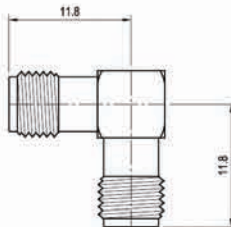
❖ Adaptors -50Ω

Right angle Plug to Jack



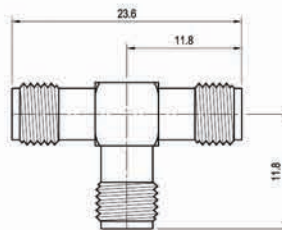
Part number	1S-805
Cable group	Adaptors

Right angle Jack to Jack



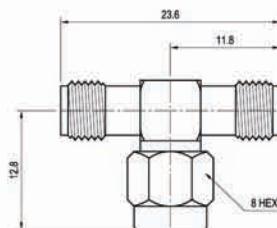
Part number	1S-806
Cable group	Adaptors

T-Adaptor 3 Jacks



Part number	1S-881
Cable group	Adaptors

T-Adaptor 1 Plug, 2 Jacks



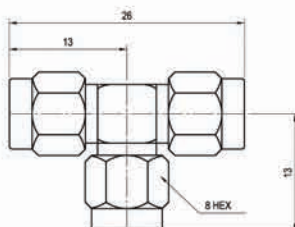
Part number	1S-882
Cable group	Adaptors

SMA

Connectors

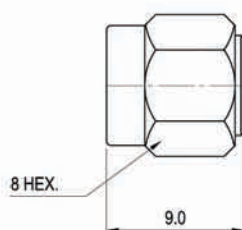
❖ Adaptors, Terminations

T-Adaptor 3 Plugs



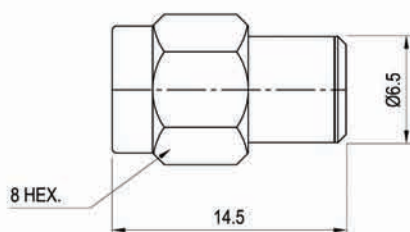
Part number	1S-883
Cable group	Adaptors

Short circuit cap-Plug



Part number	1S-001
Cable group	Short circuit cap
Impedance	50Ω

Terminations-Plug



Part number	1S-901
Cable group	Termination
Impedance	50Ω