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Introduction



50Ω	DC - 10 GHz

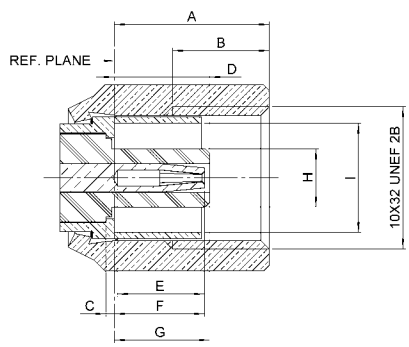
GENERAL
- Subminiature coaxial connectors
- Screw-on coupling
- Plugs have female contacts
- Jacks have male contacts
- Low weight
- Reduced outline dimensions

APPLICABLE STANDARDS
- MIL-C-39012

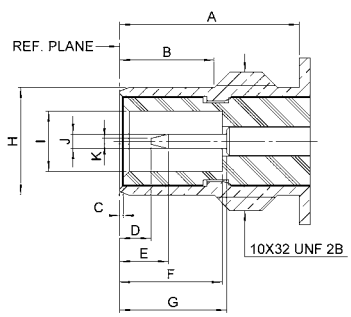
APPLICATIONS
- Civil and military telecommunications
- Aeronautics
- Missiles
- Edge mounting applications

Interface

PLUG



JACK



Letter	mm		inch	
	min.	max.	min.	max.
A	5.14	5.55	.202	.219
B	3.20	4.20	.126	.165
C	0.25	0.35	.010	.014
D	2.95	3.00	.116	.118
E	2.80	3.20	.110	.126
F	2.80	3.40	.110	.134
G	3.15	3.40	.124	.134
H	2.00	2.05	.079	.081
I	3.75	3.80	.148	.150

Letter	mm		inch	
	min.	max.	min.	max.
A	6.00	6.20	.236	.244
B	3.15	3.35	.124	.132
C	0.05	0.20	.002	.008
D	0.65	1.50	.026	.059
E	1.30	2.05	.051	.081
F	3.40	3.71	.134	.146
G	3.40	3.95	.134	.156
H	3.65	3.69	.144	.145
I	2.08	2.13	.082	.084
J	0.48	0.52	.019	.020
K	--	0.20	--	.008

Characteristics

Test / Characteristics		MIL-C-39012 paragraph	Values / Remarks	
ELECTRICAL CHARACTERISTICS				
Impedance			50Ω	
Frequency range			DC - 10 GHz	
V.S.W.R. (typ.) • Straight • Right angle	cable	3-14	2/50 1.25 + 0.04 F (GHz) 1.40 + 0.06 F (GHz)	2.6/50 1.20 + 0.04 F (GHz) 1.30 + 0.04 F (GHz)
Insertion loss • Straight • Right angle		3-27	0.25 dB max. at 4 GHz 0.5 dB max. at 4 GHz	
RF leakage		3-26	-60 dB min between 2 and 3 GHz	
Insulation resistance		3-11	1000 MΩ min	
Contact resistance • Center contact (mΩ) • Outer contact (mΩ)		3-16	Initial 6 1	After environment 8 1.5
Voltage rating (volts RMS) • At sea level • At 70000 ft (21000 m)	cable		2/50 250 V rms 60 V rms	2.6/50 335 V rms 85 V rms
Dielectric withstanding voltage • At sea level • At 70000 ft (21000 m)	cable	3-17	2/50 750 V rms 185 V rms	2.6/50 1000 V rms 250 V rms
RF high potential withstanding voltage (Frequency 5 MHz) • At sea level	cable	3-23	2/50 500 V rms	2.6/50 700 V rms

MECHANICAL CHARACTERISTICS

Durability	3-15	500 matings	
Force to engage and disengage	3-5-1	torque: 16 inch-ounces max - 11.3 Ncm	
Mating torque		35 to 50 inch-ounces - 25 to 35 Ncm	
Coupling nut proof torque		100 inch-ounces - 71 Ncm	
Coupling nut retention force	3-25	35 lbs min - 156 N min	
Cabling retention force cable	3-24	2/50 13 lbs - 58 N	2.6/50 25 lbs - 110 N
Contact captivation		Axial force: 4 lbs - 18 N torque: not applicable	

ENVIRONMENTAL CHARACTERISTICS

Operating temperature range • Standard models and hermetic • Models for semi-rigid cables		-65°C / + 165°C -65°C / +105°C
Temperature cycling		MIL-STD-202, method 102, condition C
Thermal shock	3-20	MIL-STD-202, method 107, condition B
High temperature test		MIL-STD-202, method 108
Corrosion (salt spray)	3-13	MIL-STD-202, method 101, condition B, 5%
Vibration	3-18	MIL-STD-202, method 204, condition D, 20g
Shock	3-19	MIL-STD-202, method 213, condition C, 100g
Moisture resistance	3-21	not applicable
Barometric pressure	3-22	MIL-STD-202, method 105, condition C
Hermetic test		Down to 10^{-6} mm Hg (Torr) Leak rate <1 x 10^{-6} atm/cm^3/sec

MATERIALS AND PLATING

	Material	Plating
Bodies and male contacts	Brass, half hard per QQ-B-626	Gold to satisfy the corrosion requirements (bodies)
Female contacts and interfaces	Beryllium copper per QQ-C-530	Gold (Center contact)
Ferrules	Brass	
Insulators	PTFE teflon	
Gaskets	Silicone rubber	

All dimensions are given in mm.

STRAIGHT PLUGS



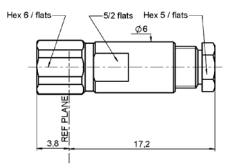


Fig. 1

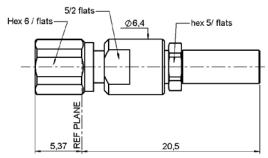


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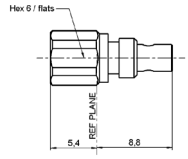


Fig. 3

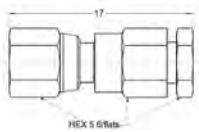


Fig. 4

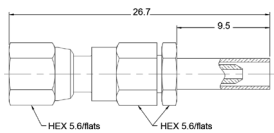


Fig. 5

Cable group	Cable group dia	Part number (Gold)	Part number (Nickel)	Fig.	Note
RG178 / RG196	2/50/S	R112 003 000	n/a	1	Clamp type
RG174 / RG316 / RG179	2.6/50+75/S	R112 005 000			
		R112 075 000		2	Crimp type
RG405	.085"	R112 053 000		3	Solder type
RG178 / RG196	2/50/S	1002-1571-002	1002-7571-002	5	Crimp type
		1002-1551-002	1002-7551-002	4	Clamp type
RD178	2/50/D	1002-1551-005	1002-7551-005		
		1002-1571-005	1002-7571-005	5	Crimp type
RG174 / RG316 / RG179	2.6/50/S	1002-1551-003	1002-7551-003	4	Clamp type
		1002-1571-003	1002-7571-003	5	Crimp type
RD316	2.6/50/D	1002-1551-019	1002-7551-019	4	Clamp type
		1002-1571-019	1002-7571-019	5	Crimp type
RG405	.085"	1002-1541-010	1002-7541-010	4	Solder clamp
RG402	.141"	1002-1541-009	1002-7541-009		

RIGHT ANGLE PLUGS



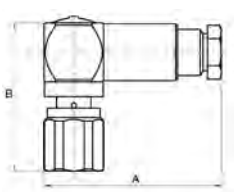


Fig. 1

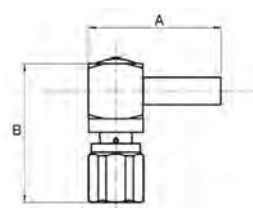


Fig. 2

Cable group	Cable group dia	Part number (Gold)	Part number (Nickel)	Fig.	Dimensions mm		Note
					A dia	B dia	
RG174 / RG316 / RG179	2.6/50+75/S	R112 165 000	n/a	1	19	15.9	Crimp type
RG178 / RG196	2/50	R112 183 000		2	16	15.5	
RG174 / RG316 / RG179	2.6/50+75/S	R112 186 000			15.3	15.9	
RG178 / RG196	2/50/S	1005-1551-002	1005-7551-002	1	14.9	13.9	Clamp type
		1105-1521-002	1105-7521-002	2	16		Crimp type
RD178	2/50/D	1005-1551-005	1005-7551-005	1	14.9		Clamp type
		1105-1521-005	1105-7521-005	2	16		Crimp type
RG174 / RG316 / RG179	2.6/50/S	1005-1551-003	1005-7551-003	1	14.9		Clamp type
		1105-1521-003	1105-7521-003	2	16		Crimp type
RD316	2.6/50/D	1005-1551-019	1005-7551-019	1	14.9		Clamp type
		1105-1521-019	1105-7521-019	2	16		Crimp type
RG405	.085"	1005-1541-010	1005-7541-010	1	14.9		Solder clamp
RG402	.141"	1005-1541-009	1005-7541-009				

STRAIGHT JACK



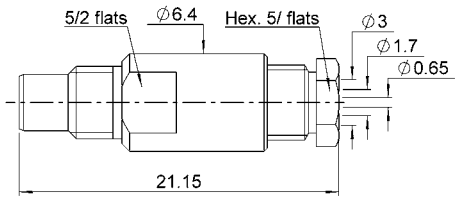


Fig. 1

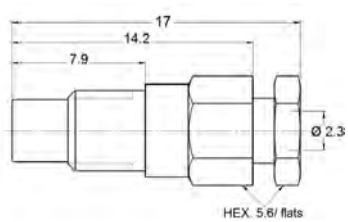


Fig. 2

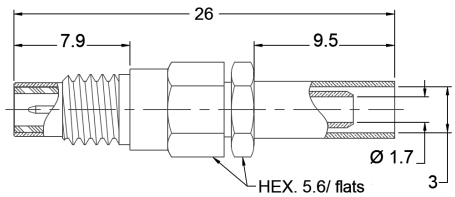


Fig. 3

Cable group	Cable group dia	Part number (Gold)	Part number (Nickel)	Note
RG174 / RG316 / RG179	2.6/50+75/S	R112 205 000		Clamp type
RG178 / RG196	2/50/S	1001-1551-002	1001-7551-002	
		1001-1571-002	1001-7571-002	Crimp type
RD178	2/50/D	1001-1551-005	1001-7551-005	Clamp type
		1001-1571-005	1001-7571-005	Crimp type
RG174 / RG316 / RG179	2.6/50/S	1001-1551-003	1001-7551-003	Clamp type
		1001-1571-003	1001-7571-003	Crimp type
RD316	2.6/50/D	1001-1551-019	1001-7551-019	Clamp type
		1001-1571-019	1001-7571-019	Crimp type
RG405	.085"	1001-1571-010	1001-7571-010	Solder clamp
RG402	.141"	1001-1571-009	1001-7571-009	

BULKHEAD STRAIGHT AND RIGHT ANGLE JACKS



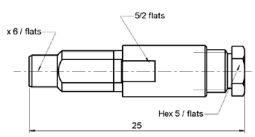


Fig. 1

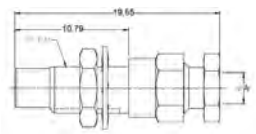


Fig. 2

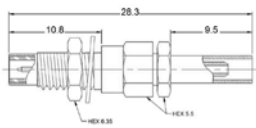


Fig. 3

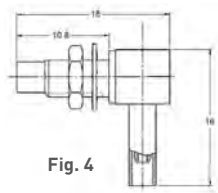


Fig. 4

Cable group	Cable group dia	Part number (Gold)	Part number (Nickel)	Fig.	Panel drilling	Note
RG178 / RG196	2/50/S	R112 303 000		1	P03	
RG174 / RG316 / RG179	2.6/50+75/S	R112 305 000				
RG178 / RG196	2/50/S	1003-1551-002	1003-7551-002	2		Clamp type
		1003-1571-002	1003-7571-002	3		Crimp type
		1006-1551-002	1006-7551-002	4		Clamp type
		1106-1521-002	1106-7521-002			Crimp type
RD178	2/50/D	1003-1551-005	1003-7551-005	2		Clamp type
		1003-1571-005	1003-7571-005	3		Crimp type
		1006-1551-005	1006-7551-005	4		Clamp type
		1106-1521-005	1106-7521-005			Crimp type
RG174 / RG316 / RG179	2.6/50/S	1003-1551-003	1003-7551-003	2		Clamp type
		1003-1571-003	1003-7571-003	3		Crimp type
		1006-1551-003	1006-7551-003	4		Clamp type
		1106-1521-003	1106-7521-003			Crimp type

BULKHEAD STRAIGHT AND RIGHT ANGLE JACKS (CONTINUED)

Cable group	Cable group dia	Part number (Gold)	Part number (Nickel)	Fig.	Panel drilling	Note
RD316	2.6/50/D	1003-1551-019	1003-7551-019	2	P03	Clamp type
		1003-1571-019	1003-7571-019	3		Crimp type
		1006-1551-019	1006-7551-019	4		Clamp type
		1106-1521-019	1106-7521-019			Crimp type
RG405	.085"	1003-1541-010	1003-7541-010	2		Solder clamp
		1006-1541-010	1006-7541-010	4		
RG402	.141"	1003-1541-009	1003-7541-009	2		
		1006-1541-009	1006-7541-009	4		

SQUARE FLANGE RECEPTACLES

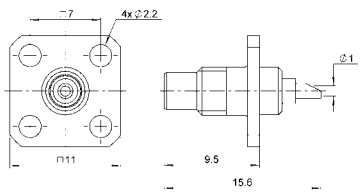


Fig. 1

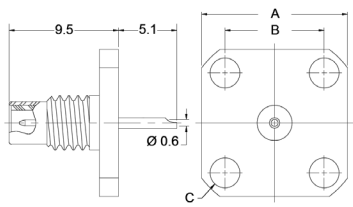


Fig. 2

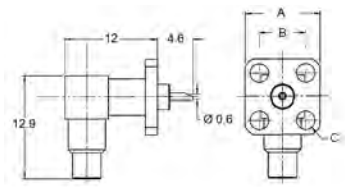


Fig. 3

Part number (Gold)	Part number (Nickel)	Fig.	Dimensions (mm)			Panel drilling
			A	B	C	
R112 403 000	n/a	1				P01
1484-1511-000	1484-7511-000	2	9.5	5.9	2.4	
1486-1511-000	1486-7511-000		12.7	8.6	2.6	
1490-1511-000	1490-7511-000	3				
1488-1511-000	1488-7511-000		9.5	5.9	2.4	

BULKHEAD RECEPTACLES WITH SOLDER POT CONTACT



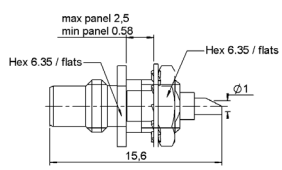


Fig. 1

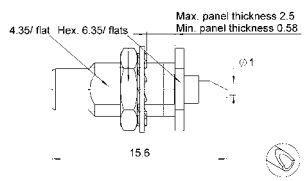


Fig. 2

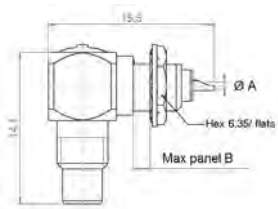


Fig. 3

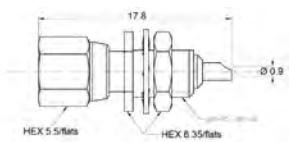


Fig. 4

Part number (Gold)	Part number (Nickel)	Fig.	Dimensions (mm)		Panel drilling	Note
			A	B		
R112 553 000	n/a	1			P03	Front mount
R112 554 000		2				Rear mount
R112 670 000		3	0.6	1.55		Front mount
1004-1511-000	1004-7511-000	2				Rear mount
1019-1511-000	1019-7511-000	1				Front mount
1012-1511-000	1012-7511-000	3	0.9	2.4		
1017 1511-000	1017 7511-000	4				

Receptacles and adapters

PCB RECEPTACLES





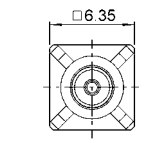


Fig. 1

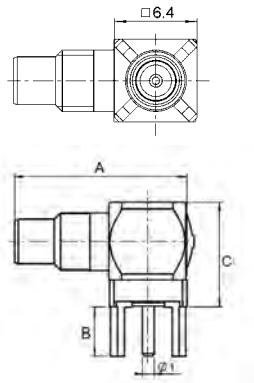


Fig. 2

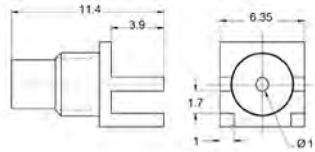


Fig. 3

Part number (Gold)	Part number (Nickel)	Fig.	Dimensions (mm)			Panel drilling	Note
			A	B	C		
R112 426 000	n/a	1	11.8	4.4		P02	Standoff legs
R112 665 000		2	14.2	4	12.7		
1009-1511-000	1009-7511-000	1	11.4			P04	No standoff
1010-1511-000	1010-7511-000	2	14		7		
1010-1511-001	1010-7511-001				8.8		
1109-1511-000	1109-7511-000	1	16.3			P04 + P03	No standoff, bulkhead type
1110-1511-000	1110-7511-000	2	18		7		
1009-1511-005	1009-7511-005	3				P04	End launch type

IN SERIES ADAPTERS

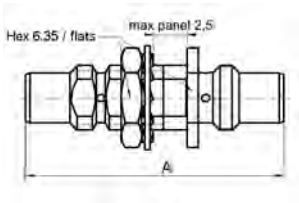


Fig. 1

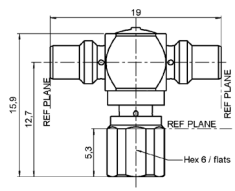
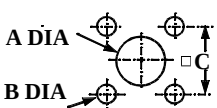


Fig. 2

Part number (Gold)	Fig.	Dimensions A (mm)	Panel drilling	Note
R112 720 000	1	19	P03	male - male bulkhead
R112 780 000	2			tee male - male / female
5822-1501-000	1	17.5	P03	female - female

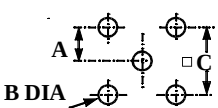
Panel drilling

PO1



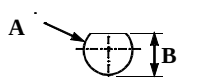
	mm	
	Maxi	mini
A	4.9	4.8
B	2.3	2.2
C	6.95	7.05

PO2



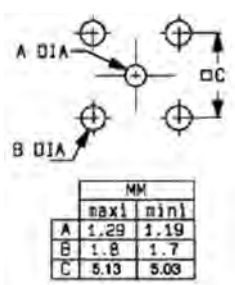
	mm	
	Maxi	mini
A	2.59	2.49
B	1.4	1.3
C	5.00	5.16

PO3



	mm	
	Maxi	mini
A	5	4.9
B	4.6	4.45

PO4



	MM	
	maxi	mini
A	1.29	1.19
B	1.8	1.7
C	5.13	5.03

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