

50  $\Omega$ 

DC - 18 GHz

### GENERAL

- Sub-miniature coaxial connectors
- Screw-on coupling
- High RF performance
- 2 plating options :
  - passivated stainless steel
  - gold plated
- Wide hermetically sealed range  
(Please contact *RADIALL*)
- Space qualified range of products  
(Please contact *RADIALL*)
- SMA extended frequency 27 GHz

### APPLICABLE STANDARDS

- MIL- C - 39012
- IEC 169-1
- CECC 22110
- CECC 22111 - 801 to 808
- BS 9210 N006



### QUALIFICATIONS/APPROVALS

- MIL QPL
- CECC QPL

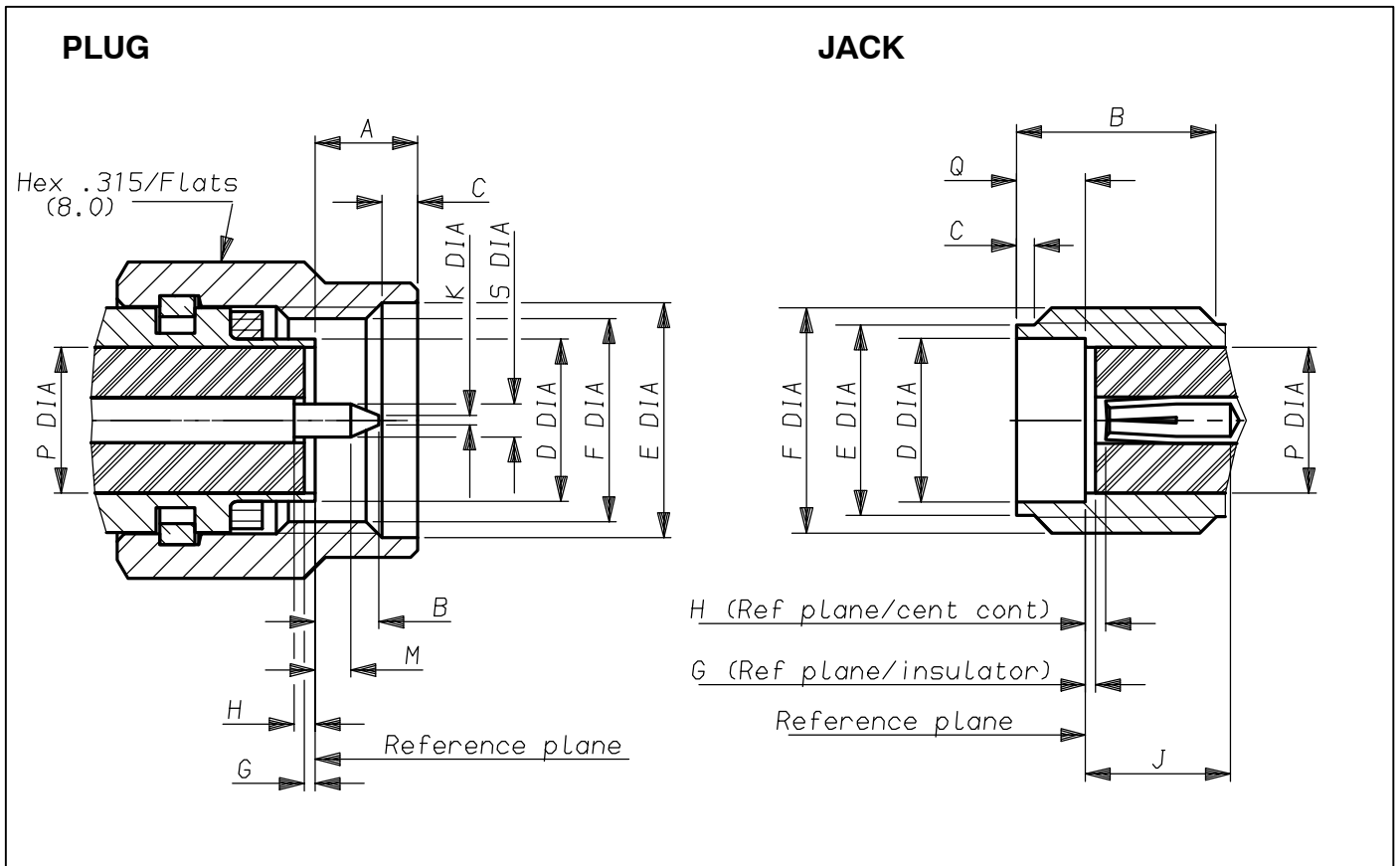
### SPACE QUALIFIED/APPROVALS

(For space range)

- SCC 3402 (ESA)
- CNES

### APPLICATIONS

- Civil & Military Telecommunications
- Civil & Military Aeronautics
- Military equipments
- Space
- Measurement systems



LETTER	mm		inch	
	min.	max.	min.	max.
A		3.43		.135
B		2.54		.100
C	0.38	1.14	.015	.045
D DIA		4.59		
E DIA	6.35		.250	
F DIA	1/4 36 UNS 2B			
G*	0.0	-0.20	0.0	-.008
H*	0.0	-0.25	0.0	-.010
J				
K DIA		0.38		.015
M	1.27		.050	
P DIA	4.10 nom		.161 non	
Q DIA				
S DIA	0.90	0.94	.035	.037

LETTER	mm		inch	
	min.	max.	min.	max.
A				
B	4.31		.170	
C	0.38	1.14	.015	.045
D DIA	4.596		.181	
E DIA	5.28	5.49	.208	.216
F DIA	1/4 36 UNS 2A			
G*	0.0	-0.20	0.0	-.008
H*	0.0	-0.25	0.0	-.010
J	2.92		.115	
K				
M				
P DIA	4.10 nom		.161 non	
Q	1.88	1.98	.074	.078
S DIA				

\*NOTA : - means behind ref plane



TEST / CHARACTERISTICS	VALUES / REMARKS
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### ELECTRICAL CHARACTERISTICS

Impedance	50 Ω						
Frequency range	DC - 18 GHz						
Typical V.S.W.R.	Frequency	1 GHz	2.4 GHz	6 GHz	12.4 GHz	18 GHz	
<ul style="list-style-type: none"> <li>• <i>straight connector</i></li> <li>• <i>right angle connector</i></li> </ul>	.085"	1.01	1.01	1.04	1.06	1.06	
	.141"	1.01	1.01	1.01	1.03		1.05
	2.6/50S	1.05	1.07	1.12	1.15	1.12	
	5/50S	1.04	1.05	1.10	1.12		1.12
	.085"	1.01	1.02	1.06	1.14	1.10	
	.141"	1.01	1.02	1.08	1.10		1.24
	2.6/50S	1.06	1.15	1.18	1.24	1.25	
	5/50S	1.06	1.15	1.15	1.25		0.10
Typical insertion loss in dB						0.10	
<ul style="list-style-type: none"> <li>• <i>straight connector</i></li> <li>• <i>right angle connector</i></li> </ul>	.085"	0.03	0.03	0.05	0.08	0.02	
	.141"	0.02	0.02	0.02	0.02		0.02
	2.6/50S	0.06 F (F in GHz) max					
	5/50S	0.06 F (F in GHz) max					
	.085"	0.04	0.04	0.04	0.08	0.09	
	.141"	0.04	0.05	0.06	0.09		0.10
	2.6/50S	0.08	0.08	0.10	0.10	0.25	
	5/50S	0.04	0.12	0.12	0.25		-90 + F (GHz)
RF leakage (dB max)	-90 + F (GHz)						
<ul style="list-style-type: none"> <li>• <i>connectors for semi-rigid cables solder attachment</i></li> <li>• <i>connectors for flexible cables crimp attachment</i></li> <li>• <i>receptacles</i></li> </ul>	-60 + F (GHz)						
	-100 + F (GHz)						
Insulation resistance	5 000 MΩ mini						
Contact resistance	<b>After tests</b>			<b>Initial</b>			
	4 mΩ 3 mΩ			3 mΩ 2 mΩ			
Working voltage in VRMS	<b>.085", RG 405, KS 1</b>	<b>.141", RG 402, KS 2</b>	<b>RG 174, 188, 316, KX 3, KX 22</b>		<b>RG 55, 142, 223, KX 23</b>		
	350	500	250		335		
	85	125	65		85		
Dielectric withstanding voltage in VRMS	1000	1500	750		1000		
RF testing voltage at in VRMS	670	1000	500		670		

### MECHANICAL CHARACTERISTICS

Durability	500 matings					
Force to engage and disengage	23 Ncm - (2 inch pounds)					
Recommended coupling nut torque	80 to 115 Ncm - (7 to 10 inch pounds)					
Coupling nut retention force	270 N - (60 Lbs)					
Cable retention force	<b>.085", RG 405, KS 1</b>	<b>.141", RG 402, KS 2</b>	<b>RG 174, 188, 316, KX 3, KX 22</b>		<b>RG 55, 142, 223, KX 23</b>	
	135 N (30 Lbs)	270 N (60 Lbs)	110 N (25 Lbs)		180 N (40 Lbs)	
Center contact retention force	27 N					
	2.8 N					



## ENVIRONMENTAL CHARACTERISTICS

Temperature range <i>Standard models</i> <i>Semi-rigid cable</i> <b>R125 753 000 &amp; R125 603 000</b>	- 65°C + 165° C - 65°C + 105° C - 40°C + 100° C
Thermal shock	MIL STD 202, method 107, condition B,
High temperature test	MIL STD 202, method 108
Corrosion (salt spray)	MIL STD 202, method 101, condition B,
Vibration	MIL STD 202, method 204, condition D, 20g
Shock	MIL STD 202, method 213
Moisture resistance	MIL STD 202, method 106
Hermetic test	down to 10 <sup>-6</sup> mmHg (Torr) leakage rate < 10 <sup>-8</sup> atm/cm <sup>3</sup> /sec
Barometric pressure	MIL STD 202, method 105, condition C

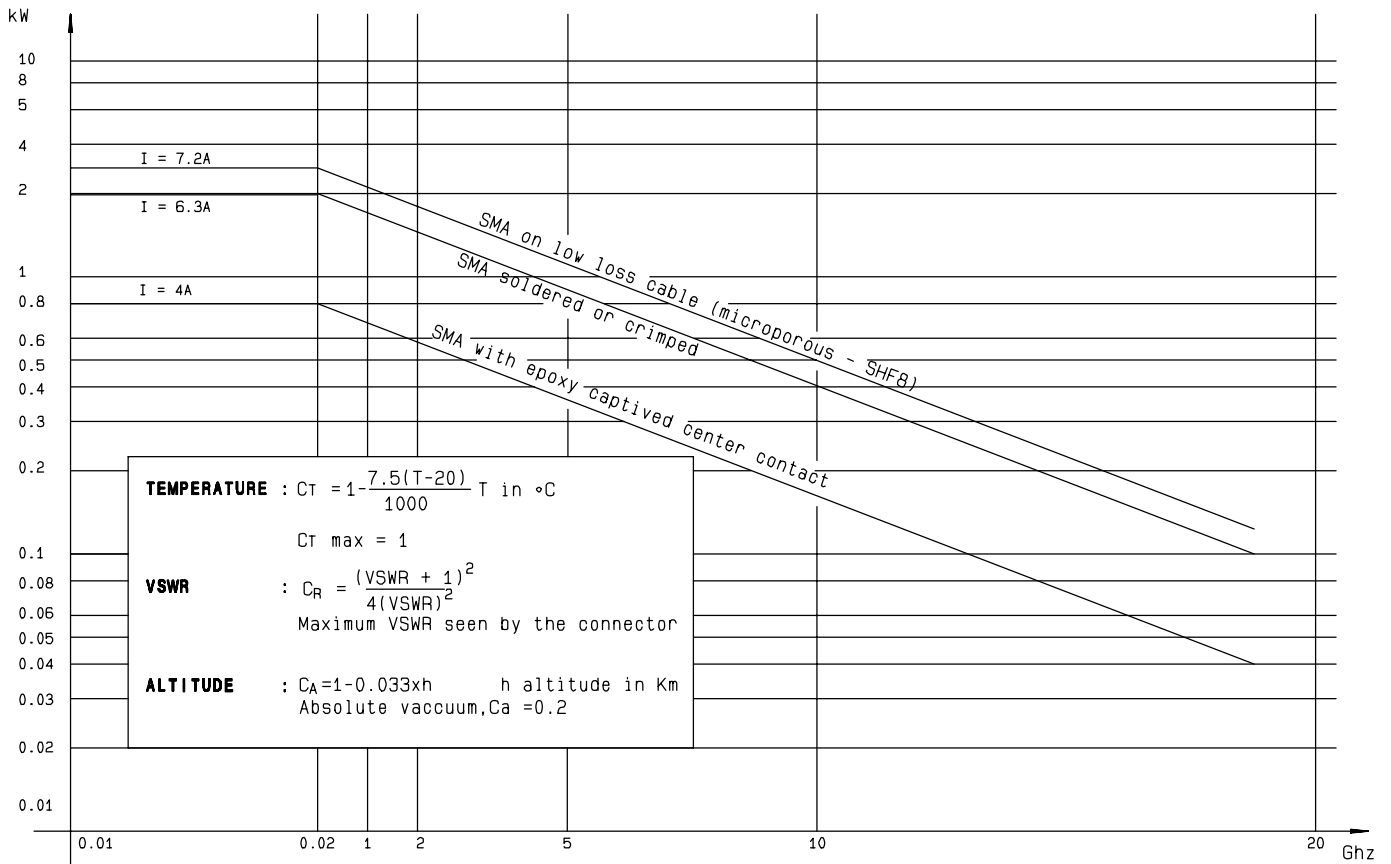
## MATERIALS

Body / nut	Stainless steel
Center contacts female male	Beryllium copper Brass
Gaskets	Silicone rubber
Insulator	PTFE

## FINISH

Bodies	Passivated or gold plated
Center contacts	Gold plated

## POWER RANGE



Standard packaging : unit

All dimensions are given in mm