DOCUMENT CHANGE REQUEST

DCR number 556	Changes required for: N/A	Originator: Alain Blanchard
Date: 2009/11/11	Date sent: 2009/11/11	Organisation: CNES
Status: IMPLEMENTED		

Title:	RF Coaxial Connectors, Type SMA 2.9, 50 Ohms (Male Contact)		
Number:	3402/021	Issue:	1

Other documents affected:

3402/022-1

Page:

Figure 2(b) variants

Paragraph:

Figure 2(b) variants

Original wording:

Proposed wording:

Addition of tolerances on dimensions for each variants

Correction of dimension error on some variants.
ESCC 3402/021 variants 03 and 04
ESCC 3402/022 Variants variants 03 - 04 -05

Justification:

Dimensions given in the specification correspond at the old design of Radiall SMA 2.9m connecteurs never qualified.

Qualification was performed with the actual design, and dimensions are in accordance with the attached document.
No connector has been sold under the old configuration

Attachments:

Demande_Modification_variantes_ESCC3402-021_Iss_1A.pdf, Demande_modification_variantes_ESCC3402-022.pdf, null

Modifications:

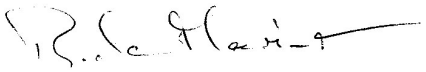
For ESCC 3402/021:-

- Page 1 : Change total number of Pages from 25 to 24.
- Page 6 : Remove Variant 06 from Table 1(a) - Type Variants.
- Figure 2(b), Variant 02 : The cable limitation is 36GHz, therefore "* Limited up to 32GHz by cable" shall be amended to "* Limited up to 36GHz by cable".
- Figure 2(b), Variant 06 : Delete this Variant (the entire content of Page 23) and re-number the page of Variant 07 accordingly.

For ESCC 3402/022:-

- Figure 2(b), Variant 02 : Correct typo - the diameter of 'Cable used' is 3.58mm, not 3.85mm.
- Figure 2(b), Variants 04 and 05 : the correct dimensions for dimension F are 0.055mm Min, 0.135mm Max.
- Figure 2(b), Variant 05 : Cable used, currently "SHF 5 MS", shall be corrected to "Not applicable".

Approval signature:

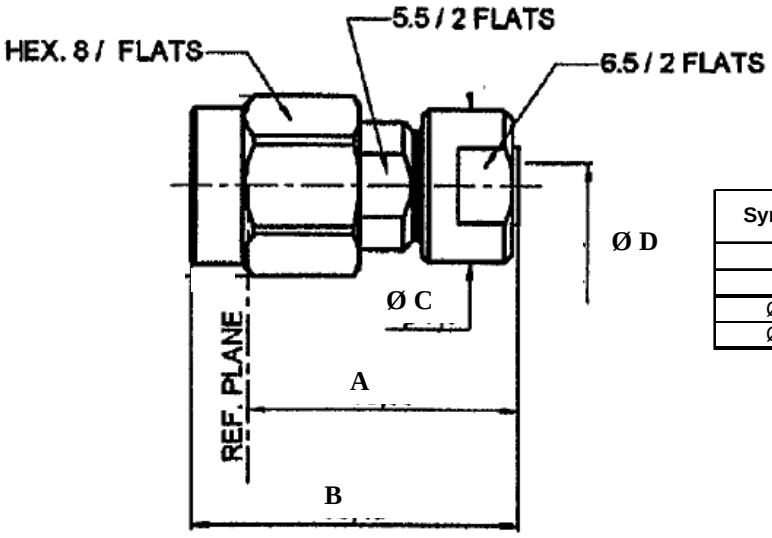


Date signed:

2009-11-11

Figure 2(b) – VARIANTS (CONTINUED)

Variant 01 – STRAIGHT PLUG SOLDER TYPE FOR MICROPOROUS SEMI-RIGID CABLE Ø2.20mm (0.085")



Symbol	Millimetre		Notes
	Min.	Max.	
A	13.43	13.68	
B	16.33	16.58	
ØC	7.40	7.50	
ØD	2.25	2.29	

All dimensions are in mm

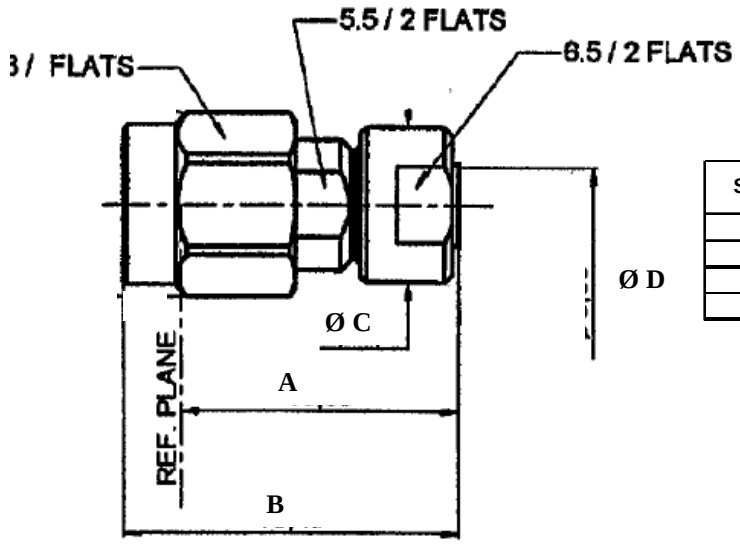
ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 40	GHz
Maximum voltage standing wave ration (VSWR)	1.05+0.005 x F (GHz)	-
Maximum insertion loss	0.03√F (GHz)	dB
RF leakage	- [90 – F (GHz)]	dB
Voltage proof	750	Vrms
Power Handling Category (Figure 1(a))	Category III	-

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Mini centre contact retention force (axial)	27	N
Mini centre contact retention torque	Not Applicable	N.cm
Mini cable retention force	200	N
Mini cable retention torque value	11.28	N.cm
Maximum weigth	4.5	g

OTHER CHARACTERISTICS	VALUES	UNITS
Rapid change of temperature (peak)	+165	°C
Operating temperature range	-65 to +165	°C
Maxi leakage (panel sealed connectors)	Not Applicable	-
Maxi leakage (hermetic sealed connector)	Not Applicable	-
Solderability	Applicable	-
Soldering proof	Not Applicable	-
Cable used	Microporous semi-rigid cable Ø2.2mm (0.085″ P/N UT85CLL)	-

Figure 2(b) – VARIANTS (CONTINUED)

Variant 02 – STRAIGHT PLUG SOLDER TYPE FOR MICROPOROUS SEMI-RIGID CABLE Ø3.58mm (0.141")



Symbol	Millimetre		Notes
	Min.	Max.	
A	13.43	13.68	
B	16.33	16.58	
ØC	7.40	7.50	
ØD	3.64	3.68	

All dimensions are in mm

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 40	GHz
Maximum voltage standing wave ration (VSWR) (1)	1.05+0.005 x F (GHz)	-
Maximum insertion loss (1)	0.03√F (GHz)	dB
RF leakage(1)	- [90 – F (GHz)]	dB
Voltage proof	750	Vrms
Power Handling Category (Figure 1(a))	Category I	-

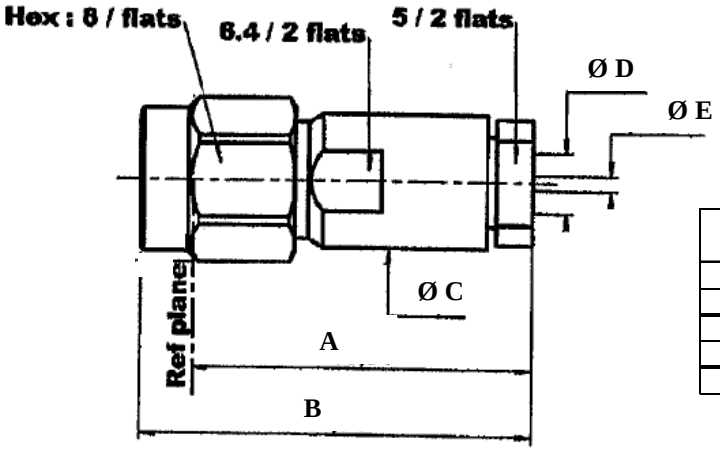
Note:
1- Limited up to 36GHz by cable

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Mini centre contact retention force (axial)	27	N
Mini centre contact retention torque	Not Applicable	N.cm
Mini cable retention force	270	N
Mini cable retention torque value	38.85	N.cm
Maximum weigth	4.3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Rapid change of temperature (peak)	+165	°C
Operating temperature range	-65 to +165	°C
Maxi leakage (panel sealed connectors)	Not Applicable	-
Maxi leakage (hermetic sealed connector)	Not Applicable	-
Solderability	Applicable	-
Soldering proof	Not Applicable	-
Cable used	Microporous semi-rigid cable Ø3.58mm (0.141″ P/N UT141CLL)	-

Figure 2(b) – VARIANTS (CONTINUED)

Variant 03 – STRAIGHT PLUG SOLDER TYPE FOR SHF3MS CABLE



Symbol	Millimetre		Notes
	Min.	Max.	
A	19.47	19.82	
B	22.37	22.92	
ØC	7.10	7.30	
ØD	3.30	3.35	
ØE	0.85	0.90	

All dimensions are in mm

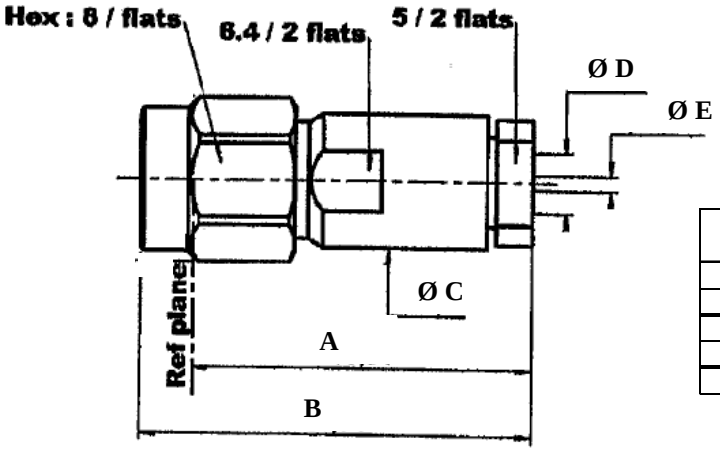
ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 40	GHz
Maximum voltage standing wave ration (VSWR)	1.05+0.005 x F (GHz)	-
Maximum insertion loss	0.03√F (GHz)	dB
RF leakage	- [90 – F (GHz)]	dB
Voltage proof	750	Vrms
Power Handling Category (Figure 1(a))	Category II	-

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Mini centre contact retention force (axial)	27	N
Mini centre contact retention torque	Not Applicable	N.cm
Mini cable retention force	50	N
Mini cable retention torque value	Not Applicable	N.cm
Maximum weigth	6	g

OTHER CHARACTERISTICS	VALUES	UNITS
Rapid change of temperature (peak)	+165	°C
Operating temperature range	-65 to +165	°C
Maxi leakage (panel sealed connectors)	Not Applicable	-
Maxi leakage (hermetic sealed connector)	Not Applicable	-
Solderability	Applicable	-
Soldering proof	Not Applicable	-
Cable used	SHF3MS	-

Figure 2(b) – VARIANTS (CONTINUED)

Variant 04 – STRAIGHT PLUG SOLDER TYPE FOR SHF4.2MS CABLE



Symbol	Millimetre		Notes
	Min.	Max.	
A	20.27	20.62	
B	23.17	23.52	
ØC	7.10	7.30	
ØD	3.75	3.85	
ØE	1.05	1.10	

All dimensions are in mm

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 40	GHz
Maximum voltage standing wave ration (VSWR) (1)	1.05+0.005 x F (GHz)	-
Maximum insertion loss (1)	0.03√F (GHz)	dB
RF leakage(1)	- [90 – F (GHz)]	dB
Voltage proof	750	Vrms
Power Handling Category (Figure 1(a))	Category II	-

Note:

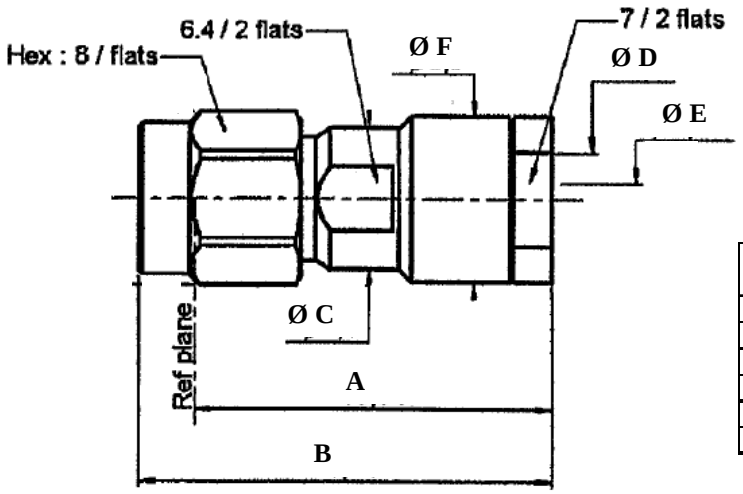
1- Limited up to 36GHz by cable

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Mini centre contact retention force (axial)	27	N
Mini centre contact retention torque	Not Applicable	N.cm
Mini cable retention force	50	N
Mini cable retention torque value	Not Applicable	N.cm
Maximum weigth	5.6	g

OTHER CHARACTERISTICS	VALUES	UNITS
Rapid change of temperature (peak)	+165	°C
Operating temperature range	-65 to +165	°C
Maxi leakage (panel sealed connectors)	Not Applicable	-
Maxi leakage (hermetic sealed connector)	Not Applicable	-
Solderability	Applicable	-
Soldering proof	Not Applicable	-
Cable used	SHF4.2MS	-

Figure 2(b) – VARIANTS (CONTINUED)

Variant 05 – STRAIGHT PLUG SOLDER TYPE FOR SHF5MS CABLE



Symbol	Millimetre		Notes
	Min.	Max.	
A	18.47	18.82	
B	21.37	21.72	
ØC	7.10	7.30	
ØD	4.70	4.75	
ØE	1.51	1.55	
ØF	8.40	8.60	

All dimensions are in mm

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 40	GHz
Maximum voltage standing wave ration (VSWR) (1)	1.05+0.005 x F (GHz)	-
Maximum insertion loss (1)	0.03√F (GHz)	dB
RF leakage(1)	- [90 – F (GHz)]	dB
Voltage proof	750	Vrms
Power Handling Category (Figure 1(a))	Category II	-

Note:

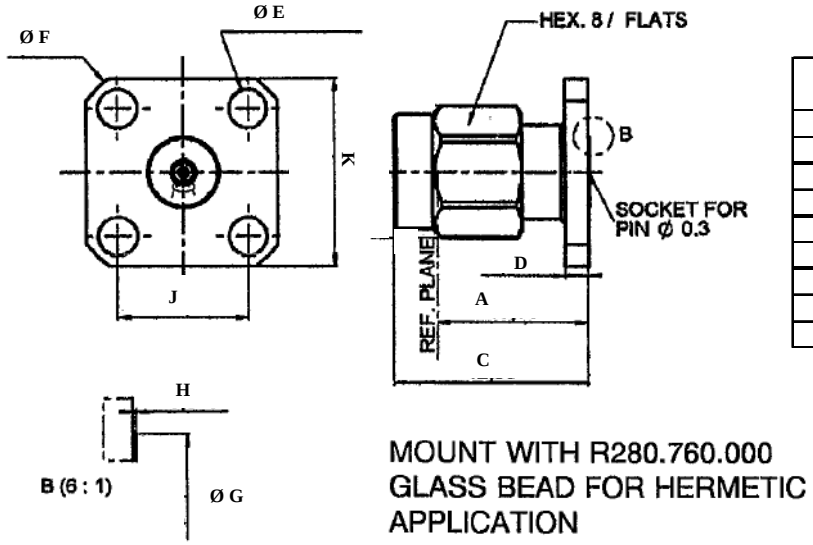
1- Limited up to 30GHz by cable

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Mini centre contact retention force (axial)	27	N
Mini centre contact retention torque	Not Applicable	N.cm
Mini cable retention force	60	N
Mini cable retention torque value	Not Applicable	N.cm
Maximum weigth	5.7	g

OTHER CHARACTERISTICS	VALUES	UNITS
Rapid change of temperature (peak)	+165	°C
Operating temperature range	-65 to +165	°C
Maxi leakage (panel sealed connectors)	Not Applicable	-
Maxi leakage (hermetic sealed connector)	Not Applicable	-
Solderability	Applicable	-
Soldering proof	Not Applicable	-
Cable used	SHF5MS	-

Figure 2(b) – VARIANTS (CONTINUED)

Variant 07 – SQUARE FLANGE PLUG RECEPTACLE FOR 0.3mm DIA. PIN



Symbol	Millimetre		Notes
	Min.	Max.	
A	10.03	10.09	
C	12.93	12.99	
D	1.52	1.54	
ØE	2.57	2.70	4 Holes
ØF	15.90	16.10	
ØG	4.65	4.85	
H	0.09	0.1	
J	8.59	8.69	
K	12.6	12.8	

All dimensions are in mm

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 40	GHz
Maximum voltage standing wave ration (VSWR) (1)	1.05+0.005 x F (GHz)	-
Maximum insertion loss (1)	0.03√F (GHz)	dB
RF leakage(1)	- [90 – F (GHz)]	dB
Voltage proof	750	Vrms
Power Handling Category (Figure 1(a))	Category III	-

Note:

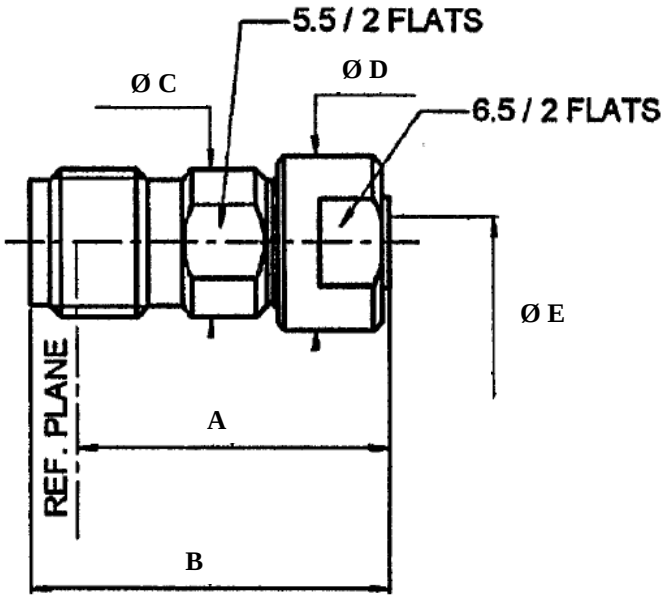
1- Limited up to 30GHz by cable

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Mini centre contact retention force (axial)	27	N
Mini centre contact retention torque	Not Applicable	N.cm
Mini cable retention force	Not Applicable	N
Mini cable retention torque value	Not Applicable	N.cm
Maximum weigth	4.8	g

OTHER CHARACTERISTICS	VALUES	UNITS
Rapid change of temperature (peak)	+165	°C
Operating temperature range	-65 to +165	°C
Maxi leakage (panel sealed connectors)	Not Applicable	-
Maxi leakage (hermetic sealed connector)	Not Applicable	-
Solderability	Applicable	-
Soldering proof	Applicable	-
Cable used	Not Applicable	-

Figure 2(b) – VARIANTS (CONTINUED)

Variant 01 – STRAIGHT JACK SOLDER TYPE FOR MICROPOROUS SEMI-RIGID CABLE Ø2.20mm (0.085")



Symbol	Millimetre		Notes
	Min.	Max.	
A	13.43	13.77	
B	15.34	15.62	
ØC	6.19	6.26	
ØD	7.40	7.60	
ØE	2.25	2.29	

All dimensions are in mm

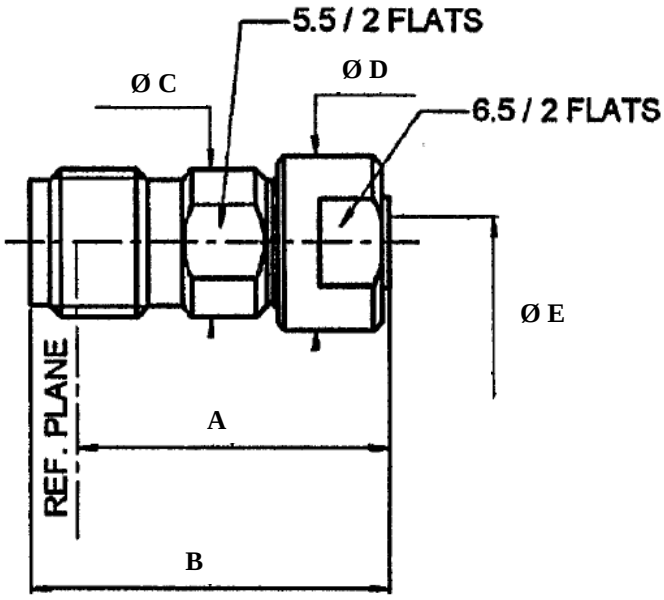
ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 40	GHz
Maximum voltage standing wave ration (VSWR)	1.05+0.005 x F (GHz)	-
Maximum insertion loss	0.03√F (GHz)	dB
RF leakage	- [90 – F (GHz)]	dB
Voltage proof	750	Vrms
Power Handling Category (Figure 1(a))	Category III	-

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Mini centre contact retention force (axial)	27	N
Mini centre contact retention torque	Not Applicable	N.cm
Mini cable retention force	200	N
Mini cable retention torque value	11.28	N.cm
Maximum weigth	3.4	g

OTHER CHARACTERISTICS	VALUES	UNITS
Rapid change of temperature (peak)	+165	°C
Operating temperature range	-65 to +165	°C
Maxi leakage (panel sealed connectors)	Not Applicable	-
Maxi leakage (hermetic sealed connector)	Not Applicable	-
Solderability	Applicable	-
Soldering proof	Not Applicable	-
Cable used	Microporous semi-rigid cable Ø2.2mm (0.085″ P/N UT85CLL)	-

Figure 2(b) – VARIANTS (CONTINUED)

Variant 02 – STRAIGHT JACK SOLDER TYPE FOR MICROPOROUS SEMI-RIGID CABLE Ø3.58mm (0.141")



Symbol	Millimetre		Notes
	Min.	Max.	
A	13.43	13.77	
B	15.34	15.62	
ØC	6.19	6.26	
ØD	7.40	7.60	
ØE	3.64	3.68	

All dimensions are in mm

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 40	GHz
Maximum voltage standing wave ration (VSWR) (1)	1.05+0.005 x F (GHz)	-
Maximum insertion loss (1)	0.03√F (GHz)	dB
RF leakage(1)	- [90 – F (GHz)]	dB
Voltage proof	750	Vrms
Power Handling Category (Figure 1(a))	Category III	-

Note:

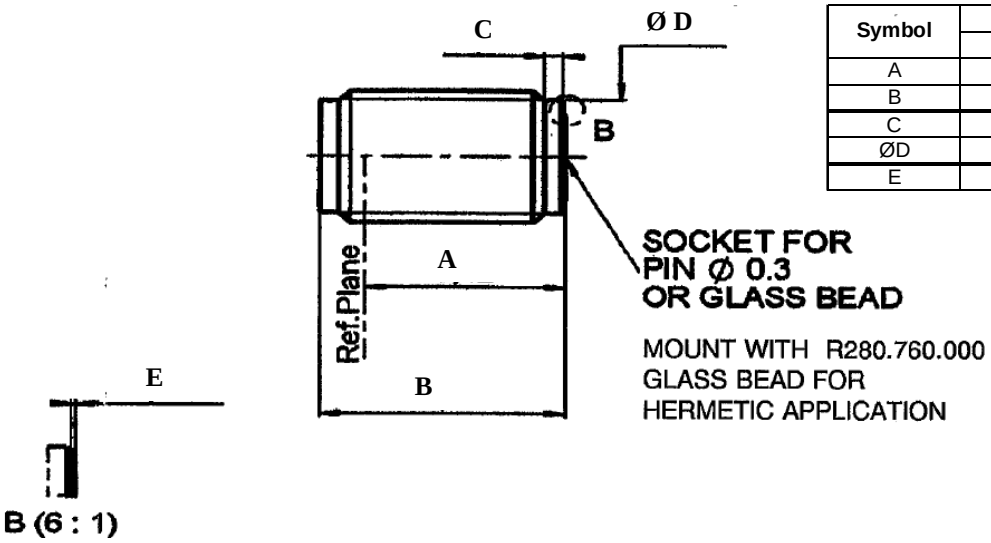
1- Limited up to 36GHz by cable

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Mini centre contact retention force (axial)	27	N
Mini centre contact retention torque	Not Applicable	N.cm
Mini cable retention force	270	N
Mini cable retention torque value	38.85	N.cm
Maximum weigth	3.1	g

OTHER CHARACTERISTICS	VALUES	UNITS
Rapid change of temperature (peak)	+165	°C
Operating temperature range	-65 to +165	°C
Maxi leakage (panel sealed connectors)	Not Applicable	-
Maxi leakage (hermetic sealed connector)	Not Applicable	-
Solderability	Applicable	-
Soldering proof	Not Applicable	-
Cable used	Microporous semi-rigid cable Ø3.58mm (0.141″ P/N UT141CLL)	-

Figure 2(b) – VARIANTS (CONTINUED)

Variant 03 – SCREW JACK RECEPTACLE FOR 0.3mm DIA. PIN



Symbol	Millimetre		Notes
	Min.	Max.	
A	8.89	8.96	
B	10.77	10.94	
C	6.19	6.26	
ØD	5.30	5.35	
E	0.09	0.10	

All dimensions are in mm

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 40	GHz
Maximum voltage standing wave ration (VSWR) (1)	1.05+0.005 x F (GHz)	-
Maximum insertion loss (1)	0.03√F (GHz)	dB
RF leakage(1)	- [90 – F (GHz)]	dB
Voltage proof	750	Vrms
Power Handling Category (Figure 1(a))	Category III	-

Note:

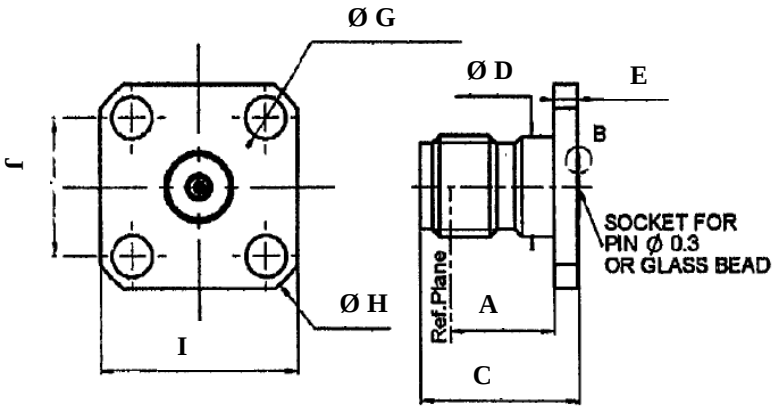
1- Limited up to 36GHz by cable

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Mini centre contact retention force (axial)	27	N
Mini centre contact retention torque	Not Applicable	N.cm
Mini cable retention force	Not Applicable	N
Mini cable retention torque value	Not Applicable	N.cm
Maximum weigth	2	g

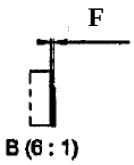
OTHER CHARACTERISTICS	VALUES	UNITS
Rapid change of temperature (peak)	+165	°C
Operating temperature range	-65 to +165	°C
Maxi leakage (panel sealed connectors)	Not Applicable	-
Maxi leakage (hermetic sealed connector)	Not Applicable	-
Solderability	Not Applicable	-
Soldering proof	Not Applicable	-
Cable used	Not Applicable	-

Figure 2(b) – VARIANTS (CONTINUED)

Variant 04 – SQUARE FLANGE JACK RECEPTACLE FOR 0.3mm DIA. PIN



Symbol	Millimetre		Notes
	Min.	Max.	
A	7.20	7.40	
C	10.67	10.84	
ØD	6.15	6.35	
E	1.40	1.70	
F	0.09	0.10	
ØG	2.55	2.70	4 Holes
ØH	15.90	16.10	
I	12.60	12.80	
J	8.59	8.69	



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All dimensions are in mm

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 40	GHz
Maximum voltage standing wave ration (VSWR) (1)	1.05+0.005 x F (GHz)	-
Maximum insertion loss (1)	0.03√F (GHz)	dB
RF leakage(1)	- [90 – F (GHz)]	dB
Voltage proof	750	Vrms
Power Handling Category (Figure 1(a))	Category III	-

Note:

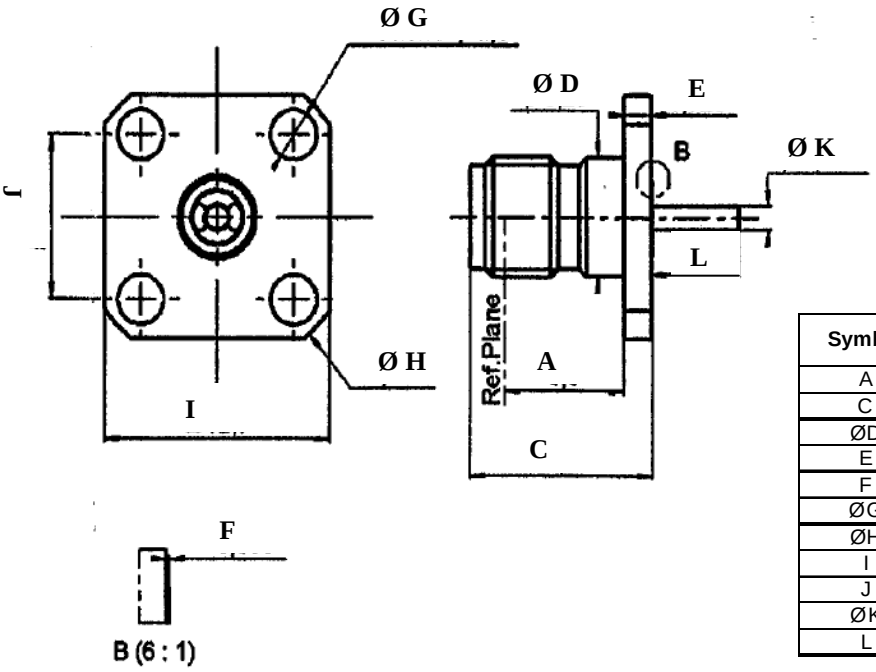
1- Limited up to 36GHz by cable

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Mini centre contact retention force (axial)	27	N
Mini centre contact retention torque	Not Applicable	N.cm
Mini cable retention force	Not Applicable	N
Mini cable retention torque value	Not Applicable	N.cm
Maximum weigth	3.3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Rapid change of temperature (peak)	+165	°C
Operating temperature range	-65 to +165	°C
Maxi leakage (panel sealed connectors)	Not Applicable	-
Maxi leakage (hermetic sealed connector)	Not Applicable	-
Solderability	Not Applicable	-
Soldering proof	Not Applicable	-
Cable used	Not Applicable	-

Figure 2(b) – VARIANTS (CONTINUED)

Variant 05 – ADJUSTABLE SQUARE FLANGE JACK RECEPTACLE WITH CYLINDRICAL CONTACT



Symbol	Millimetre		Notes
	Min.	Max.	
A	7.20	7.40	
C	10.67	10.84	
ØD	6.15	6.35	
E	1.40	1.70	
F	0.09	0.10	
ØG	2.55	2.70	4 Holes
ØH	15.90	16.10	
I	12.60	12.80	
J	8.59	8.69	
ØK	1.26	1.28	
L	4.90	5.10	

All dimensions are in mm

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 40	GHz
Maximum voltage standing wave ration (VSWR)	1.05+0.005 x F (GHz)	-
Maximum insertion loss	0.03√F (GHz)	dB
RF leakage	- [90 – F (GHz)]	dB
Voltage proof	750	Vrms
Power Handling Category (Figure 1(a))	Category I	-

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Mini centre contact retention force (axial)	27	N
Mini centre contact retention torque	Not Applicable	N.cm
Mini cable retention force	60	N
Mini cable retention torque value	Not Applicable	N.cm
Maximum weigth	5.7	g

OTHER CHARACTERISTICS	VALUES	UNITS
Rapid change of temperature (peak)	+165	°C
Operating temperature range	-65 to +165	°C
Maxi leakage (panel sealed connectors)	Not Applicable	-
Maxi leakage (hermetic sealed connector)	Not Applicable	-
Solderability	Applicable	-
Soldering proof	Not Applicable	-
Cable used	Not Applicable	-