

RF COAXIAL CONNECTORS WITH FEMALE CONTACT

BASED ON TYPE SMA

ESCC Detail Specification No. 3402/002

Issue 9	November 2023
---------	---------------



LEGAL DISCLAIMER AND COPYRIGHT

European Space Agency, Copyright © 2023. All rights reserved.

The European Space Agency disclaims any liability or responsibility, to any person or entity, with respect to any loss or damage caused, or alleged to be caused, directly or indirectly by the use and application of this ESCC publication.

This publication, without the prior permission of the European Space Agency and provided that it is not used for a commercial purpose, may be:

- copied in whole, in any medium, without alteration or modification.
- copied in part, in any medium, provided that the ESCC document identification, comprising the ESCC symbol, document number and document issue, is removed.

DOCUMENTATION CHANGE NOTICE

(Refer to <https://escies.org> for ESCC DCR content)

DCR No.	CHANGE DESCRIPTION
1446	Specification updated to incorporate changes per DCR.

TABLE OF CONTENTS

1	GENERAL	8
1.1	SCOPE	8
1.2	APPLICABLE DOCUMENTS	8
1.3	TERMS, DEFINITIONS, ABBREVIATIONS, SYMBOLS AND UNITS	8
1.4	THE ESCC COMPONENT NUMBER AND COMPONENT TYPE VARIANTS	8
1.4.1	The ESCC Component Number	8
1.4.2	Component Type Variants	9
1.5	MAXIMUM RATINGS	12
1.6	PHYSICAL DIMENSIONS (SEE ALSO PARA. 3)	14
1.6.1	Connector Interface Dimensions and Connector Interface Gauge Dimensions	14
1.7	MATERIALS AND FINISHES	14
1.7.1	Type 1	14
1.7.2	Type 2	14
1.7.3	Type 3	15
1.7.4	Type 4	15
2	REQUIREMENTS	16
2.1	GENERAL	16
2.1.1	Deviations from the Generic Specification	16
2.2	MARKING	16
2.3	ENVIRONMENTAL AND MECHANICAL TESTS	17
2.4	ROOM TEMPERATURE ELECTRICAL MEASUREMENTS (NOTE 1)	17
2.5	INTERMEDIATE AND END-POINT ELECTRICAL MEASUREMENTS	18
3	COMPONENT TYPE VARIANTS – DETAIL REQUIREMENTS	19
3.1	VARIANT 01 – STRAIGHT JACK, SOLDER-TYPE, FOR SEMI-RIGID CABLE Ø2.2MM (0.085")	19
3.2	VARIANT 02 - STRAIGHT JACK, SOLDER-TYPE, FOR SEMI-RIGID CABLE Ø3.58MM (0.141")	20
3.3	VARIANT 03 - STRAIGHT JACK WITH CABLE CLAMP, SOLDER-TYPE, FOR SEMI-RIGID CABLE Ø6.35MM (0.25")	21
3.4	VARIANT 04 - STRAIGHT JACK WITH CABLE CLAMP, SOLDER-TYPE, FOR SEMI-RIGID MICROPOROUS CABLE Ø6.35MM (0.25")	22
3.5	VARIANT 05 - SQUARE FLANGE FEMALE RECEPTACLE, CRIMP-TYPE	23
3.6	VARIANT 06 - STRAIGHT JACK, CRIMP-TYPE	24
3.7	VARIANT 07 - STRAIGHT JACK, CRIMP-TYPE, FOR CABLE Ø5MM, SINGLE BRAID	25
3.8	VARIANT 08 - STRAIGHT JACK, CRIMP-TYPE, FOR CABLE Ø5MM, DOUBLE BRAID	26
3.9	VARIANT 09 – 2-HOLE FLANGE FEMALE RECEPTACLE, SOLDER-TYPE, BACK MOUNTING, FOR SEMI-RIGID CABLE Ø2.2MM (0.085")	27
3.10	VARIANT 10 - 2-HOLE FLANGE FEMALE RECEPTACLE, SOLDER-TYPE, BACK MOUNTING, FOR SEMI-RIGID CABLE Ø3.58MM (0.141")	28

3.11	VARIANT 11 - SQUARE FLANGE FEMALE RECEPTACLE, CRIMP-TYPE	29
3.12	VARIANT 12 - SQUARE FLANGE FEMALE RECEPTACLE, CRIMP-TYPE, FOR 50 CIS CABLE	30
3.13	VARIANT 13 - SQUARE FLANGE FEMALE RECEPTACLE, CRIMP- OR SOLDER-TYPE	31
3.14	VARIANT 14 - SQUARE FLANGE FEMALE RECEPTACLE, CRIMP- OR SOLDER-TYPE, DOUBLE BRAID CABLE, FOR CABLE Ø5MM	32
3.15	VARIANT 15 - SQUARE FLANGE FEMALE RECEPTACLE, FRONT MOUNTING	33
3.16	VARIANT 16 - 2-HOLE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP, FRONT MOUNTING	34
3.17	VARIANT 17 - 2-HOLE FLANGE FEMALE RECEPTACLE, FRONT MOUNTING	35
3.18	VARIANT 18 - 2-HOLE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP, FRONT MOUNTING	36
3.19	VARIANT 19 - SQUARE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP, FRONT MOUNTING, OFF-SET TAB	37
3.20	VARIANT 20 - 2-HOLE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP, FRONT MOUNTING	38
3.21	VARIANT 21 - SQUARE FLANGE FEMALE RECEPTACLE FOR STRIP-LINE, FRONT MOUNTING	39
3.22	VARIANT 22 - SQUARE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP, FRONT MOUNTING	40
3.23	VARIANT 23 - BULKHEAD FEMALE RECEPTACLE	41
3.24	VARIANT 24 - BULKHEAD FEMALE RECEPTACLE WITH COMPRESSION GASKET	42
3.25	VARIANT 25 - HERMETIC BULKHEAD FEMALE RECEPTACLE	43
3.26	VARIANT 26 - HERMETIC FEMALE RECEPTACLE, SOLDER-TYPE	44
3.27	VARIANT 27 - ELBOW FEMALE RECEPTACLE, SQUARE FLANGE	45
3.28	VARIANT 28 - ELBOW FEMALE RECEPTACLE, SQUARE FLANGE	46
3.29	VARIANT 29 - SQUARE FLANGE FEMALE RECEPTACLE	47
3.30	VARIANT 30 - 2-HOLE FLANGE FEMALE RECEPTACLE	48
3.31	VARIANT 31 - SQUARE FLANGE FEMALE RECEPTACLE	49
3.32	VARIANT 32 - 2-HOLE FLANGE FEMALE RECEPTACLE	50
3.33	VARIANT 34 - FLANGE FEMALE RECEPTACLE, TRIPLATE LAUNCHER	51
3.34	VARIANT 36 - SQUARE FLANGE FEMALE RECEPTACLE	52
3.35	VARIANT 37 - FLANGE FEMALE RECEPTACLE, TRIPLATE LAUNCHER	53
3.36	VARIANT 38 - FLANGE FEMALE RECEPTACLE, TRIPLATE LAUNCHER	54
3.37	VARIANT 39 - SQUARE FLANGE FEMALE RECEPTACLE	55
3.38	VARIANT 40 - SQUARE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE	56
3.39	VARIANT 41 - SQUARE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE	57
3.40	VARIANT 42 - SQUARE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE	58
3.41	VARIANT 43 - SQUARE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE	59
3.42	VARIANT 44 - BULKHEAD FEMALE RECEPTACLE	60
3.43	VARIANT 45 - SQUARE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP	61

3.44	VARIANT 46 - 2-HOLE FLANGE FEMALE RECEPTACLE FOR STRIP-LINE	62
3.45	VARIANT 47 - 2-HOLE FLANGE FEMALE RECEPTACLE FOR STRIP-LINE	63
3.46	VARIANT 48 - SQUARE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP	64
3.47	VARIANT 49 - 2-HOLE FLANGE FEMALE RECEPTACLE	65
3.48	VARIANT 50 - SQUARE FLANGE FEMALE RECEPTACLE	66
3.49	VARIANT 51 - SQUARE FLANGE FEMALE RECEPTACLE	67
3.50	VARIANT 53 - STRAIGHT JACK, SOLDER TYPE, FOR SHF 5 CABLE	68
3.51	VARIANT 54 - 2-HOLE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE	69
3.52	VARIANT 55 - ELBOW FEMALE RECEPTACLE, ROUND FLANGE, TRIPLATE LAUNCHER	70
3.53	VARIANT 56 - SQUARE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE	71
3.54	VARIANT 57 - ROUND FLANGE FEMALE RECEPTACLE, TRIPLATE LAUNCHER	72
3.55	VARIANT 58 - SQUARE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE	73
3.56	VARIANT 59 - 2-HOLE FLANGE FEMALE RECEPTACLE, WITH HERMETIC GLASS SEAL Ø0.46MM AND EMI GASKET	74
3.57	VARIANT 60 - BULKHEAD FEMALE RECEPTACLE, WITH HERMETIC GLASS SEAL Ø0.3MM	75
3.58	VARIANT 61 - BULKHEAD FEMALE RECEPTACLE, WITH HERMETIC GLASS SEAL Ø0.46MM	76
3.59	VARIANT 62 - HERMETIC BULKHEAD FEMALE RECEPTACLE, WITH COMPRESSION GASKET	77
3.60	VARIANT 63 - HERMETIC BULKHEAD FEMALE RECEPTACLE, WITH COMPRESSION GASKET	78
3.61	VARIANT 64 - HERMETIC BULKHEAD FEMALE RECEPTACLE, WITH COMPRESSION GASKET	79
3.62	VARIANT 65 - 2-HOLE FLANGE FEMALE RECEPTACLE, WITH HERMETIC GLASS SEAL Ø0.3MM AND EMI GASKET	80
3.63	VARIANT 66 - BULKHEAD JACK, SOLDER-TYPE, FOR SHF 3 CABLE	81
3.64	VARIANT 67 - BULKHEAD JACK, SOLDER-TYPE, FOR SHF 8 CABLE	82
3.65	VARIANT 68 – SQUARE FLANGE FEMALE RECEPTACLE, SOLDER-TYPE, BACK MOUNTING, FOR SEMI-RIGID CABLE Ø2.2MM (0.085")	83
3.66	VARIANT 69 – SQUARE FLANGE FEMALE RECEPTACLE, SOLDER-TYPE, BACK MOUNTING, FOR SEMI-RIGID CABLE Ø3.58MM (0.141")	84
3.67	VARIANT 70 - STRAIGHT JACK, CRIMP-TYPE, FOR 50 CIS CABLE	85
3.68	VARIANT 71 - ELBOW FEMALE RECEPTACLE, SQUARE FLANGE (SOLID CONTACT)	86
3.69	VARIANT 72 - SQUARE FLANGE FEMALE RECEPTACLE TAB CONTACT, LOW RF LEAKAGE	87
3.70	VARIANT 73 - SQUARE FLANGE FEMALE RECEPTACLE, FRONT MOUNTING	88
3.71	VARIANT 74 - 2-HOLE FLANGE FEMALE RECEPTACLE, FRONT MOUNTING	89
3.72	VARIANT 75 - 2-HOLE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP, FRONT MOUNTING	90
3.73	VARIANT 76 - SQUARE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP, FRONT MOUNTING	91
3.74	VARIANT 77 - SQUARE FLANGE FEMALE RECEPTACLE	92
3.75	VARIANT 78 - 2-HOLE FLANGE FEMALE RECEPTACLE	93
3.76	VARIANT 79 - SQUARE FLANGE FEMALE RECEPTACLE	94

3.77	VARIANT 80 - 2-HOLE FLANGE FEMALE RECEPTACLE	95
3.78	VARIANT 81 - SQUARE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE	96
3.79	VARIANT 82 - 2-HOLE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE	97
3.80	VARIANT 83 - BULKHEAD FEMALE RECEPTACLE, WITH HERMETIC GLASS SEAL Ø0.3MM	98
3.81	VARIANT 84 - BULKHEAD FEMALE RECEPTACLE, WITH HERMETIC GLASS SEAL Ø0.46MM	99
3.82	VARIANT 85 - ELBOW FEMALE RECEPTACLE, SQUARE FLANGE (SOLID CONTACT)	100
3.83	VARIANT 86 - SQUARE FLANGE FEMALE RECEPTACLE, LOW VSWR, EXTENDED FREQUENCY RANGE	101
3.84	VARIANT 87 - SQUARE FLANGE FEMALE RECEPTACLE, LOW VSWR, EXTENDED FREQUENCY RANGE	102
3.85	VARIANT 88 - SQUARE FLANGE FEMALE RECEPTACLE, LOW VSWR, EXTENDED FREQUENCY RANGE	103
3.86	VARIANT 89 - SQUARE FLANGE FEMALE RECEPTACLE, LOW VSWR, EXTENDED FREQUENCY RANGE	104
APPENDIX A		105
APPENDIX B		106

1 GENERAL

1.1 SCOPE

This specification details the ratings, physical and electrical characteristics, and test and inspection data for the component type variants and/or the range of components specified below. It supplements the requirements of, and shall be read in conjunction with, the ESCC Generic Specification listed under Applicable Documents.

1.2 APPLICABLE DOCUMENTS

The following documents form part of this specification and shall be read in conjunction with it:

- (a) ESCC Generic Specification No. [3402](#).
- (b) [MIL-STD-348](#), Department of Defence Interface Standard: Radio Frequency Connector Interfaces.

1.3 TERMS, DEFINITIONS, ABBREVIATIONS, SYMBOLS AND UNITS

For the purpose of this specification, the terms, definitions, abbreviations, symbols and units specified in ESCC Basic Specification No. [21300](#) shall apply.

1.4 THE ESCC COMPONENT NUMBER AND COMPONENT TYPE VARIANTS

1.4.1 The ESCC Component Number

The ESCC Component Number shall be constituted as follows:

- (a) For components with a fixed configuration (see Paras. 1.4.2 and 3):
Example: 3402002012
 - Detail Specification Reference: 3402002
 - Component Type Variant Number: 01 (as required)
 - Characteristic code: Material/Plating (Type 2): 2 (as required)
- (b) For components with a variable configuration where the rear contact and insert dimensions A and B shall be selected by the Orderer (see Paras. 1.4.2 and 3):
Example: 340200215213D00W02D50C
 - Detail Specification Reference: 3402002
 - Component Type Variant Number: 15 (as required)
 - Characteristic code: Material/Plating (Type 2): 2 (as required)
 - Characteristic code: Dimension A: Rear contact length (13mm): 13D00 (as required)
 - Characteristic code: Dimension A tolerance ($\pm 0.05\text{mm}$): W (as required)
 - Characteristic code: Dimension B: Rear insert length (2.5mm): 02D50 (as required)
 - Characteristic code: Dimension B tolerance ($\pm 0.25\text{mm}$): C (as required)

1.4.1.1 Characteristics Codes

Characteristics to be codified as part of the ESCC Component Number (as applicable) shall be as follows:

- (a) Material/Plating: Connector material and plating (see Para. 1.7) expressed by means of the following codes:

Material/Plating	Code
Beryllium Copper, Gold plated, Copper underplate (Type 1)	1
Beryllium Copper, Gold plated, Nickel underplate (Type 2)	2
Amagnetic Stainless Steel, Electro-passivated (Type 3)	3
Amagnetic Stainless Steel, Gold plated (Type 4)	4

- (b) Dimension A and B: Rear contact and insert lengths (see Para. 3) expressed by the following codes. The unit quantity shall be mm:

Dimension A or B Length (mm)	Code
XX.XX	XXDXX

NOTES:

- Dimension A shall always be greater than B. Both values shall always be positive.
- When dimension B (insert) is flush with the flange (B = 0), the insert length shall be marked 00D00 with the appropriate tolerance.

- (c) Dimension A and B tolerance: Tolerances on contact and insert lengths (see Para. 3) expressed by the following codes. The unit quantity shall be mm:

Dimension A or B Tolerance (mm)	Code
±0.05	W
±0.1	B
±0.25	C

1.4.2 Component Type Variants

The component type variants applicable to this specification are as follows:

Variant Number	Description (Notes 1, 2)	Configuration Type (Note 3)
01	Straight Jack, Solder-Type, for Semi-Rigid Cable Ø2.2mm (0.085")	Fixed
02	Straight Jack, Solder-Type, for Semi-Rigid Cable Ø3.58mm (0.141")	Fixed
03	Straight Jack with Cable Clamp, Solder-Type, for Semi-Rigid Cable Ø6.35mm (0.25")	Fixed
04	Straight Jack with Cable Clamp, Solder-Type, for Semi-Rigid Microporous Cable Ø6.35mm (0.25")	Fixed
05	Square Flange Female Receptacle, Crimp Type	Fixed
06	Straight Jack, Crimp-Type	Fixed
07	Straight Jack, Crimp-Type, Cable Ø5mm, Single Braid	Fixed
08	Straight Jack, Crimp-Type, Cable Ø5mm, Double Braid	Fixed

Variant Number	Description (Notes 1, 2)	Configuration Type (Note 3)
09	2-Hole Flange Female Receptacle, Solder-Type, Back Mounting, For Semi-Rigid Cable Ø2.2mm (0.085")	Fixed
10	2-Hole Flange Female Receptacle, Solder-Type, Back Mounting, For Semi-Rigid Cable Ø3.58mm (0.141")	Fixed
11	Square Flange Female Receptacle, Crimp-Type	Fixed
12	Square Flange Female Receptacle, Crimp-Type, for 50 CIS Cable	Fixed
13	Square Flange Female Receptacle, Crimp- or Solder-Type	Fixed
14	Square Flange Female Receptacle, Crimp- or Solder-Type, Double Braid Cable, for Cable Ø5mm	Fixed
15	Square Flange Female Receptacle, Front Mounting (Note 4)	Variable
16	2-Hole Flange Female Receptacle for Micro-Strip, Front Mounting	Fixed
17	2-Hole Flange Female Receptacle, Front Mounting (Note 4)	Variable
18	2-Hole Flange Female Receptacle for Micro-Strip, Front Mounting (Note 4)	Fixed
19	Square Flange Female Receptacle for Micro-Strip, Front Mounting, Off-Set Tab	Fixed
20	2-Hole Flange Female Receptacle for Strip-Line, Front Mounting	Fixed
21	Square Flange Female Receptacle for Strip-Line, Front Mounting	Fixed
22	Square Flange Female Receptacle for Micro-Strip, Front Mounting (Note 4)	Fixed
23	Bulkhead Female Receptacle	Fixed
24	Bulkhead Female Receptacle, with Compression Gasket	Fixed
25	Hermetic Bulkhead Female Receptacle	Fixed
26	Hermetic Female Receptacle, Solder-Type	Fixed
27	Elbow Female Receptacle, Square Flange	Fixed
28	Elbow Female Receptacle, Square Flange	Variable
29	Square Flange Female Receptacle (Note 4)	Variable
30	2-Hole Flange Female Receptacle (Note 4)	Variable
31	Square Flange Female Receptacle (Note 4)	Fixed
32	2-Hole Flange Female Receptacle (Note 4)	Fixed
34	Flange Female Receptacle, Triplate Launcher	Fixed
36	Square Flange Female Receptacle	Fixed
37	Flange Female Receptacle, Triplate Launcher	Fixed
38	Flange Female Receptacle, Triplate Launcher	Fixed
39	Square Flange Female Receptacle	Fixed
40	Square Flange Female Receptacle, Low RF Leakage (Note 4)	Variable
41	Square Flange Female Receptacle, Low RF Leakage	Fixed
42	Square Flange Female Receptacle, Low RF Leakage	Fixed
43	Square Flange Female Receptacle, Low RF Leakage	Fixed
44	Bulkhead Female Receptacle	Variable
45	Square Flange Female Receptacle for Micro-Strip	Variable
46	2-Hole Flange Female Receptacle for Strip-Line	Fixed
47	2-Hole Flange Female Receptacle for Strip-Line	Fixed
48	Square Flange Female Receptacle for Micro-Strip	Fixed

Variant Number	Description (Notes 1, 2)	Configuration Type (Note 3)
49	2-Hole Flange Female Receptacle	Fixed
50	Square Flange Female Receptacle	Fixed
51	Square Flange Female Receptacle	Variable
53	Straight Jack, Solder-Type, for SHF 5 Cable	Fixed
54	2-Hole Flange Female Receptacle, Low RF Leakage (Note 4)	Variable
55	Elbow Female Receptacle, Round Flange, Triplate Launcher	Fixed
56	Square Flange Female Receptacle, Low RF Leakage	Variable
57	Round Flange Female Receptacle, Triplate Launcher	Fixed
58	Square Flange Female Receptacle, Low RF Leakage	Variable
59	2-Hole Flange Female Receptacle, with Hermetic Glass Seal Ø0.46mm and EMI Gasket	Fixed
60	Bulkhead Female Receptacle, with Hermetic Glass Seal Ø0.3mm (Note 4)	Fixed
61	Bulkhead Female Receptacle, with Hermetic Glass Seal Ø0.46mm (Note 4)	Fixed
62	Hermetic Bulkhead Female Receptacle, with Compression Gasket	Fixed
63	Hermetic Bulkhead Female Receptacle, with Compression Gasket	Fixed
64	Hermetic Bulkhead Female Receptacle, with Compression Gasket	Fixed
65	2-Hole Flange Female Receptacle, with Hermetic Glass Seal Ø0.3mm and EMI Gasket	Fixed
66	Bulkhead Jack, Solder-Type, for SHF 3 Cable	Fixed
67	Bulkhead Jack, Solder-Type, for SHF 8 Cable	Fixed
68	Square Flange Female Receptacle, Solder-Type, Back Mounting, For Semi-Rigid Cable Ø2.2mm (0.085")	Fixed
69	Square Flange Female Receptacle, Solder-Type, Back Mounting, For Semi-Rigid Cable Ø3.58mm (0.141")	Fixed
70	Straight Jack, Crimp-Type, for 50 CIS Cable	Fixed
71	Elbow Female Receptacle, Square Flange (Solid Contact) (Note 4)	Variable
72	Square Flange Female Receptacle, Tab Contact, Low RF Leakage	Fixed
73	Square Flange Female Receptacle, Front Mounting, Maximum Operating Temperature = +165°C (Note 4)	Variable
74	2-Hole Flange Female Receptacle, Front Mounting, Maximum Operating Temperature = +165°C (Note 4)	Variable
75	2-Hole Flange Female Receptacle for Micro-Strip, Front Mounting, Maximum Operating Temperature = +165°C (Note 4)	Fixed
76	Square Flange Female Receptacle for Micro-Strip, Front Mounting, Maximum Operating Temperature = +165°C (Note 4)	Fixed
77	Square Flange Female Receptacle, Maximum Operating Temperature = +165°C (Note 4)	Variable
78	2-Hole Flange Female Receptacle, Maximum Operating Temperature = +165°C (Note 4)	Variable
79	Square Flange Female Receptacle, Maximum Operating Temperature = +165°C (Note 4)	Fixed
80	2-Hole Flange Female Receptacle, Maximum Operating Temperature = +165°C (Note 4)	Fixed
81	Square Flange Female Receptacle, Low RF Leakage, Maximum Operating Temperature = +165°C (Note 4)	Variable
82	2-Hole Flange Female Receptacle, Low RF Leakage, Maximum Operating Temperature = +165°C (Note 4)	Variable

Variant Number	Description (Notes 1, 2)	Configuration Type (Note 3)
83	Bulkhead Female Receptacle, with Hermetic Glass Seal Ø0.3mm, Maximum Operating Temperature = +165°C (Note 4)	Fixed
84	Bulkhead Female Receptacle, with Hermetic Glass Seal Ø0.46mm, Maximum Operating Temperature = +165°C (Note 4)	Fixed
85	Elbow Female Receptacle, Square Flange (Solid Contact), Maximum Operating Temperature = +165°C (Note 4)	Variable
86	Square Flange Female Receptacle, Low VSWR, Extended Frequency Range	Fixed
87	Square Flange Female Receptacle, Low VSWR, Extended Frequency Range	Fixed
88	Square Flange Female Receptacle, Low VSWR, Extended Frequency Range	Fixed
89	Square Flange Female Receptacle, Low VSWR, Extended Frequency Range	Fixed

NOTES:

1. See Para. 3 for details.
2. For available connector materials and finishes, see Paras. 1.4.1.1(a) and 1.7.
3. See Paras. 1.4.1, 1.4.1.1(b), 1.4.1.1(c) and 3.
4. Variants 73 to 85 inclusive are high temperature capability versions of Variants 15, 17, 18, 22, 29, 30, 31, 32, 40, 54, 60, 61, 71 respectively.

1.5 **MAXIMUM RATINGS**

The maximum ratings shall not be exceeded at any time during use or storage.

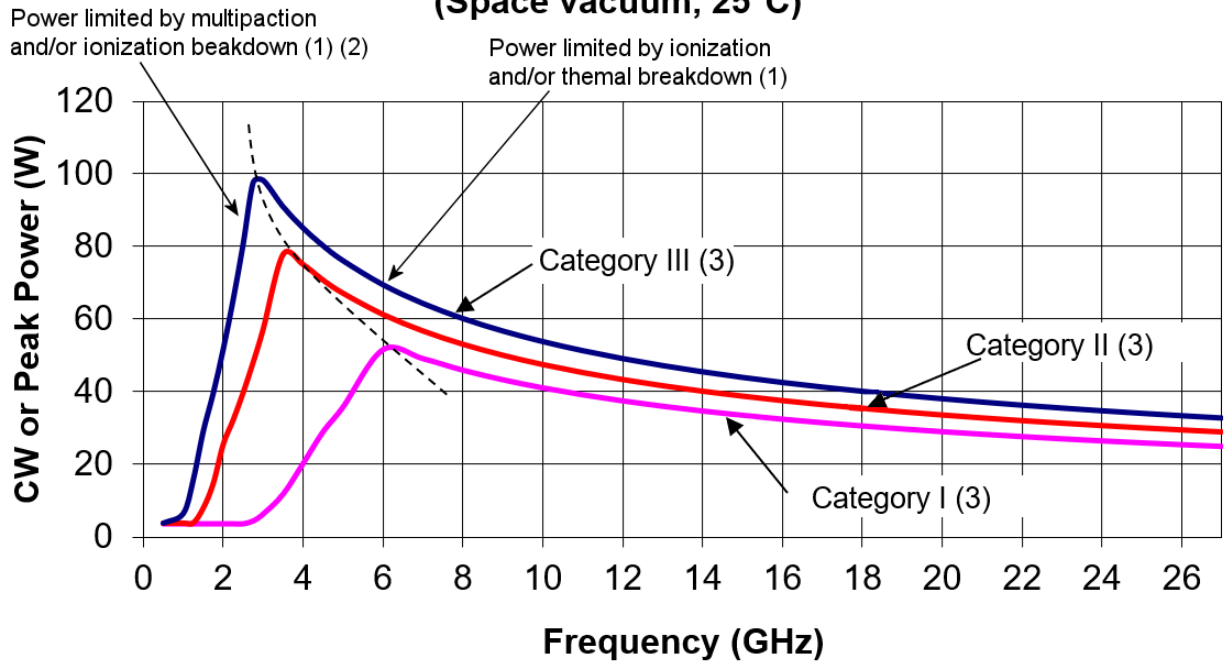
Maximum ratings shall only be exceeded during testing to the extent specified in this specification and when stipulated in Test Methods and Procedures of the ESCC Generic Specification.

Characteristics	Symbol	Maximum Ratings	Unit	Remarks
Power	P	See Para. 3		Notes 1, 2
Nominal Impedance	Z	50	Ω	-
Operating Frequency Range	f	See Para. 3	GHz	Note 1
Operating Voltage	V _{op}	335	V _{rms}	-
Operating Temperature Range	T _{op}	See Para. 3	°C	-
Storage Temperature Range	T _{stg}	As per T _{op}	°C	-
Soldering Temperature	T _{sol}	260	°C	Duration 10s maximum See Para. 3
Coupling Nut Torque (Coupling Proof Torque)	T _q	170	N.cm	See Note 3 for nominal coupling torque

NOTES:

- Derate Power with respect to Operating Frequency as follows:

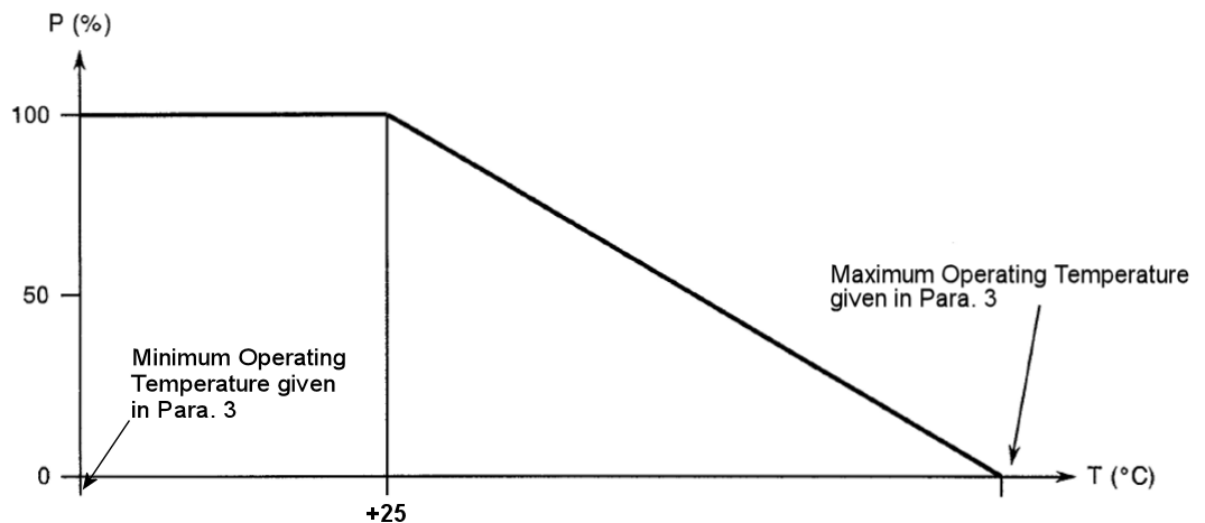
Maximum Power Handling: SMA connectors (Space vacuum, 25°C)



The following details apply:

- Load VSWR is better than 1.3:1.
- The part of the curve limited by multipaction takes into account a 6dB margin.
- See Para. 3 for applicability of power handling categories to the different variants.
- These power handling curves have been constructed using the ESCC Multipactor Tool v1.0.

- Derate Power with respect to Operating Temperature as follows:



- Whenever a test is performed on mated pairs of connectors, the pairs shall be torqued at 100 ±20N.cm.

1.6 PHYSICAL DIMENSIONS (SEE ALSO PARA. 3)

1.6.1 Connector Interface Dimensions and Connector Interface Gauge Dimensions

- (a) SMA Female Connector Interface: compatible with series SMA socket contact interface as specified in [MIL-STD-348](#).
- (b) SMA Male Gauge Interface: compatible with series SMA pin contact test connector interface as specified in [MIL-STD-348](#).

1.7 MATERIALS AND FINISHES

Materials and finishes shall be as follows (as applicable, see Paras. 1.4.1.1(a) and 3):

1.7.1 Type 1

- (a) Shell: beryllium copper, plated gold 2.5µm minimum over copper 2.5µm minimum.
- (b) Centre Contact: beryllium copper, plated gold 2.5µm minimum over copper 2.5µm minimum.
- (c) Insulator: PTFE.
- (d) Gaskets:
 - EMI: conductive silicone loaded silver.
 - Compression: aluminium with surface treatment.
- (e) Crimping and soldering elements: brass or copper, plated gold 2.5µm minimum over copper 2.5µm minimum.
- (f) Rear Nut: brass or copper, plated gold 2.5µm minimum over copper 2.5µm minimum.
- (g) Hermetic Glass Seal:
 - Shell, Centre Contact: iron-nickel alloy, plated gold 1.27µm minimum over nickel 2µm minimum.
 - Insulator: glass.

1.7.2 Type 2

- (a) Shell: beryllium copper, plated gold 1.27µm minimum over nickel 2µm minimum.
- (b) Centre Contact: beryllium copper, plated gold 1.27µm minimum over nickel 2µm minimum.
- (c) Insulator: PTFE.
- (d) Gaskets:
 - EMI: conductive silicone loaded silver.
 - Compression: aluminium with surface treatment.
- (e) Crimping and soldering elements: brass or copper, plated gold 0.5µm minimum over nickel 2µm minimum.
- (f) Rear Nut: brass or copper, plated gold 0.5µm minimum over nickel 2µm minimum.
- (g) Hermetic Glass Seal:
 - Shell, Centre Contact: iron-nickel alloy, plated gold 1.27µm minimum over nickel 2µm minimum.
 - Insulator: glass.

1.7.3 Type 3

- (a) Shell: amagnetic stainless steel, electro-passivated.
NOTE: For solder-type connectors, the rear part of the shell shall be plated gold 1.27µm minimum over nickel 2µm minimum.
- (b) Centre Contact: beryllium copper, plated gold 1.27µm minimum over nickel 2µm.
- (c) Insulator: PTFE.
- (d) Gaskets:
 - EMI: conductive silicone loaded silver.
 - Compression: aluminium with surface treatment.
- (e) Crimping elements: brass or copper, plated nickel 2µm minimum.
- (f) Soldering elements: brass or copper, plated gold 0.5µm minimum over nickel 2µm minimum.
- (g) Rear Nut: amagnetic stainless steel, electro-passivated.
- (h) Hermetic Glass Seal:
 - Shell, Centre Contact: iron-nickel alloy, plated gold 1.27µm minimum over nickel 2µm minimum.
 - Insulator: glass

1.7.4 Type 4

- (a) Shell: amagnetic stainless steel, plated gold 1.27µm minimum over nickel 2µm minimum.
- (b) Centre Contact: beryllium copper, plated gold 1.27µm minimum over nickel 2µm minimum.
- (c) Insulator: PTFE.
- (d) Gaskets:
 - EMI: conductive silicone loaded silver.
 - Compression: aluminium with surface treatment.
- (e) Crimping and soldering elements: brass or copper, plated gold 0.5µm minimum over nickel 2µm minimum.
- (f) Rear Nut: amagnetic stainless steel, plated gold 0.5µm minimum over nickel 2µm minimum.
- (g) Hermetic Glass Seal:
 - Shell, Centre Contact: iron-nickel alloy, plated gold 1.27µm minimum over nickel 2µm minimum.
 - Insulator: glass

2 REQUIREMENTS

2.1 GENERAL

The complete requirements for procurement of the components specified herein are as stated in this specification and the ESCC Generic Specification. Permitted deviations from the Generic Specification, applicable to this specification only, are listed below.

Permitted deviations from the Generic Specification and this Detail Specification, formally agreed with specific Manufacturers on the basis that the alternative requirements are equivalent to the ESCC requirement and do not affect the component's reliability, are listed in the appendices attached to this specification.

2.1.1 Deviations from the Generic Specification

2.1.1.1 *Deviations from Screening Tests – Chart F3*

- (a) Coupling Proof Torque: shall not be performed on connectors with a female contact.

2.2 MARKING

The marking shall be in accordance with the requirements of ESCC Basic Specification No. [21700](#) and as follows.

The information to be marked on the component or the primary package shall be:

- (a) The ESCC qualified components symbol (for ESCC qualified components only).
- (b) The ESCC Component Number (see Para. 1.4.1).
- (c) Traceability information.

2.3 ENVIRONMENTAL AND MECHANICAL TESTS

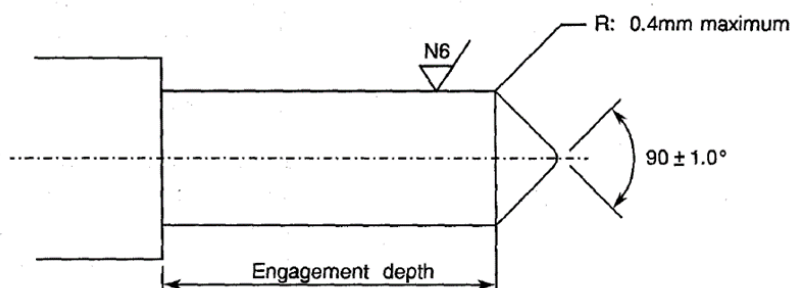
The following requirements apply to tests performed on the connector (and contact) lot as specified in the ESCC Generic Specification:

(a) Contact Engagement and Separation Forces:

	Oversize Test Pin Test	Maximum Diameter Test Pin Test	Minimum Diameter Test Pin Test
Test Pin Diameter (mm) (1)	0.9525 to 0.955	0.94 to 0.942	0.902 to 0.904
Engagement Depth (mm) (1)	0.76 to 1.14	1.27 to 1.91	1.27 to 1.91
Engagement Force (N)	-	13.34 maximum	-
Separation Force (N)	-	-	0.28 minimum

NOTES:

1. Test Pins details:



- (b) Coupling Proof Torque: See Para. 1.5.
- (c) Mating and Unmating Forces: Maximum torque: 24N.cm.
- (d) Centre Contact Retention: See Para. 3.
- (e) Seal: See Para. 3.

2.4 ROOM TEMPERATURE ELECTRICAL MEASUREMENTS (NOTE 1)

The measurements shall be performed at $T_{amb} = +22 \pm 3^{\circ}\text{C}$.

Characteristics	Symbols	Test Method and Conditions	Limits		Units
			Min	Max	
Insulation Resistance	R_i	ESCC No. 3402	5	-	GΩ
Voltage Proof Leakage Current (Voltage Proof)	I_L	ESCC No. 3402 See Para. 3 Note 2	-	2	mA

NOTES:

- For Variants that are delivered with the centre contact and insulator not mounted in the connector, measurements shall not be performed during Chart F3; see Para. 3.
- Between centre contact and shell.

2.5 INTERMEDIATE AND END-POINT ELECTRICAL MEASUREMENTS

Unless otherwise specified, the measurements shall be performed at $T_{amb} = +22 \pm 3^{\circ}\text{C}$.

Unless otherwise specified, the test methods and test conditions shall be as per the corresponding test defined in Para. 2.4 Room Temperature Electrical Measurements.

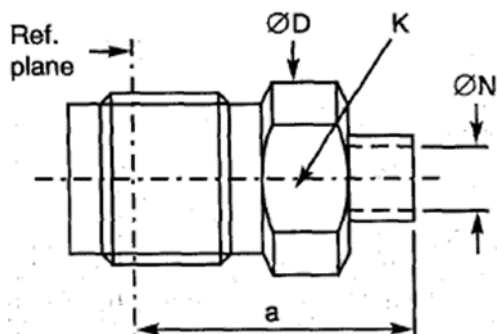
Test Reference per ESCC No. 3402	Characteristics and Test Conditions Ref. ESCC No. 3402	Symbols	Limits		Units
			Min	Max	
Random Vibration	Contact Resistance: $I_T = 10\text{mA}$, $V_T = 6\text{V}$				
	Centre Contact:	R_{ctc}	-	3	mΩ
	Hermetic Glass Seal: Centre Contact:	R_{hgs}	-	12	mΩ
Mechanical Shock	Contact Resistance: $I_T = 10\text{mA}$, $V_T = 6\text{V}$				
	Centre Contact:	R_{ctc}	-	3	mΩ
	Hermetic Glass Seal: Centre Contact:	R_{hgs}	-	12	mΩ
Temperature Cycling	Contact Resistance: $I_T = 10\text{mA}$, $V_T = 6\text{V}$				
	Centre Contact:	R_{ctc}	-	3	mΩ
	Hermetic Glass Seal: Centre Contact:	R_{hgs}	-	12	mΩ
	Voltage Proof Leakage Current:	I_L	Note 1		
Electrical Measurements at Room Temperature	Insulation Resistance:	R_i	Note 1		
	Voltage Proof Leakage Current:	I_L	Note 1		
	Contact Resistance: $I_T = 10\text{mA}$, $V_T = 6\text{V}$				
	Centre Contact:	R_{ctc}	-	3	mΩ
	Shell:	R_{cts}	-	2	mΩ
	Hermetic Glass Seal: Centre Contact:	R_{hgs}	-	12	mΩ
	VSWR (Note 3):	VSWR	Note 2		
Endurance	Insertion Loss:	LI	Note 2		
	Contact Resistance: $I_T = 10\text{mA}$, $V_T = 6\text{V}$				
	Centre Contact:	R_{ctc}	-	4	mΩ
	Shell:	R_{cts}	-	3	mΩ
	Hermetic Glass Seal: Centre Contact:	R_{hgs}	-	12	mΩ

NOTES:

- As specified in Para. 2.4.
- As specified in Para. 3.
- Measured with suitable low level RF power applied.

3 COMPONENT TYPE VARIANTS – DETAIL REQUIREMENTS

3.1 VARIANT 01 – STRAIGHT JACK, SOLDER-TYPE, FOR SEMI-RIGID CABLE Ø2.2mm (0.085")



Symbol	Dimensions mm		Notes
	Min	Max	
a	10.5	11	
ØD	6.6	6.8	
K	-	6	2 flats
ØN	2.25	2.35	

NOTES:

- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	$1.1 + 0.01 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.02 \sqrt{f}$ (GHz)	dB
Voltage proof	750	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 2)	$-100 + f$ (GHz)	dBi

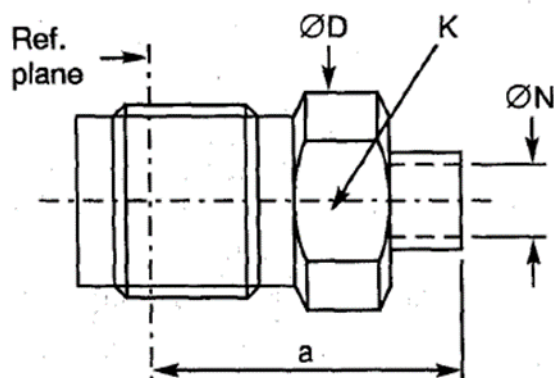
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	1.5	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 3)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Applicable	
Cables used (Note 3)	KS 1, RG 405/U, (Ø2.2mm)	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used

3.2 VARIANT 02 - STRAIGHT JACK, SOLDER-TYPE, FOR SEMI-RIGID CABLE Ø3.58mm (0.141")



Symbol	Dimensions mm		Notes
	Min	Max	
a	10.5	11	
ØD	6.6	6.8	
K	-	6	2 flats
ØN	3.65	3.75	

NOTES:

- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	$1.05 + 0.004 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.02 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-100 + f$ (GHz)	dBi

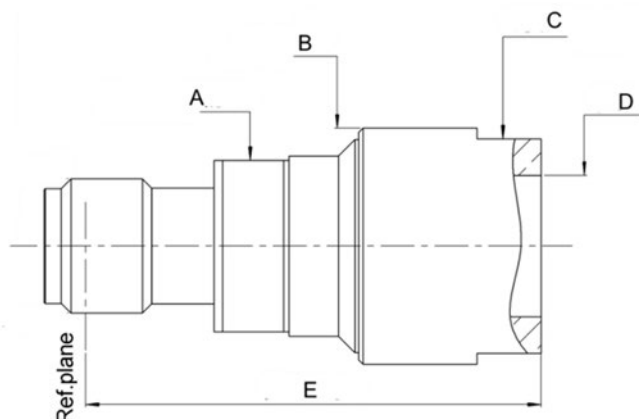
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	1.6	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 3)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Applicable	
Cables used (Note 3)	KS 2, RG 402/U, (Ø3.58mm)	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.

3.3 VARIANT 03 - STRAIGHT JACK WITH CABLE CLAMP, SOLDER-TYPE, FOR SEMI-RIGID CABLE Ø6.35mm (0.25")



Symbol	Dimensions mm		Notes
	Min	Max	
A	-	8	2 flats
ØB	10.9	11	
C	-	10	2 flats
ØD	6.45	6.7	
E	-	22.5	

NOTES:

- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	$1.05 + 0.015 f \text{ (GHz)}$	
Maximum insertion loss	$0.02 + 0.02 \sqrt{f \text{ (GHz)}}$	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-95 + f \text{ (GHz)}$	dBi

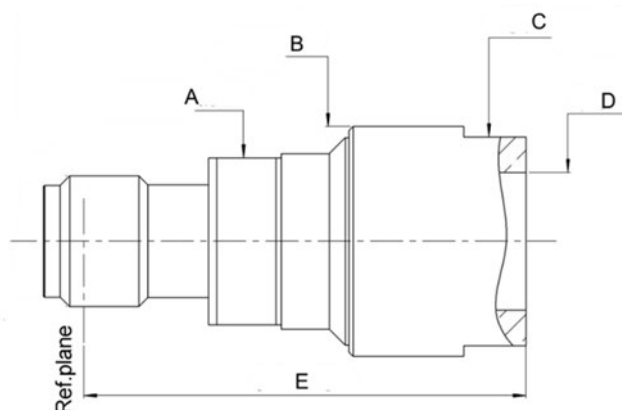
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	7.8	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 3)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Applicable	
Cables used (Note 3)	KS 3, RG 401/U, (Ø6.35mm)	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.

3.4 VARIANT 04 - STRAIGHT JACK WITH CABLE CLAMP, SOLDER-TYPE, FOR SEMI-RIGID MICROPOROUS CABLE Ø6.35mm (0.25")



Symbol	Dimensions mm		Notes
	Min	Max	
A	-	8	2 flats
ØB	10.9	11	
C	-	10	2 flats
ØD	6.45	6.7	
E	-	22.5	

NOTES:

- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	$1.05 + 0.015 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.02 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dB _i

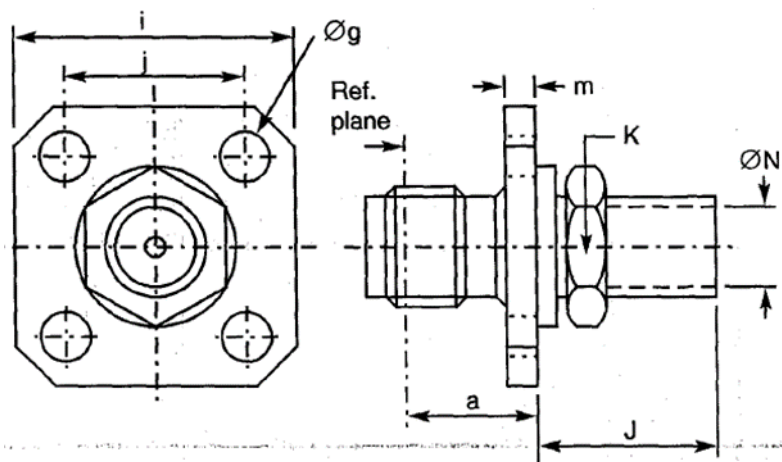
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	7.8	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 3)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Applicable	
Cables used (Note 3)	Microporous Ø6.35mm	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.

3.5 VARIANT 05 - SQUARE FLANGE FEMALE RECEPTACLE, CRIMP-TYPE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.4	7.75	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
J	-	17.3	
K	-	7	2 flats
m	1.4	1.8	
ØN	2.55	2.65	

NOTES:

- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 12.4 (Note 3)	GHz
Maximum voltage standing wave ratio (VSWR)	$1.1 + 0.015 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	750	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dB

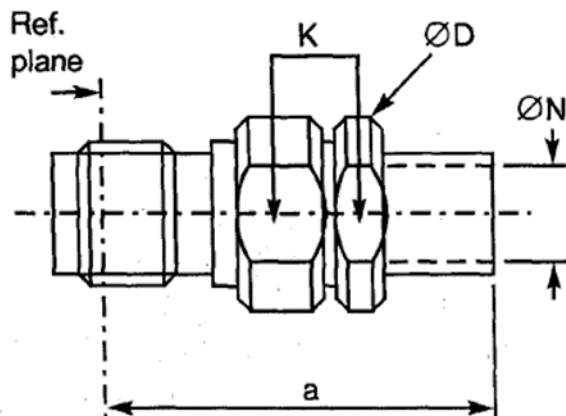
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	0.5	N.cm
Maximum weight	4.9	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 3)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used (Notes 3, 4)	KX 21A, RG 178/U	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.
- The test frequency shall be limited by the applicable cable maximum frequency.

3.6 VARIANT 06 - STRAIGHT JACK, CRIMP-TYPE



Symbol	Dimensions mm		Notes
	Min	Max	
a	22.7	24.15	
ØD	7.5	7.9	
K	-	7	2 flats
ØN	3.15	3.35	

NOTES:

- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 12.4 (Note 3)	GHz
Maximum voltage standing wave ratio (VSWR)	$1.05 + 0.015 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	750	V _{rms}
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 2)	-95 + f (GHz)	dB _i

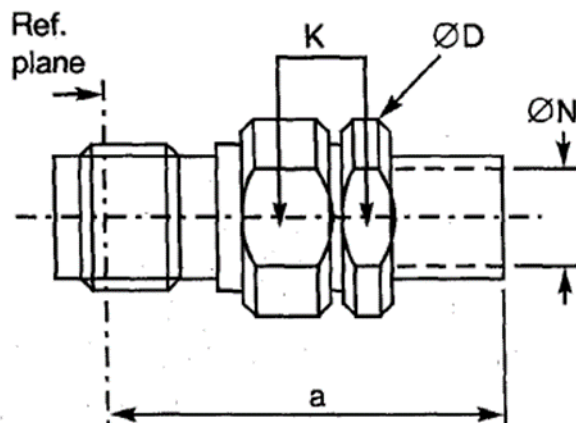
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	0.5	N.cm
Maximum weight	4.5	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 3)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used (Notes 3, 4)	KX 3B, KX 22A, RG 174/U, RG 316/U	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.
- The test frequency shall be limited by the applicable cable maximum frequency.

3.7 VARIANT 07 - STRAIGHT JACK, CRIMP-TYPE, FOR CABLE Ø5mm, SINGLE BRAID



Symbol	Dimensions mm		Notes
	Min	Max	
a	24.9	26.15	
ØD	7.5	7.9	
K	-	7	2 flats
ØN	5.55	5.65	

NOTES:

- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 12.4 (Note 3)	GHz
Maximum voltage standing wave ratio (VSWR)	$1.15 + 0.01 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dB

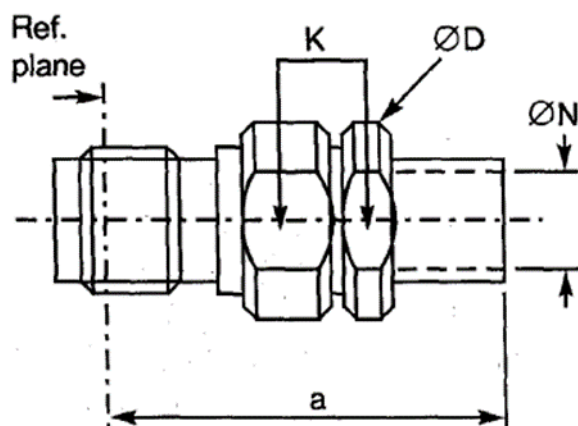
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	0.5	N.cm
Maximum weight	5.1	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 3)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used (Notes 3, 4)	KX 15, RG 58 C/U, RG 141 A/U	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.
- The test frequency shall be limited by the applicable cable maximum frequency.

3.8 VARIANT 08 - STRAIGHT JACK, CRIMP-TYPE, FOR CABLE Ø5mm, DOUBLE BRAID



Symbol	Dimensions mm		Notes
	Min	Max	
a	24.9	26.15	
ØD	7.5	7.9	
K	-	7	2 flats
ØN	5.55	5.65	

NOTES:

- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 12.4 (Note 3)	GHz
Maximum voltage standing wave ratio (VSWR)	$1.15 + 0.01 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dB

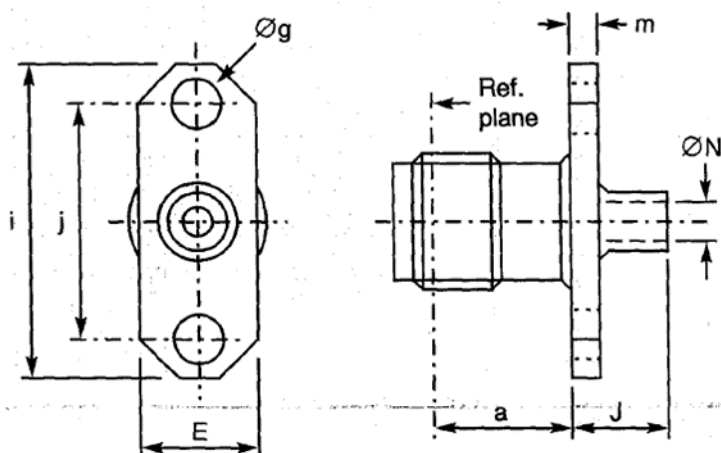
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	0.5	N.cm
Maximum weight	5.1	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 3)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used (Notes 3, 4)	KX 23, RG 142 B/U, RG 223/U	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.
- The test frequency shall be limited by the applicable cable maximum frequency.

3.9 VARIANT 09 – 2-HOLE FLANGE FEMALE RECEPTACLE, SOLDER-TYPE, BACK MOUNTING, FOR SEMI-RIGID CABLE Ø2.2mm (0.085")



Symbol	Dimensions mm		Notes
	Min	Max	
a	5.87	6.12	
E	5.5	5.8	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
J	4.6	5	
m	1.4	1.8	
ØN	2.25	2.35	

NOTES:

- Components are delivered with the centre contact and insulator not mounted in the connector.
- Maximum panel thickness: 2.3mm.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	$1.1 + 0.01 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.02 \sqrt{f}$ (GHz)	dB
Voltage proof	750	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 3)	$-100 + f$ (GHz)	dB

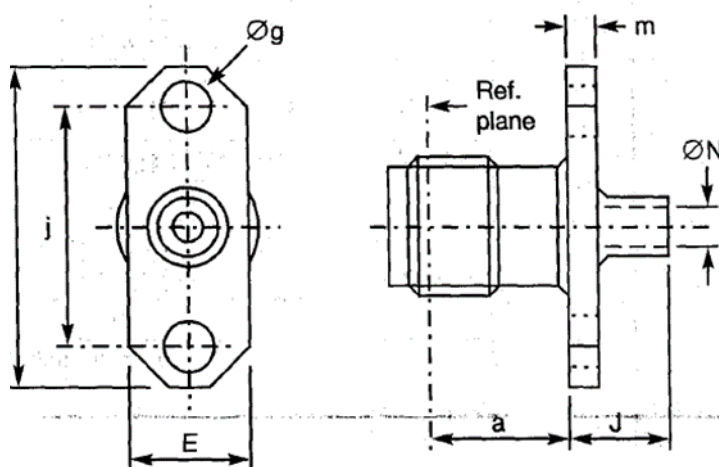
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 4)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Applicable	
Cables used (Note 4)	KS 1, RG 405/U (Ø2.2mm)	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.

3.10 VARIANT 10 - 2-HOLE FLANGE FEMALE RECEPTACLE, SOLDER-TYPE, BACK MOUNTING, FOR SEMI-RIGID CABLE Ø3.58mm (0.141")



Symbol	Dimensions mm		Notes
	Min	Max	
a	5.87	6.12	
E	5.5	5.8	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
J	4.6	5	
m	1.4	1.8	
ØN	3.65	3.75	

NOTES:

- Components are delivered with the centre contact and insulator not mounted in the connector.
- Maximum panel thickness: 2.3mm

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	$1.05 + 0.04 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.02 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 3)	$-100 + f$ (GHz)	dB

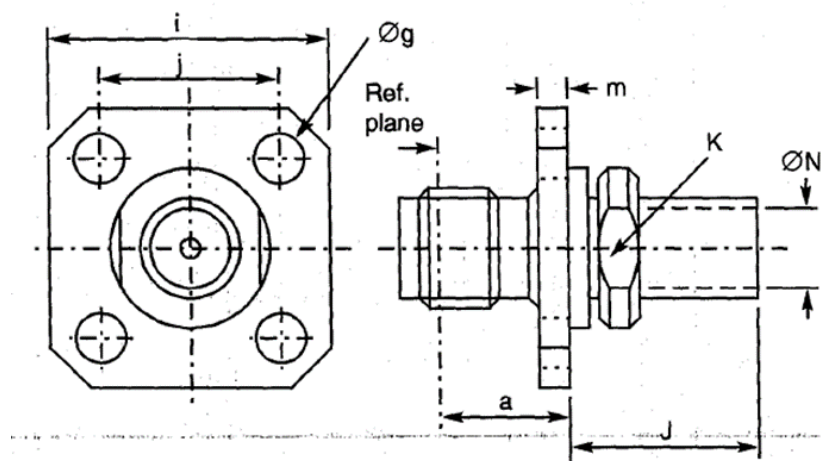
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 4)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Applicable	
Cables used (Note 4)	KS 2, RG 402/U (Ø3.58mm)	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.

3.11 VARIANT 11 - SQUARE FLANGE FEMALE RECEPTACLE, CRIMP-TYPE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.4	7.75	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
J	15.1	17.6	
K	-	7	2 flats
m	1.4	1.8	
ØN	3.25	3.35	

NOTES:

- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 12.4 (Note 3)	GHz
Maximum voltage standing wave ratio (VSWR)	$1.1 + 0.015 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	750	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dBi

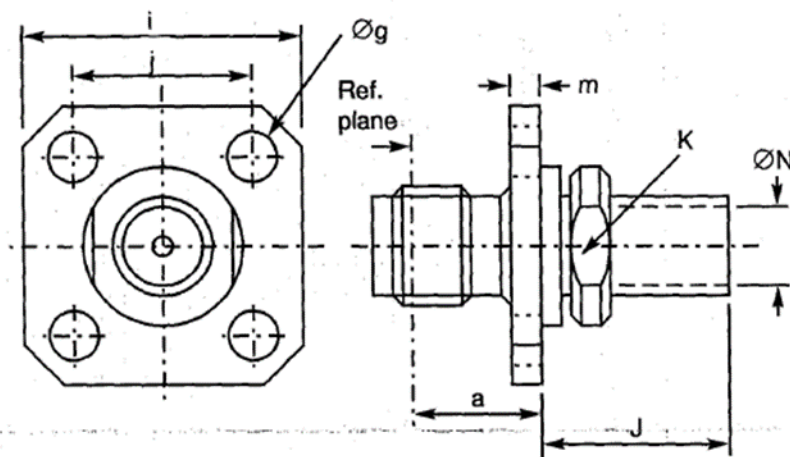
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	0.5	N.cm
Maximum weight	5.2	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 3)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used (Notes 3, 4)	KX 3B, KX 22A, RG 174/U, RG 316/U	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.
- The test frequency shall be limited by the applicable cable maximum frequency.

3.12 VARIANT 12 - SQUARE FLANGE FEMALE RECEPTACLE, CRIMP-TYPE, FOR 50 CIS CABLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.4	7.75	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
J	15.1	17.6	
K	-	7	2 flats
m	1.4	1.8	
ØN	2	2.2	

NOTES:

- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 12.4 (Note 3)	GHz
Maximum voltage standing wave ratio (VSWR)	$1.1 + 0.015 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	750	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dBi

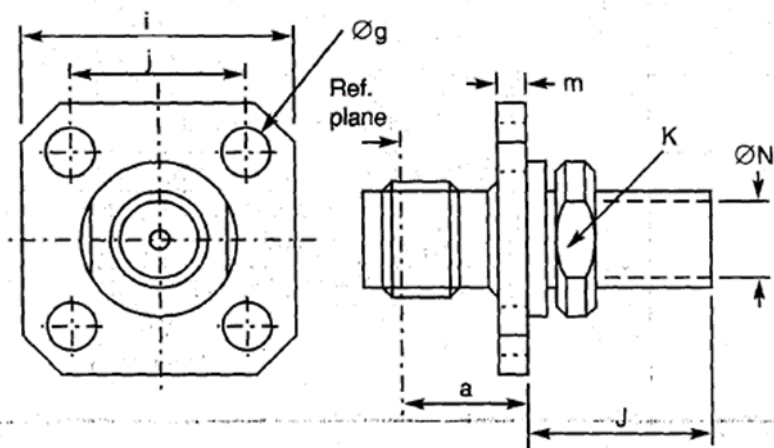
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	0.5	N.cm
Maximum weight	4.4	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 3)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used (Notes 3, 4)	50 CIS	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.
- The test frequency shall be limited by the applicable cable maximum frequency.

3.13 VARIANT 13 - SQUARE FLANGE FEMALE RECEPTACLE, CRIMP- OR SOLDER-TYPE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.4	7.75	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
J	17.1	20.4	
K	-	7	2 flats
m	1.4	1.8	
ØN	5.55	5.65	

NOTES:

- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 12.4 (Note 3)	GHz
Maximum voltage standing wave ratio (VSWR)	$1.1 + 0.012 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dBi

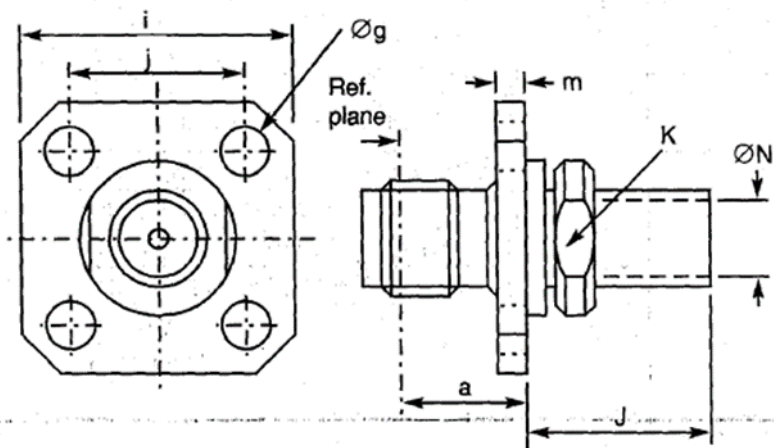
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	0.5	N.cm
Maximum weight	5.8	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 3)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Applicable	
Cables used (Notes 3, 4)	KX15, RG 58C/U, RG 141A/U	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.
- The test frequency shall be limited by the applicable cable maximum frequency.

3.14 VARIANT 14 - SQUARE FLANGE FEMALE RECEPTACLE, CRIMP- OR SOLDER-TYPE, DOUBLE BRAID CABLE, FOR CABLE Ø5mm



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.4	7.75	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
J	17.1	20.4	
K	-	7	2 flats
m	1.4	1.8	
ØN	5.55	5.65	

NOTES:

- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 12.4 (Note 3)	GHz
Maximum voltage standing wave ratio (VSWR)	$1.1 + 0.012 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dBi

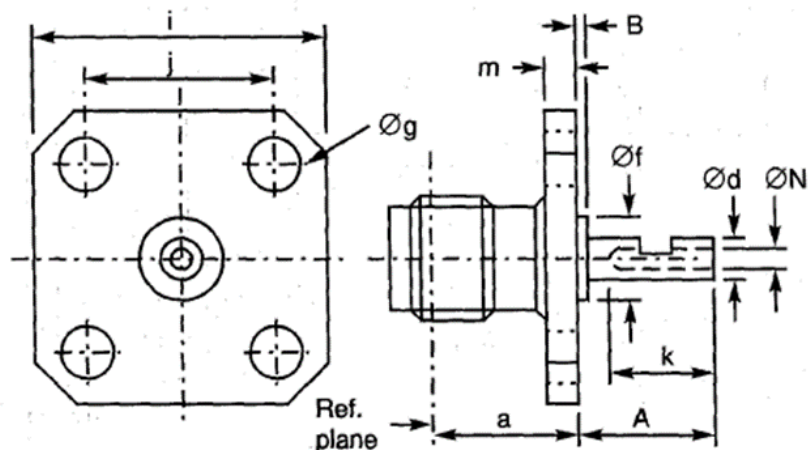
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	0.5	N.cm
Maximum weight	5.5	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 3)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Applicable	
Cables used (Notes 3, 4)	KX 23, RG 142B/U, RG 223/U	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.
- The test frequency shall be limited by the applicable cable maximum frequency.

3.15 VARIANT 15 - SQUARE FLANGE FEMALE RECEPTACLE, FRONT MOUNTING



**Solder Bucket -
Optional Shapes:**



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A		35	Note 1
B	-	20	Note 1
Ød	1.24	1.3	
Øf	4	4.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
k	2.4	-	
m	1.4	1.8	
ØN	0.7	1	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.003 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dB

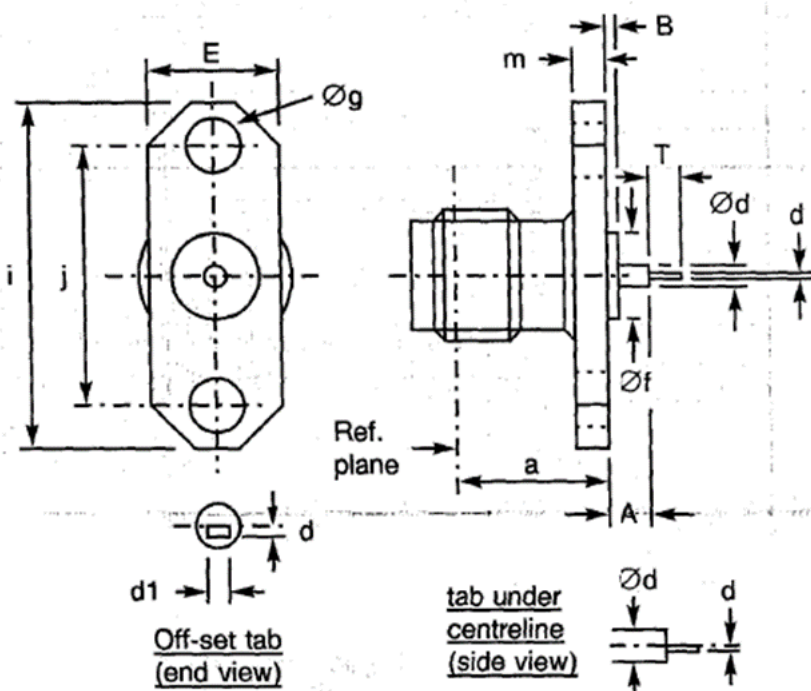
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3.3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.16 VARIANT 16 – 2-HOLE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP, FRONT MOUNTING



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	3.1	3.3	
B	0.15	0.35	
d	0.2	0.3	
Ød	0.7	0.9	
d1	0.4	0.5	
Øf	1.75	1.8	
E	5.5	5.8	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
m	1.4	1.8	
T	0.70	0.95	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.05 + 0.005 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	II	
RF Leakage (Note 1)	$-95 + f$ (GHz)	dB

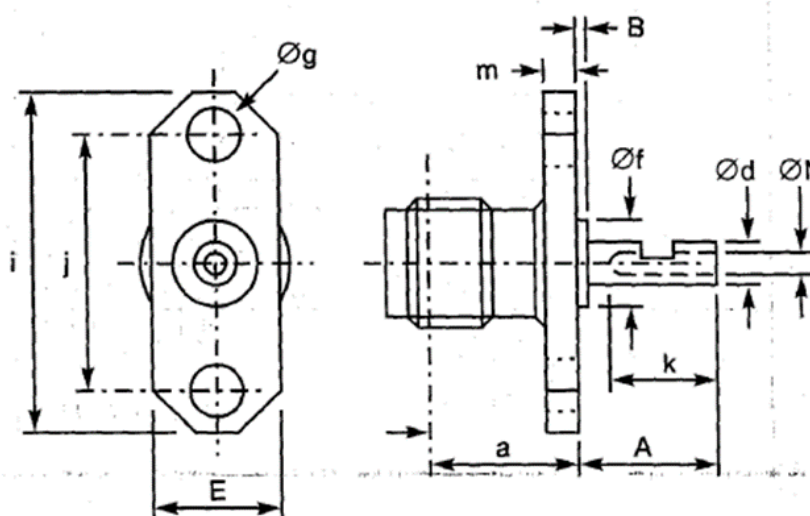
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	1.8	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

- For information purposes only.

3.17 VARIANT 17 - 2-HOLE FLANGE FEMALE RECEPTACLE, FRONT MOUNTING



**Solder Bucket -
Optional Shapes:**



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	-	35	Note 1
B	-	20	Note 1
Ød	1.24	1.3	
E	5.5	5.8	
Øf	4	4.2	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
k	2.4	-	
m	1.4	1.8	
ØN	0.7	1	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.003 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dBi

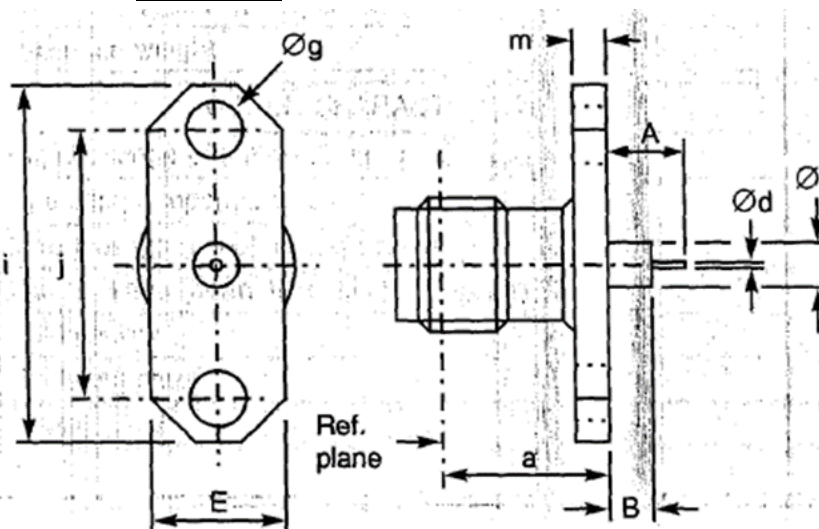
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.18 VARIANT 18 - 2-HOLE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP, FRONT MOUNTING



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	4.5	5	
B	3.05	3.3	
Ød	0.2	0.3	
E	5.5	5.8	
Øf	2.1	2.2	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
m	1.4	1.8	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 12.4	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.04 + 0.018 f \text{ (GHz)}$	
Maximum insertion loss (Note 1)	$0.02 + 0.03\sqrt{f \text{ (GHz)}}$	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	II	
RF Leakage (Note 1)	$-95 + f \text{ (GHz)}$	dB

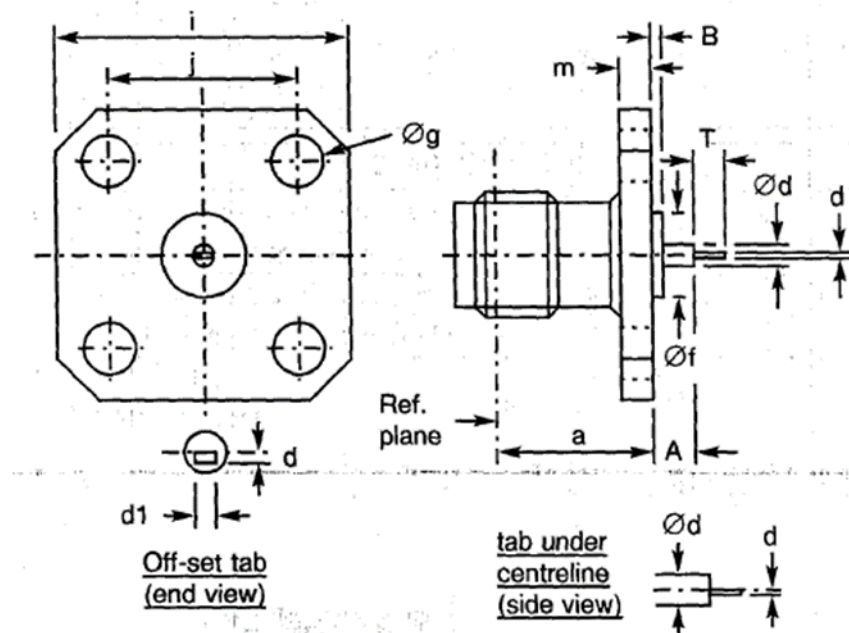
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	2.3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

- For information purposes only.

3.19 VARIANT 19 - SQUARE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP, FRONT MOUNTING, OFF-SET TAB



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	3.1	3.3	
B	0.15	0.35	
d	0.2	0.3	
Ød	0.7	0.9	
d1	0.4	0.5	
Øf	1.75	1.8	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	
T	0.7	0.95	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.05 + 0.05 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03\sqrt{f}$ (GHz)	dB
Voltage proof	1000	V _{rms}
Power Handling Category (see Para. 1.5 Note 1)	II	
RF Leakage (Note 1)	$-95 + f$ (GHz)	dB _i

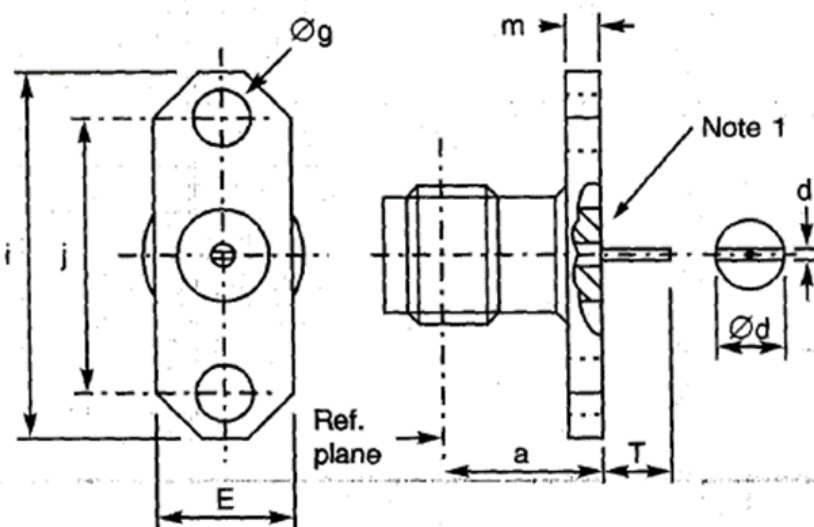
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

- For information purposes only.

3.20 VARIANT 20 - 2-HOLE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP, FRONT MOUNTING



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
d	0.1	0.2	Tab thickness
Ød	1.24	1.3	
E	5.5	5.8	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
m	1.4	1.8	
T	2.35	2.7	

NOTES:

1. Insert may stand proud of, or be recessed from, the flange by 0.05mm.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 3)	$1.05 + 0.005 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03\sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	II	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dBi

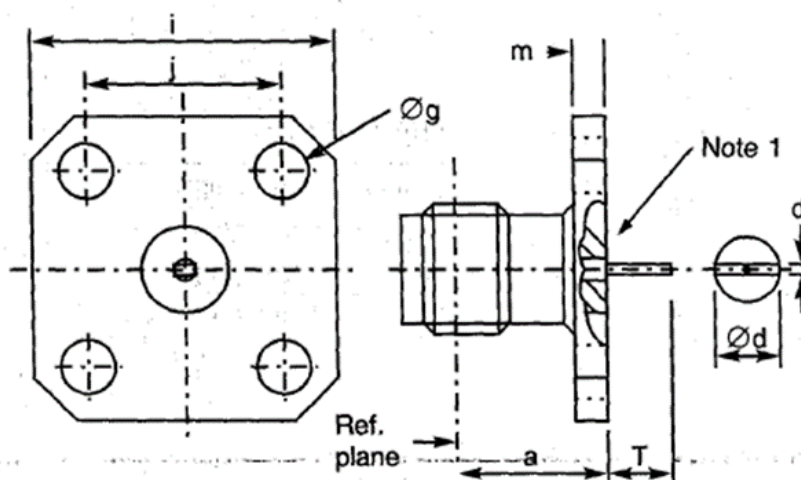
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	2	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.21 VARIANT 21 - SQUARE FLANGE FEMALE RECEPTACLE FOR STRIP-LINE, FRONT MOUNTING



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
d	0.1	0.2	Tab thickness
Ød	1.24	1.3	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	
T	2.35	2.7	

NOTES:

1. Insert may stand proud of, or be recessed from, the flange by 0.05mm.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.005 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	II	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dBi

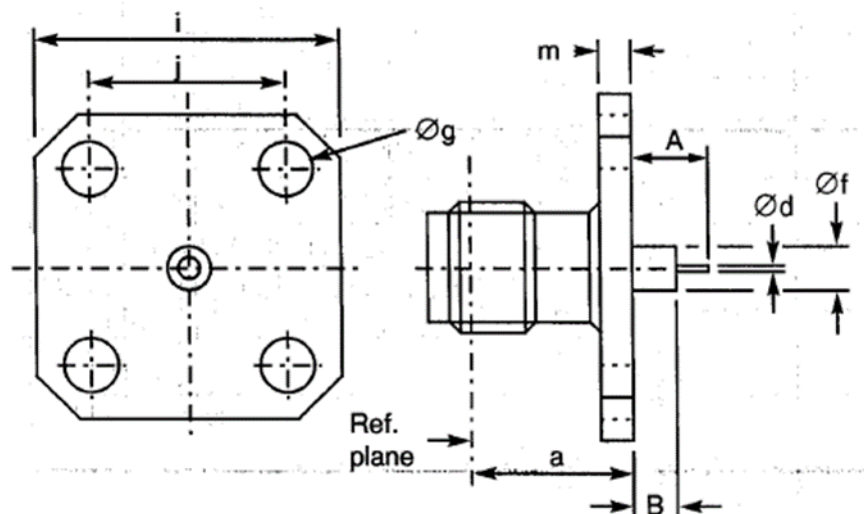
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3.2	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.22 VARIANT 22 - SQUARE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP, FRONT MOUNTING



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	4.6	4.9	
B	3.05	3.3	
Ød	0.2	0.3	
Øf	2.1	2.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 12.4	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.04 + 0.018 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	V _{rms}
Power Handling Category (see Para. 1.5 Note 1)	II	
RF Leakage (Note 1)	$-95 + f$ (GHz)	dB _i

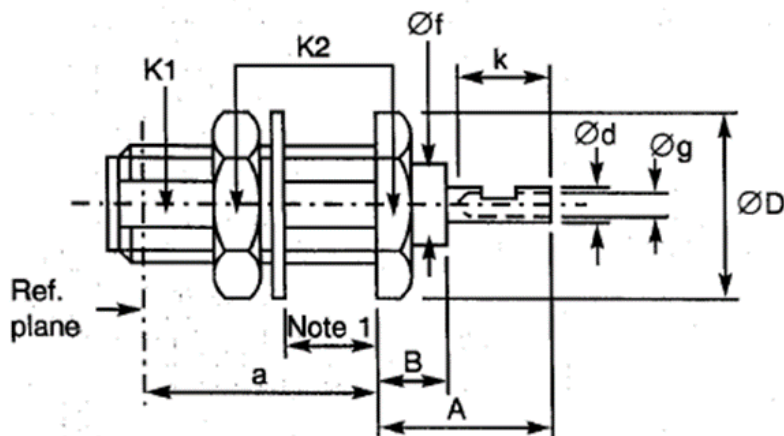
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3.2	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

- For information purposes only.

3.23 VARIANT 23 - BULKHEAD FEMALE RECEPTACLE



Solder Bucket -
Optional Shapes:



Symbol	Dimensions mm		Notes
	Min	Max	
a	9.4	9.85	
A	5.4	5.7	
B	2.6	3.15	
Ød	1.24	1.3	
ØD	-	9.1	
Øf	4	4.2	
Øg	0.7	1	
k	2.4	-	
K1	-	6	2 flats
K2	-	8	

NOTES:

- Maximum panel thickness: 3.4mm.

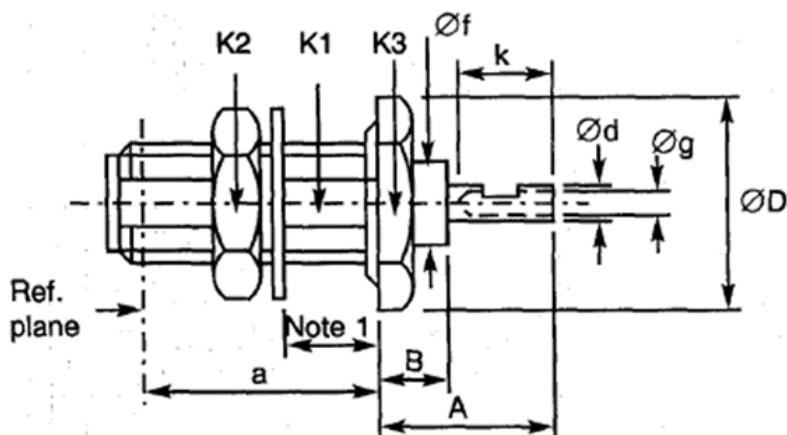
ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.06 f \text{ (GHz)}$	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f \text{ (GHz)}}$	dB
Voltage proof	1000	V _{rms}
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-95 + f \text{ (GHz)}$	dB _i

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

- For information purposes only.

3.24 VARIANT 24 - BULKHEAD FEMALE RECEPTACLE WITH COMPRESSION GASKET


Solder Bucket -
Optional Shapes:



Symbol	Dimensions mm		Notes
	Min	Max	
a	10.9	11.3	
A	6.1	6.4	
B	2.8	3	
Ød	1.24	1.3	
ØD	-	12.5	
Øf	4	4.2	
Øg	0.7	1	
k	2.4	-	
K1	-	6	2 flats
K2	-	9	
K3	-	11	

NOTES:

1. Maximum panel thickness: 3.4mm.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.06 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dB

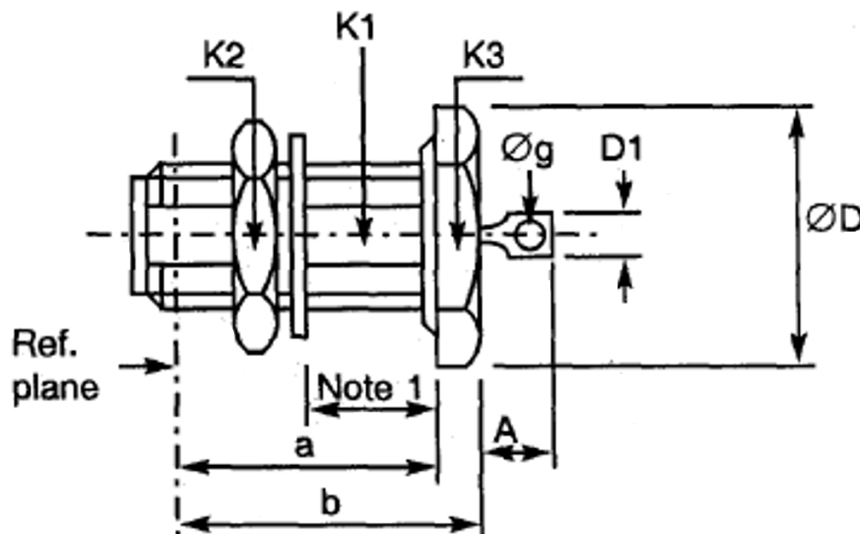
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3.5	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage (panel-sealed)	Applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.25 VARIANT 25 - HERMETIC BULKHEAD FEMALE RECEPTACLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	10.5	10.85	
A	2.95	4	
b	12.9	13.25	
ØD	-	13.5	
D1	1.9	2.1	
Øg	1	-	
K1	-	6	1 flat
K2	-	9	Hex.
K3	-	12	Hex.

NOTES:

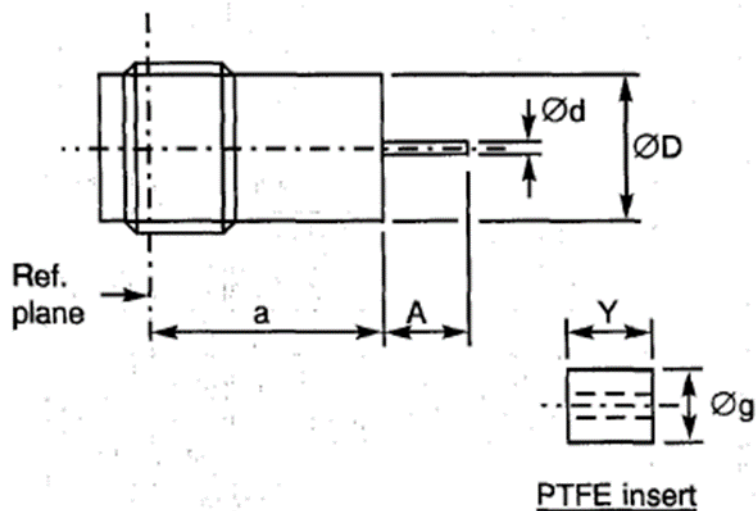
- Maximum panel thickness: 4mm.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	Not applicable	
Maximum insertion loss	Not applicable	
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	4.4	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-40 to +100	°C
Seal: Maximum leakage	10 ⁻⁸	atm.cm ³ /s
Solderability	On centre contact only	
Cables used	Not applicable	

3.26 VARIANT 26 - HERMETIC FEMALE RECEPTACLE, SOLDER-TYPE



Symbol	Dimensions mm	
	Min	Max
a	8.15	8.45
A	2.8	3.2
Ød	0.45	0.55
ØD	5.2	5.4
Øg	4	4.2
Y	6.25	6.3

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.05 + 0.015 f \text{ (GHz)}$	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f \text{ (GHz)}}$	dB
Voltage proof	1000	V _{rms}
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 1)	$-95 + f \text{ (GHz)}$	dBi

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	4.4	g

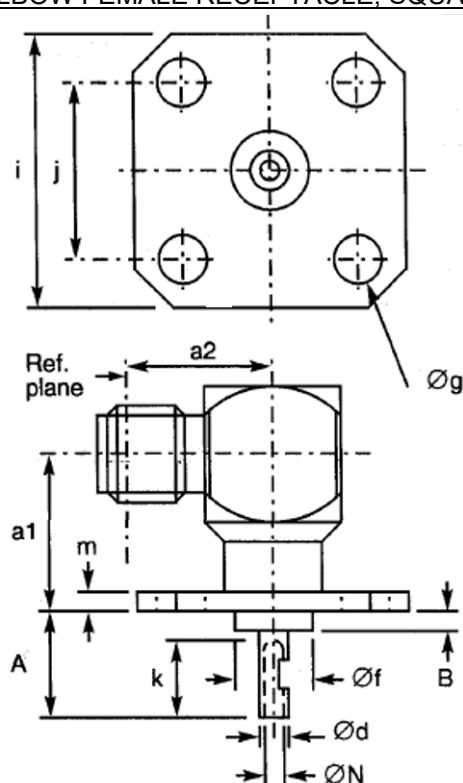
OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	10^{-8}	atm.cm ³ /s
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

- For information purposes only.

3.27 VARIANT 27 - ELBOW FEMALE RECEPTACLE, SQUARE FLANGE

**Solder Bucket -
Optional Shapes:**



Symbol	Dimensions mm		Notes
	Min	Max	
a1	7.1	9.4	
a2	9.2	9.4	
A	4.25	4.75	
B	1.4	1.7	
Ød	1.25	1.3	
Øf	4	4.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
k	2.3	-	
m	1.4	1.8	
ØN	0.7	1	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.05 + 0.01 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	V _{rms}
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 1)	$-95 + f$ (GHz)	dB _i

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	5.2	g

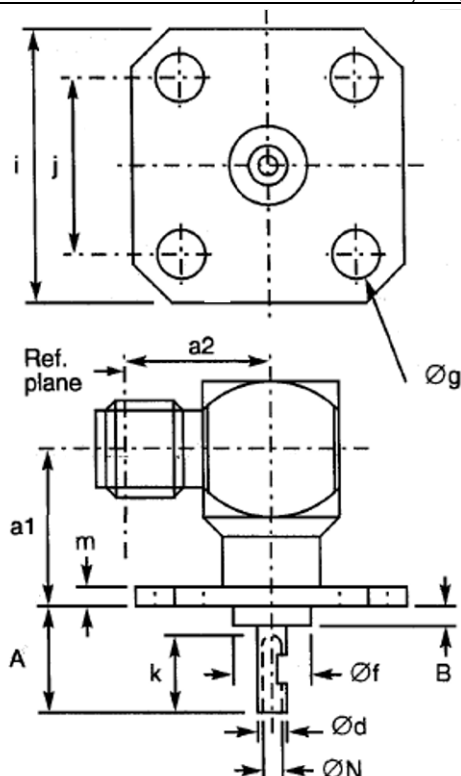
OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

- For information purposes only.

3.28 VARIANT 28 - ELBOW FEMALE RECEPTACLE, SQUARE FLANGE

Solder Bucket -
Optional Shapes:



Symbol	Dimensions mm		Notes
	Min	Max	
a1	7.9	8.1	
a2	9.2	9.4	
A	-	15	Note 1
B	-	10	Note 1
Ød	1.25	1.3	
Øf	4	4.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
k	2.3	-	
m	1.4	1.8	
ØN	0.7	1	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.01 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dB

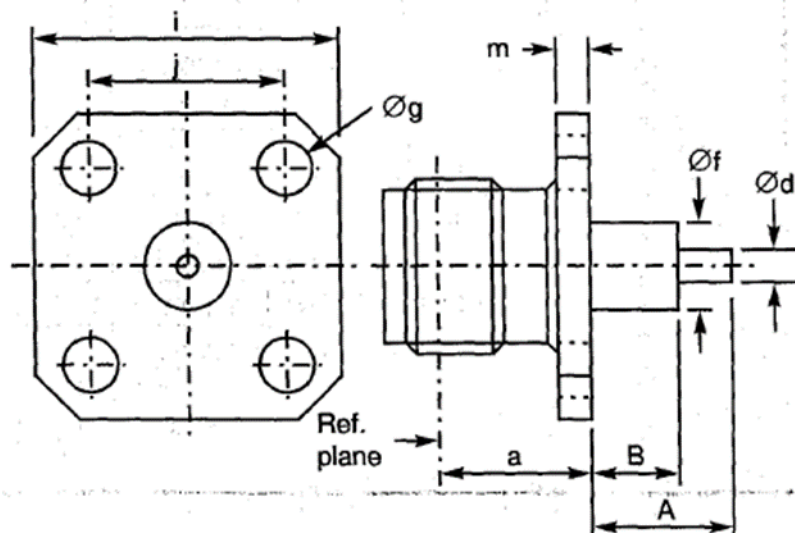
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	5.5	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.29 VARIANT 29 - SQUARE FLANGE FEMALE RECEPTACLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	-	40.1	Note 1
B	-	30	Note 1
Ød	1.25	1.3	
Øf	4	4.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.003 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dB

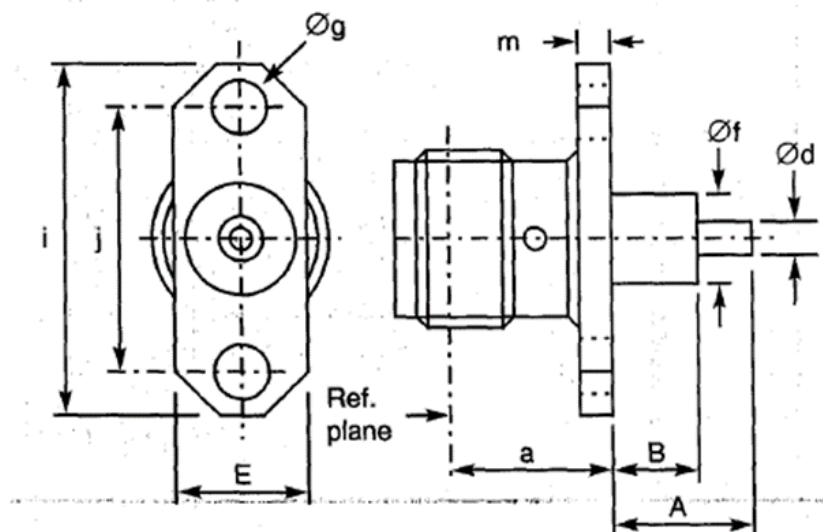
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	5	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.30 VARIANT 30 - 2-HOLE FLANGE FEMALE RECEPTACLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	-	40.1	Note 1
B	-	20	Note 1
Ød	1.25	1.3	
E	5.5	5.8	
Øf	4	4.2	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
m	1.4	1.8	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.003 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dB

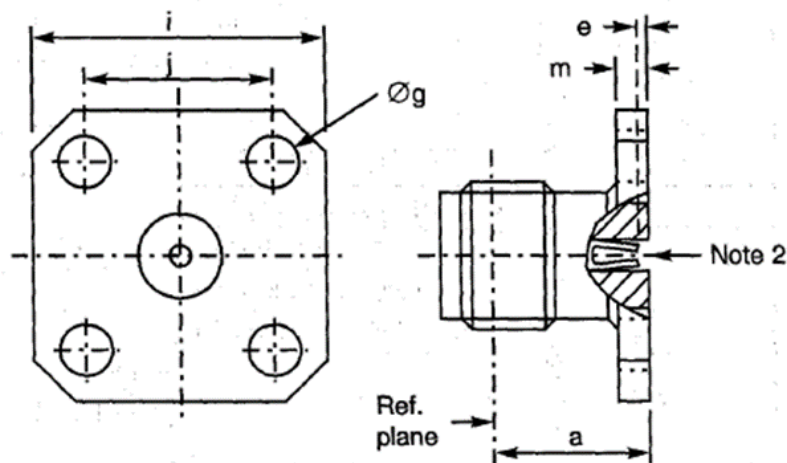
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	4	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.31 VARIANT 31 - SQUARE FLANGE FEMALE RECEPTACLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
e	0.18	0.41	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	$1.06 + 0.007 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 1)	$-95 + f$ (GHz)	dB

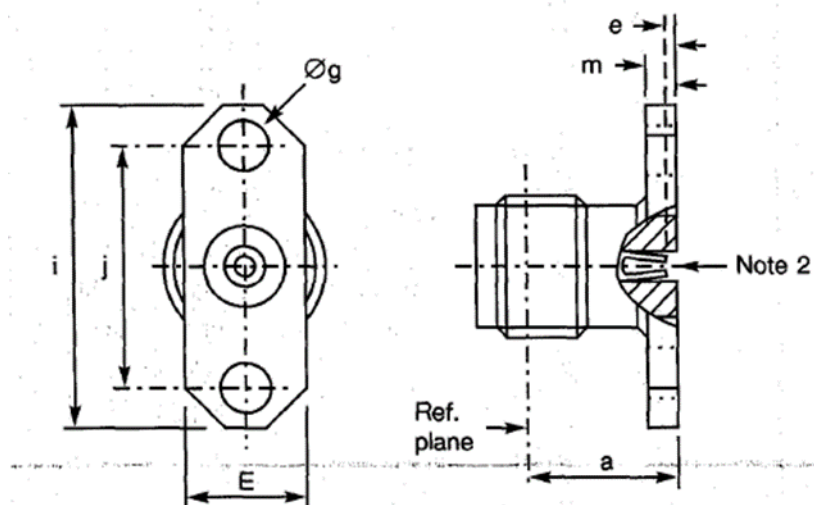
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	Not applicable	
Maximum weight	3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Contact Engagement and Separation Forces shall be measured on the rear contact (see Para. 2.3(a)).

3.32 VARIANT 32 - 2-HOLE FLANGE FEMALE RECEPTACLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
e	0.18	0.41	
E	5.5	5.8	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
m	1.4	1.8	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	$1.06 + 0.006 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 1)	$-95 + f$ (GHz)	dBi

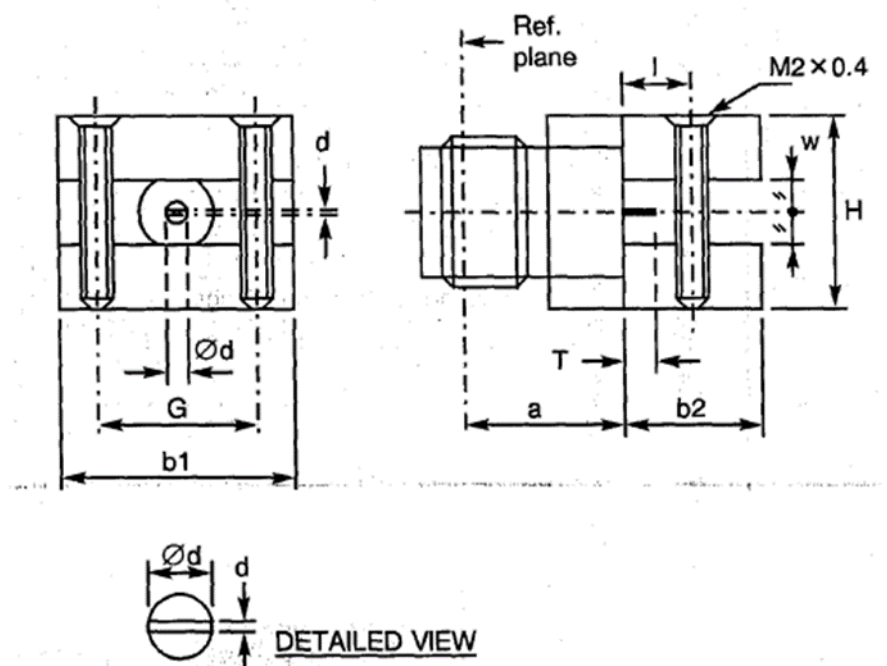
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	2.3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Contact Engagement and Separation Forces shall be measured on the rear contact (see Para. 2.3(a)).

3.33 VARIANT 34 - FLANGE FEMALE RECEPTACLE, TRIPLATE LAUNCHER



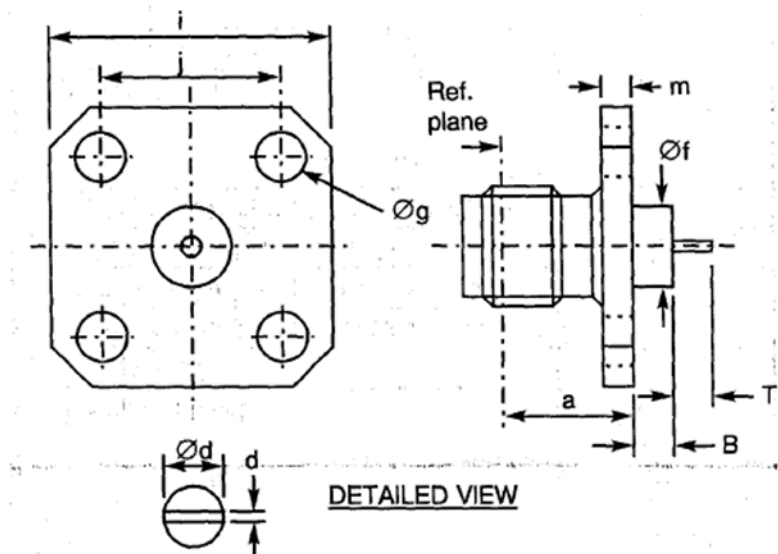
Symbol	Dimensions mm	
	Min	Max
a	7.8	8.1
b1	13.8	14.1
b2	5.60	5.85
d	0.1	0.15
Ød	1.25	1.3
G	7.45	-
H	9.35	9.85
l	2.6	2.85
T	1.8	2.6
w	-	3.17

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 4	GHz
Maximum voltage standing wave ratio (VSWR)	1.2	
Maximum insertion loss	Not applicable	
Voltage proof	750	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	15	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

3.34 VARIANT 36 - SQUARE FLANGE FEMALE RECEPTACLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
B	3.1	3.3	
d	0.1	0.35	
Ød	1.25	1.3	
Øf	4	4.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	
T	2.1	2.3	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.05 + 0.003 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	II	
RF Leakage (Note 1)	$-95 + f$ (GHz)	dBi

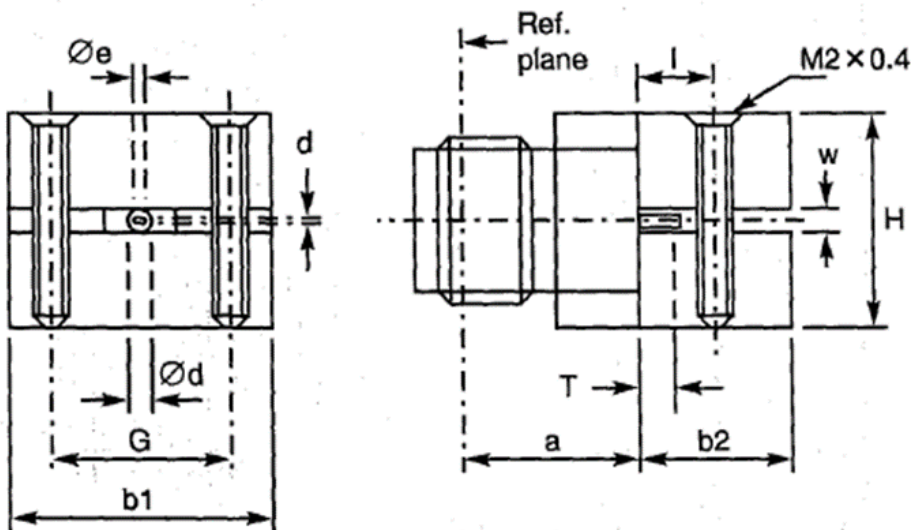
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

- For information purposes only.

3.35 VARIANT 37 - FLANGE FEMALE RECEPTACLE, TRIPLATE LAUNCHER



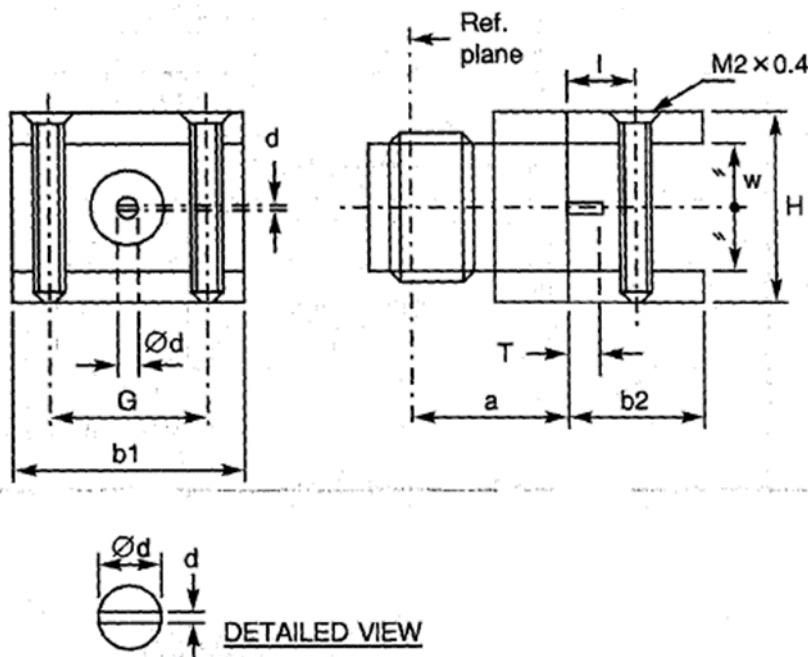
Symbol	Dimensions mm	
	Min	Max
a	7.8	8.1
b1	13.9	14.1
b2	5.6	5.85
d	0.1	0.15
Ød	1.25	1.3
Øe	0.4	0.6
G	7.45	-
H	9.35	9.85
l	2.6	2.9
T	1.8	2.6
w	1.5	1.65

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 8	GHz
Maximum voltage standing wave ratio (VSWR)	1.2	
Maximum insertion loss	Not applicable	
Voltage proof	150	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	15	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

3.36 VARIANT 38 - FLANGE FEMALE RECEPTACLE, TRIPLATE LAUNCHER



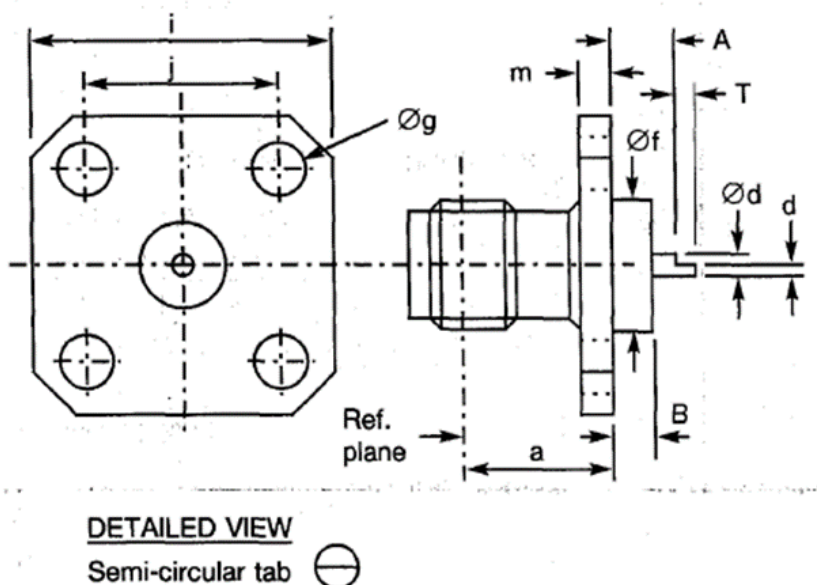
Symbol	Dimensions mm	
	Min	Max
a	7.8	8.1
b1	13.9	14.1
b2	5.6	5.85
d	0.1	0.15
Ød	-	1.3
G	7.45	-
H	9.35	9.85
I	2.7	2.9
T	2.4	2.6
w	6.3	6.4

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 2	GHz
Maximum voltage standing wave ratio (VSWR)	1.2	
Maximum insertion loss	Not applicable	
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	15	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

3.37 VARIANT 39 - SQUARE FLANGE FEMALE RECEPTACLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	0.7	0.9	
B	0.2	0.4	
d	0.59	0.65	
Ød	1.25	1.3	
Øf	4	4.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	
T	1.2	1.4	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.05 + 0.003 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 1)	$-95 + f$ (GHz)	dB

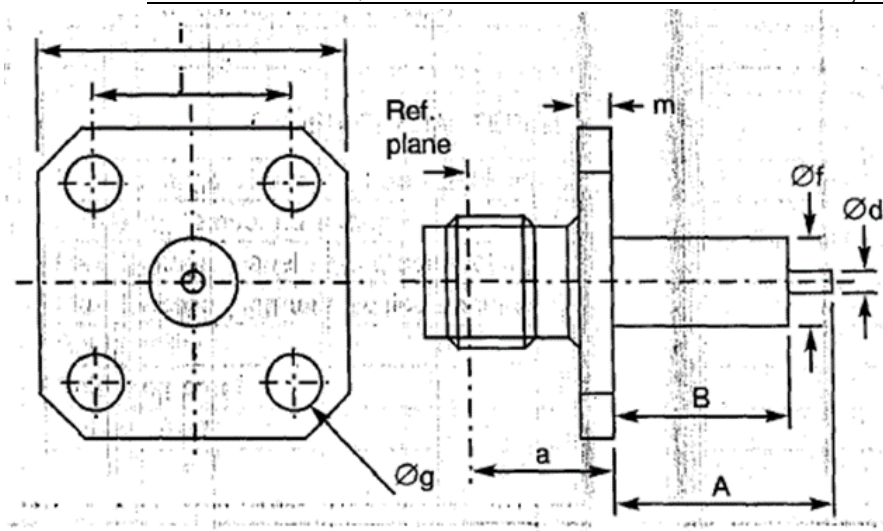
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

- For information purposes only.

3.38 VARIANT 40 - SQUARE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	-	35	Note 1
B	-	20	Note 1
Ød	1.25	1.3	
Øf	4	4.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.003 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-120 + f$ (GHz)	dB

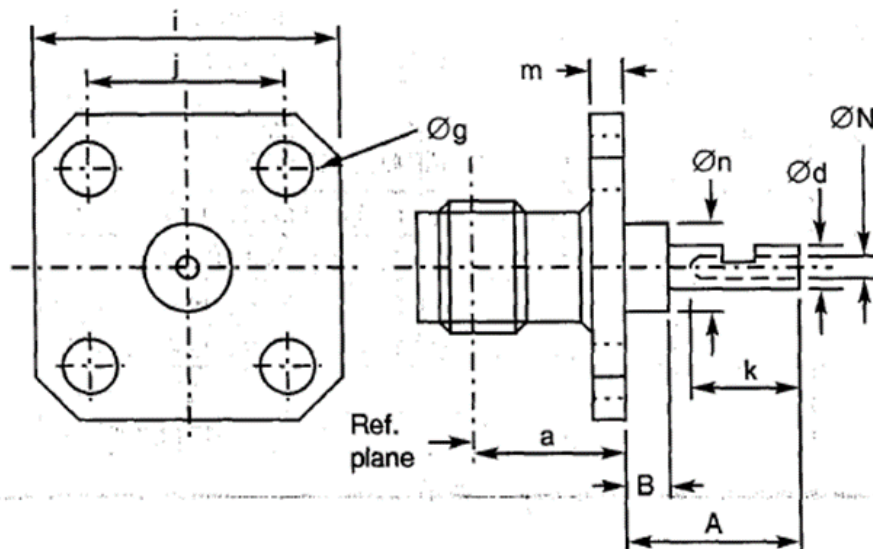
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	4	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.39 VARIANT 41 - SQUARE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE



**Solder Bucket -
Optional Shapes:**



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	6	6.2	
B	0.9	1	
Ød	1.25	1.3	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
k	2.4	-	
m	1.4	1.8	
Øn	4	4.2	
ØN	0.75	-	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.05 + 0.003 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 1)	$-120 + f$ (GHz)	dBi

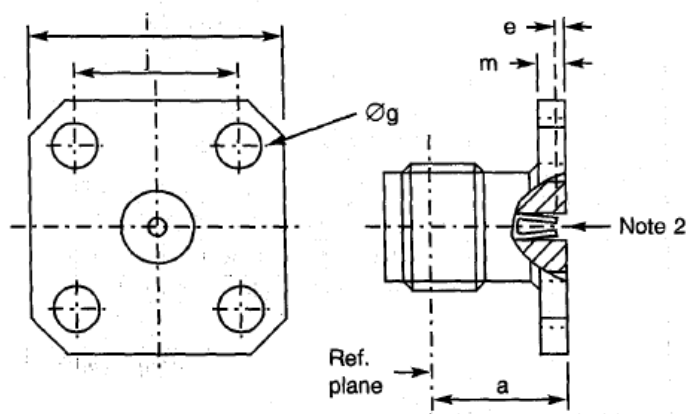
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

- For information purposes only.

3.40 VARIANT 42 - SQUARE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
e	0.18	0.41	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.06 + 0.007 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 1)	$-120 + f$ (GHz)	dB

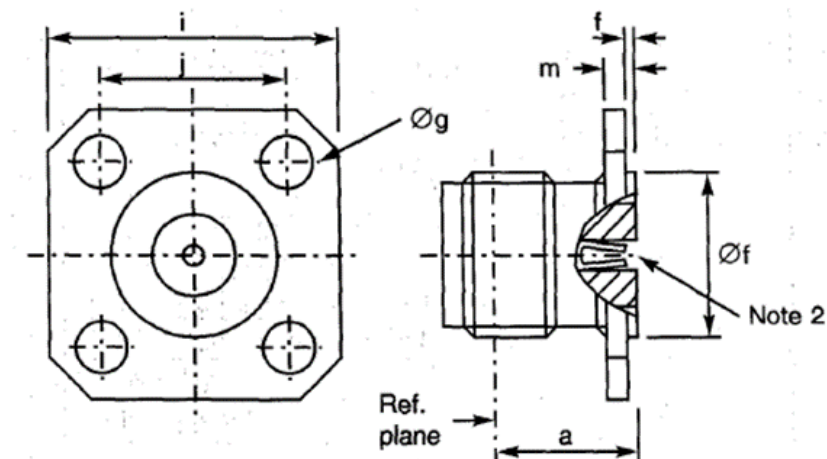
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Contact Engagement and Separation Forces shall be measured on the rear contact (see Para. 2.3(a)).

3.41 VARIANT 43 - SQUARE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
e	0.18	0.41	
f	0.3	0.5	
Øf	5.9	6.1	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	$1.06 + 0.007 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 1)	$-120 + f$ (GHz)	dB

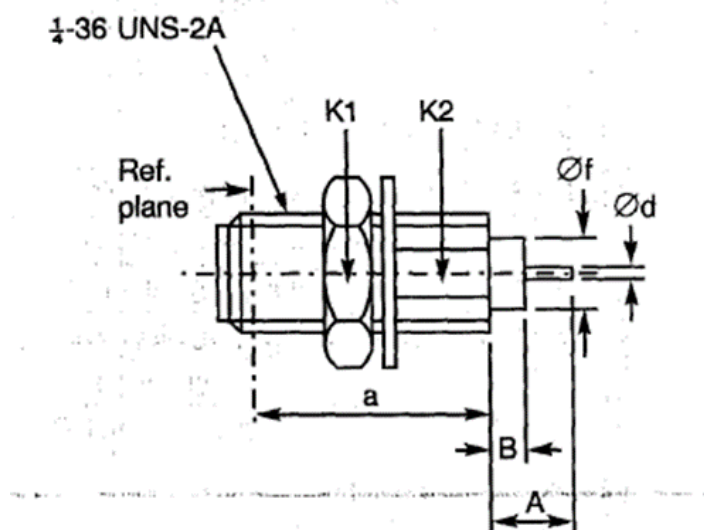
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	Not applicable	
Maximum weight	2.6	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Contact Engagement and Separation Forces shall be measured on the rear contact (see Para. 2.3(a)).

3.42 VARIANT 44 - BULKHEAD FEMALE RECEPTACLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	10.65	10.9	
A	-	40.1	Note 1
B	-	20	Note 1
Ød	1.25	1.3	
Øf	4	4.2	
K1	-	8	2 flats
K2	-	5.4	2 flats

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.06 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dBi

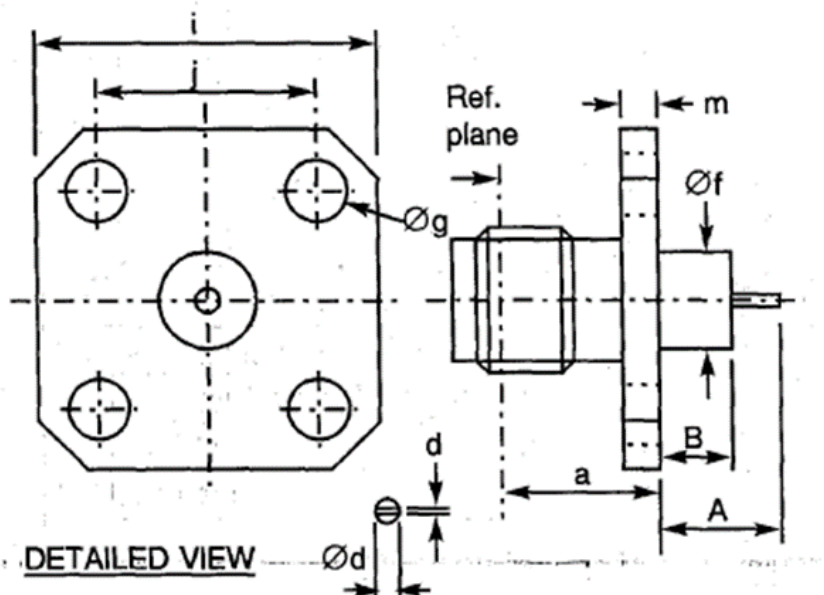
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3.6	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.43 VARIANT 45 - SQUARE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	-	35	Note 1
B	-	20	Note 1
Ød	1.25	1.3	
d	0.1	0.15	
d1	0.55	0.65	
Øf	4	4.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 12.4	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.035 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	II	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dBi

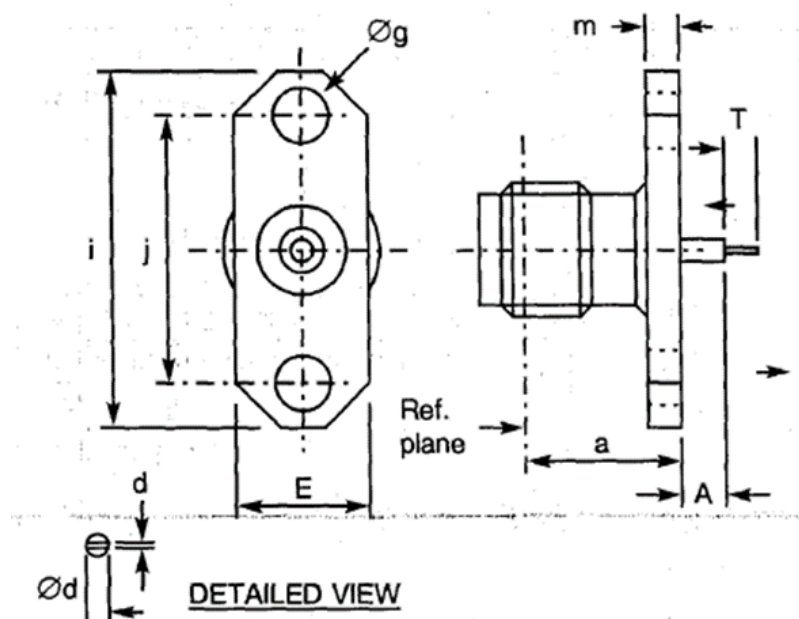
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	4	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.44 VARIANT 46 - 2-HOLE FLANGE FEMALE RECEPTACLE FOR STRIP-LINE



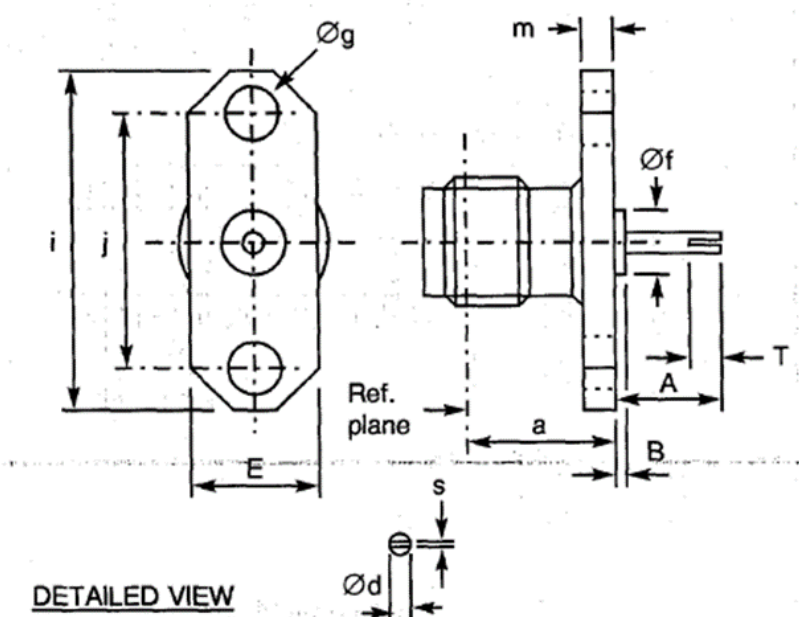
Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	2.4	2.7	
d	0.1	0.15	
Ød	1.25	1.3	
E	5.5	5.8	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
m	1.4	1.8	
T	2.4	2.65	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	Not applicable	
Maximum insertion loss	Not applicable	
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	II	

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	2.6	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

3.45 VARIANT 47 - 2-HOLE FLANGE FEMALE RECEPTACLE FOR STRIP-LINE



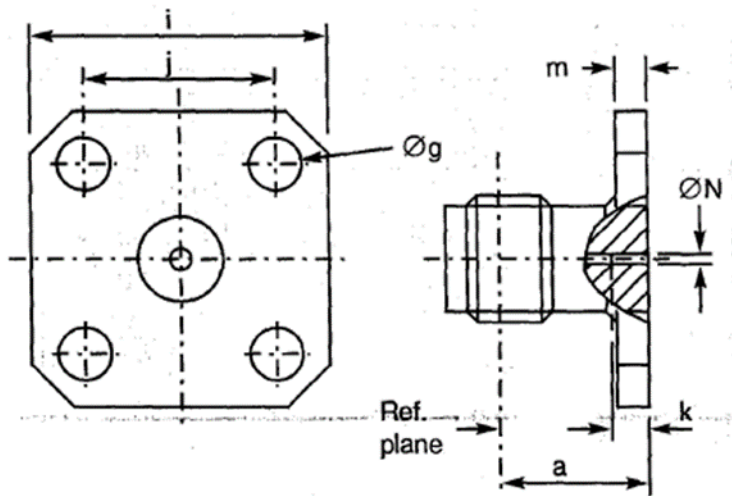
Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	6.2	6.7	
Ød	1.25	1.3	
B	0.4	0.65	
E	5.5	5.8	
Øf	4	4.2	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
m	1.4	1.8	
s	0.6	-	
T	2.4	2.65	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	Not applicable	
Maximum insertion loss	Not applicable	
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	II	

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	2.6	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

3.46 VARIANT 48 - SQUARE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP



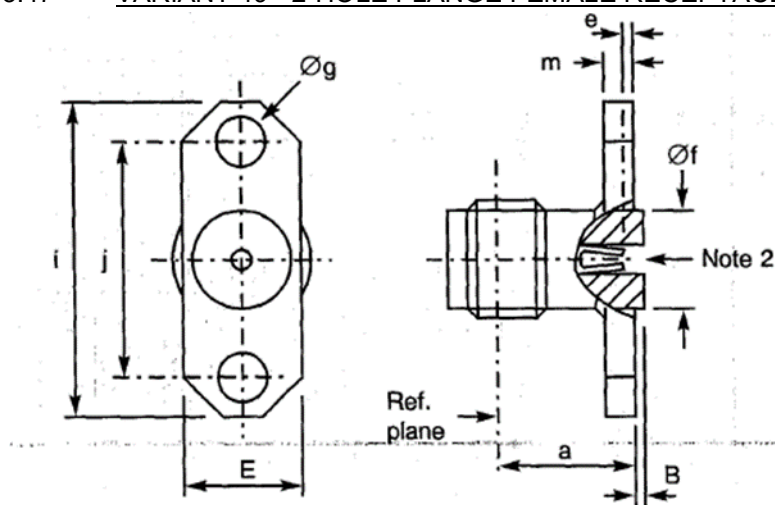
Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
k	2.3	2.7	
m	1.4	1.8	
ØN	0.7	0.9	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	Not applicable	
Maximum insertion loss	Not applicable	
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	II	

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	2.6	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

3.47 VARIANT 49 - 2-HOLE FLANGE FEMALE RECEPTACLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
B	0.15	0.25	
e	0.18	0.41	
E	5.5	5.8	
Øf	4	4.2	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
m	1.4	1.8	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.06 + 0.006 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 1)	$-95 + f$ (GHz)	dB

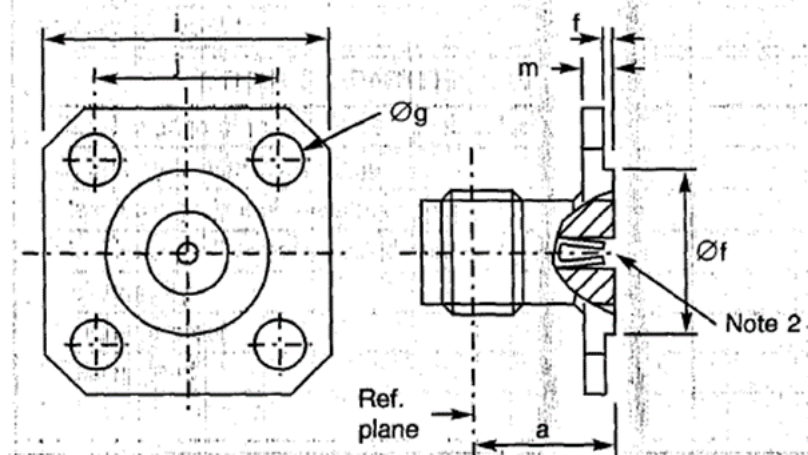
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	2	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Contact Engagement and Separation Forces shall be measured on the rear contact (see Para. 2.3(a)).

3.48 VARIANT 50 - SQUARE FLANGE FEMALE RECEPTACLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.70	
e	0.18	0.41	
f	0.3	0.5	
Øf	5.9	6.1	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.06 + 0.007 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	V _{rms}
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 1)	$-95 + f$ (GHz)	dBi

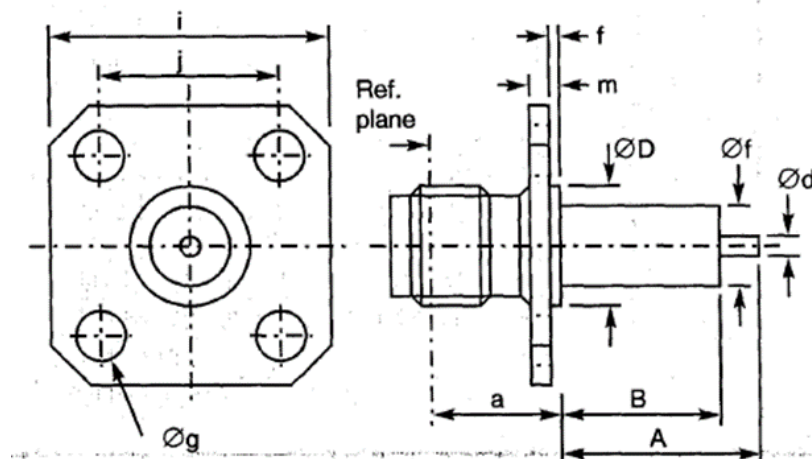
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	Not applicable	
Maximum weight	2.6	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Contact Engagement and Separation Forces shall be measured on the rear contact (see Para. 2.3(a)).

3.49 VARIANT 51 - SQUARE FLANGE FEMALE RECEPTACLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	-	40.1	Note 1
B	-	30	Note 1
Ød	1.25	1.3	
ØD	5.9	6.1	
f	0.3	0.5	
Øf	4	4.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

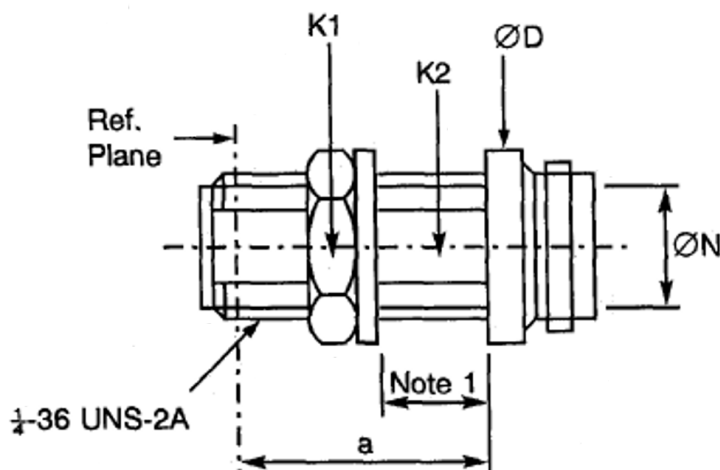
ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.003 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dB

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3.3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.50 VARIANT 53 - STRAIGHT JACK, SOLDER TYPE, FOR SHF 5 CABLE


Symbol	Dimensions mm		Notes
	Min	Max	
a	14.2	14.45	
ØD	10.9	11.1	
K1	-	8	Hexagon
K2	-	5.9	1 flat
ØN	5.9	-	

NOTES:

- Maximum panel thickness: 5.4mm
- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	1.15	
Maximum insertion loss	$0.02 + 0.06 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 3)	$-90 + f$ (GHz)	dBi

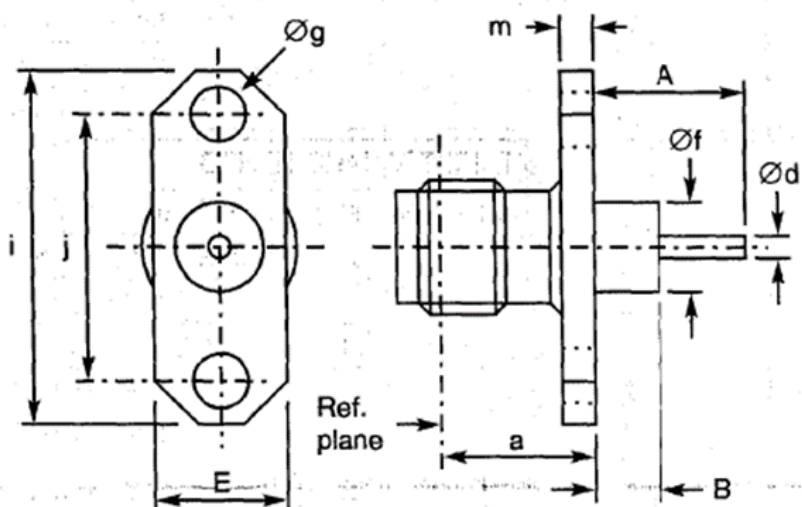
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	7	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 4)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Applicable	
Cables used (Note 4)	F 1703.245 (SHF 5MS)	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.

3.51 VARIANT 54 - 2-HOLE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	-	40.1	Note 1
B	-	20	Note 1
Ød	1.25	1.3	
E	5.5	5.8	
Øf	4	4.2	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
m	1.4	1.8	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.003 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-120 + f$ (GHz)	dB

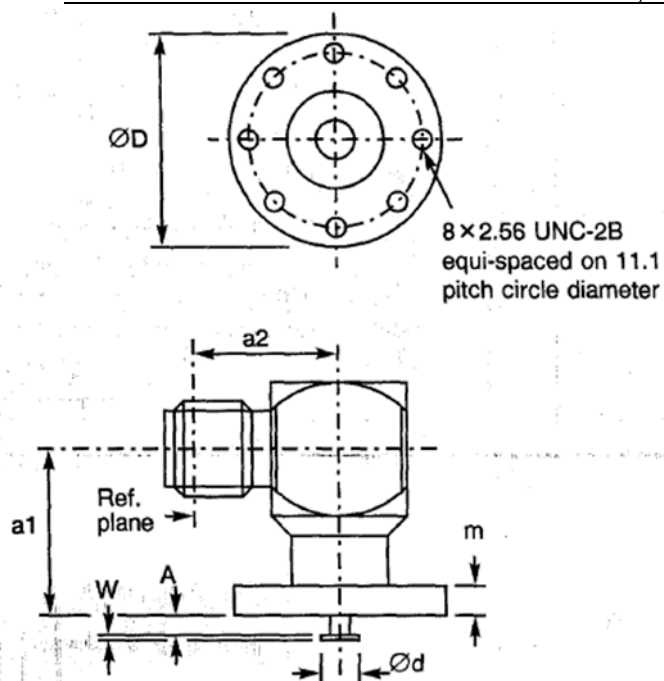
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3.3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.52 VARIANT 55 - ELBOW FEMALE RECEPTACLE, ROUND FLANGE, TRIPLATE LAUNCHER



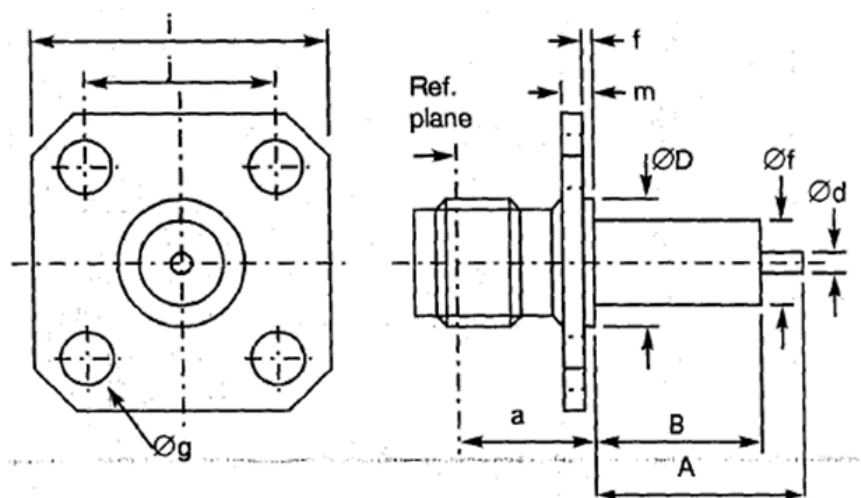
Symbol	Dimensions mm	
	Min	Max
a1	9.15	9.4
a2	9.2	9.4
A	0.94	1.7
Ød	1.7	1.9
ØD	14	14.4
m	1.95	2.3
w	0.15	0.35

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 4	GHz
Maximum voltage standing wave ratio (VSWR)	1.2	
Maximum insertion loss	Not applicable	
Voltage proof	750	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	5.8	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

3.53 VARIANT 56 - SQUARE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	-	40.1	Note 1
B	-	20	Note 1
Ød	1.25	1.5	
ØD	5.9	6.1	
f	0.3	0.4	
Øf	4	4.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.9	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.003 f \text{ (GHz)}$	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f \text{ (GHz)}}$	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-120 + f \text{ (GHz)}$	dB

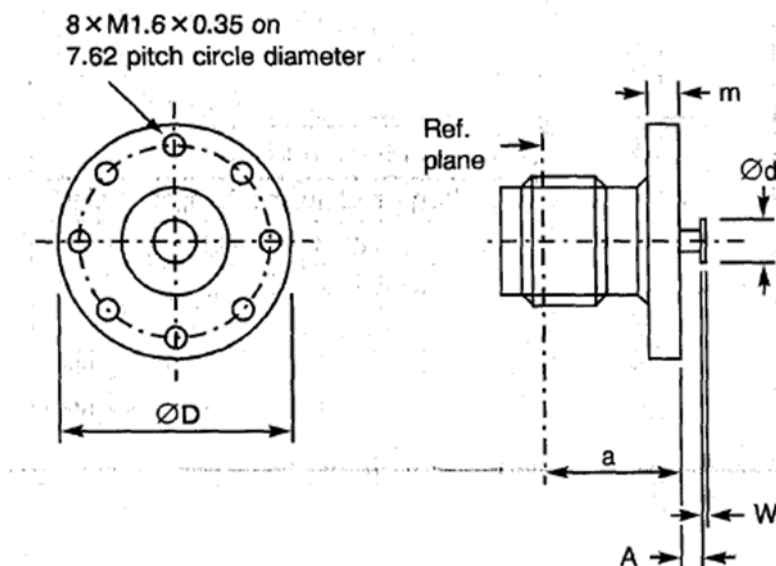
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3.3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.54 VARIANT 57 - ROUND FLANGE FEMALE RECEPTACLE, TRIPLATE LAUNCHER



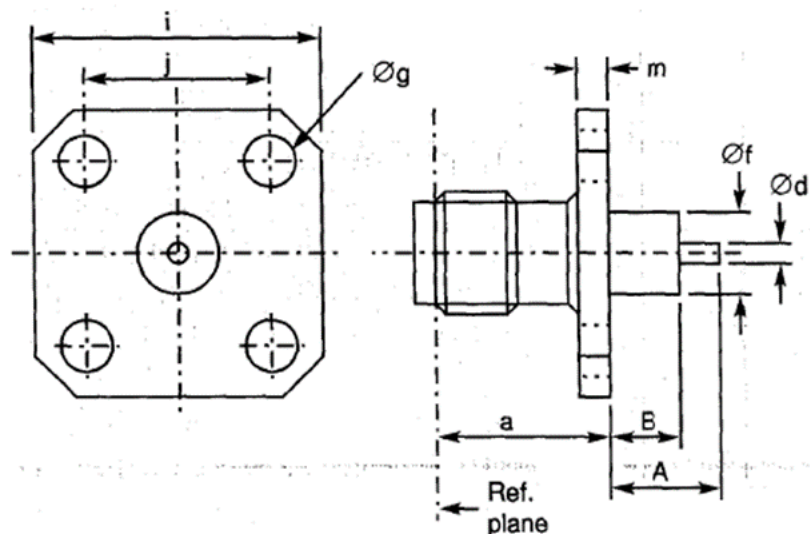
Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	3	3.4	After assembly
Ød	1.7	1.9	
ØD	10.1	10.5	
m	2.1	2.25	
W	0.2	0.3	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 2	GHz
Maximum voltage standing wave ratio (VSWR)	1.2	
Maximum insertion loss	Not applicable	
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	2.6	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

3.55 VARIANT 58 - SQUARE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	-	40.1	Note 1
B	-	20	Note 1
Ød	0.4	0.6	
Øf	4	4.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.003 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-120 + f$ (GHz)	dB

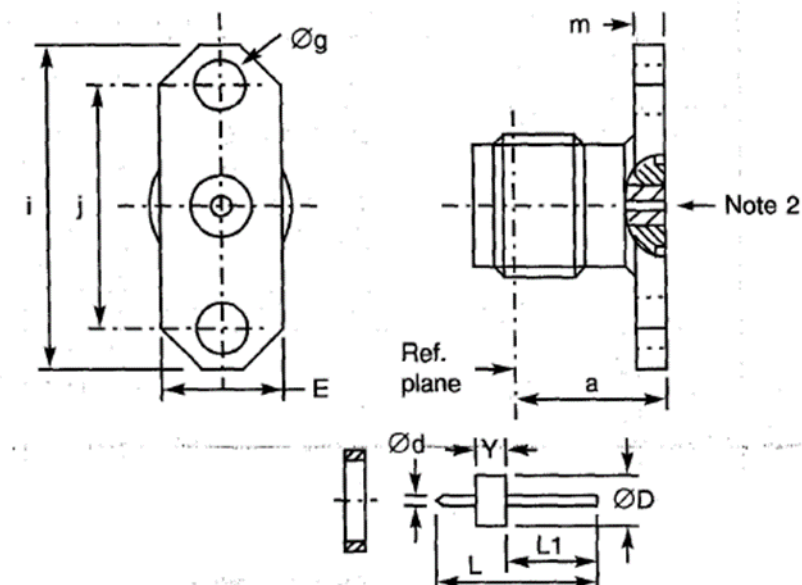
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.56 VARIANT 59 - 2-HOLE FLANGE FEMALE RECEPTACLE, WITH HERMETIC GLASS SEAL Ø0.46mm AND EMI GASKET



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
Ød	-	0.47	
ØD	-	2.86	
E	5.41	5.91	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
L	7.8	8.2	
L1	4.45	4.7	
m	1.4	1.8	
Y	1.55	1.65	

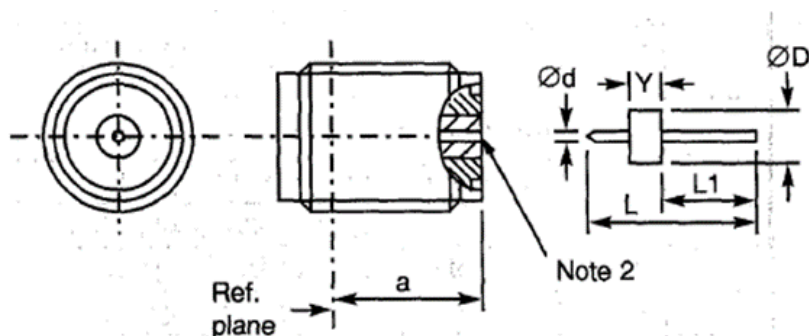
ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.06 + 0.01 f \text{ (GHz)}$	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f \text{ (GHz)}}$	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 1)	$-70 + f \text{ (GHz)}$	dB

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	Not applicable	
Maximum weight	2.1	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	10^{-8} (hermetic glass seal only)	atm.cm ³ /s
Solderability	On hermetic glass seal only	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Accept contact Ø0.46mm.

3.57 VARIANT 60 - BULKHEAD FEMALE RECEPTACLE, WITH HERMETIC GLASS SEAL Ø0.3mm


Symbol	Dimensions mm	
	Min	Max
a	7.05	8.05
Ød	-	0.31
ØD	-	2.53
L	7.8	8.2
L1	4.45	4.7
Y	1.55	1.65

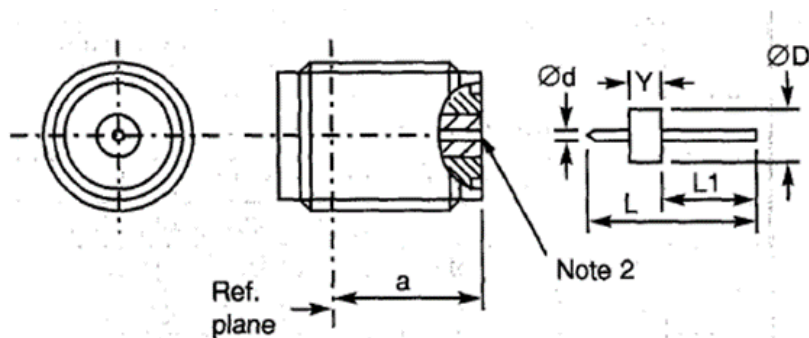
ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.06 + 0.01 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 1)	$-70 + f$ (GHz)	dBi

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	Not applicable	
Maximum weight	1.7	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	10^{-8} (hermetic glass seal only)	atm.cm ³ /s
Solderability	On hermetic glass seal only	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Accept contact Ø0.3mm.

3.58 VARIANT 61 - BULKHEAD FEMALE RECEPTACLE, WITH HERMETIC GLASS SEAL Ø0.46mm


Symbol	Dimensions mm	
	Min	Max
a	7.05	8.05
Ød	-	0.47
ØD	-	2.86
L	7.8	8.2
L1	4.45	4.7
Y	1.55	1.65

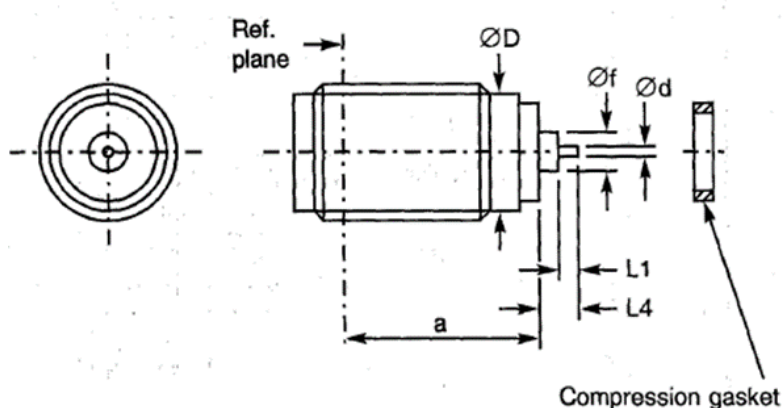
ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.06 + 0.01 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 1)	$-70 + f$ (GHz)	dBi

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	Not applicable	
Maximum weight	1.7	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	10^{-8} (hermetic glass seal only)	atm.cm ³ /s
Solderability	On hermetic glass seal only	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Accept contact Ø0.46mm.

3.59 VARIANT 62 - HERMETIC BULKHEAD FEMALE RECEPTACLE, WITH COMPRESSION GASKET


Symbol	Dimensions mm	
	Min	Max
a	9.05	10.05
Ød	-	0.51
ØD	5.3	5.4
L	-	1.67
L1	0.62	1.25
L4	1.72	2.25

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.06 + 0.01 f \text{ (GHz)}$	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f \text{ (GHz)}}$	dB
Voltage proof	1000	V _{rms}
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 1)	$-70 + f \text{ (GHz)}$	dBi

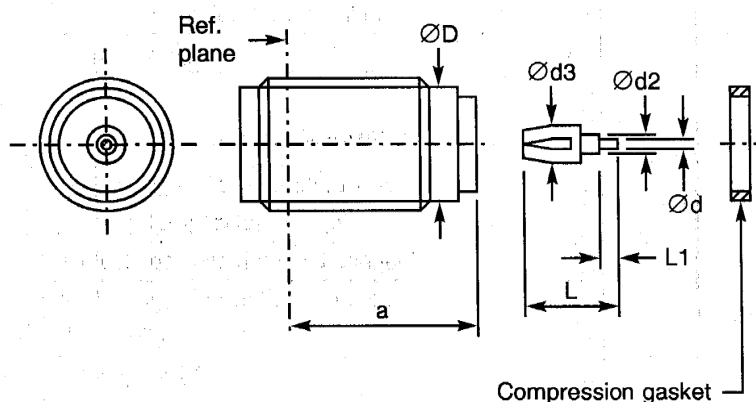
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	Not applicable	
Maximum weight	2	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	10^{-8}	atm.cm ³ /s
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

- For information purposes only.

3.60 VARIANT 63 - HERMETIC BULKHEAD FEMALE RECEPTACLE, WITH COMPRESSION GASKET



Symbol	Dimensions mm	
	Min	Max
a	9.05	10.05
Ød	0.45	0.55
Ød2	0.65	0.95
Ød3	1.3	1.5
ØD	5.3	5.4
L	-	4.25
L1	0.7	-

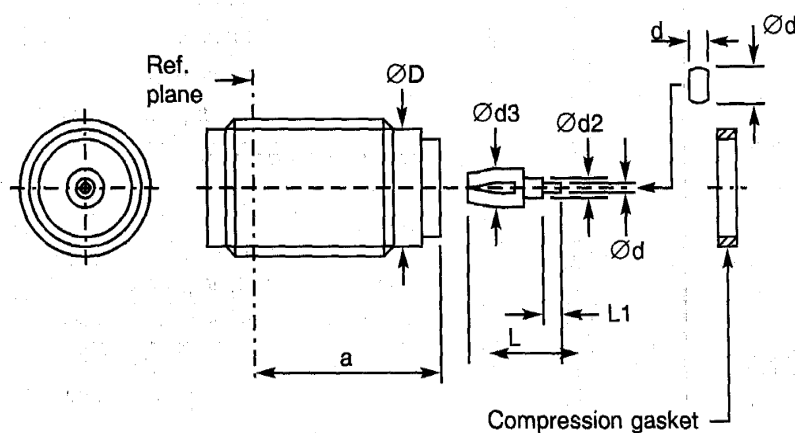
ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.06 + 0.01 f \text{ (GHz)}$	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f \text{ (GHz)}}$	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 1)	$-70 + f \text{ (GHz)}$	dBi

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	Not applicable	
Maximum weight	2	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	10^{-8}	atm.cm ³ /s
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

1. For information purposes only.

3.61 VARIANT 64 - HERMETIC BULKHEAD FEMALE RECEPTACLE, WITH COMPRESSION GASKET


Symbol	Dimensions mm	
	Min	Max
a	9.05	10.05
d	0.1	0.2
Ød	0.45	0.55
Ød2	0.7	0.8
Ød3	1.3	1.5
ØD	5.3	5.4
L	-	4.25
L1	0.7	-

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	$1.06 + 0.01 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 1)	$-70 + f$ (GHz)	dBi

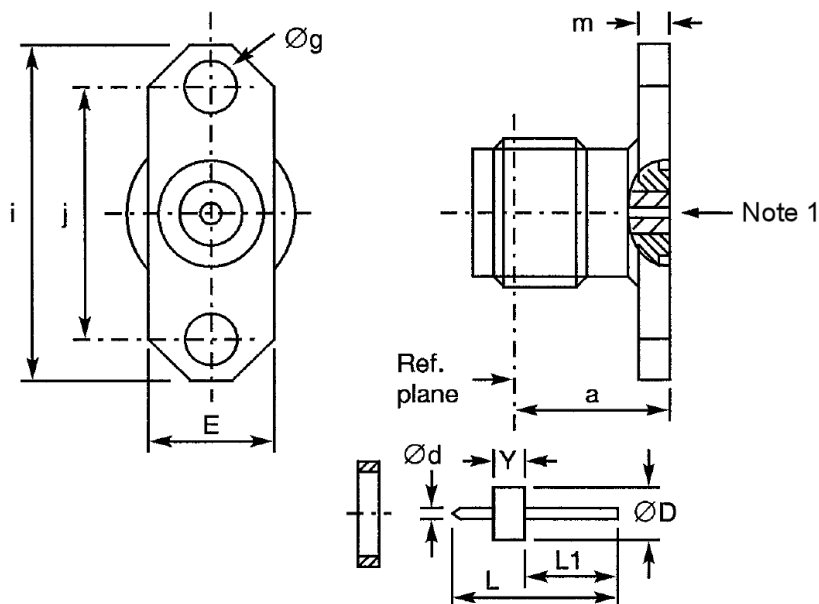
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	Not applicable	
Maximum weight	2	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	10^{-8}	atm.cm ³ /s
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

- For information purposes only.

3.62 VARIANT 65 - 2-HOLE FLANGE FEMALE RECEPTACLE, WITH HERMETIC GLASS SEAL Ø0.3mm AND EMI GASKET



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.65	
Ød	-	0.31	
ØD	-	2.53	
E	5.41	5.91	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
L	7.8	8.2	
L1	4.45	4.7	
m	1.4	1.8	
Y	1.55	1.65	

NOTES:

1. Accept contact Ø0.3mm.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	$1.06 + 0.01 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	V _{rms}
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 2)	$-70 + f$ (GHz)	dBi

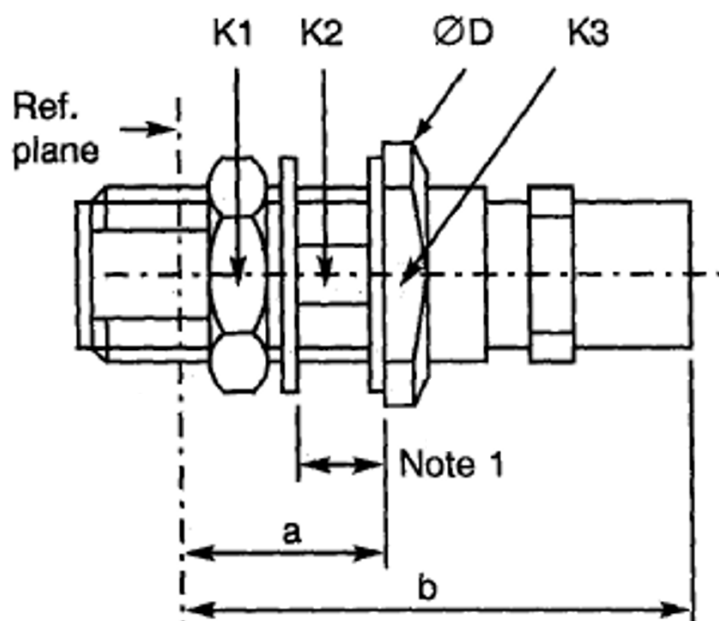
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	Not applicable	
Maximum weight	2.1	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	10^{-7} (hermetic glass seal only)	atm.cm ³ /s
Solderability	On hermetic glass seal only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.63 VARIANT 66 - BULKHEAD JACK, SOLDER-TYPE, FOR SHF 3 CABLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	10.4	10.8	
b	25.05	27.1	
ØD	11.8	12.2	
K1	-	8	Hexagon
K2	-	5.9	1 flat
K3	-	11	2 flats

NOTES:

- Maximum panel thickness: 2.3mm
- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 17	GHz
Maximum voltage standing wave ratio (VSWR)	1.15	
Maximum insertion loss	$0.02 + 0.06 \sqrt{f}$ (GHz)	dB
Voltage proof	750	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 3)	$-90 + f$ (GHz)	dB

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	7	g

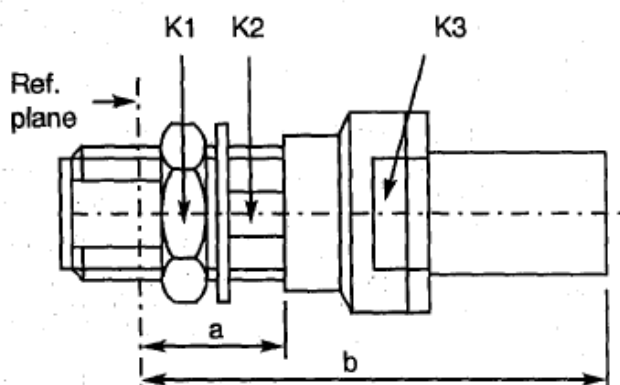
OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 4)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Applicable	
Cables used (Note 4)	F1703.163 (SHF 3MS)	

NOTES:

- For information purposes only.

4. In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.

3.64 VARIANT 67 - BULKHEAD JACK, SOLDER-TYPE, FOR SHF 8 CABLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	11.8	12.2	
b	40.85	42.4	
K1	-	8	Hexagon
K2	-	5.9	1 flat
K3	-	13	2 flats

NOTES:

1. Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	1.15	
Maximum insertion loss	$0.02 + 0.06 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-90 + f$ (GHz)	dB

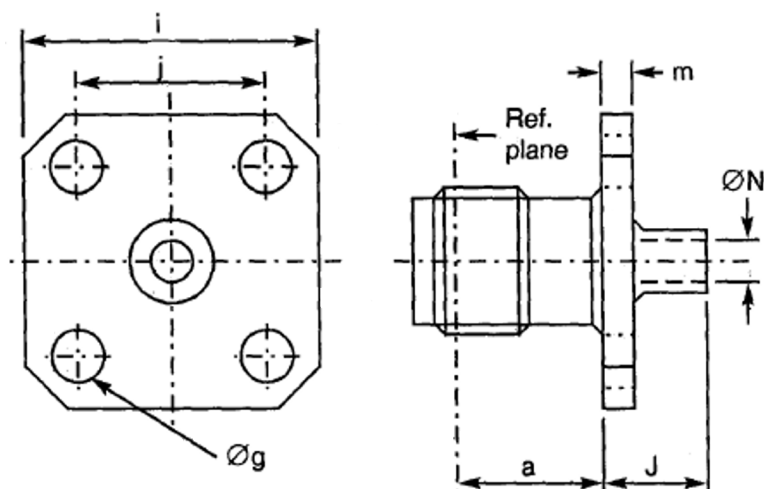
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	25.3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 3)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Applicable	
Cables used (Note 3)	F1703.248 (SHF 8MS)	

NOTES:

2. For information purposes only.
3. In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.

3.65 VARIANT 68 – SQUARE FLANGE FEMALE RECEPTACLE, SOLDER-TYPE, BACK MOUNTING, FOR SEMI-RIGID CABLE Ø2.2mm (0.085")



Symbol	Dimensions mm		Notes
	Min	Max	
a	5.87	6.12	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
J	4.6	5	
m	1.4	1.8	
ØN	2.25	2.35	

NOTES:

- Maximum panel thickness: 2.3mm.
- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	$1.1 + 0.01 f \text{ (GHz)}$	
Maximum insertion loss	$0.02 + 0.02 \sqrt{f \text{ (GHz)}}$	dB
Voltage proof	750	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 3)	$-100 + f \text{ (GHz)}$	dBi

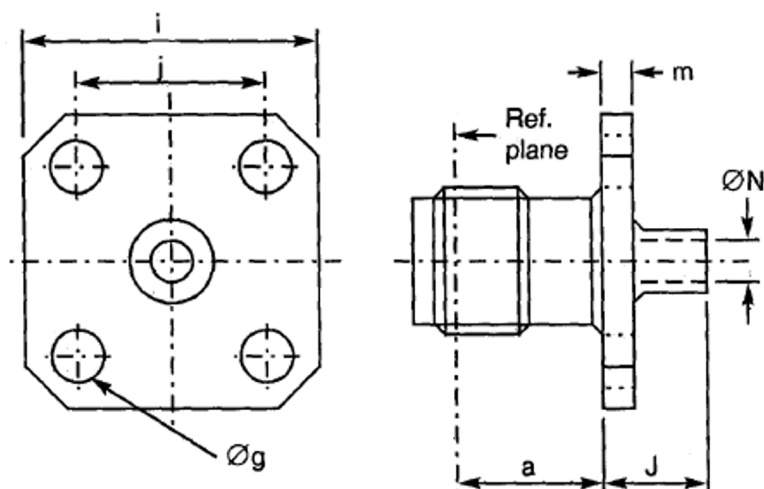
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	4	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 3)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Applicable	
Cables used (Note 3)	KS 1, RG 405/U (Ø2.2mm)	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.

3.66 **VARIANT 69 – SQUARE FLANGE FEMALE RECEPTACLE, SOLDER-TYPE, BACK MOUNTING, FOR SEMI-RIGID CABLE Ø3.58mm (0.141")**



Symbol	Dimensions mm		Notes
	Min	Max	
a	5.87	6.12	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
J	4.6	5	
m	1.4	1.8	
ØN	3.65	3.75	

NOTES:

- Maximum panel thickness: 2.3mm.
- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	$1.05 + 0.04 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.02 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 3)	$-100 + f$ (GHz)	dBi

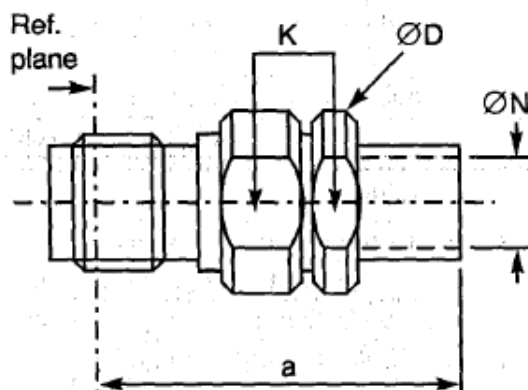
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	Not applicable	
Minimum centre contact retention torque	Not applicable	
Maximum weight	4	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 4)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Applicable	
Cables used (Note 4)	KS 2, RG 402/U (Ø3.58mm)	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.

3.67 VARIANT 70 - STRAIGHT JACK, CRIMP-TYPE, FOR 50 CIS CABLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	22.7	24.15	
ØD	7.5	7.9	
K	-	7	2 flats
ØN	2	2.2	

NOTES:

- Maximum panel thickness: 2.3mm.
- Components are delivered with the centre contact and insulator not mounted in the connector.

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 12.4 (Note 3)	GHz
Maximum voltage standing wave ratio (VSWR)	$1.05 + 0.015 f$ (GHz)	
Maximum insertion loss	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	750	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 3)	$-95 + f$ (GHz)	dB

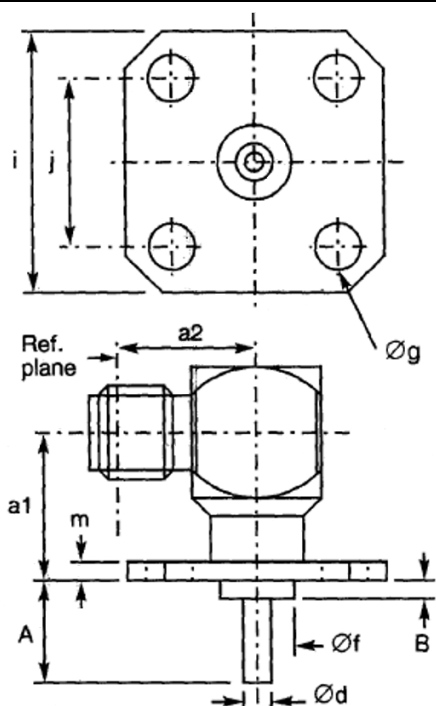
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	0.5	N.cm
Maximum weight	4.5	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range (Note 4)	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used (Notes 4, 5)	50 CIS	

NOTES:

- For information purposes only.
- In use, the maximum operating and storage temperature ratings shall be limited by the related maximum ratings of the particular cable used.
- The test frequency shall be limited by the applicable cable maximum frequency.

3.68 VARIANT 71 - ELBOW FEMALE RECEPTACLE, SQUARE FLANGE (SOLID CONTACT)



Symbol	Dimensions mm		Notes
	Min	Max	
a1	7.9	8.1	
a2	9.2	9.4	
A	-	25	Note 1
B	-	20	Note 1
Ød	1.25	1.3	
Øf	4	4.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.01 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dBi

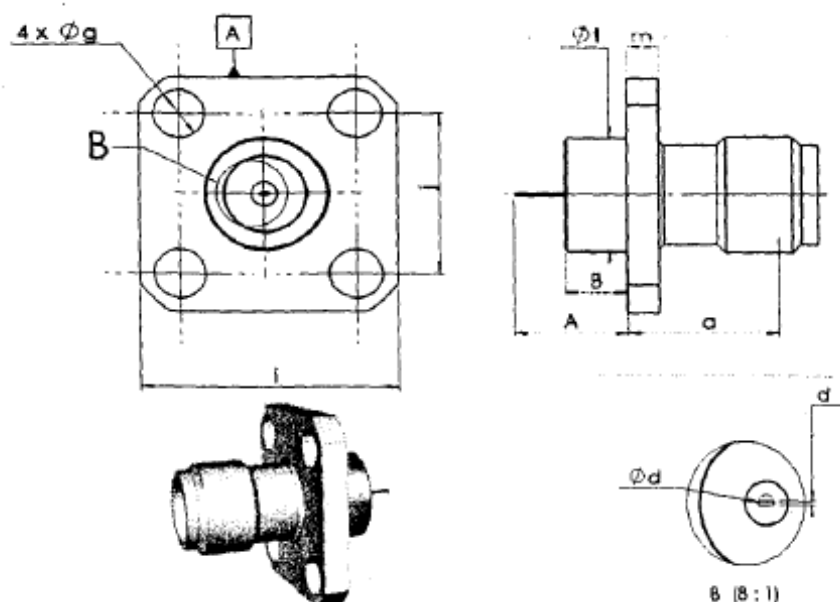
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	5.5	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.69 VARIANT 72 - SQUARE FLANGE FEMALE RECEPTACLE TAB CONTACT, LOW RF LEAKAGE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	5.7	5.9	
B	3.13	3.32	
d	0.11	0.15	Tab Thickness
Ød	0.45	0.55	
Øf	6.05	6.15	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.1 + 0.001 f$ (GHz)	
Maximum voltage standing wave ratio (VSWR) (Notes 1, 2)	$1.05 + 0.005 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.05 \sqrt{f}$ (GHz)	dB
Maximum insertion loss (Notes 1, 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	II	
RF Leakage (Note 1)	$-120 + f$ (GHz)	dB

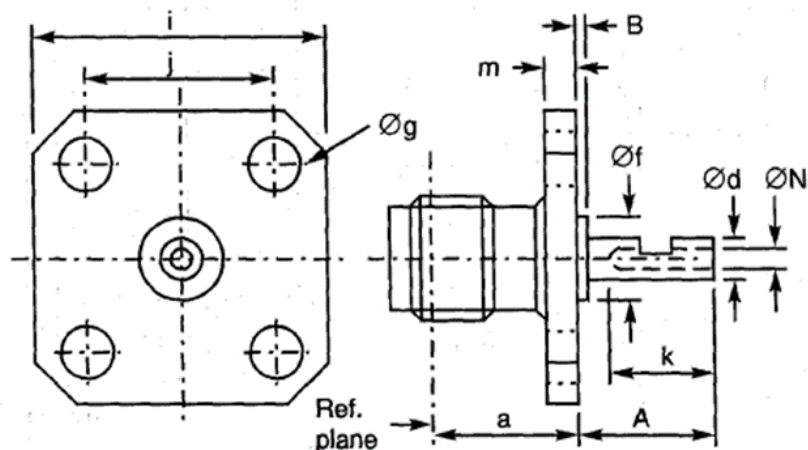
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3.5	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +105	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Between 0 and 5 GHz only.

3.70 VARIANT 73 - SQUARE FLANGE FEMALE RECEPTACLE, FRONT MOUNTING



**Solder Bucket -
Optional Shapes:**



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A		35	Note 1
B	-	20	Note 1
Ød	1.24	1.3	
Øf	4	4.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
k	2.4	-	
m	1.4	1.8	
ØN	0.7	1	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.003 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dB

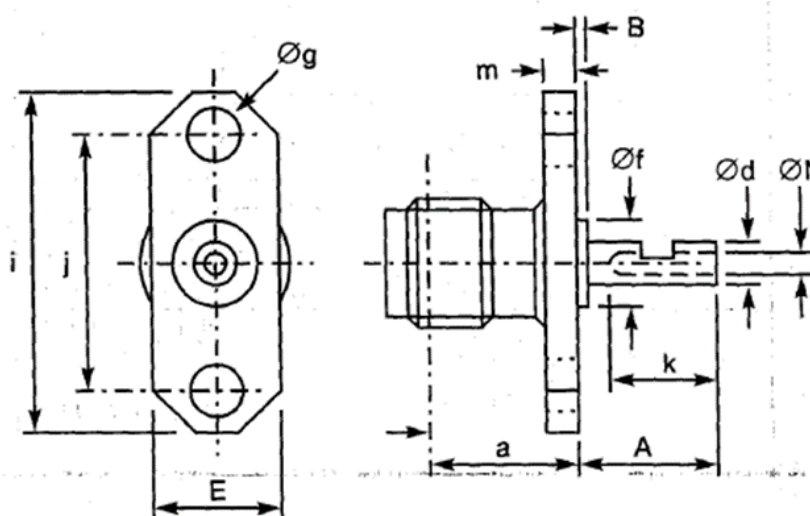
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3.3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.71 VARIANT 74 - 2-HOLE FLANGE FEMALE RECEPTACLE, FRONT MOUNTING



**Solder Bucket -
Optional Shapes:**



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	-	35	Note 1
B	-	20	Note 1
Ød	1.24	1.3	
E	5.5	5.8	
Øf	4	4.2	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
k	2.4	-	
m	1.4	1.8	
ØN	0.7	1	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.003 f \text{ (GHz)}$	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f \text{ (GHz)}}$	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-95 + f \text{ (GHz)}$	dB

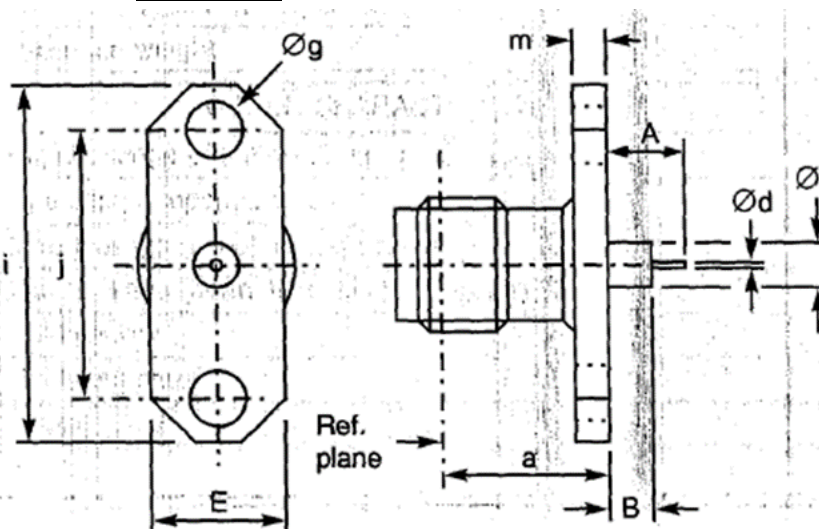
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.72 VARIANT 75 - 2-HOLE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP, FRONT MOUNTING



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	4.5	5	
B	3.05	3.3	
Ød	0.2	0.3	
E	5.5	5.8	
Øf	2.1	2.2	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
m	1.4	1.8	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 12.4	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.04 + 0.018 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03\sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	II	
RF Leakage (Note 1)	$-95 + f$ (GHz)	dB

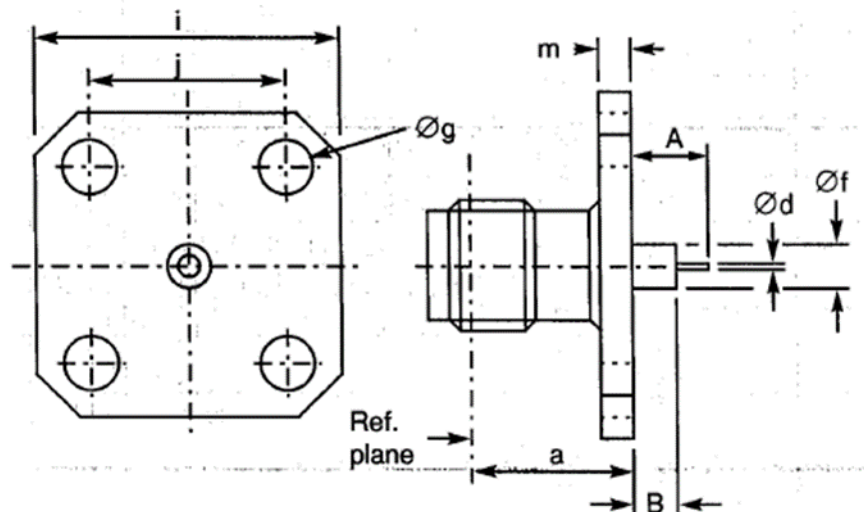
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	2.3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

- For information purposes only.

3.73 VARIANT 76 - SQUARE FLANGE FEMALE RECEPTACLE FOR MICRO-STRIP, FRONT MOUNTING



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	4.6	4.9	
B	3.05	3.3	
Ød	0.2	0.3	
Øf	2.1	2.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 12.4	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.04 + 0.018 f \text{ (GHz)}$	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f \text{ (GHz)}}$	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	II	
RF Leakage (Note 1)	$-95 + f \text{ (GHz)}$	dBi

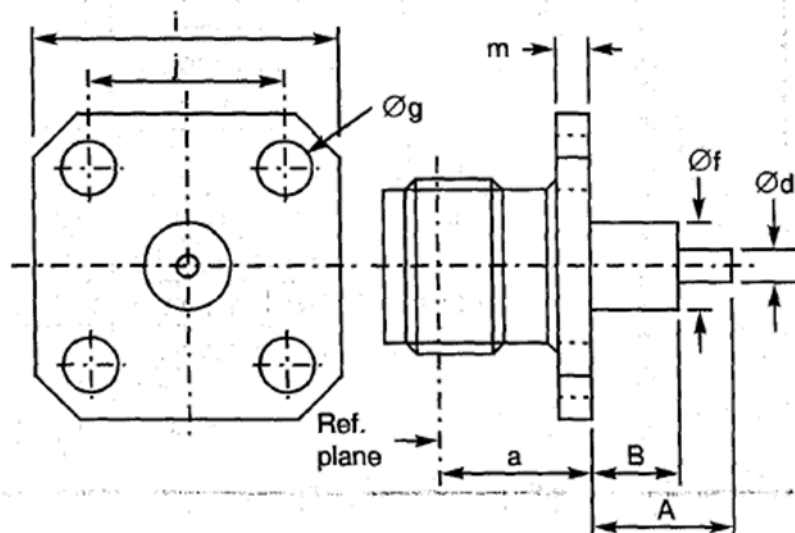
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3.2	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

- For information purposes only.

3.74 VARIANT 77 - SQUARE FLANGE FEMALE RECEPTACLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	-	40.1	Note 1
B	-	30	Note 1
Ød	1.25	1.3	
Øf	4	4.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.003 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dB

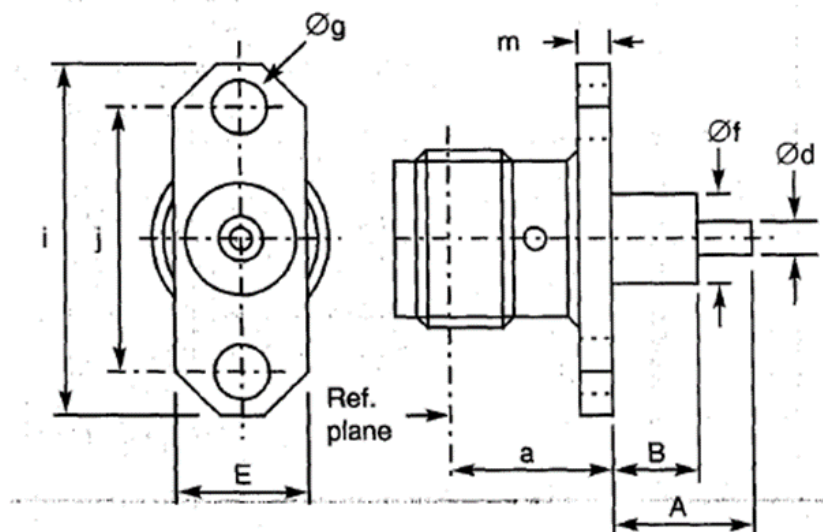
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	5	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.75 VARIANT 78 - 2-HOLE FLANGE FEMALE RECEPTACLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	-	40.1	Note 1
B	-	20	Note 1
Ød	1.25	1.3	
E	5.5	5.8	
Øf	4	4.2	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
m	1.4	1.8	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.003 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dB

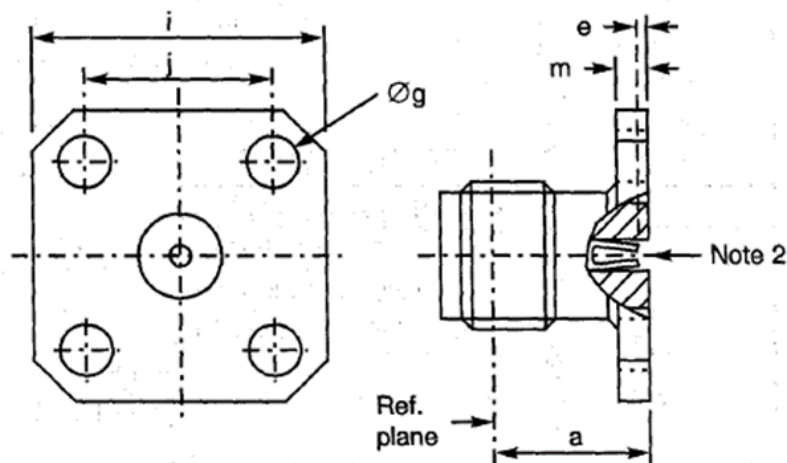
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	4	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.76 VARIANT 79 - SQUARE FLANGE FEMALE RECEPTACLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
e	0.18	0.41	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	$1.06 + 0.007 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 1)	$-95 + f$ (GHz)	dBi

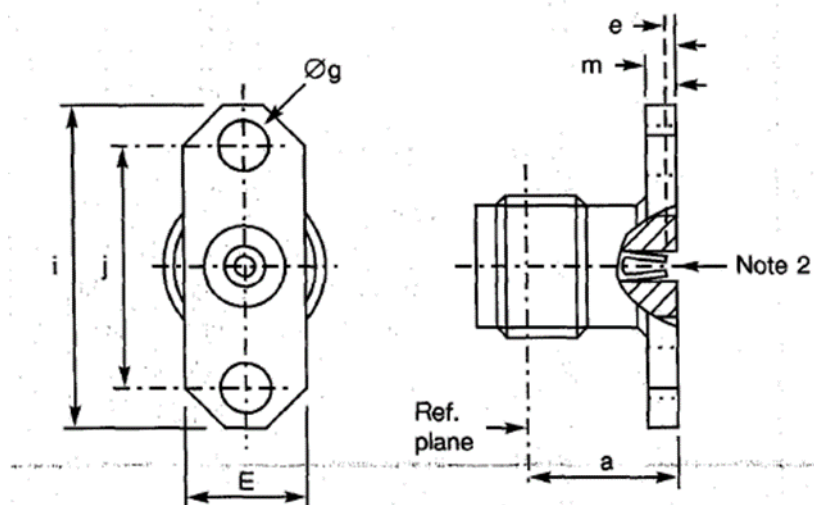
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	Not applicable	
Maximum weight	3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Contact Engagement and Separation Forces shall be measured on the rear contact (see Para. 2.3(a)).

3.77 VARIANT 80 - 2-HOLE FLANGE FEMALE RECEPTACLE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
e	0.18	0.41	
E	5.5	5.8	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
m	1.4	1.8	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR)	$1.06 + 0.006 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 1)	$-95 + f$ (GHz)	dBi

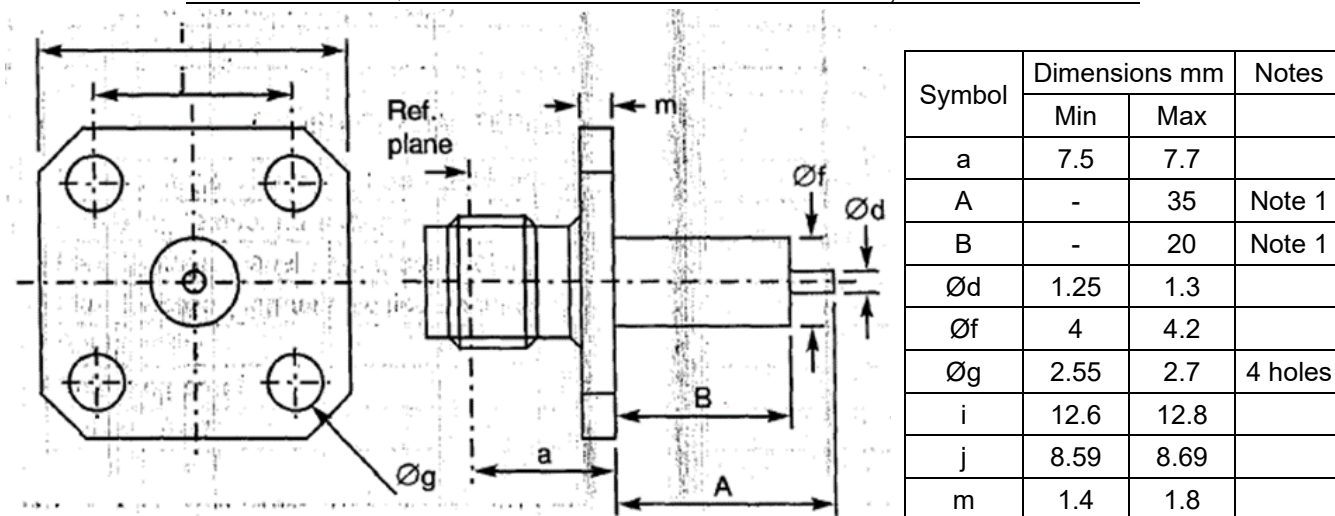
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	2.3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Contact Engagement and Separation Forces shall be measured on the rear contact (see Para. 2.3(a)).

3.78 VARIANT 81 - SQUARE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE



NOTES:

- Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.003 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-120 + f$ (GHz)	dBi

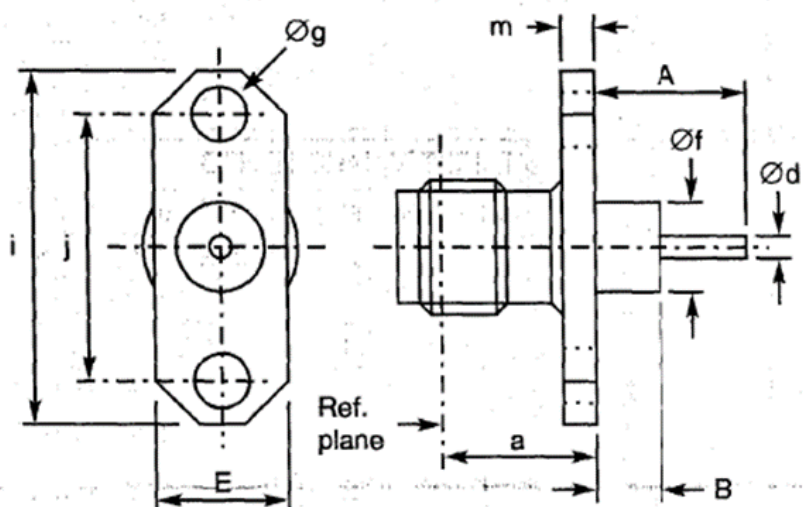
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	4	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

- For information purposes only.

3.79 VARIANT 82 - 2-HOLE FLANGE FEMALE RECEPTACLE, LOW RF LEAKAGE



Symbol	Dimensions mm		Notes
	Min	Max	
a	7.5	7.7	
A	-	40.1	Note 1
B	-	20	Note 1
Ød	1.25	1.3	
E	5.5	5.8	
Øf	4	4.2	
Øg	2.55	2.7	2 holes
i	15.9	16.1	
j	12.1	12.3	
m	1.4	1.8	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

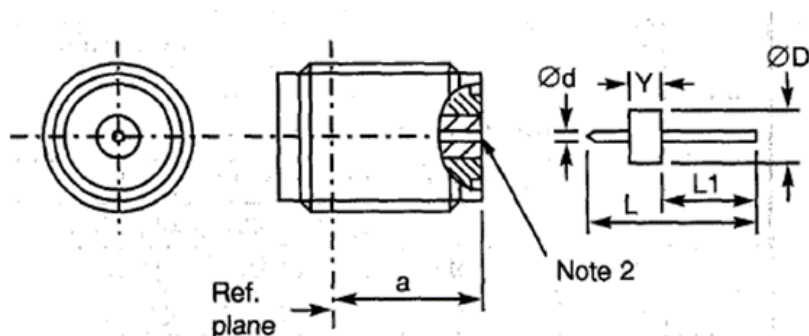
ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.003 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-120 + f$ (GHz)	dB

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	3.3	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.80 VARIANT 83 - BULKHEAD FEMALE RECEPTACLE, WITH HERMETIC GLASS SEAL Ø0.3mm


Symbol	Dimensions mm	
	Min	Max
a	7.05	8.05
Ød	-	0.31
ØD	-	2.53
L	7.8	8.2
L1	4.45	4.7
Y	1.55	1.65

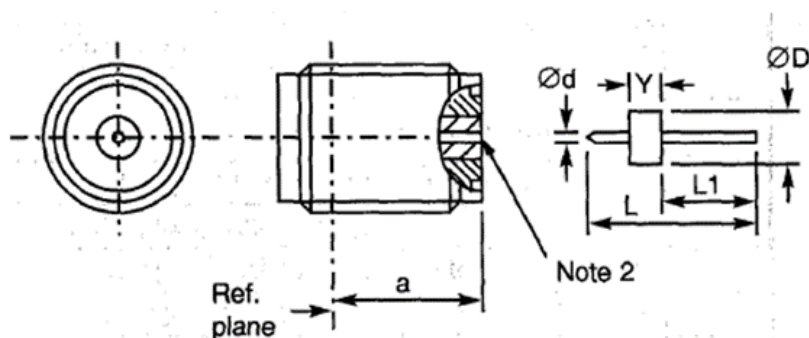
ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.06 + 0.01 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 1)	$-70 + f$ (GHz)	dBi

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	Not applicable	
Maximum weight	1.7	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	10^{-8} (hermetic glass seal only)	atm.cm ³ /s
Solderability	On hermetic glass seal only	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Accept contact Ø0.3mm.

3.81 VARIANT 84 - BULKHEAD FEMALE RECEPTACLE, WITH HERMETIC GLASS SEAL Ø0.46mm


Symbol	Dimensions mm	
	Min	Max
a	7.05	8.05
Ød	-	0.47
ØD	-	2.86
L	7.8	8.2
L1	4.45	4.7
Y	1.55	1.65

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 1)	$1.06 + 0.01 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	I	
RF Leakage (Note 1)	$-70 + f$ (GHz)	dBi

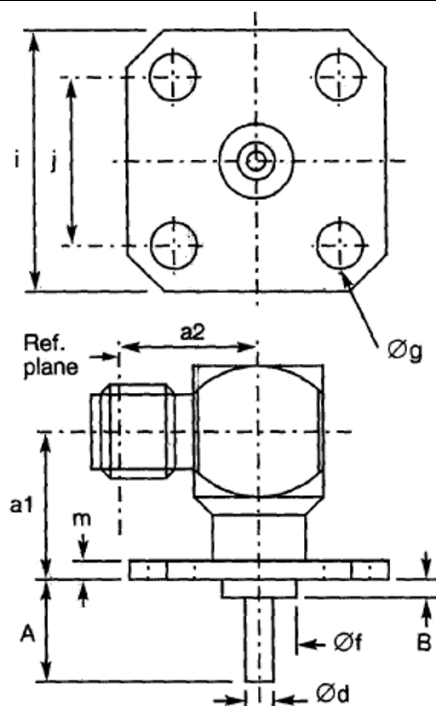
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	Not applicable	
Maximum weight	1.7	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	10^{-8} (hermetic glass seal only)	atm.cm ³ /s
Solderability	On hermetic glass seal only	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Accept contact Ø0.46mm.

3.82 VARIANT 85 - ELBOW FEMALE RECEPTACLE, SQUARE FLANGE (SOLID CONTACT)



Symbol	Dimensions mm		Notes
	Min	Max	
a1	7.9	8.1	
a2	9.2	9.4	
A	-	25	Note 1
B	-	20	Note 1
Ød	1.25	1.3	
Øf	4	4.2	
Øg	2.55	2.7	4 holes
i	12.6	12.8	
j	8.59	8.69	
m	1.4	1.8	

NOTES:

1. Contact and Insert dimensions A and B shall be selected by the Orderer; see Para. 1.4.1(b).

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 18	GHz
Maximum voltage standing wave ratio (VSWR) (Note 2)	$1.05 + 0.01 f$ (GHz)	
Maximum insertion loss (Note 2)	$0.02 + 0.03 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 2)	$-95 + f$ (GHz)	dBi

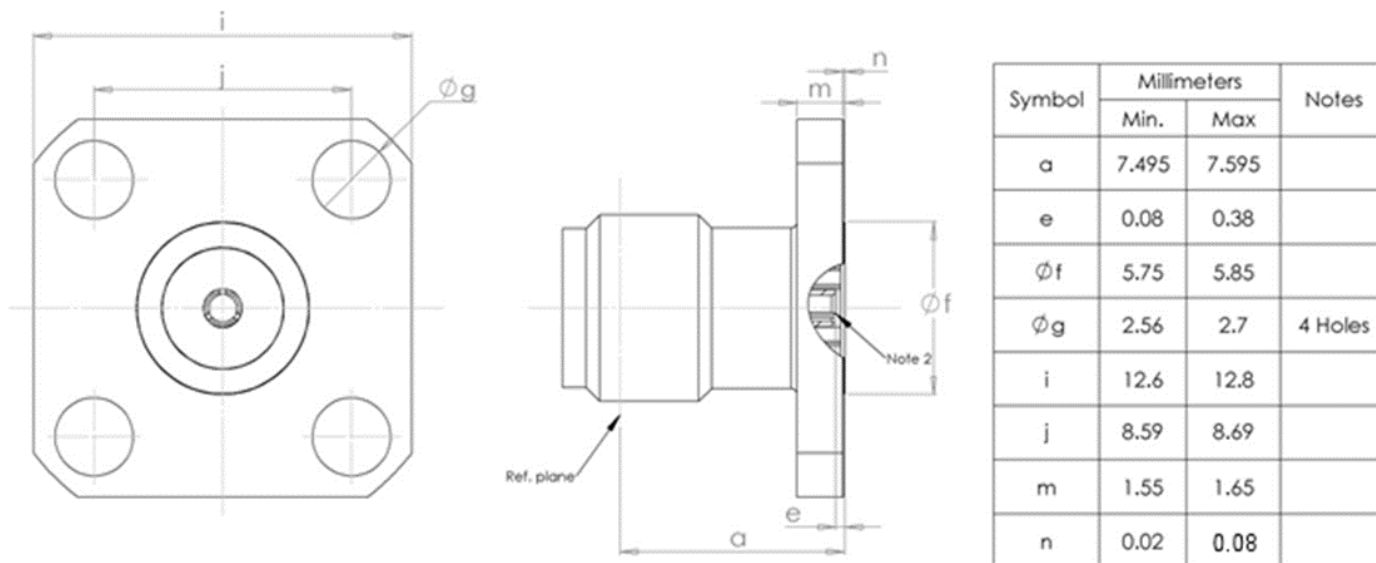
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	2.8	N.cm
Maximum weight	5.5	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	On centre contact only	
Cables used	Not applicable	

NOTES:

2. For information purposes only.

3.83 VARIANT 86 - SQUARE FLANGE FEMALE RECEPTACLE, LOW VSWR, EXTENDED FREQUENCY RANGE



ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 22	GHz
Maximum voltage standing wave ratio (VSWR)	$1.05 + 0.0027 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.02 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 1)	$-120 + f$ (GHz)	dB

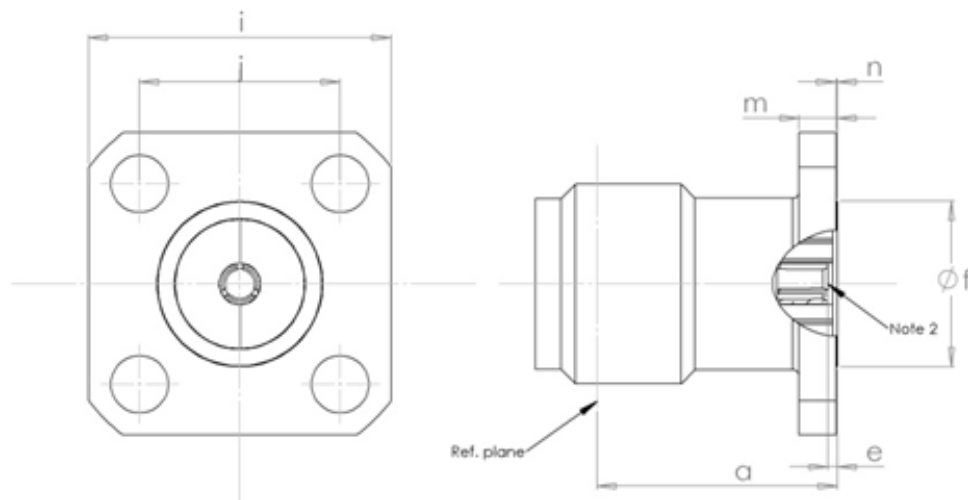
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	< 0.2	N.cm
Maximum weight	2.8	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Contact Engagement and Separation Forces shall be measured on the rear contact (see Para. 2.3(a)).

3.84 VARIANT 87 - SQUARE FLANGE FEMALE RECEPTACLE, LOW VSWR, EXTENDED FREQUENCY RANGE



Symbol	Millimeters		Notes
	Min.	Max	
a	7.495	7.595	
e	0.08	0.38	
ϕf	5.15	5.25	
ϕg	1.8	1.9	4 Holes
i	9.45	9.55	
j	6.25	6.35	
m	1.15	1.25	
n	0.02	0.08	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 22	GHz
Maximum voltage standing wave ratio (VSWR)	$1.05 + 0.0027 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.02 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 1)	$-120 + f$ (GHz)	dB

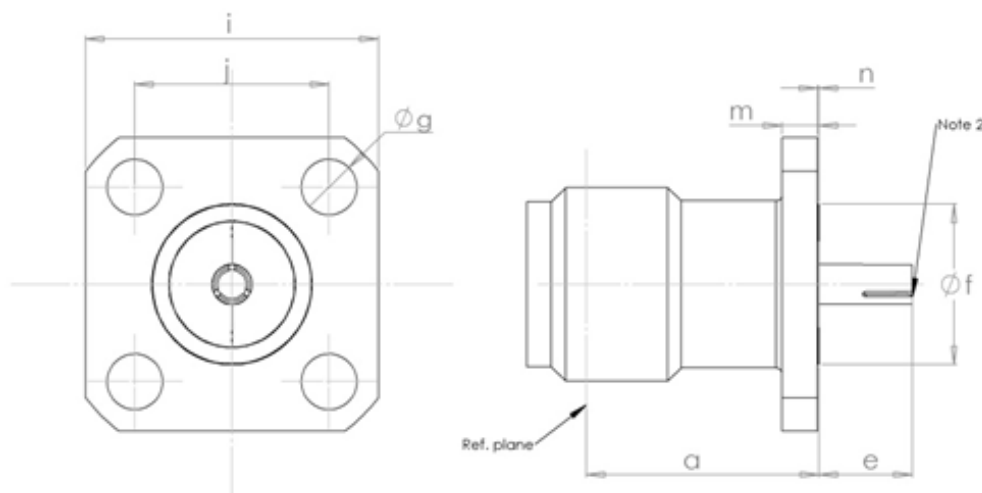
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	< 0.2	N.cm
Maximum weight	1.8	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Contact Engagement and Separation Forces shall be measured on the rear contact (see Para. 2.3(a)).

3.85 VARIANT 88 - SQUARE FLANGE FEMALE RECEPTACLE, LOW VSWR, EXTENDED FREQUENCY RANGE



Symbol	Millimeters		Notes
	Min.	Max	
a	7.495	7.595	
e	2.95	3.27	
Øf	5.15	5.25	
Øg	1.8	1.9	4 Holes
i	9.45	9.55	
j	6.25	6.35	
m	1.15	1.25	
n	0.02	0.08	

ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 22	GHz
Maximum voltage standing wave ratio (VSWR)	$1.05 + 0.0027 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.02 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 1)	$-120 + f$ (GHz)	dB

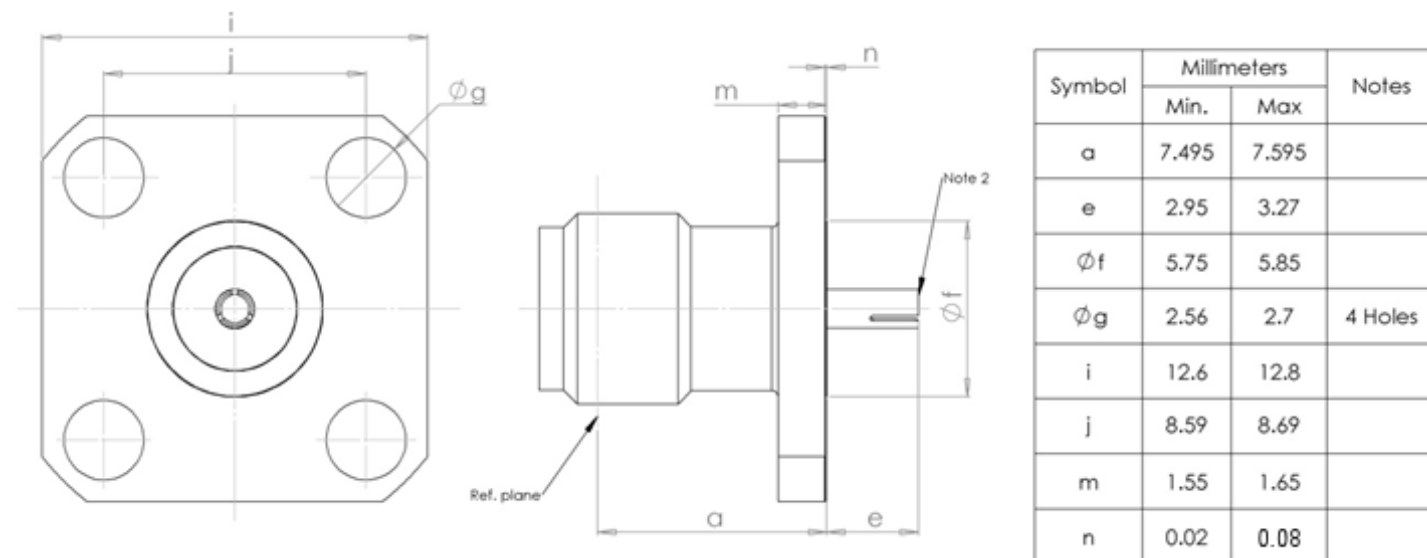
MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	< 0.2	N.cm
Maximum weight	1.8	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Contact Engagement and Separation Forces shall be measured on the rear contact (see Para. 2.3(a)).

3.86 VARIANT 89 - SQUARE FLANGE FEMALE RECEPTACLE, LOW VSWR, EXTENDED FREQUENCY RANGE



ELECTRICAL CHARACTERISTICS	VALUES	UNITS
Frequency range	0 to 22	GHz
Maximum voltage standing wave ratio (VSWR)	$1.05 + 0.0027 f$ (GHz)	
Maximum insertion loss (Note 1)	$0.02 + 0.02 \sqrt{f}$ (GHz)	dB
Voltage proof	1000	Vrms
Power Handling Category (see Para. 1.5 Note 1)	III	
RF Leakage (Note 1)	$-120 + f$ (GHz)	dB

MECHANICAL CHARACTERISTICS	VALUES	UNITS
Minimum centre contact retention force (axial)	27	N
Minimum centre contact retention torque	< 0.2	N.cm
Maximum weight	1.8	g

OTHER CHARACTERISTICS	VALUES	UNITS
Operating temperature range	-65 to +165	°C
Seal: Maximum leakage	Not applicable	
Solderability	Not applicable	
Cables used	Not applicable	

NOTES:

- For information purposes only.
- Contact Engagement and Separation Forces shall be measured on the rear contact (see Para. 2.3(a)).

APPENDIX A
AGREED DEVIATIONS FOR RADIAL (F)

ITEMS AFFECTED	DESCRIPTION OF DEVIATIONS
Para. 1.4.1, The ESCC Component Number	The ESCC Component Number may include the additional Manufacturer's code 'B' as indicated in the following examples: (a) For components with a fixed configuration: Example: 340200201<u>B</u>2 (b) For components with a variable configuration: Example: 340200215<u>B</u>213D00W02D50C

APPENDIX B
AGREED DEVIATIONS FOR ROSENBERGER (D)

ITEMS AFFECTED	DESCRIPTION OF DEVIATIONS
Para. 1.4.1, The ESCC Component Number	The ESCC Component Number may include the additional Manufacturer's code 'B' as indicated in the following examples: (c) For components with a fixed configuration: Example: 340200201<u>B</u>2 (d) For components with a variable configuration: Example: 340200215<u>B</u>213D00W02D50C