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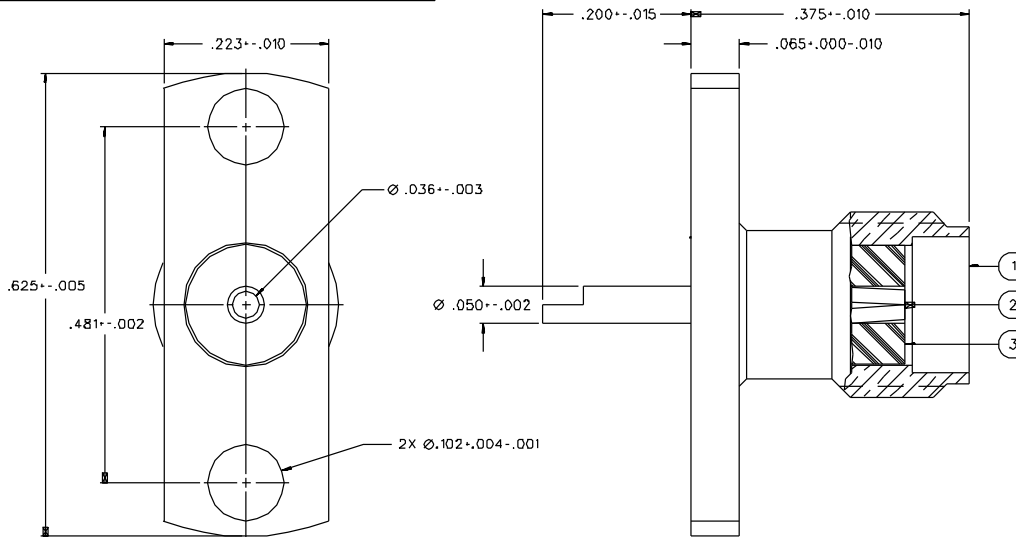
Product Detail



Product Line:	Johnson (Click for customer service)
Part Number:	142-0701-621
Description:	SMA 2 Hole Flange Mount Straight Jack Receptacle - Flush Dielectric
Product Family:	SMA
Body Material:	Brass
Body Style:	Straight
Color / Finish:	Gold
Frequency:	18 GHz
Genders:	Female
Ohm:	50
Product Type:	Flange Mount
RoHS Compliant:	Yes

20070523-1523

PART NUMBER	ITEM ① BODY	ITEM ② CONTACT	ITEM ③ INSULATOR
142-D701-621	BRASS GOLD PL .00001 MIN OVER NICKEL PL .00005 MIN OVER COPPER PL .00005 MIN	BERYLLIUM COPPER GOLD PL .00003 MIN OVER NICKEL PL .00005 MIN OVER COPPER PL .00005 MIN	TEFLON
142-D701-626	BRASS NICKEL PL .0001 MIN OVER COPPER PL .00005 MIN	BERYLLIUM COPPER GOLD PL .00003 MIN OVER NICKEL PL .00005 MIN OVER COPPER PL .00005 MIN	TEFLON



NOTES:

1. SPECIFICATIONS:

IMPEDANCE: 50 OHMS
 FREQUENCY RANGE: 0-18 GHZ
 VSWR: NOT APPLICABLE
 WORKING VOLTAGE: 335 VRMS MAX AT SEA LEVEL
 DIELECTRIC WITHSTANDING VOLTAGE: 1000 VRMS MIN AT SEA LEVEL
 INSULATION RESISTANCE: 5000 MEGOHM MIN
 CONTACT RESISTANCE:
 CENTER CONTACT - INITIAL 3.0 MILLIOHM MAX, AFTER ENVIRONMENTAL 4.0 MILLIOHM MAX
 OUTER CONDUCTOR - INITIAL 2.0 MILLIOHM MAX AFTER ENVIRONMENTAL NOT APPLICABLE
 BRAID TO BODY - NOT APPLICABLE
 CORONA LEVEL: 250 VOLTS MIN AT 70,000 FEET
 INSERTION LOSS: NOT APPLICABLE
 RF LEAKAGE: NOT APPLICABLE
 RF HIGH POTENTIAL WITHSTANDING VOLTAGE: 670 VRMS MIN AT 4 AND 7 MHZ

MECHANICAL:
 ENGAGE/DISENGAGE TORQUE: 2 INCH-POUNDS MAX
 MATING TORQUE: 7-10 INCH POUNDS
 COUPLING PROOF TORQUE: NOT APPLICABLE
 COUPLING NUT RETENTION: NOT APPLICABLE
 CONTACT RETENTION: 6 LBS MIN AXIAL FORCE
 CABLE ACCEPTABILITY: NOT APPLICABLE
 CABLE HEX CRIMP SIZE: NOT APPLICABLE
 CABLE RETENTION: NOT APPLICABLE
 DURABILITY: 500 CYCLES MIN

ENVIRONMENTAL:
 (MEETS OR EXCEEDS THE APPLICABLE PARAGRAPH OF MIL-C-39012)
 THERMAL SHOCK: MIL-STD-202, METHOD 107, CONDITION B EXCEPT 200 DEG C HIGH TEMP
 OPERATING TEMPERATURE: -65 DEG C TO 165 DEG C
 CORROSION: MIL-STD-202, METHOD 101, CONDITION B
 SHOCK: MIL-STD-202, METHOD 213, CONDITION I
 VIBRATION: MIL-STD-202, METHOD 204, CONDITION D
 MOISTURE RESISTANCE MIL-STD-202, METHOD 108

DRAWING NO.	
C - 142-0701-621/630	
REVISIONS	
01	06-27-88 EJR/RJB 6-30-88 ECO 23458
ENGINEERING RELEASE	
ADDED: MOISTURE RESISTANCE SPEC, HIGH TEMP SPEC TO THERMAL SHOCK	
CHANGED: .625±.005 WAS ±.010, .481±.002 WAS .480±.010, DIA .036 ±.003 WAS .025±.003, DIA .102±.004±.001 WAS ±.003, .085±.000±.010 WAS ±.010.	
2	7-16-90 [initials] [initials] [initials] [initials]
VERSION UPDATE	
3	12-4-90 R [initials] [initials] [initials] [initials] 12-21-90 ECO 4004
CHANGED: DIA .050±.002 WAS .050 ±.001, RF HIGH POT 4 AND 7 MHZ WAS 5	
4	3-9-92 R [initials] [initials] [initials] [initials] 3-11-92 ECO 40872
CHANGED: .481±.002 WAS .481±.010, UPDATED GRAPHICS	
* REVISION NUMBER FOLLOWED BY AN ALPHA * * CHARACTER INDICATES DRAWING CHANGE * * CATION OR PART NUMBER ADDITION ONLY *	
4a	8-21-96 R [initials] [initials] [initials] [initials] ECN 44136

CUSTOMER DRAWING

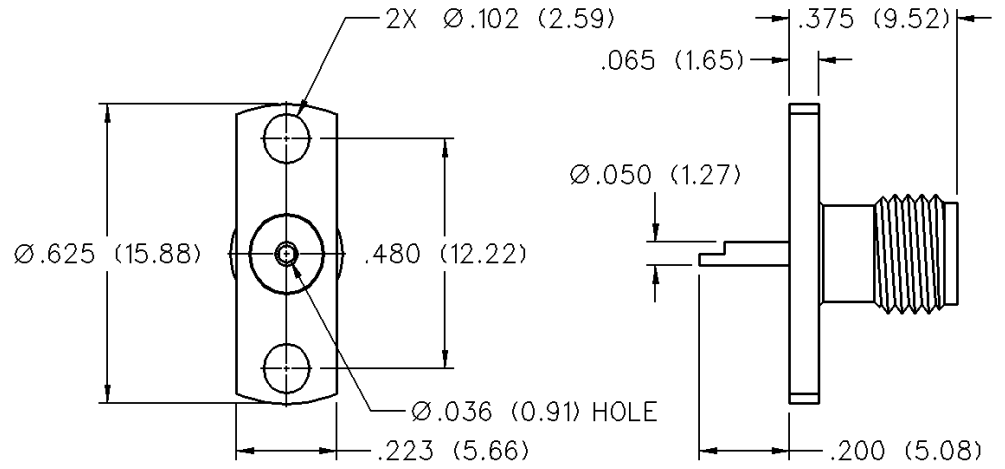
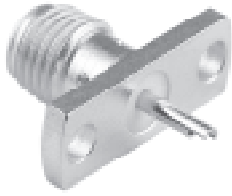
THIS DRAWING TO BE INTERPRETED PER ANSI Y 14.5M - 1982

"μSTATION"

COMPANY CONFIDENTIAL

TOLERANCE UNLESS OTHERWISE SPECIFIED	DRAWN BY	DATE	 299 Johnson Ave. P.O. Box 1732 Waseca, MN 56093-0832
.0001S	EJR	8-5-87	
.XXX	CHECKED BY	DATE	TITLE
MATL	APPROVED BY	DATE	JACK ASSEMBLY FLANGE MOUNT SMA
FINISH	APPROVED BY	DATE	CODE NO.
	RELEASE DATE	DATE	DRAWING NO.
		6-30-88	C - 142-0701-621/630
			SCALE 10:1
			U/N INCH
			SHEET 2 OF 2

50 Ohm SMA 2-Hole Flange Mount Jack Receptacle - Flush Dielectric



VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
VSWR: N/A 0-18 GHz	142-0701-621	142-0701-626

SMA - 50 Ohm Connectors

Specifications



INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

ELECTRICAL RATINGS

Impedance: 50 ohms

Frequency Range:

Dummy loads	0-2 GHz
Flexible cable connectors	0-12.4 GHz
Uncabled receptacles, RA semi-rigid and adapters	0-18.0 GHz
Straight semi-rigid cable connectors and field replaceable connectors	0-26.5 GHz

VSWR: (f = GHz)

	Straight Cabled Connectors	Right Angle Cabled Connectors
RG-178 cable	1.20 + .025f	1.20 + .03f
RG-316, LMR-100 cable	1.15 + .02f	1.15 + .03f
RG-58, LMR-195 cable	1.15 + .01f	1.15 + .02f
RG-142 cable	1.15 + .01f	1.15 + .02f
LMR-200, LMR-240 cable	1.10 + .03f	1.10 + .06f
.086 semi-rigid	1.07 + .008f	1.18 + .015f
.141 semi-rigid (w/contact)	1.05 + .008f	1.15 + .015f
.141 semi-rigid (w/o contact)	1.035 + .005f	
Jack-bulkhead jack adapter and plug-plug adapter	1.05 + .01f	
Jack-jack adapter and plug-jack adapter	1.05 + .005f	
Uncabled receptacles, dummy loads	N/A	
Field replaceable (see page 59)	N/A	

Working Voltage: (Vrms maximum)†

	Sea Level	70K Feet
RG-178	170	45
RG-316; LMR-100, 195, 200	250	65
RG-58, RG-142, LMR-240, .086 semi-rigid, uncabled receptacles, .141 semi-rigid w/o contact ...	335	85
.141 semi-rigid with contact and adapters	500	125
Dummy loads	N/A	

Connectors for Cable Type

	Sea Level	70K Feet
RG-178	170	45
RG-316; LMR-100, 195, 200	250	65
RG-58, RG-142, LMR-240, .086 semi-rigid, uncabled receptacles, .141 semi-rigid w/o contact ...	335	85
.141 semi-rigid with contact and adapters	500	125
Dummy loads	N/A	

Dielectric Withstanding Voltage: (VRMS minimum at sea level)†

Connectors for RG-178	500
Connectors for RG-316; LMR-100, 195, 200	750
Connectors for RG-58, RG-142, LMR-240, .086 semi-rigid, field replaceable, uncabled receptacles	1000
Connectors for .141 semi-rigid with contact and adapters	1500
Connectors for .141 semi-rigid w/o contact, dummy loads	N/A
Corona Level: (Volts minimum at 70,000 feet)†	
Connectors for RG-178	125
Connectors for RG-316; LMR-100, 195, 200	190
Connectors for RG-58, RG-142, LMR-240, .086 semi-rigid, uncabled receptacles, .141 semi-rigid w/o contact	250
Connectors for .141 semi-rigid with contact and adapters	375
Dummy loads	N/A

Insertion Loss: (dB maximum)

Straight flexible cable connectors and adapters	0.06	\sqrt{f} (GHz), tested at 6 GHz
Right angle flexible cable connectors	0.15	\sqrt{f} (GHz), tested at 6 GHz
Straight semi-rigid cable connectors with contact	0.03	\sqrt{f} (GHz), tested at 10 GHz
Right angle semi-rigid cable connectors	0.05	\sqrt{f} (GHz), tested at 10 GHz
Straight semi-rigid cable connectors w/o contact	0.03	\sqrt{f} (GHz), tested at 16 GHz
Straight low loss flexible cable connectors	0.06	\sqrt{f} (GHz), tested at 1 GHz
Right Angle low loss flexible cable connectors	0.15	\sqrt{f} (GHz), tested at 1 GHz
Uncabled receptacles, field replaceable, dummy loads		N/A

Insulation Resistance: 5000 megohms minimum

Contact Resistance: (milliohms maximum) **Initial** **After Environmental**

Center contact (straight cabled connectors and uncabled receptacles)	3.0*	4.0*
Center contact (right angle cabled connectors and adapters)	4.0	6.0
Field replaceable connectors	6.0	8.0
Outer contact (all connectors)	2.0	N/A
Braid to body (gold plated connectors)	0.5	N/A
Braid to body (nickel plated connectors)	5.0	N/A

*N/A where the cable center conductor is used as a contact

RF Leakage: (dB minimum, tested at 2.5 GHz)

Flexible cable connectors, adapters and .141 semi-rigid connectors w/o contact	-60 dB
Field replaceable w/o EMI gasket	-70 dB
.086 semi-rigid connectors and .141 semi-rigid connectors with contact, and field replaceable with EMI Gasket	-90 dB
Two-way adapters	-90 dB
Uncabled receptacles, dummy loads	N/A

RF High Potential Withstanding Voltage: (Vrms minimum, tested at 4 and 7 MHz)†

Connectors for RG-178	335
Connectors for RG-316; LMR-100, 195, 200	500
Connectors for RG-58, RG-142, LMR-240, .086 semi-rigid, .141 semi-rigid cable w/o contact, uncabled receptacles	670
Connectors for .141 semi-rigid with contact and adapters	1000

Power Rating (Dummy Load): 0.5 watt @ + 25°C, derated to 0.25 watt @ +125°C

MECHANICAL RATINGS

Engagement Design: MIL-C-39012, Series SMA

Engagement/Disengagement Force: 2 inch-pounds maximum

Mating Torque: 7 to 10 inch-pounds

Bulkhead Mounting Nut Torque: 15 inch-pounds

Coupling Proof Torque: 15 inch-pounds minimum

Coupling Nut Retention: 60 pounds minimum

Contact Retention:

6 lbs. minimum axial force (captivated contacts)

4 inch-ounce minimum torque (uncabled receptacles)

Cable Retention:

	Axial Force*(lbs)	Torque (in-oz)
Connectors for RG-178	10	N/A
Connectors for RG-316, LMR-100	20	N/A
Connectors for LMR-195, 200	30	N/A
Connectors for RG-58, LMR-240	40	N/A
Connectors for RG-142	45	N/A
Connectors for .086 semi-rigid	30	16
Connectors for .141 semi-rigid	60	55

*Or cable breaking strength whichever is less.

Durability: 500 cycles minimum

100 cycles minimum for .141 semi-rigid connectors w/o contact

ENVIRONMENTAL RATINGS (Meets or exceed the applicable paragraph of MIL-C-39012)

Temperature Range: - 65°C to + 165°C

Thermal Shock: MIL-STD-202, Method 107, Condition B

Corrosion: MIL-STD-202, Method 101, Condition B

Shock: MIL-STD-202, Method 213, Condition I

Vibration: MIL-STD-202, Method 204, Condition D

Moisture Resistance: MIL-STD-202, Method 106

†Avoid user injury due to misapplication. See safety advisory definitions inside front cover.

SMA - 50 Ohm Connectors

Specifications

MATERIAL SPECIFICATIONS

Bodies: Brass per QQ-B-626, gold plated* per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

Contacts: Male - brass per QQ-B-626, gold plated per MIL-G-45204 .00003" min.

Female - beryllium copper per QQ-C-530, gold plated per MIL-G-45204 .00003" min.

Nut Retention Spring: Beryllium copper per QQ-C-533. Unplated

Insulators: PTFE fluorocarbon per ASTM D 1710 and ASTM D 1457 or Tefzel per ASTM D 3159 or PFA 340 per ASTM

Expansion Caps: Brass per QQ-B-613, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

Crimp Sleeves: Copper per WW-T-799 or brass per QQ-B-613, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

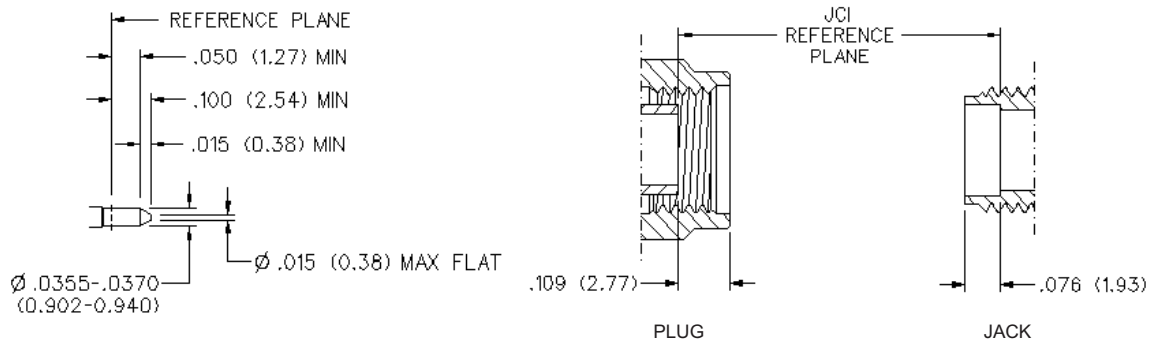
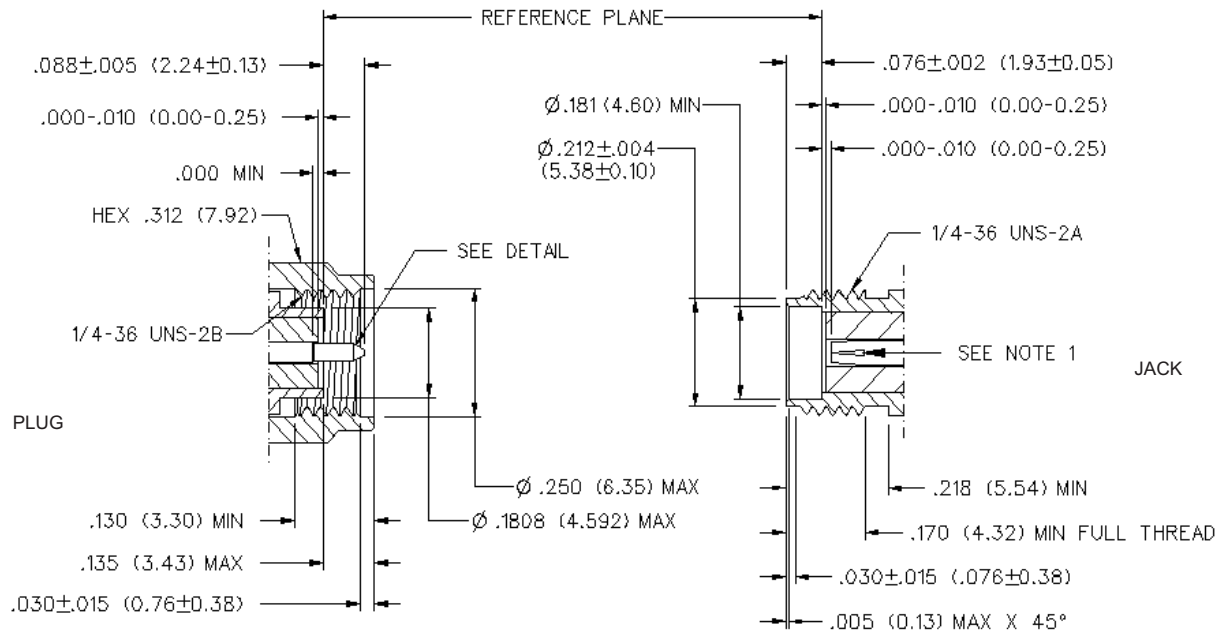
Mounting Hardware: Brass per QQ-B-626 or QQ-B-613, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

Seal Rings: Silicone rubber per ZZ-R-765

EMI Gaskets: Conductive silicone rubber per MIL-G-83528, Type M

* All gold plated parts include a .00005" min. nickel underplate barrier layer.

Mating Engagement for SMA Series per MIL-C-39012



NOTES

1. ID OF CONTACT TO MEET VSWR, CONTACT RESISTANCE AND INSERTION WITHDRAWAL FORCES WHEN MATED WITH DIA. .0355-.0370 MALE PIN.