EFJohnson™ COMPONENTS

Mini 75 Ohm SMB
SPECIFICATIONS

ELECTRICAL RATINGS

Impedence: 75 ohms
Frequency Range: 0-2 GHz
VSWR: f = GHz

RG-179 cable: Straight cabled connectors	1.25 + .04f
Right angle cabled connectors	1.35 + .04f
Adapters	1.20 + .04f
Type N Adapters	1.05 +.1f
Matching pad 50 ohm/75 ohm	1.05 + .1f
Loads	1.05 + .01f
Uncabled receptacles, opens, shorts	N/A

Working Voltage: (Vrms maximum) †

Connectors for Cable Type	Sea Level	70K Feet
RG-179 uncabled receptacles, adapters	335	85
Open, shorts, loads, matching pad	N/A	N/A

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

Connectors for RG-179 uncabled receptacles, adapters	1000
Open, shorts, loads, matching pad	N/A

Corona Level: (Volts minimum at 70,000 feet) †

Connectors for RG-179	250
Uncabled receptacles, adapters, open, shorts, loads, matching pad	N/A

Electrical Length: Open ± 1.5° (± 5.2° relative to short)
Short ± 1.5° (± 5.2° relative to open)
Adapters ± 5.2° (N/A for Jack-Bulkhead Jack and N Types)

Insertion Loss: (dB maximum, tested at 1.5 GHz)

Straight cable connectors	0.30 dB
Right angle cable connectors	0.60 dB
Matching pad	6 dB nominal
Uncabled receptacles, adapters, opens, shorts, loads	N/A

Insulation Resistance: 1000 megohms minimum

Contact Resistance: (milliohms maximum)

	Initial	After Environmental
Center contact (straight cabled connectors, uncabled receptacles, opens, shorts, loads)	6.0	8.0
Center contact (right angle cabled connectors and adapters)	12.0	16.0
Outer contact (gold plated connectors)	1.0	1.5
Outer contact (nickel plated connectors)	2.5	3.5
Braid to body (gold plated connectors)	1.0	N/A
Braid to body (nickel plated connectors)	2.5	N/A

RF Leakage: (dB minimum tested at 2.5 GHz)

Cable connectors	-55 dB
Uncabled receptacles, adapters opens, shorts, loads,matching pad	N/A

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

Connectors for RG-179	700
Uncabled receptacles and adapters	600
Opens, shorts, loads, matching pad	N/A

Power Rating: (Loads and matching pad only) 1.0 watt at +25°C derated linearly to .5 watt at +125°C

MECHANICAL RATINGS

Engagement Design: MIL-C-39012, Series SMB
Engagement/Disengagment Force: 2 pounds minimum to 14 pounds maximum axial force
Contact Retention: 4 lbs. minimum axial force (captivated contacts)
1 inch-ounce minimum torque (uncabled receptacles)

Cable Retention:

	Axial Force* (pounds)	Torque (in-oz)
Connectors for RG-179	20	N/A

* or cable breaking strength whichever is less.
Durability: 500 cycles minimum

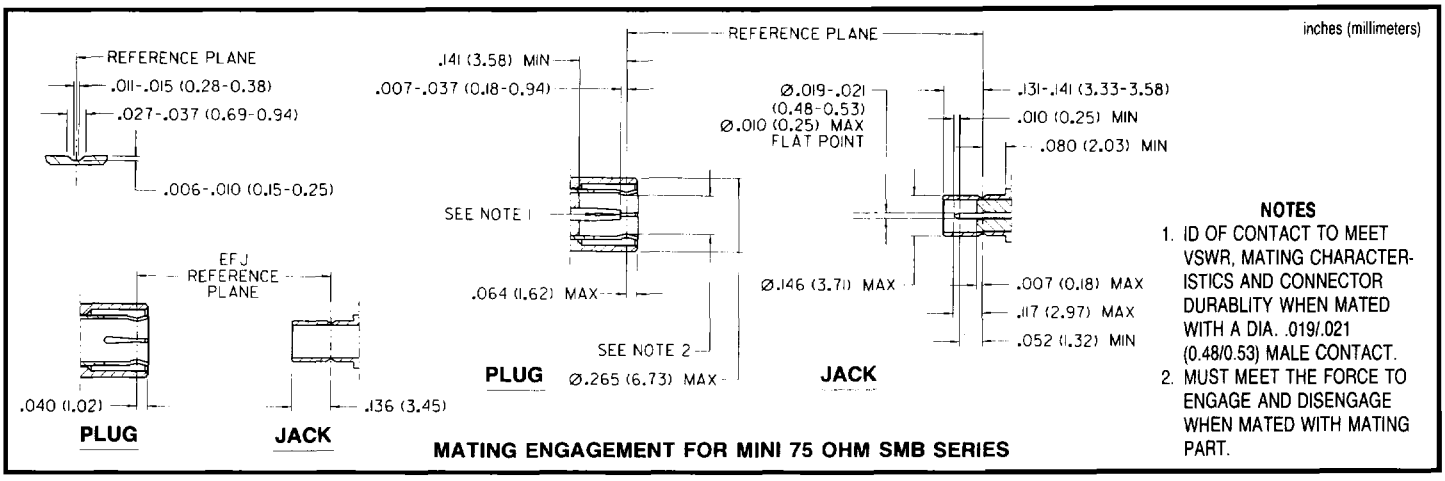
ENVIRONMENTAL RATINGS (Meets or exceed the applicable paragraph of MIL-C-39012)

Temperature Range: - 65°C to +165°C -- Connectors and adapters
- 65°C to +125°C -- Loads, matching pad
20°C to 26°C -- Opens, shorts
Thermal Shock: MIL-STD-202, Method 107, Condition B (N/A opens, shorts, loads, matching pad)
Corrosion: MIL-STD-202, Method 101, Condition B (N/A opens, shorts, loads, matching pad)
Shock: MIL-STD-210, Method 213, Condition B (N/A opens, shorts, loads, matching pad)
Vibration: MIL-STD-202, Method 204, Condition B (N/A opens, shorts, loads, matching pad)
Temperature Coefficient: (Loads only) ± 300 ppm/°C

MATERIAL SPECIFICATIONS

Bodies: Brass per QQ-B-626, gold plated** per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290
N type adapters stainless steel per QQ-S-763, passivated per MIL-F-14072
Contacts: Male & Female - beryllium copper per QQ-C-530, gold plated per MIL-G-45204 .00003" min.
Insulators: PTFE fluorocarbon per ASTM D 1710 and ASTM D 1457
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, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290
Mounting Hardware: Brass (nuts) per QQ-B-626 or phosphor bronze (lockwashers) QQ-B-750, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

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



MATING ENGAGEMENT FOR MINI 75 OHM SMB SERIES

E.F. JOHNSON COMPANY • Component Products • 1-800-247-8256, ext. 6281
299 Johnson Avenue, P.O. Box 1249, Waseca, MN 56093-0514 Phone: (507) 835-6281 Fax: (507) 835-6287, or 1-800-247-8256, ext. 6287

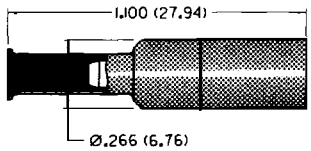
† *Avoid user injury due to misapplication. See safety advisory and definitions, page 2.*

Mini 75 Ohm SMB
FOR FLEXIBLE CABLE

EFJohnson™ COMPONENTS

Straight Crimp Type Plug

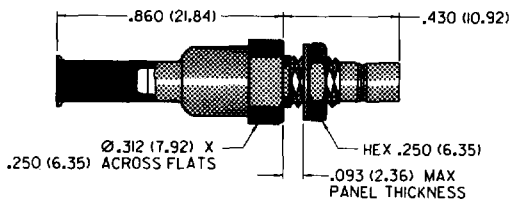
Inches (millimeters)
customer drawings available upon request



CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG-179, 187	131-8403-001	131-8403-006
RG-179 DS RG-187 DS	131-8404-001	131-8404-006

Assembly instructions Page 74.
See Page 61 for Cable Assembly Tools.

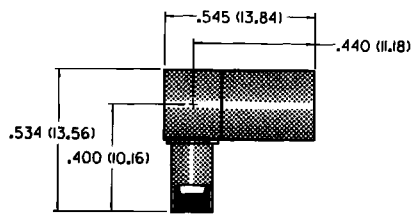
Straight Crimp Type Bulkhead Jack



CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG-179, 187	131-8303-401	131-8303-406
RG-179 DS RG-187 DS	131-8304-401	131-8304-406

Assembly instructions Page 74.
Mounting hole layout Fig. 5 Page 76.
See Page 61 for Cable Assembly Tools.

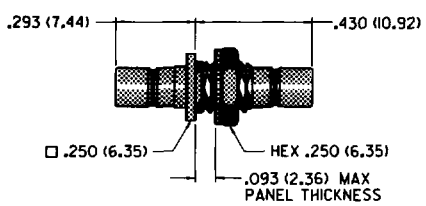
Right Angle Crimp Type Plug



CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG-179, 187	131-8403-101	131-8403-106
RG-179 DS RG-187 DS	131-8404-101	131-8404-106

Assembly instructions Page 75.
See Page 61 for Cable Assembly Tools.

In-Series Adapter
Jack - Bulkhead Jack

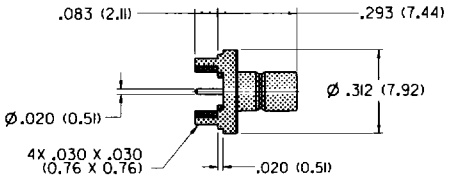


GOLD PLATED	NICKEL PLATED
131-8901-401	131-8901-406

Mounting hole layout Fig. 5 Page 76.

Inches (millimeters)
customer drawings available upon request

Straight Jack Receptacle

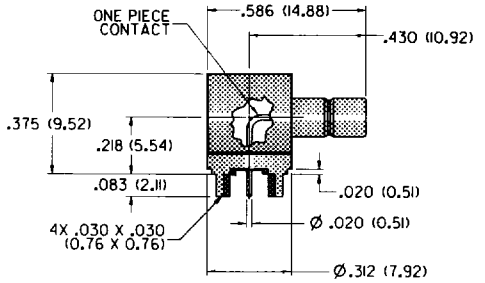


GOLD PLATED	NICKEL PLATED
131-8701-201	131-8701-206

Mounting hole layout Fig. 7 Page 76.

For PC board thickness other than .062 inches, contact factory.

RightAngle Jack Receptacle

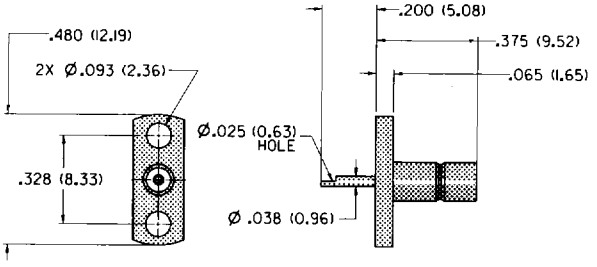


GOLD PLATED	NICKEL PLATED
131-8701-301	131-8701-306

Mounting hole layout Fig. 7 Page 76.

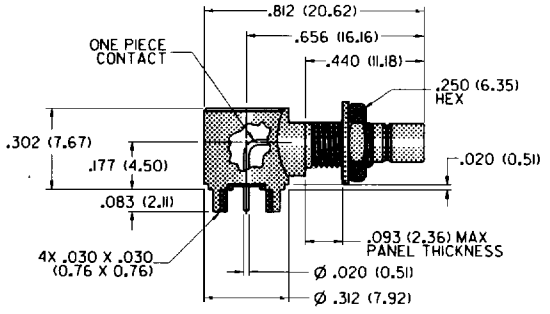
For PC board thickness other than .062 inches, contact factory.

2-hole Flange Mount Jack Receptacle



GOLD PLATED	NICKEL PLATED
131-8701-601	131-8701-606

RightAngle Bulkhead Jack Receptacle



GOLD PLATED	NICKEL PLATED
131-8701-501	131-8701-506

Mounting hole layout Fig. 5 & 7 Page 76.

** For PC board thickness other than .062 inches, contact factory.*

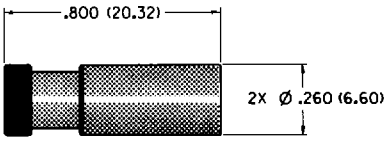
CONNECTOR TYPE

Mini 75 Ohm SMB
TERMINATIONS

EFJohnson™ COMPONENTS

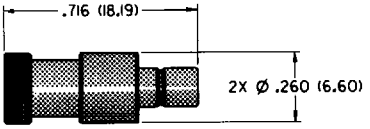
Inches (millimeters)
customer drawings available upon request

Plug Load



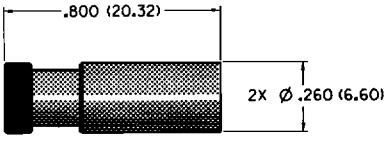
GOLD PLATED
131-8801-801

Jack Load



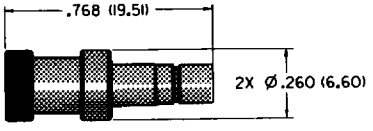
GOLD PLATED
131-8701-801

Matched Plug Open and Short



	GOLD PLATED
OPEN	131-8801-821
SHORT	131-8801-811

Matched Jack Open and Short



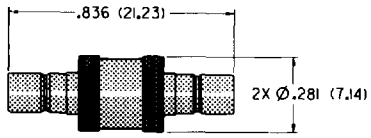
	GOLD PLATED
OPEN	131-8701-821
SHORT	131-8701-811

EFJohnson™ COMPONENTS

Mini 75 Ohm SMB
IN-SERIES MATCHED ADAPTERS

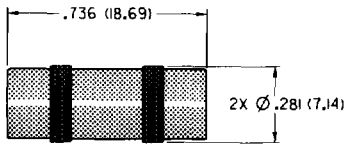
inches (millimeters)
customer drawings available upon request

Jack - Jack



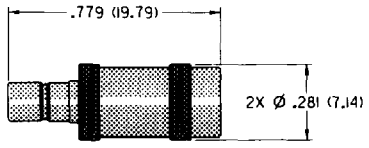
GOLD PLATED
131-8901-801

Plug - Plug



GOLD PLATED
131-8901-811

Jack - Plug



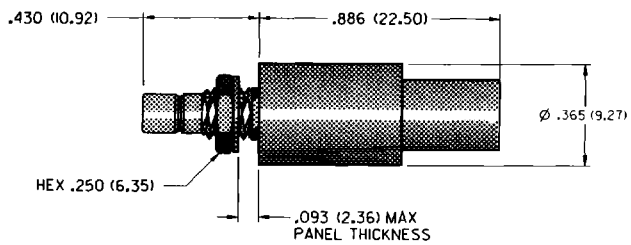
GOLD PLATED
131-8901-821

Mini 75 Ohm SMB
BETWEEN-SERIES ADAPTERS

EFJohnson™ COMPONENTS

Inches (millimeters)
customer drawings available upon request

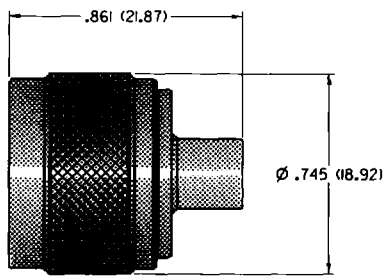
Between-Series Matching Pad
50 Ohm SMB Bulkhead Jack - Mini 75 Ohm SMB Plug



GOLD PLATED
134-1029-011

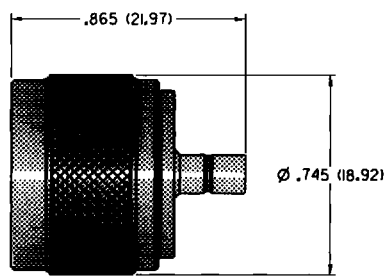
Mounting hole layout Fig. 5 Page 76.

Between-Series Adapter
75 Ohm Type N Plug - Mini 75 Ohm SMB Plug



STAINLESS STEEL PASSIVATED
134-1069-001

Between-Series Adapter
75 Ohm Type N Plug - Mini 75 Ohm SMB Jack

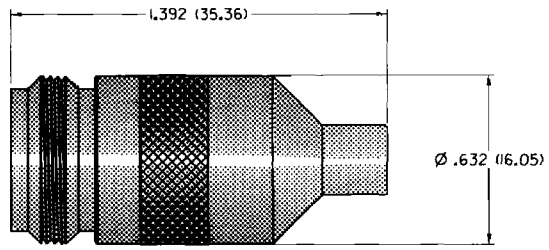


STAINLESS STEEL PASSIVATED
134-1069-011

inches (millimeters)
customer drawings available upon request

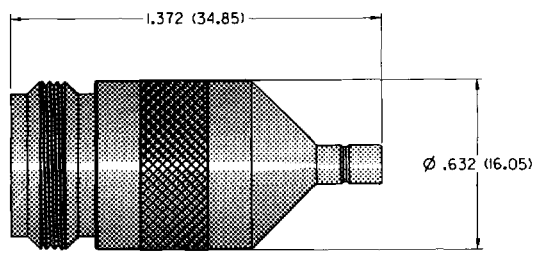
Between-Series Adapter
75 Ohm Type N Jack - Mini 75 Ohm SMB Plug

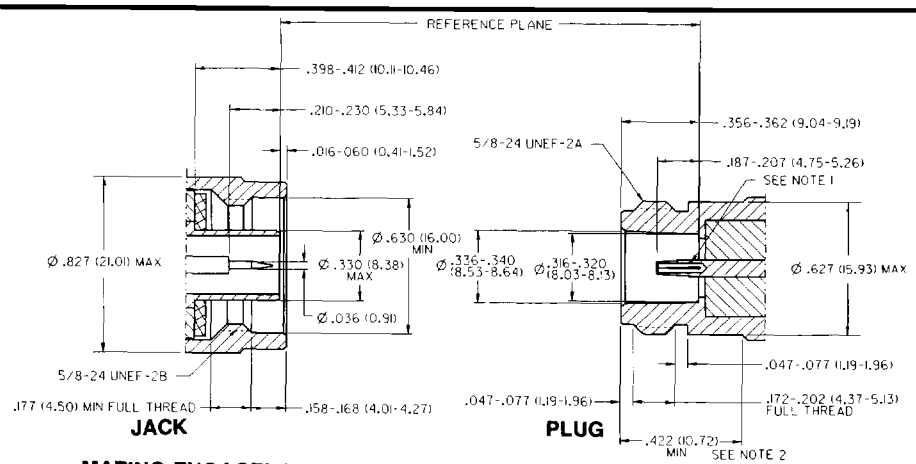
STAINLESS STEEL PASSIVATED
134-1069-021



Between-Series Adapter
75 Ohm Type N Jack - Mini 75 Ohm SMB Jack

STAINLESS STEEL PASSIVATED
134-1069-031





NOTES
1. ID TO MEET VSWR AND CONTACT RESISTANCE WHEN MATED WITH .036/.037 (0.91/0.94) DIA. PIN.
2. CLEARANCE FOR MATING CONNECTOR COUPLING NUT.

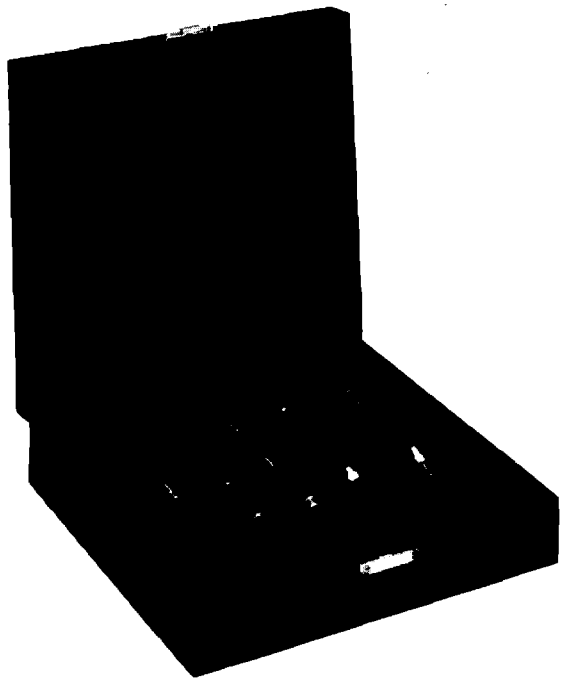
MATING ENGAGEMENT FOR 75 OHM "N" SERIES BASED ON MIL-STD-348A 50 OHM "N" SERIES

Mini 75 Ohm SMB
STANDARDS KIT

EFJohnson™ COMPONENTS

Inches (millimeters)
customer drawings available upon request

Mini 75 Ohm SMB Standards* (Calibration) Kit



PART NUMBER
131-8000-001

The Mini 75 Ohm Standards Kit contains precision terminations and adapters necessary for calibrating Scalar and Vector Network Analyzers from DC to 2 GHz. Kit includes standards definition data sheet.

Contents	Part Number
Load, 75 Ohm SMB Jack	131-8701-801
Short, 75 Ohm SMB Jack	131-8701-811
Open, 75 Ohm SMB Jack	131-8701-821
Load, 75 Ohm SMB Plug	131-8801-801
Short, 75 Ohm SMB Plug	131-8801-811
Open, 75 Ohm SMB Plug	131-8801-821
Adapter, 75 Ohm SMB Jack to 75 Ohm SMB Jack	131-8901-801
Adapter, 75 Ohm SMB Plug to 75 Ohm SMB Plug	131-8901-811
Adapter, 75 Ohm SMB Plug to 75 Ohm SMB Jack	131-8901-821
Adapter, 75 Ohm Type N Plug to 75 Ohm SMB Plug	134-1069-001
Adapter, 75 Ohm Type N Plug to 75 Ohm SMB Jack	134-1069-011
Adapter, 75 Ohm Type N Jack to 75 Ohm SMB Plug	134-1069-021
Adapter, 75 Ohm Type N Jack to 75 Ohm SMB Jack	134-1069-031

Compatibility
The Johnson Mini 75 Ohm SMB series is a "true" 75 Ohm impedance connector line. These connectors mechanically intermate with MIL-C-39012 50 Ohm SMB connectors.

*** Conformity Data**
Kit is certified to meet E.F. Johnson performance specifications. Performance data is available upon request. Kit is not NIST traceable.