

131-1402-101	7	131-3403-116	6
131-1402-116	7	131-3403-406	6
131-1403-001	5	131-3404-001	5
131-1403-016	5	131-3404-016	5
131-1403-101	7	131-3404-101	6
131-1403-116	7	131-3404-116	6
131-1404-001	5	131-3404-406	6
131-1404-016	5	131-3407-001	5
131-1404-101	7	131-3407-006	5
131-1404-116	7	131-3407-101	6
131-1693-101	4	131-3407-106	6
131-1693-116	4	131-3593-001	4
131-3302-001	7	131-3593-006	4
131-3302-006	7	131-3593-401	4
131-3303-001	7	131-3593-406	4
131-3303-006	7	131-3693-001	3
131-3303-401	8	131-3693-016	3
131-3303-406	8	131-3693-101	3
131-3303-501	8	131-3693-116	3
131-3303-506	8	131-3694-401	3
131-3304-401	8	131-3694-406	3
131-3304-406	8	Right Angle Crimp Type Bulkhead Jack - Captivated	8
131-3304-501	8	Right Angle Crimp Type Plug - Captivated Contact	6
131-3304-506	8	Right Angle Crimp Type Plug - Die Cast -	7
131-3402-001	5	Right Angle Solder Type Plug - Captivated Contact	3
131-3402-016	5	Specifications	2
131-3402-101	6	Straight Crimp Type Bulkhead Jack -	8
131-3402-116	6	Straight Crimp Type Bulkhead Plug -	6
131-3403-001	5	Straight Crimp Type Jack - Solder or Crimp	7
131-3403-016	5	Straight Solder Type Bulkhead Plug -	3
131-3403-101	6	Straight Solder Type Plug - Captivated Contact	3

SMB - 50 Ohm Connectors

Specifications

ELECTRICAL RATINGS

Impedance: 50 ohms

Frequency Range: Connectors 0-4 GHz
Dummy loads 0-1 GHz

VSWR: (f = GHz) Straight Right Angle
 Cabled Cabled
RG-178 cable 1.30 + .04f 1.45 + .06f
RG-316, RG-58, and .086 semi-rigid cable 1.25 + .04f 1.35 + .04f
Adapters 1.20 + .04f
Uncabled receptacles, dummy loads N/A

Working Voltage: (Vrms maximum)*

Connectors for Cable Type	Sea Level	70K Feet
RG-178	250	60
RG-316, RG-58, .086 semi-rigid		
uncabled receptacles, adapters	335	85
Dummy loads		N/A

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

Connectors for RG-178	750
Connectors for RG-316, RG-58, .086 semi-rigid,	
uncabled receptacles, adapters	1000
Dummy loads	N/A

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

Connectors for RG-178	185
Connectors for RG-316, RG-58, .086 semi-rigid	250
Uncabled receptacles, adapters, dummy loads	N/A

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

Straight cable connectors	0.30 dB
Right angle cable connectors	0.60 dB
Uncabled receptacles, adapters and dummy loads	N/A

Insulation Resistance: 1000 megohms minimum

Contact Resistance: (milliohms maximum)	Initial	After Environmental
Center contact (straight cabled connectors		
and uncabled receptacles)	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 and dummy loads	N/A

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

Connectors for RG-178	500
Connectors for RG-316, RG-58	700
Uncabled receptacles and adapters	600
Dummy loads	N/A

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

MECHANICAL RATINGS

Engagement Design: MIL-C-39012, Series SMB

Engagement/Disengagement Force: 2 pounds min to 14 pounds maximum axial force

Contact Retention: 4 lbs. min axial force (captivated contacts)

1 inch-ounce min torque (uncabled receptacles)

Cable Retention: Axial Force* (pounds) Torque (in-oz)

Connectors for RG-178	10	N/A
Connectors for RG-316	20	N/A
Connectors for RG-58	40	16
Connectors for .086 semi-rigid	30	16

* 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: Connectors -65°C to +165°C
Dummy loads -65°C to +125°C

Thermal Shock: MIL-STD-202, Method 107, Condition B (N/A dummy loads)

Corrosion: MIL-STD-202, Method 101, Condition B (N/A dummy loads)

Shock: MIL-STD-202, Method 213, Condition B (N/A dummy loads)

Vibration: MIL-STD-202, Method 204, Condition B (N/A dummy loads)

MATERIAL SPECIFICATIONS

Bodies: Brass per QQ-B-626 or zinc per ASTM B86-71, 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.

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

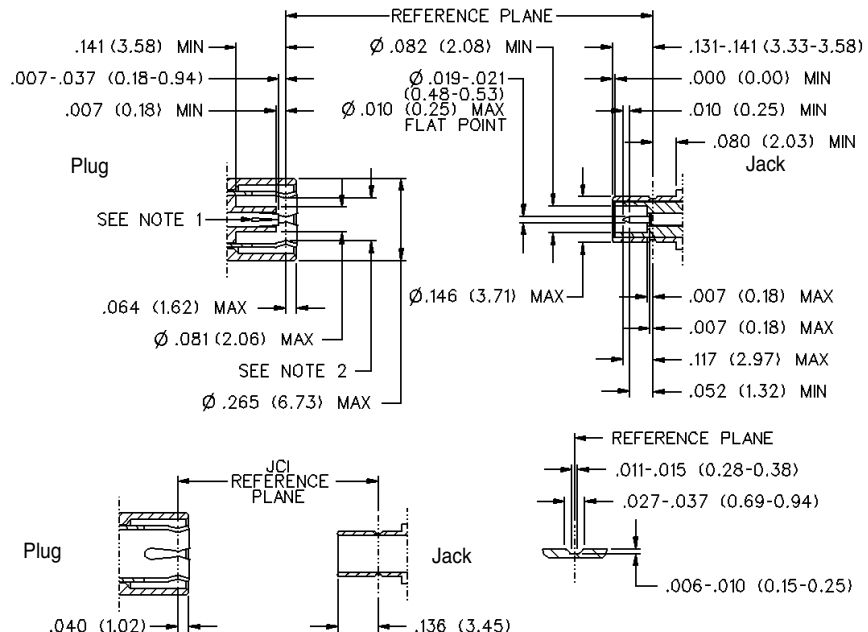
Mounting Hardware: Brass (nuts) per QQ-B-626 or phosphor bronze (lockwashers) QQ-B-750, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

Cover Rings: Phosphor Bronze per QQ-B-750, gold plated per MIL-G-45204 .00001 min. or nickel plated per QQ-N-290.

* Avoid user injury due to misapplication. See safety advisory definitions on page 2.

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

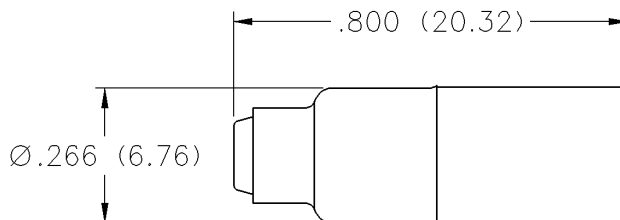
MATING ENGAGEMENT FOR SMB SERIES PER MIL-C-39012



Notes

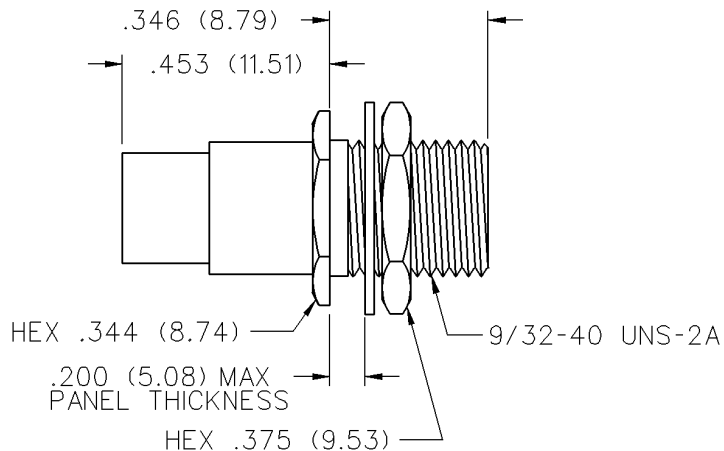
1. ID of contact to meet VSWR mating characteristics and connector durability when mated with a dia .019 / 0.53 male contact.
2. Must meet the force to engage and disengage when mated with mating part.

Straight Solder Type Plug - Captivated Contact



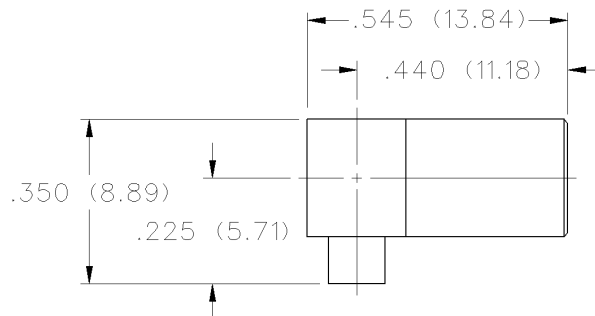
CABLE TYPE	GOLD PLATED	NICKEL PLATED
.086 Semi-Rigid	131-3693-001	131-3693-016

Straight Solder Type Bulkhead Plug - Captivated Contact



CABLE TYPE	GOLD PLATED	NICKEL PLATED
.141 Semi-Rigid	131-3694-401	131-3694-406

Right Angle Solder Type Plug - Captivated Contact



CABLE TYPE	GOLD PLATED	NICKEL PLATED
.086 Semi-Rigid	131-3693-101	131-3693-116

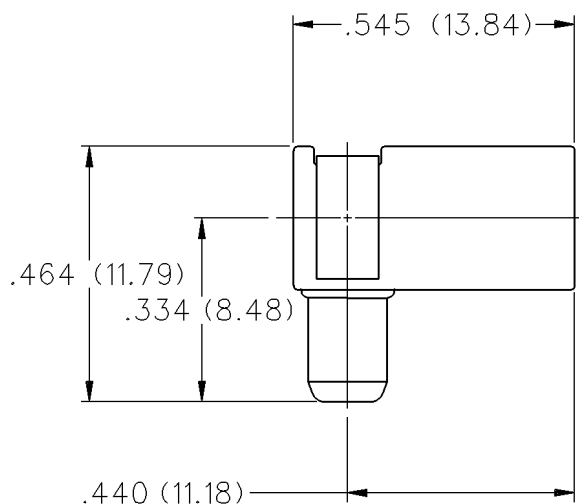
SMB - 50 Ohm Connectors

For Semi-Rigid Cable

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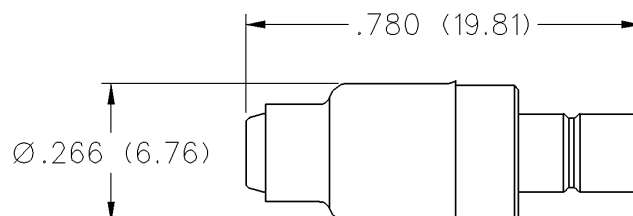
INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

Right Angle Solder Type Plug - Die Cast - Captivated Contact



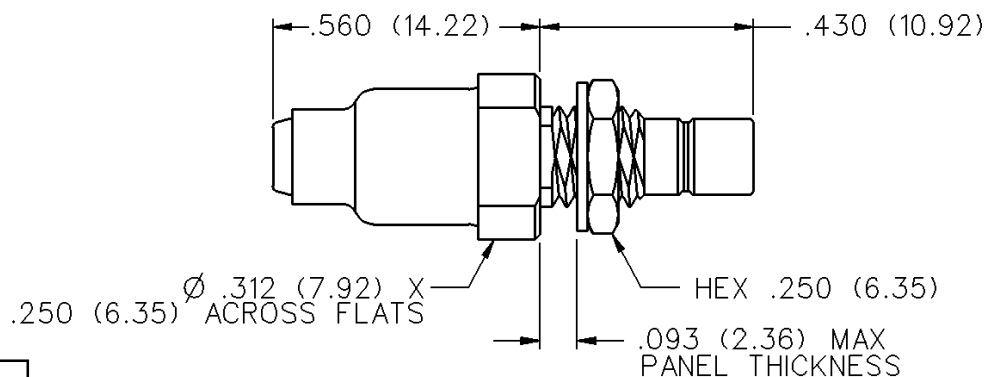
CABLE TYPE	GOLD PLATED	NICKEL PLATED
.086 Semi-Rigid	131-1693-101	131-1693-116

Straight Solder Type Jack - Captivated Contact



CABLE TYPE	GOLD PLATED	NICKEL PLATED
.086 Semi-Rigid	131-3593-001	131-3593-006

Straight Bulkhead Solder Type Jack - Captivated Contact

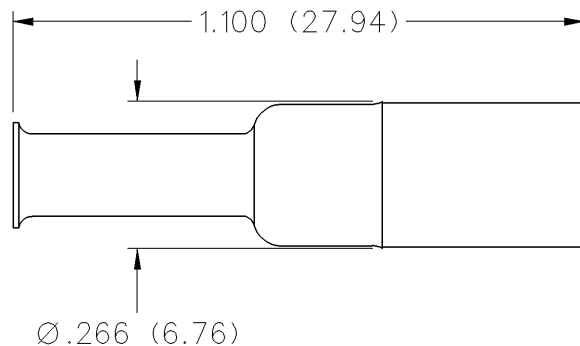


CABLE TYPE	GOLD PLATED	NICKEL PLATED
.086 Semi-Rigid	131-3593-401	131-3593-406

Straight Crimp Type Plug - Solder or Crimp Captivated Contact



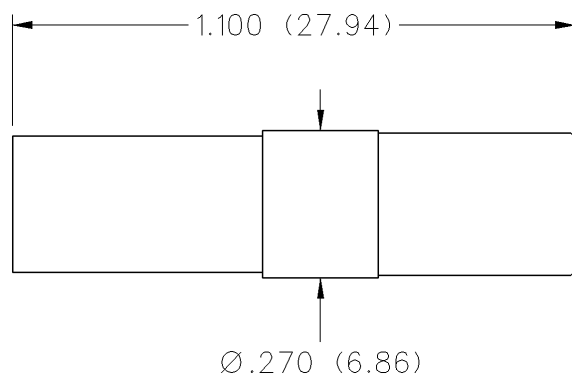
CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG-178/U, 196	131-3402-001	131-3402-016
RG-161/U, 174, 179, 187, 188, 316	131-3403-001	131-3403-016
RG-316DS, 188 DS, 179 DS, 187 DS	131-3404-001	131-3404-016



Straight Crimp Type Plug - Captivated Contact



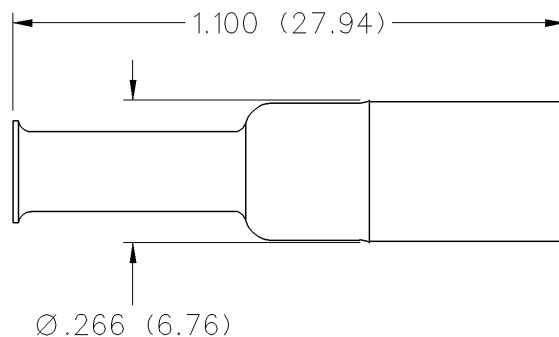
CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG-58/U, 141, 303	131-3407-001	131-3407-006



Straight Crimp Type Plug - Die Cast - Solder or Crimp Captivated Contact



CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG-161/U, 174, 179, 187, 188, 316	131-1403-001	131-1403-016
RG-316DS, 188 DS, 179 DS, 187 DS	131-1404-001	131-1404-016



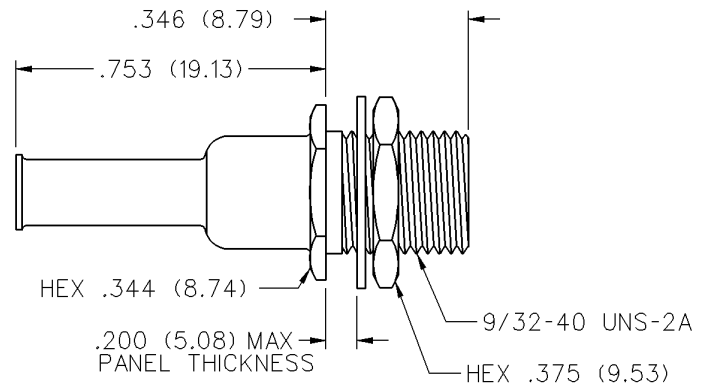
SMB - 50 Ohm Connectors

For Flexible Cable

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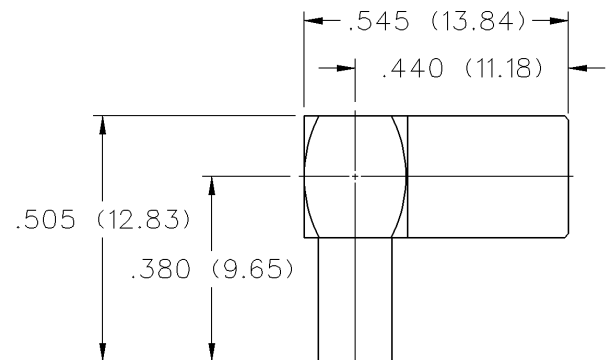
INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

Straight Crimp Type Bulkhead Plug - Solder or Crimp Captivated Contact



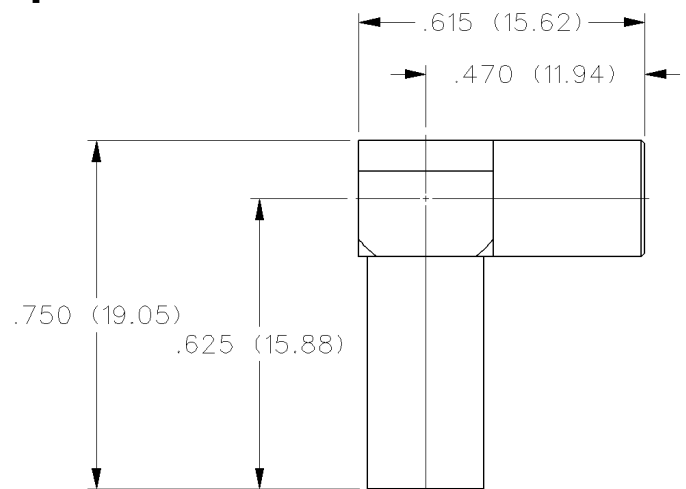
CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG-161/U, 174, 179, 187, 188, 316	131-3403-401	131-3403-406
RG-316DS, 188 DS, 179 DS, 187 DS	131-3404-401	131-3404-406

Right Angle Crimp Type Plug - Captivated Contact



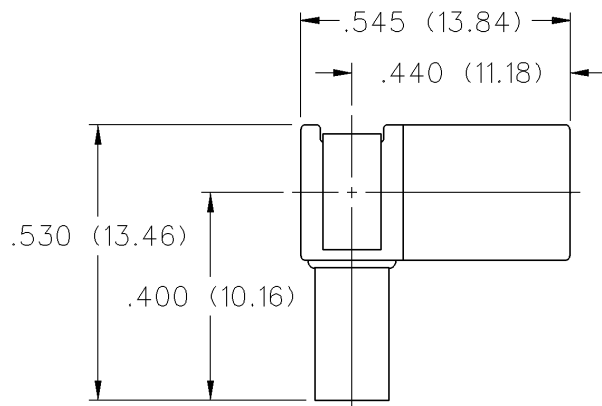
CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG-178/U, 196	131-3402-101	131-3402-116
RG-161/U, 174, 179, 187, 188, 316	131-3403-101	131-3403-116
RG-316DS, 188 DS, 179 DS, 187 DS	131-3404-101	131-3404-116

Right Angle Crimp Type Plug - Captivated Contact



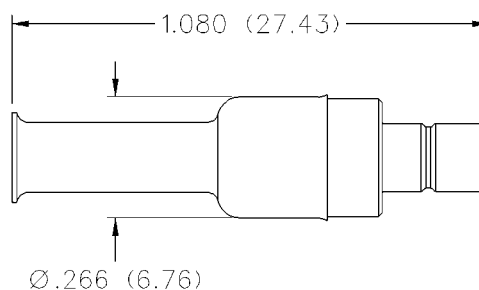
CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG-58/U, 141, 303	131-3407-101	131-3407-106

Right Angle Crimp Type Plug - Die Cast - Captivated Contact



CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG-178/U, 196	131-1402-101	131-1402-116
RG-161/U, 174, 179, 187, 188, 316	131-1403-101	131-1403-116
RG-316DS, 188 DS, 179 DS, 187 DS	131-1404-101	131-1404-116

Straight Crimp Type Jack - Solder or Crimp Captivated Contact



CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG-178/U, 196	131-3302-001	131-3302-006
RG-161/U, 174, 179, 187, 188, 316	131-3303-001	131-3303-006

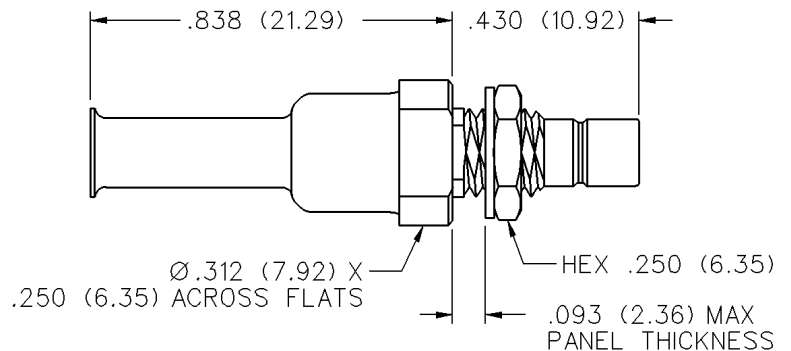
SMB - 50 Ohm Connectors

For Flexible Cable

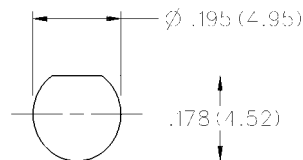
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INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

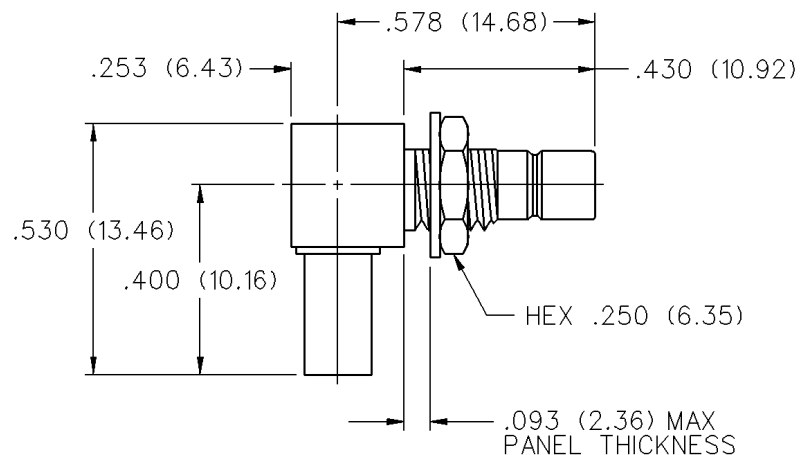
Straight Crimp Type Bulkhead Jack - Solder or Crimp Captivated Contact



CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG-161/U, 174, 179, 187, 188, 316	131-3303-401	131-3303-406
RG-316DS, 188 DS, 179 DS, 187 DS	131-3304-401	131-3304-406



Right Angle Crimp Type Bulkhead Jack - Captivated Contact



CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG-161/U, 174, 179, 187, 188, 316	131-3303-501	131-3303-506
RG-316DS, 188 DS, 179 DS, 187 DS	131-3304-501	131-3304-506

