

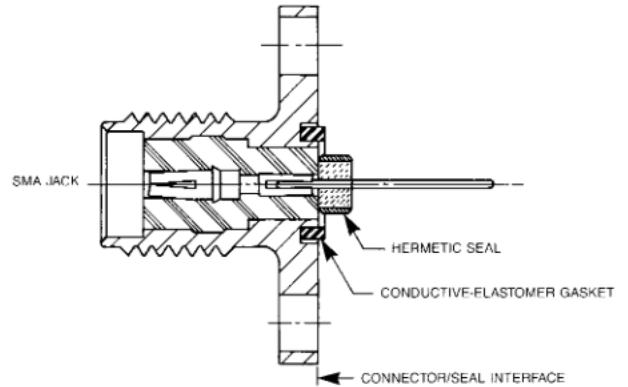
SMA Hermetic Seal Launchers

AEP SMA hermetic seal launchers are designed to fit hermetic seals with .012" to .036" pin diameters. Connectors for use with .012—.018" pins feature an internal body structure that compensates electrically for the stepdown in diameter from the connector interface to the seal outer diameter, as shown in the illustration. These units also incorporate a conductive-elastomer EMI gasket to prevent RF leakage at the interface between the connector flange and the MIC package.

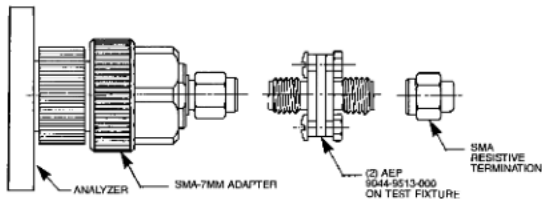
Connectors for seals with .020" or .036" pin diameters have straight-through body geometry, and do not use EMI gaskets.

Passivated stainless steel body finish is standard for this series; gold-plated bodies are available as an option.

Connector / seal design—connectors for use with .012—.018" diameter pins



Electrical Performance Data



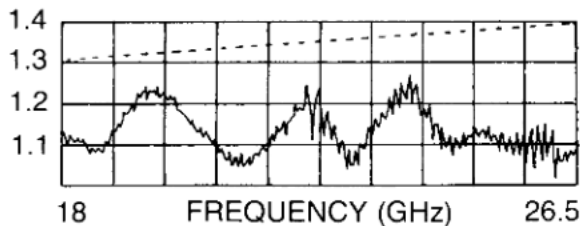
Test setup: Two connectors (P/N 9044-9513-000) mounted back-to-back on fixture incorporating hermetic seal (P/N 920-55). Precision SMA plug termination used as load.

The VSWR plot below is for the connector/fixture combination; data for a single connector can be extrapolated by taking the square root of the reading at a given frequency. Insertion loss readings should be divided by two to obtain performance for a single connector.

Electrical performance in actual use may vary based on the characteristics of the pin-to-line transition.

VSWR

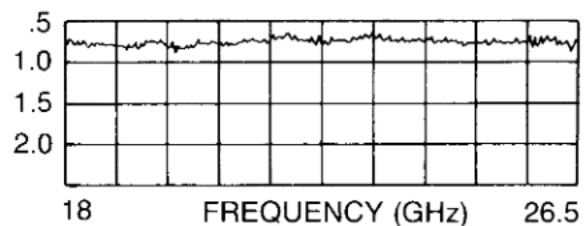
HP 8510



Dotted line = $VSWR (1.05 + .005F [GHz])^2$
 Max. VSWR DC-18 GHz: 1.23: 1 @ 13.93 GHz
 Max. VSWR DC-26.5 GHz: 1.28: 1 @ 23.74 GHz

Insertion loss (dB)

HP 8510



See next page for hermetic seal specifications and mounting dimensions.

Hermetic Seal Specifications

Materials:

All metal parts: Kovar.

Glass: Corning glass as noted:

P/N	Glass type
920-55	7052
920-56	7070
920-69	7052
920-82	7070
920-92	7052

Finish:

All metal parts: Gold plated per MIL-G-45204 type II, grade C, class 1, over nickel per MIL-C-26074, class 1, over copper per MIL-C-14550.

Hermeticity:

Greater than 1×10^{-8} cc/second @ 1 atmosphere.

Solderability:

Per MIL-Std-202, Method 209.

Meniscus:

.005" max.

Pin concentricity:

.003" T.I.R.

Temperature range:

-65–250° C.

Impedance:

$50 \pm 1\Omega$.

Frequency range:

DC-26 GHz.

Insertion loss:

.1 dB max. to 12.4 GHz;
.2 dB max. to 18 GHz;
.25 dB max. to 26 GHz.

VSWR:

Dependent on application.

Voltage rating:

335 VRMS max. @ sea level.

Current:

500 mA.

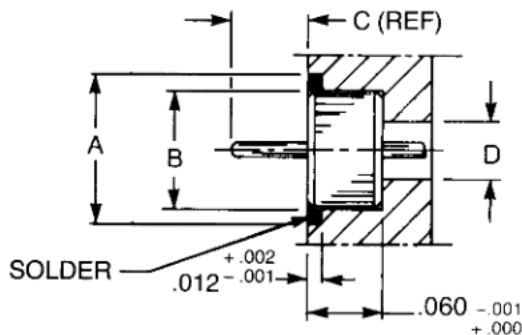
Dielectric Withstanding Voltage:

1000 VRMS @ sea level.

Insulation resistance:

100K megohms (@25° C)

Mounting Dimensions



P/N	A(± .001)	B(± .001)	C
920-55	.127	.102	.070
920-56	.140	.115	.070
920-69	.188	.163	.060
920-82	.127	.102	.070
920-92	.188	.163	.075

Notes:

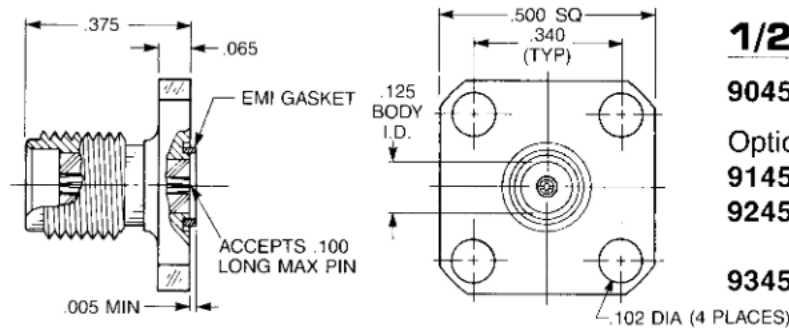
- 1) Front of seal and solder should be flush to .005" above mounting surface.
- 2) Diameters ("D") in chart are for 50Ω impedance; Teflon dielectric diameters are for applications which use a support insulator for the hermetic seal pin (user option).

Pin Diameter	"D" (Air dielectric)	"D" (Teflon dielectric)
.012	.028	.040
.015	.035	.050
.018	.041	.059
.020	.046	.066

SMA Hermetic Seal Launchers

For hermetic seals with .012" diameter pins

Straight Jacks



1/2" Square Flange

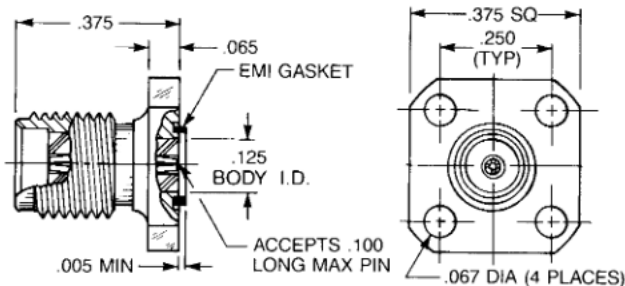
9045-9513-000

Optional packaging:

9145-9513-000 (Includes 920-55)

9245-9513-000 (Includes 920-55 and 907-111-1)

9345-9513-000 (Includes 907-111-1)



3/8" Square Flange

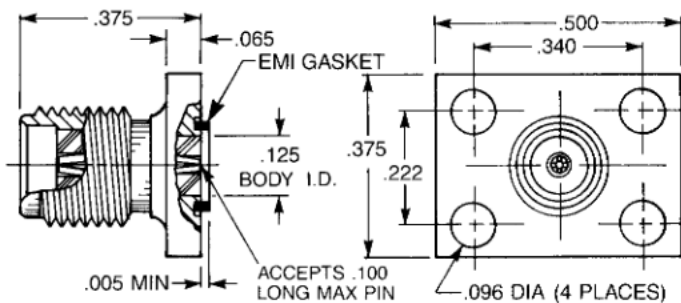
9079-9513-000

Optional packaging:

9179-9513-000 (Includes 920-55)

9279-9513-000 (Includes 920-55 and 907-111-1)

9379-9513-000 (Includes 907-111-1)



Rectangular Flange

9062-9513-000

Optional packaging:

9162-9513-000 (Includes 920-55)

9262-9513-000 (Includes 920-55 and 907-111-1)

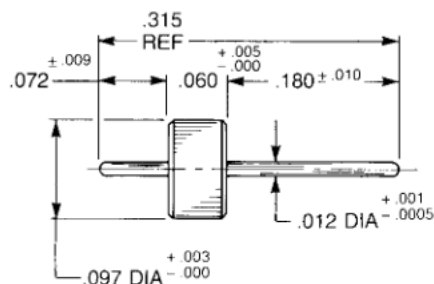
9362-9513-000 (Includes 907-111-1)

These units accept hermetic seal pin diameters .011-.015"

Hermetic Seal and Accessory Contact

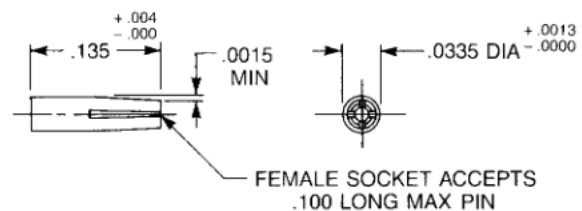
Solder-In Hermetic Seal

P/N 920-55



Accessory Contact

P/N 907-111-1



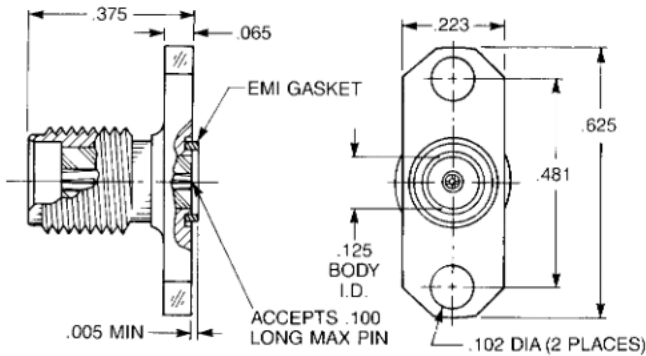
Material: Beryllium copper

Finish: Gold per MIL-G-45204, type II, class I, grade C, over .0001 copper per MIL-C-14550

SMA Hermetic Seal Launchers

For hermetic seals with .012" diameter pins

Straight Jacks



2-Hole Flange

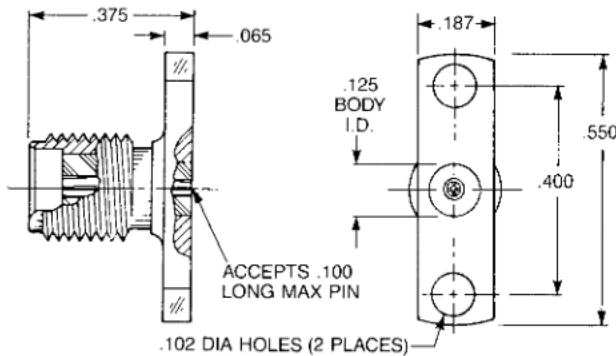
9044-9513-000

Optional packaging:

9144-9513-000 (Includes 920-55)

9244-9513-000 (Includes 920-55 and 907-111-1)

9344-9513-000 (Includes 907-111-1)



Narrow 2-Hole Flange

No EMI gasket

9080-9513-000

Optional packaging:

9180-9513-000 (Includes 920-55)

9280-9513-000 (Includes 920-55 and 907-111-1)

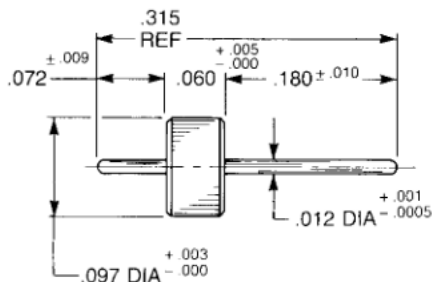
9380-9513-000 (Includes 907-111-1)

These units accept hermetic seal pin diameters .011-.015"

Hermetic Seal and Accessory Contact

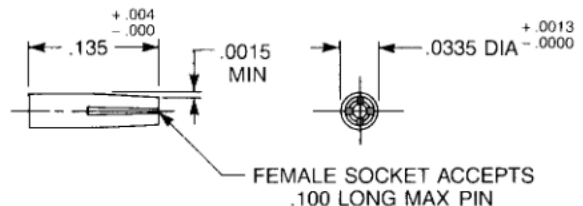
Solder-In Hermetic Seal

P/N 920-55



Accessory Contact

P/N 907-111-1



Material: Beryllium copper

Finish: Gold per MIL-G-45204, type II, class I, grade C, over .0001 copper per MIL-C-14550

SMA Hermetic Seal Launchers

For hermetic seals with .012" diameter pins

Straight Plugs

1/2" Square Flange

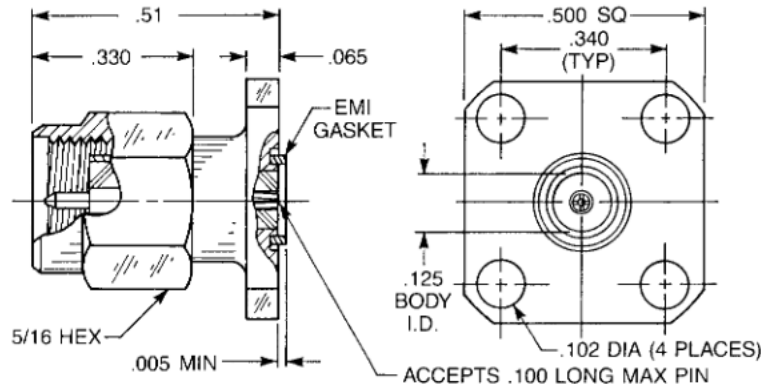
9047-9513-000

Optional packaging:

9147-9513-000 (Includes 920-55)

9247-9513-000 (Includes 920-55 and 907-111-1)

9347-9513-000 (Includes 907-111-1)



2-Hole Flange

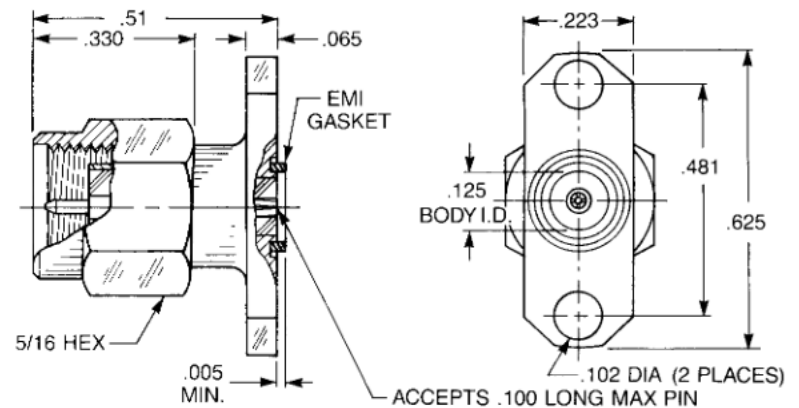
9046-9513-000

Optional packaging:

9146-9513-000 (Includes 920-55)

9246-9513-000 (Includes 920-55 and 907-111-1)

9346-9513-000 (Includes 907-111-1)

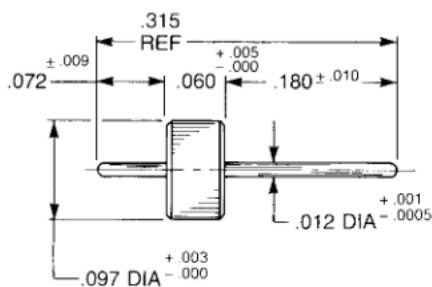


These units accept hermetic seal pin diameters .011-.015"

Hermetic Seal and Accessory Contact

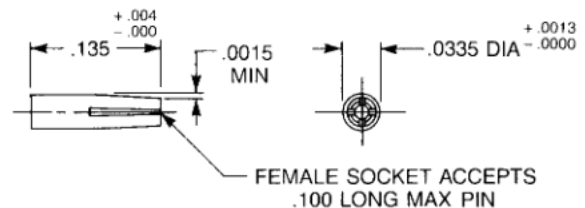
Solder-In Hermetic Seal

P/N 920-55



Accessory Contact

P/N 907-111-1



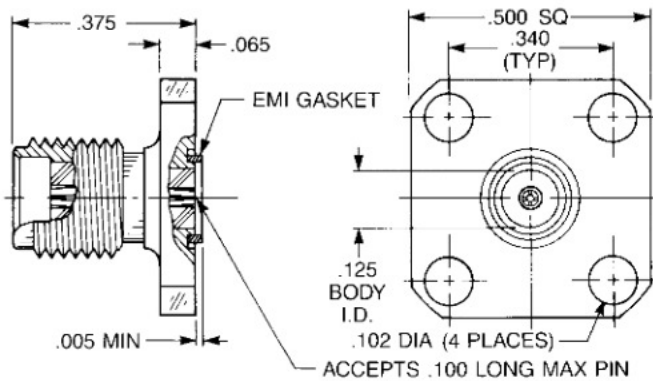
Material: Beryllium copper

Finish: Gold per MIL-G-45204, type II, class I, grade C, over .0001 copper per MIL-C-14550

SMA Hermetic Seal Launchers

For hermetic seals with .015" diameter pins

Straight Jacks



1/2" Square Flange

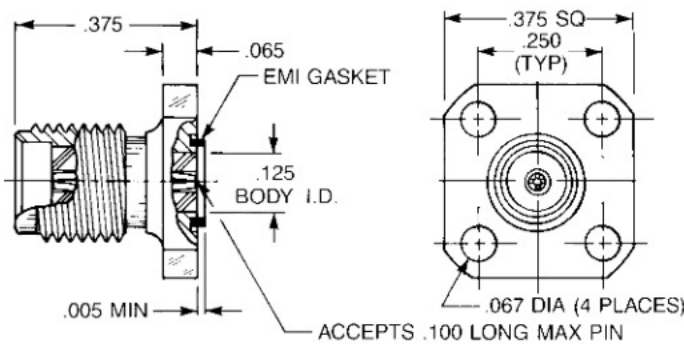
9045-9513-001

Optional packaging:

9145-9513-001 (Includes 920-82)

9245-9513-001 (Includes 920-82 and 907-111-5)

9345-9513-001 (Includes 907-111-5)



3/8" Square Flange

9079-9513-001

Optional packaging:

9179-9513-001 (Includes 920-82)

9279-9513-001 (Includes 920-82 and 907-111-5)

9379-9513-001 (Includes 907-111-5)

Rectangular Flange

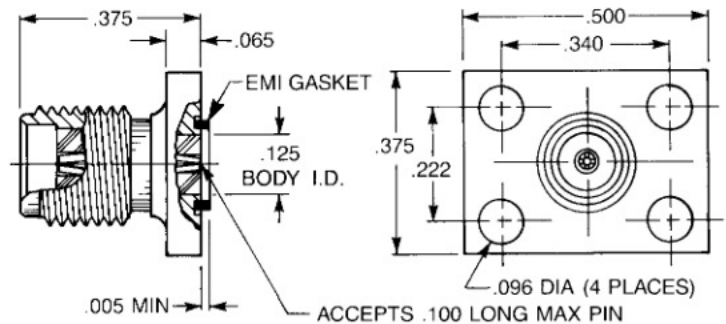
9062-9513-001

Optional packaging:

9162-9513-001 (Includes 920-82)

9262-9513-001 (Includes 920-82 and 907-111-5)

9362-9513-001 (Includes 907-111-5)

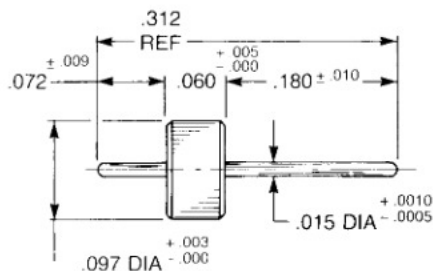


These units accept hermetic seal pin diameters .014-.016"

Hermetic Seal and Accessory Contact

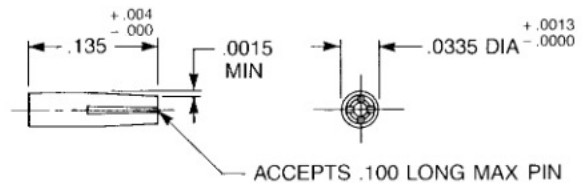
Solder-In Hermetic Seal

P/N 920-82



Accessory Contact

P/N 907-111-5



Material: Beryllium copper.

Finish: Gold per MIL-G-45204, type II, class 1, grade C, over .0001 copper per MIL-C-14450.



APPLIED ENGINEERING PRODUCTS

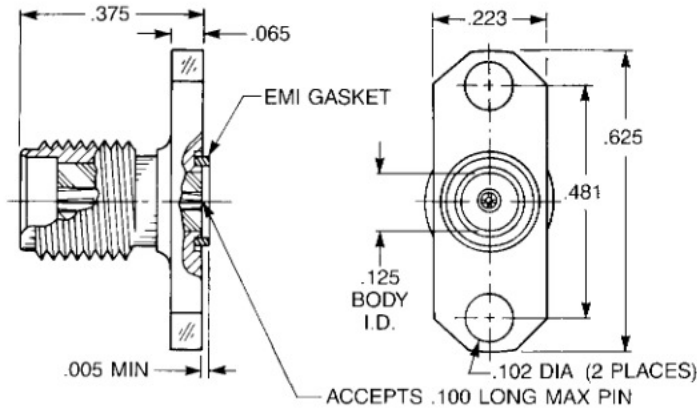
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SMA Hermetic Seal Launchers

For hermetic seals with .015" diameter pins

Straight Jacks



2-Hole Flange

9044-9513-001

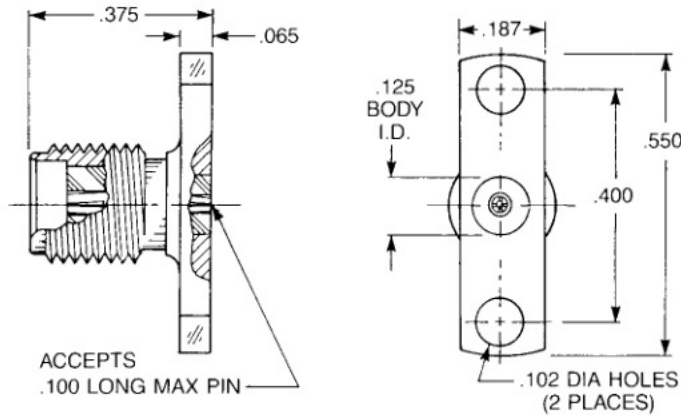
Optional packaging:

9144-9513-001 (Includes 920-82)

9244-9513-001 (Includes 920-82

and 907-111-5)

9344-9513-001 (Includes 907-111-5)



Narrow 2-Hole Flange

No EMI gasket

9080-9513-001

Optional packaging:

9180-9513-001 (Includes 920-82)

9280-9513-001 (Includes 920-82

and 907-111-5)

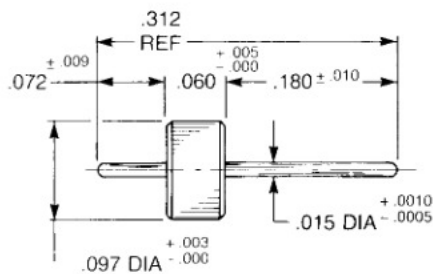
9380-9513-001 (Includes 907-111-5)

These units accept hermetic seal pin diameters .014-.016"

Hermetic Seal and Accessory Contact

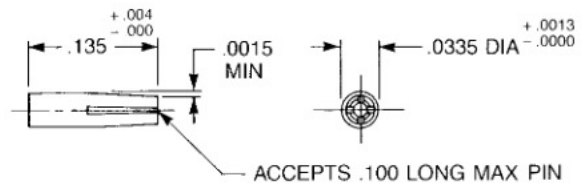
Solder-In Hermetic Seal

P/N 920-82



Accessory Contact

P/N 907-111-5



Material: Beryllium copper.

Finish: Gold per MIL-G-45204, type II, class 1, grade C, over .0001 copper per MIL-C-14450.

SMA Hermetic Seal Launchers

For hermetic seals with .015" diameter pins

Straight Plugs

1/2" Square Flange

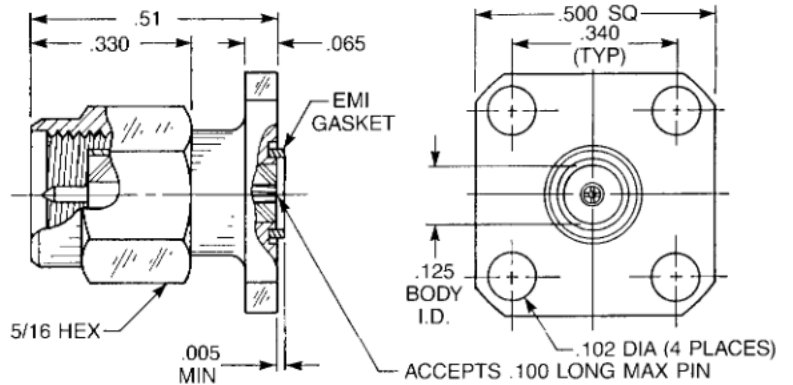
9047-9513-001

Optional packaging:

9147-9513-001 (Includes 920-82)

9247-9513-001 (Includes 920-82 and 907-111-5)

9347-9513-001 (Includes 907-111-5)



2-Hole Flange

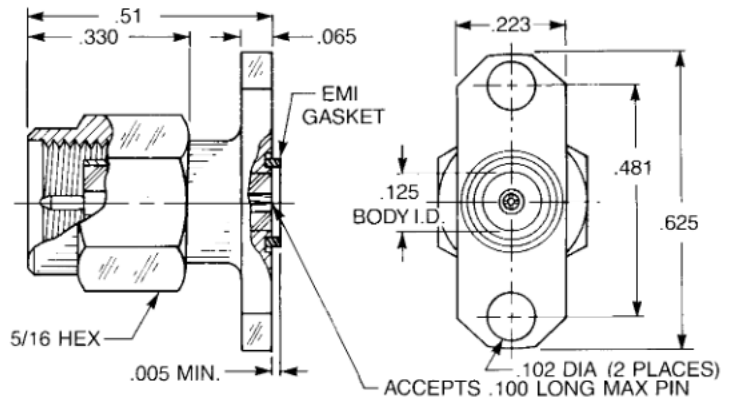
9046-9513-001

Optional packaging:

9146-9513-001 (Includes 920-82)

9246-9513-001 (Includes 920-82 and 907-111-5)

9346-9513-001 (Includes 907-111-5)

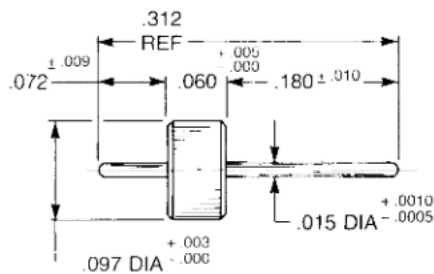


These units accept hermetic seal pin diameters .014-.016"

Hermetic Seal and Accessory Contact

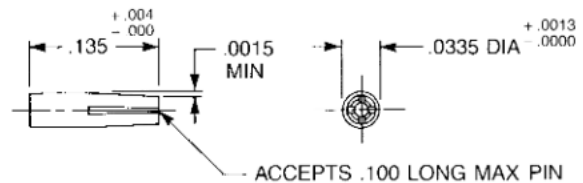
Solder-In Hermetic Seal

P/N 920-82



Accessory Contact

P/N 907-111-5



Material: Beryllium copper.

Finish: Gold per MIL-G-45204, type II, class 1, grade C, over .0001 copper per MIL-C-14450.



APPLIED ENGINEERING PRODUCTS

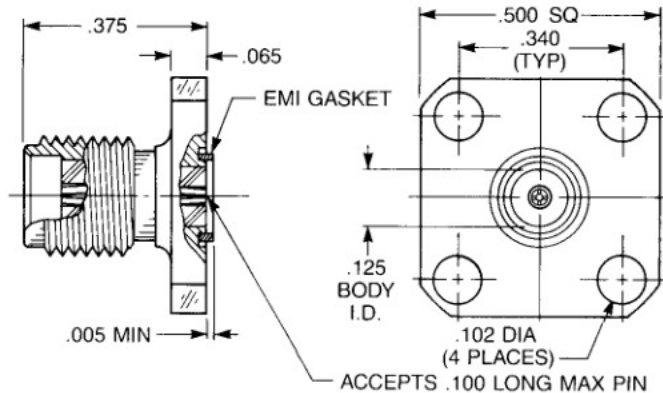
(203) 776-2813 • FAX (203) 776-8294

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SMA Hermetic Seal Launchers

For hermetic seals with .018" diameter pins

Straight Jacks



1/2" Square Flange

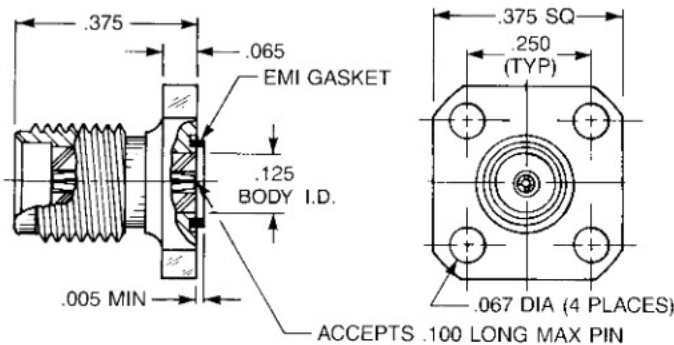
9049-9513-000

Optional packaging:

9149-9513-000 (Includes 920-56)

9249-9513-000 (Includes 920-56 and 907-111-2)

9349-9513-000 (Includes 907-111-2)



3/8" Square Flange

9074-9513-000

Optional packaging:

9174-9513-000 (Includes 920-56)

9274-9513-000 (Includes 920-56 and 907-111-2)

9374-9513-000 (Includes 907-111-2)

Rectangular Flange

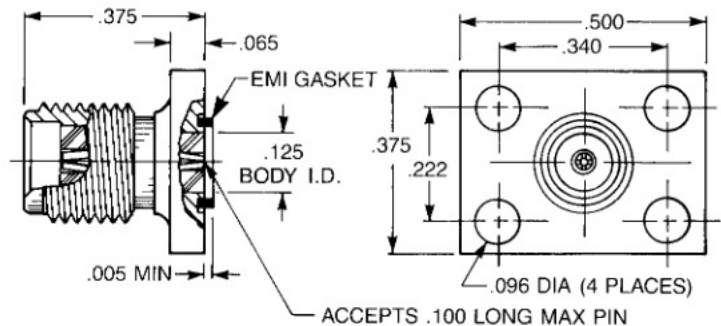
9068-9513-000

Optional packaging:

9168-9513-000 (Includes 920-56)

9268-9513-000 (Includes 920-56 and 907-111-2)

9368-9513-000 (Includes 907-111-2)

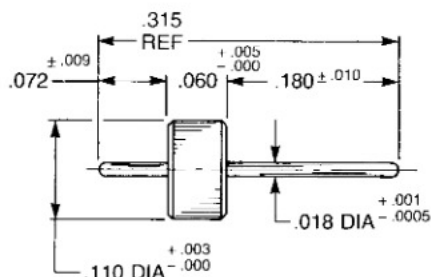


These units accept hermetic seal pin diameters .016-.020"

Hermetic Seal and Accessory Contact

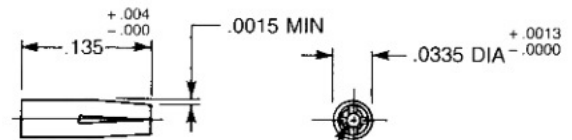
Solder-In Hermetic Seal

P/N 920-56



Accessory Contact

P/N 907-111-2



ACCEPTS .100 LONG MAX PIN

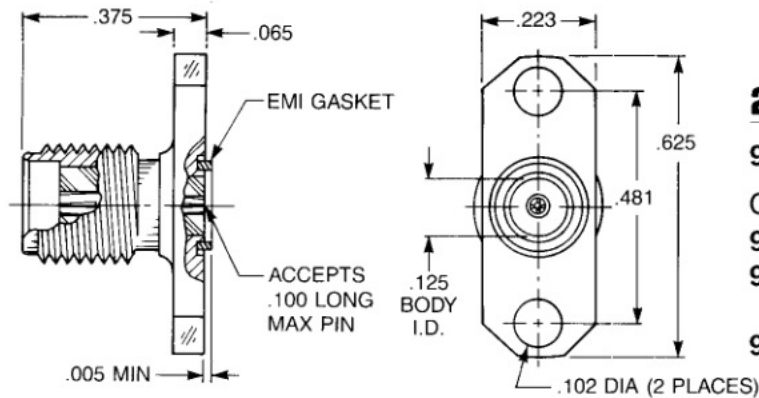
Material: Beryllium copper

Finish: Gold per MIL-G-45204, type II, class 1, grade C over .0001 copper per MIL-C-14450

SMA Hermetic Seal Launchers

For hermetic seals with .018" diameter pins

Straight Jacks



2-Hole Flange

9048-9513-000

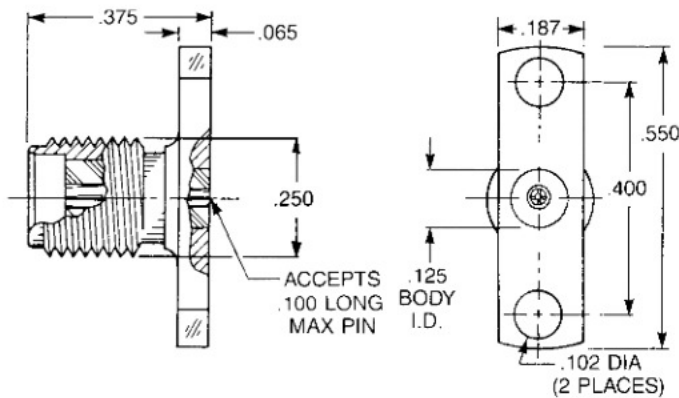
Optional packaging:

9148-9513-000 (Includes 920-56)

9248-9513-000 (Includes 920-56

and 907-111-2)

9348-9513-000 (Includes 907-111-2)



Narrow 2-Hole Flange

No EMI gasket

9081-9513-000

Optional packaging:

9181-9513-000 (Includes 920-56)

9281-9513-000 (Includes 920-56

and 907-111-2)

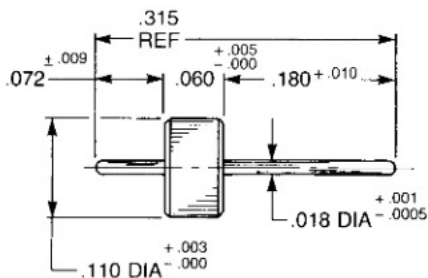
9381-9513-000 (Includes 907-111-2)

These units accept hermetic seal pin diameters .016-.020"

Hermetic Seal and Accessory Contact

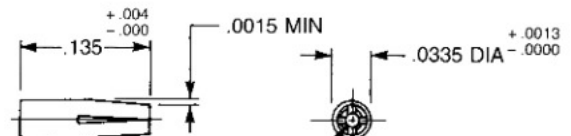
Solder-In Hermetic Seal

P/N 920-56



Accessory Contact

P/N 907-111-2



ACCEPTS .100 LONG MAX PIN

Material: Beryllium copper

Finish: Gold per MIL-G-45204, type II, class 1,
grade C over .0001 copper per MIL-C-14450



APPLIED ENGINEERING PRODUCTS

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SMA Hermetic Seal Launchers

For hermetic seals with .018" diameter pins

Straight Plugs

1/2" Square Flange

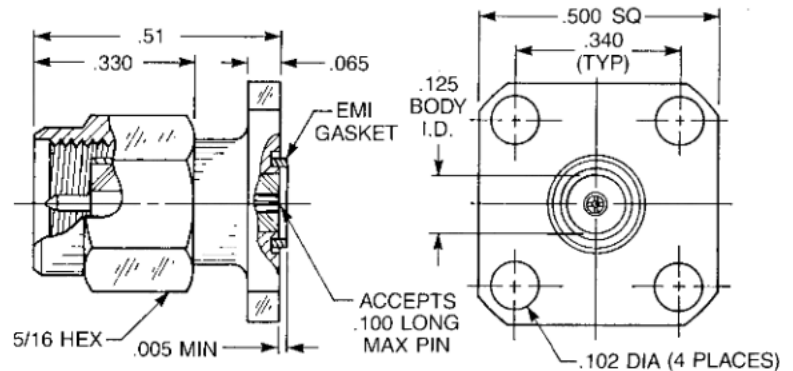
9051-9513-000

Optional packaging:

9151-9513-000 (Includes 920-56)

9251-9513-000 (Includes 920-56 and 907-111-2)

9351-9513-000 (Includes 907-111-2)



2-Hole Flange

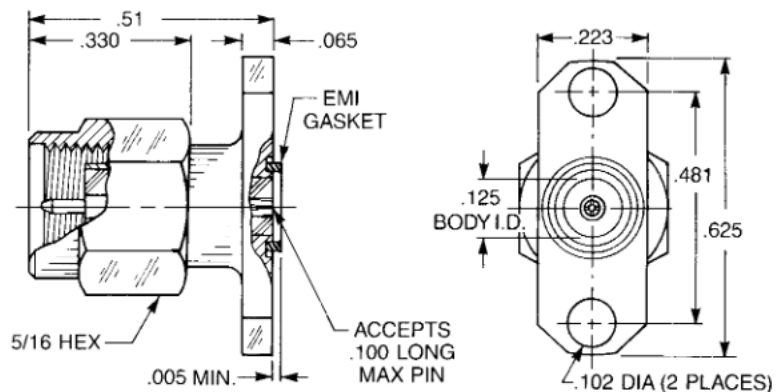
9050-9513-000

Optional packaging:

9150-9513-000 (Includes 920-56)

9250-9513-000 (Includes 920-56 and 907-111-2)

9350-9513-000 (Includes 907-111-2)

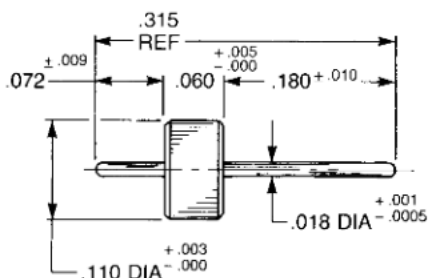


These units accept hermetic seal pin diameters .016-.020"

Hermetic Seal and Accessory Contact

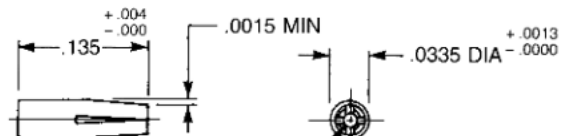
Solder-In Hermetic Seal

P/N 920-56



Accessory Contact

P/N 907-111-2



ACCEPTS .100 LONG MAX PIN

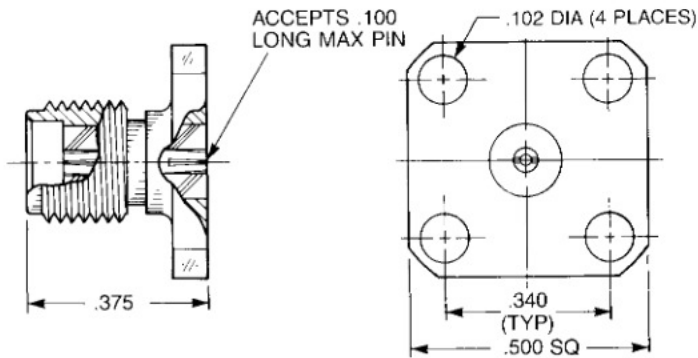
Material: Beryllium copper

Finish: Gold per MIL-G-45204, type II, class 1, grade C over .0001 copper per MIL-C-14450

SMA Hermetic Seal Launchers

For hermetic seals with .020" diameter pins

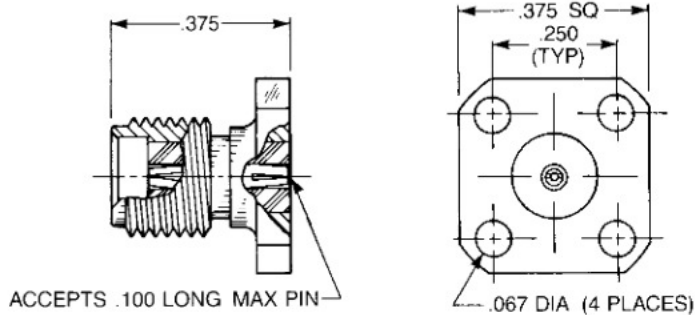
Straight Jacks



Straight Jack 1/2" Square Flange

9504-9113-031

9504-9113-034 (Includes 920-69)



Straight Jack 3/8" Square Flange

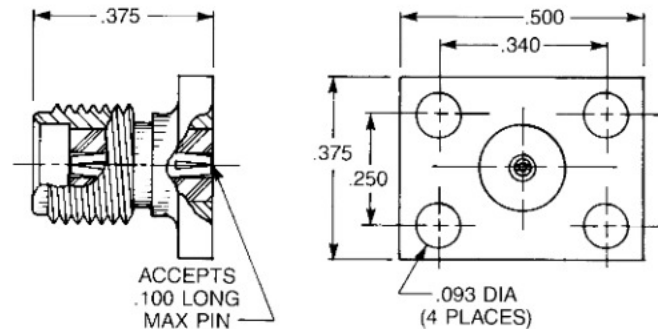
9576-9113-001

9576-9113-002 (Includes 920-69)

Straight Jack Rectangular Flange

9507-9113-003

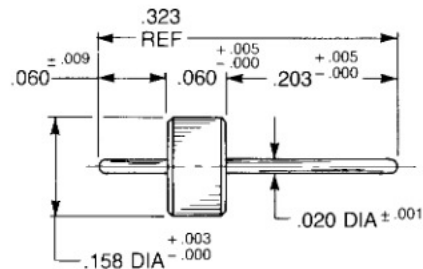
9507-9113-004 (Includes 920-69)



Hermetic Seal and Accessory Contact

Solder-In Hermetic Seal

P/N 920-69



APPLIED ENGINEERING PRODUCTS

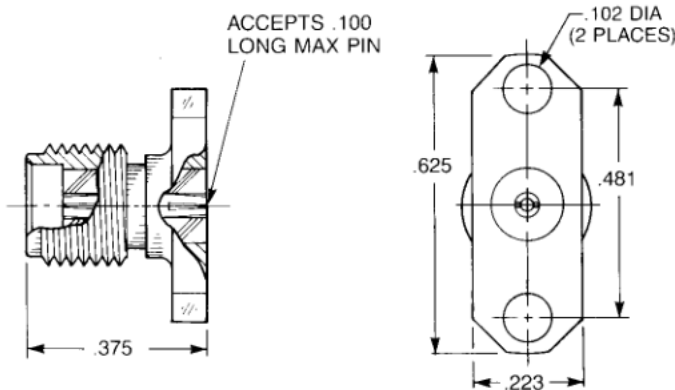
(203) 776-2813 • FAX (203) 776-8294

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SMA Hermetic Seal Launchers

For hermetic seals with .020" diameter pins

Straight Jacks



Straight Jack 2-Hole Flange

9508-9113-002

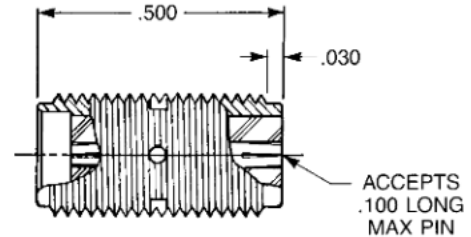
9508-9113-003 (Includes 920-69)

Straight Jack Screw-In Mounting

9513-9113-009

9513-9113-012 (Includes 920-69)

These connectors require a minimum package wall thickness of .250" for proper retention

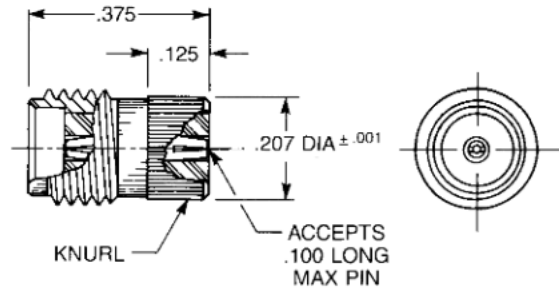


Straight Jack Knurl Mount

9533-9113-003

9533-9113-002 (Includes 920-69)

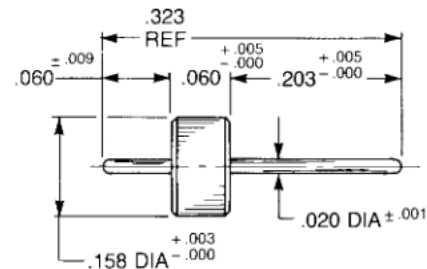
These connectors require a minimum package wall thickness of .235" for proper retention



Hermetic Seal and Accessory Contact

Solder-In Hermetic Seal

P/N 920-69



APPLIED ENGINEERING PRODUCTS

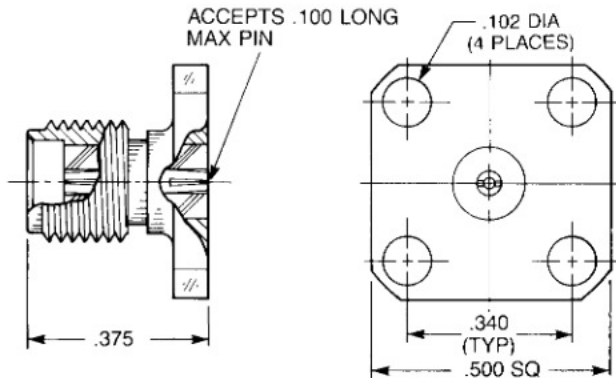
(203) 776-2813 • FAX (203) 776-8294

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SMA Hermetic Seal Launchers

For hermetic seals with .036" diameter pins

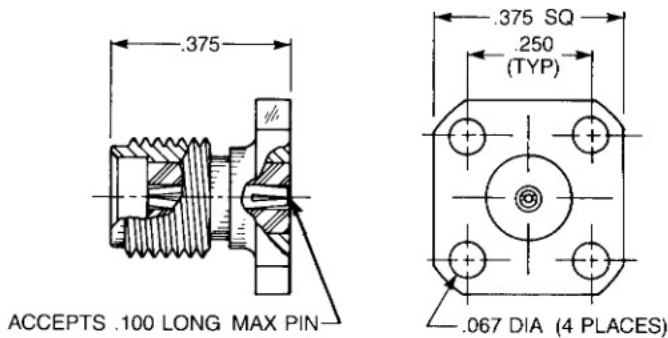
Straight Jacks



Straight Jack 1/2" Square Flange

9504-9113-009

9504-9113-035 (Includes 920-92)



Straight Jack 3/8" Square Flange

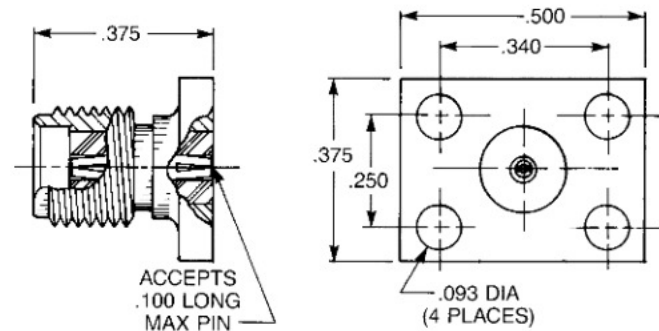
9576-9113-003

9576-9113-004 (Includes 920-92)

Straight Jack Rectangular Flange

9507-9113-005

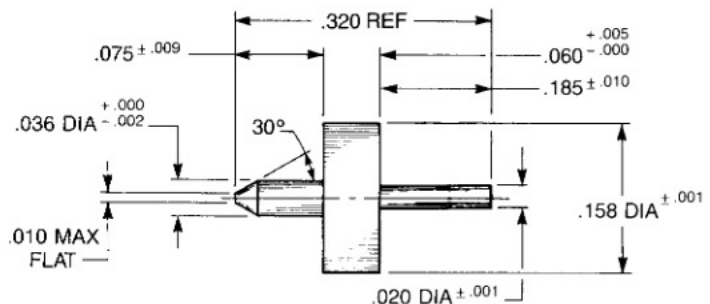
9507-9113-006 (Includes 920-92)



Hermetic Seal and Accessory Contact

Solder-In Hermetic Seal

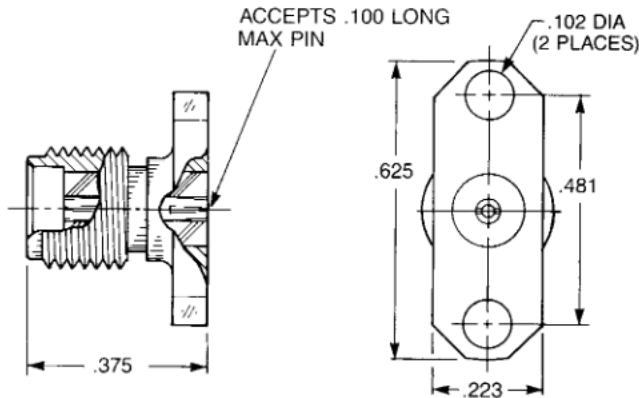
P/N 920-92



SMA Hermetic Seal Launchers

For hermetic seals with .036" diameter pins

Straight Jacks



Straight Jack 2-Hole Flange

9508-9113-001

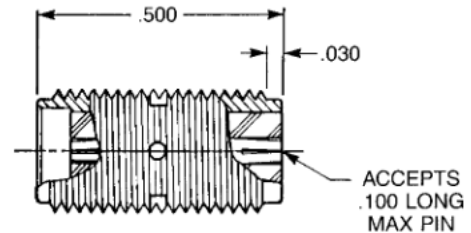
9508-9113-011 (Includes 920-92)

Straight Jack Screw-In Mounting

9513-9113-008

9513-9113-013 (Includes 920-92)

These connectors require a minimum package wall thickness of .250" for proper retention

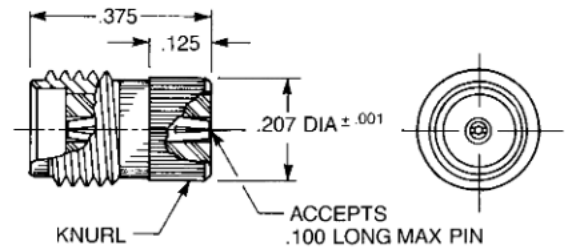


Straight Jack Knurl Mount

9533-9113-001

9533-9113-004 (Includes 920-92)

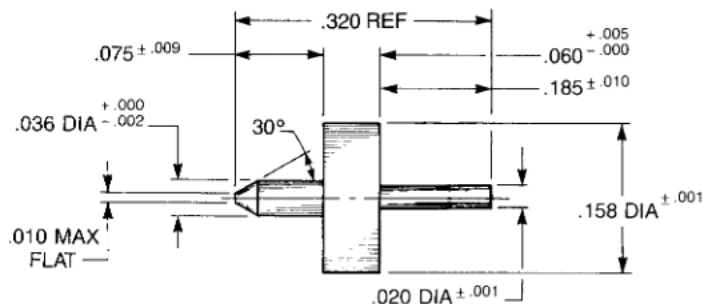
These connectors require a minimum package wall thickness of .235" for proper retention.



Hermetic Seal and Accessory Contact

Solder-In Hermetic Seal

P/N 920-92



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