

GPPO Products

- Center-to-center spacing of 0.140" available for increased package density
- Frequency from DC to 65 GHz
- Designed to accommodate both radial and axial misalignment with negligible VSWR change
- Adapters available to SMA, 2.4mm and 1.85mm



GPPO® Specifications

General Characteristics

Impedance	50 ohms nominal
Frequency range	DC to 65 GHz
Temperature range	-65°C thru 165°C

Electrical Characteristics

VSWR	1.10:1 to 26.5 GHz typical; 1.30 : 1 typical to 50 GHz
Insertion loss	.04 $\sqrt{f}$ (GHz)
DWV@ Sea Level:	325 Vrms
Insulation resistance	5,000 megohms min.
Contact resistance	
Outer conductor	2 milliohms max.
Inner conductor	6 milliohms max.
RF leakage	-80 dB (typical mated pair)

Mechanical Characteristics

Mate/Demate Cycles	Full Detent - 100min.; Smooth Bore - 500min.
Force to engage/disengage	FD - 4.5lbs.typ./6.5lbs.typ.; SB - 2.5lbs.typ./1.5lbs.typ.
Tolerated misalignment	
Radial	+/- 0.010
Axial	0.010 (flush to 0.010 from the reference plane)

Environmental Characteristics

Thermal Shock	MIL-STD-202, Method 107, Condition B
Salt Spray	MIL-STD-202, Method 101
Vibration	MIL-STD-202, Method 204
Shock	MIL-STD-202, Method 213, Condition I
Moisture resistance	MIL-STD-202, Method 106, except Step 7B

Materials (typical)

Bodies	Beryllium Copper per ASTM B196 and or/ASTM B197
Outer contacts	Beryllium Copper per ASTM B196 and or/ASTM B197
Center contacts	Beryllium Copper per ASTM B196 and or/ASTM B197
Insulators	PTFE Fluorocarbon per ASTM D1710
Springs	17-7 Stainless Steel per ASTM A313-95A

Finish (typical)

Bodies	Gold plated per MIL-G-45204, Type I, Grade C, Class 1, Over Nickel Plate per SAE AMS-QQ-N-290
Contacts	Gold plated per MIL-G-45204, Type I, Grade C, Class 1, Over Nickel Plate per SAE AMS-QQ-N-290

Female Blindmate Interconnect (0.166 Long)

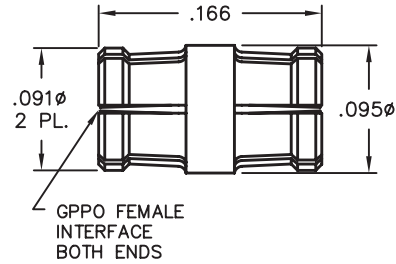
Catalog Number

B1B1-0001-05

VSWR (TYP)

1.15:1 to 18 GHz

1.35:1 to 40 GHz



Female Blindmate Interconnect

Catalog Number

A

B1B1-0001-01 0.210

B1B1-0001-02 0.500

B1B1-0001-03 0.327

B1B1-0001-07 0.260

B1B1-0001-08 0.349

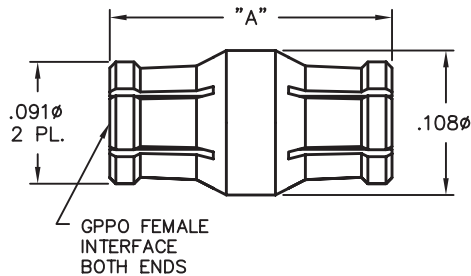
B1B1-0001-09 0.278

VSWR (TYP)

1.15:1 to 18 GHz

1.25:1 to 40 GHz

1.35:1 to 65 GHz



Female Blindmate Interconnect with Centering Ring

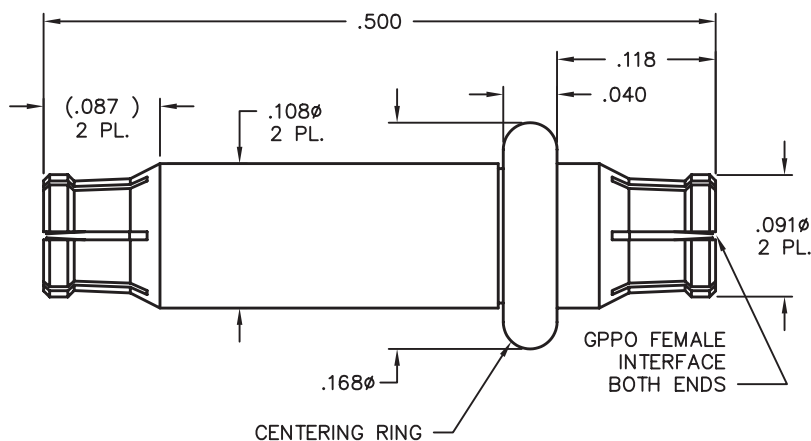
Catalog Number

0118-921-1

VSWR (TYP)

1.10:1 to 18 GHz

1.20:1 to 40 GHz



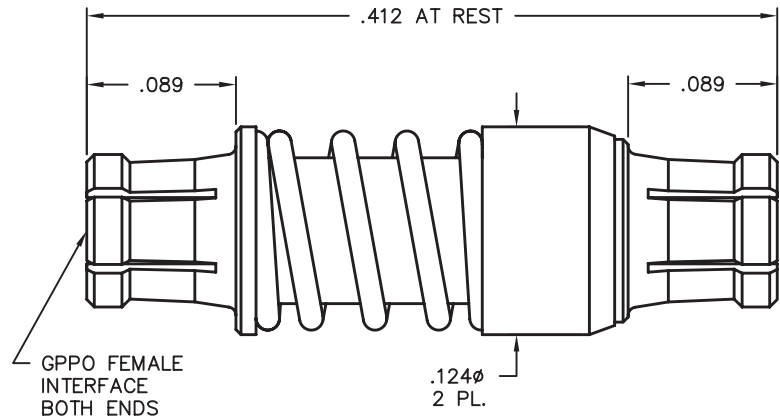
GPPO Blindmate Interconnects

Female Spring Loaded Bullet 0.412 Relaxed Length

Catalog Number

B1B1-0001-10

Compression Length: .382

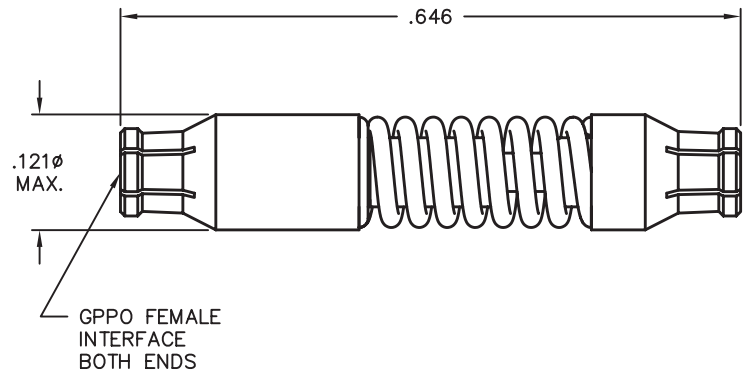


Spring Loaded Bullet 0.646 Relaxed Length

Catalog Number

B1B1-0001-11

Compression Length: .591



GPPO Cable Connectors

Female Straight to 0.047 S/R Cable

Catalog Number

B014-B11-01

Tools Recommended

B096-A93-01

VSWR (TYP)

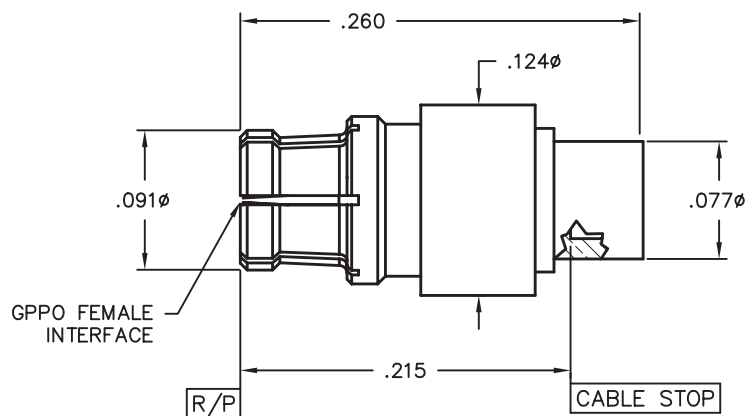
1.10:1 to 26.5 GHz

A096-A99-04

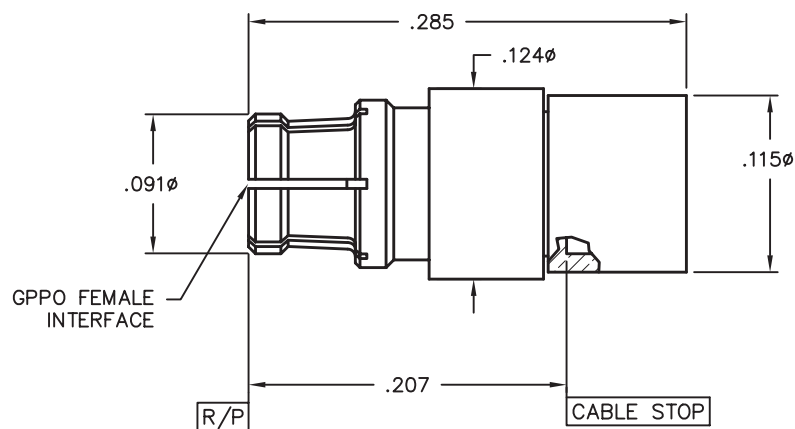
1.20:1 to 40 GHz

Assembly Procedure

AP01-133



Female Straight to 0.086 S/R Cable



Catalog Number

B014-D11-01

VSWR (TYP)

1.10:1 to 26.5 GHz

1.25:1 to 40 GHz

Tools Recommended

B096-A93-01

A096-A99-04

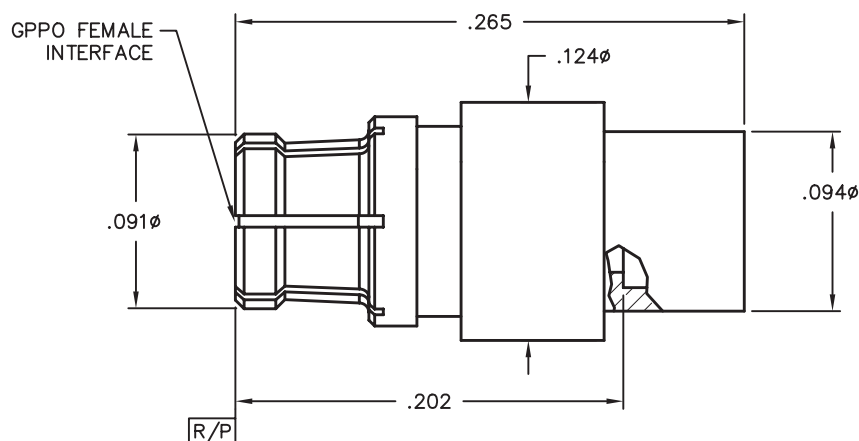
L096-A99-01

Assembly Procedure

AP01-148



Female Straight to M1049 (0.080) Flex Cable



Catalog Number

B014-K11-01

Tools Recommended

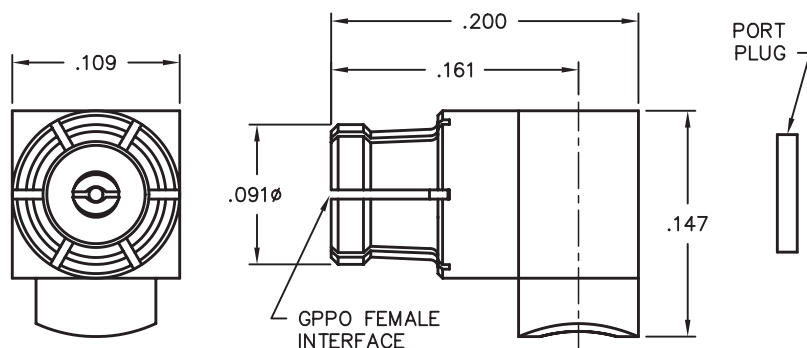
B096-A93-01

A096-A99-04

L096-A99-01

Assembly Procedure

AP01-108



Female R/A to 0.047 S/R Cable

Catalog Number

B015-B11-01

VSWR

1.10:1 to 10 GHz

1.25:1 to 20 GHz

Tools Recommended

B096-A93-01

L096-A99-02

A096-A99-09

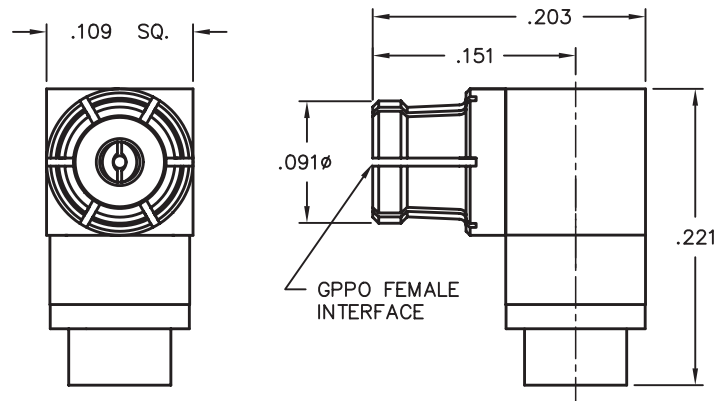
Assembly Procedure

AP01-080



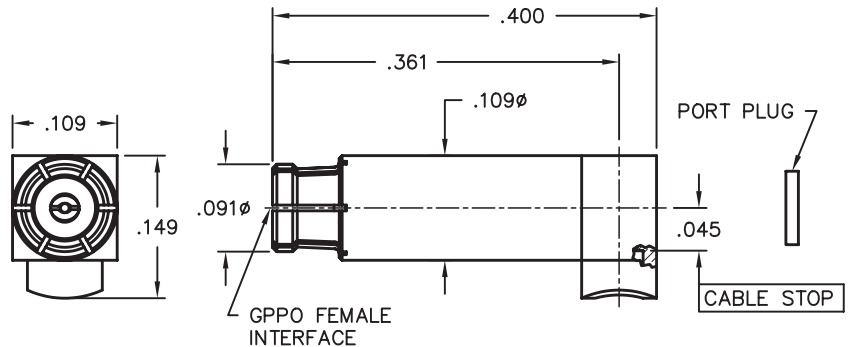
Female Swept R/A to 0.047 S/R Cable

Catalog Number	Tools Recommended
B015-B11-02	B096-A93-01
VSWR	A096-A99-10
1.15:1 to 18 GHz	L096-A99-02
1.30:1 to 26.5 GHz	Assembly Procedure
	AP01-076



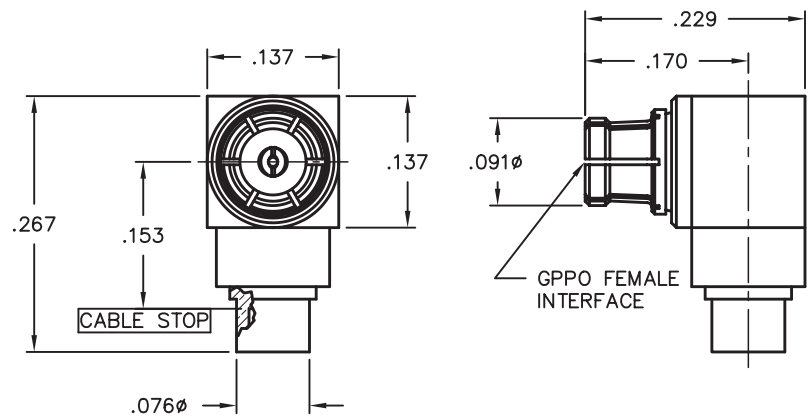
Female R/A to 0.047 S/R Cable

Catalog Number	Tools Recommended
B015-B11-04	B096-A93-01
VSWR	A096-A99-09
1.10:1 to 10 GHz	L096-A99-02
1.30:1 to 15 GHz	Assembly Procedure
	AP01-150



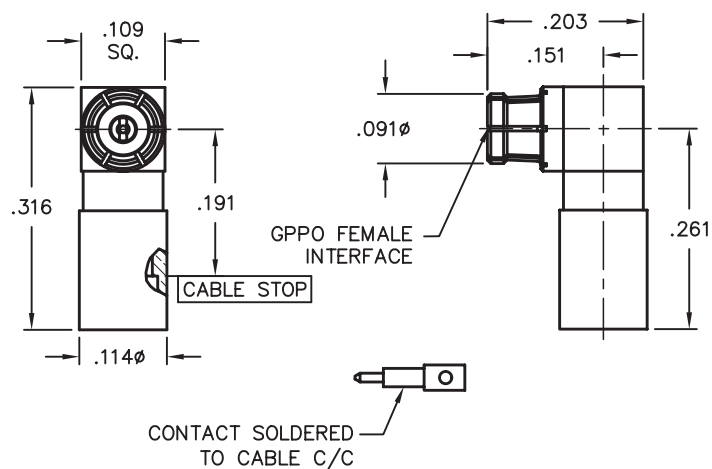
Female R/A to 0.047 S/R Cable

Catalog Number	Tools Recommended
0118-927-1	B096-A93-01
VSWR	A096-A99-10
1.10:1 to 18 GHz	L096-A99-02
1.20:1 to 26.5 GHz	Assembly Procedure
	AP01-122



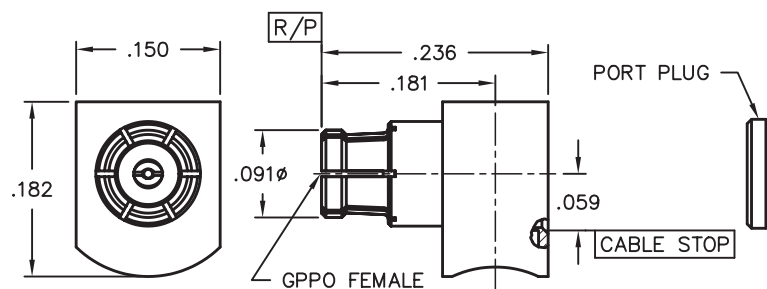
Female High Performance Swept R/A to 0.086 S/R Cable

Catalog Number	Tools Recommended
B015-D11-01	B096-A93-01
VSWR (TYP)	A096-A99-10
1.10:1 to 12 GHz	L096-A99-01
1.20:1 to 18 GHz	Assembly Procedure
	AP01-112



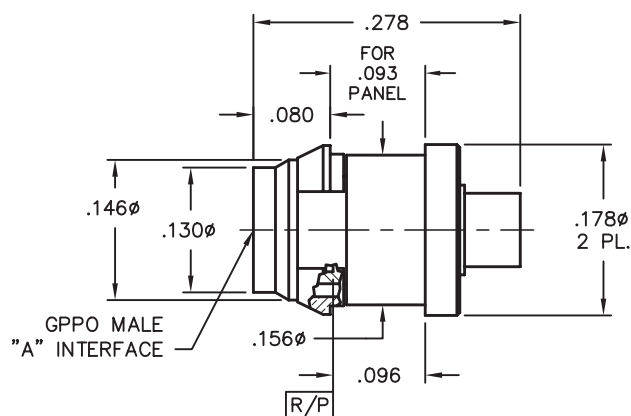
Female R/A to 0.086 S/R Cable

Catalog Number	Tools Recommended
B015-D11-02	B096-A93-01
VSWR (TYP)	A096-A99-10
1.20:1 to 12 GHz	L096-A99-01
1.30:1 to 18 GHz	



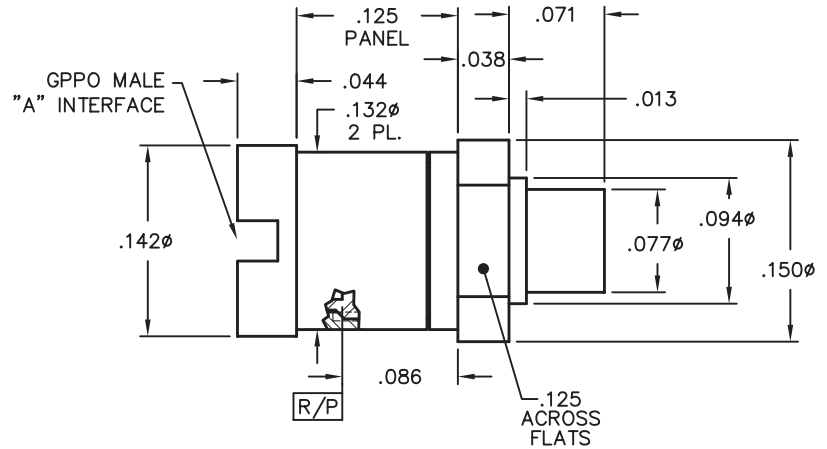
Male Snap-in to 0.047 S/R Cable

Catalog Number	A	Tools Recommended
B016-B33-01	FD	B096-A99-01
B016-B35-01	SB	L096-A99-02
VSWR (TYP)		Assembly Procedure
1.20:1 to 26.5 GHz		AP01-094
1.30:1 to 40 GHz		



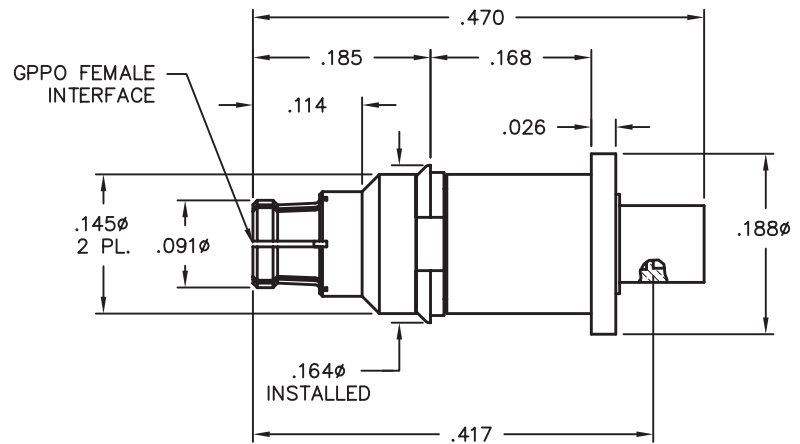
Male Bulkhead Mount to 0.047 S/R Cable

Catalog Number	A	Tools Recommended
B016-B33-02	FD	B096-A99-01
B016-B35-02	SB	L096-A99-02
VSWR (TYP)		
1.20:1 to 26.5 GHz		AP01-110
1.30:1 to 40 GHz		
Assembly Procedure		



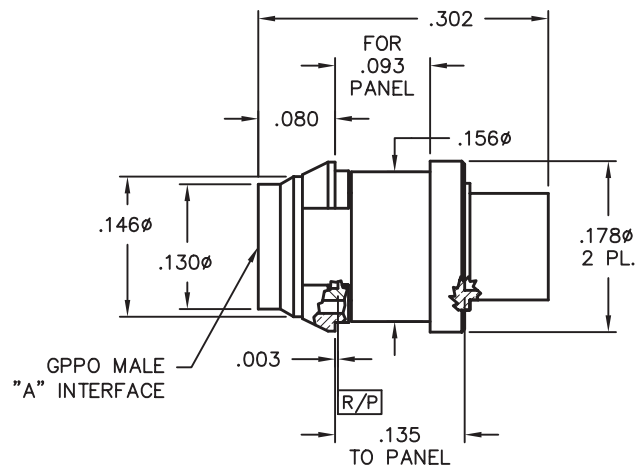
Female Snap-In to 0.047 S/R Cable

Catalog Number	Tools Recommended
0118-961-4	B096-A93-01
VSWR (TYP)	
1.10:1 to 12 GHz	L096-A99-02
1.25:1 to 26.5 GHz	AP01-103
Assembly Procedure	

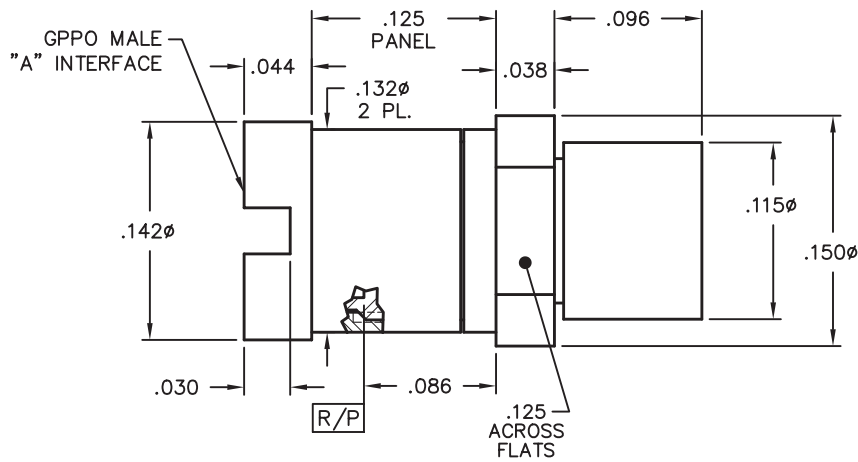


Male Snap-in to 0.086 S/R Cable

Catalog Number	A	Tools Recommended
B016-D33-01	FD	B096-A99-01
B016-D35-01	SB	L096-A99-01
VSWR (TYP)		
1.10:1 to 26.5 GHz		AP01-092
1.25:1 to 40 GHz		
Assembly Procedure		

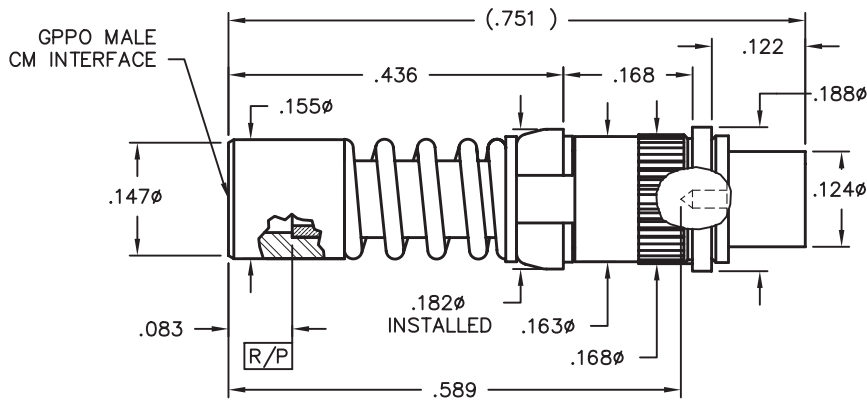


Male Bulkhead Mount to 0.086 S/R Cable



Catalog Number	A	Tools Recommended
B016-D33-02	FD	B096-A99-01
B016-D35-02	SB	L096-A99-01
VSWR (TYP)		Assembly Procedure
1.15:1 to 26.5 GHz		AP01-111
1.30:1 to 40 GHz		

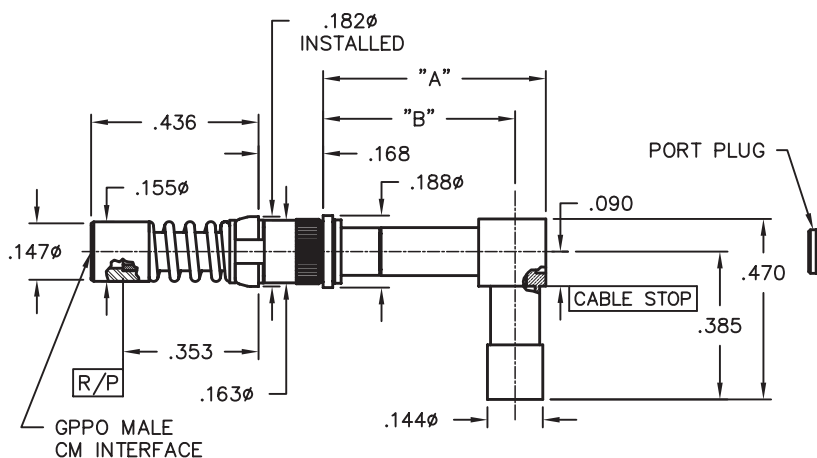
Male Catchers Mitt Snap-in Float Mount to 0.086 S/R Cable



Catalog Number	Tools Recommended
0118-928-4-CM	B096-A99-02
VSWR (TYP)	
1.10:1 to 18 GHz	
1.25:1 to 30 GHz	
Assembly Procedure	
AP01-090	



Male Catchers Mitt R/A Float Mount to 0.086 S/R Cable

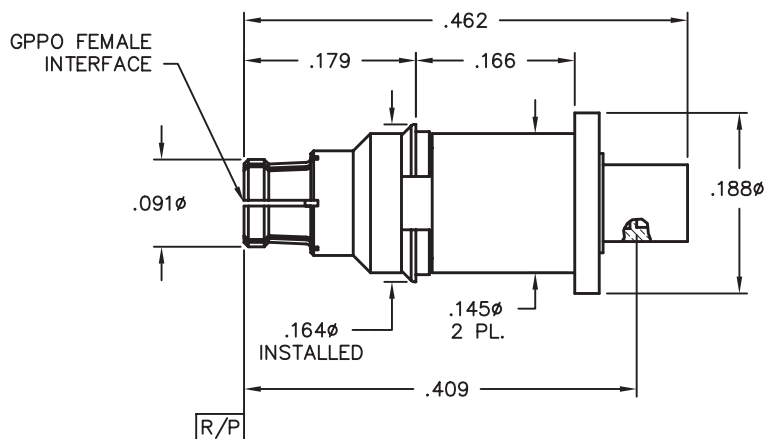


Catalog Number	A	B
B019-K36-01	0.580	0.500
B019-K36-02	0.470	0.390
B019-K36-03	0.705	0.625
Tools Recommended		
B096-A99-02		
Assembly Procedure		
AP01-134		



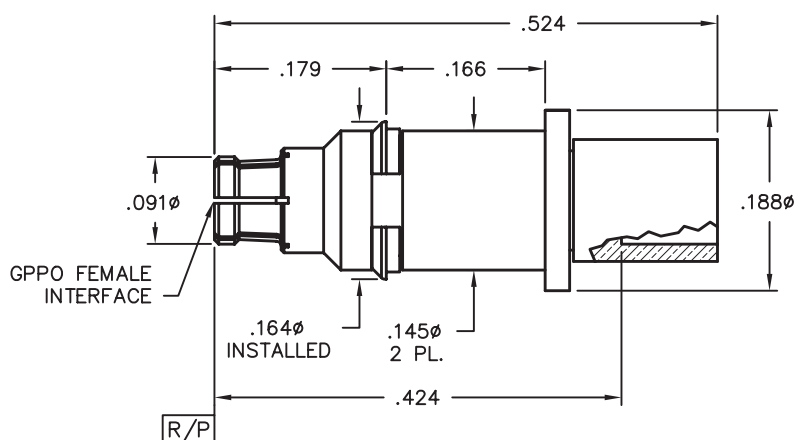
Female Snap-in to 0.047 S/R Cable

Catalog Number	Tools Recommended
B016-B11-01	B096-A93-01
VSWR (TYP)	A096-A99-09
1.10:1 to 12 GHz	L096-A99-02
1.20:1 to 26.5 GHz	Assembly Procedure
1.30:1 to 40 GHz	AP01-103



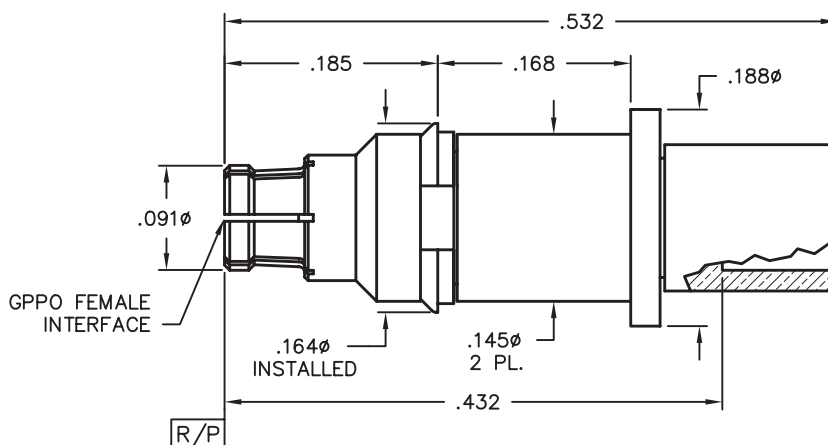
Female Snap-in to 0.086 S/R Cable

Catalog Number	Tools Recommended
0118-958-1	B096-A93-01
VSWR (TYP)	A096-A99-09
1.15:1 to 18 GHz	L096-A99-01
1.50:1 to 40 GHz	Assembly Procedure
	AP01-120

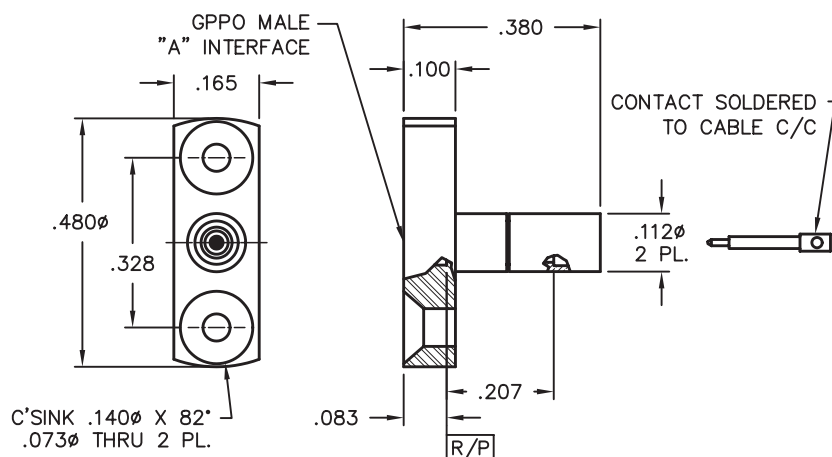


Female Snap-in to 0.086 S/R Cable

Catalog Number	Tools Recommended
0118-958-4	B096-A93-01
VSWR (TYP)	A096-A99-09
1.15:1 to 18 GHz	L096-A99-01
1.50:1 to 40 GHz	Assembly Procedure
	AP01-142



Male 2 Hole Flange Mount to 0.086 S/R Cable



Catalog Number A

B001-D33-01	FD
-------------	----

B001-D35-01 SB

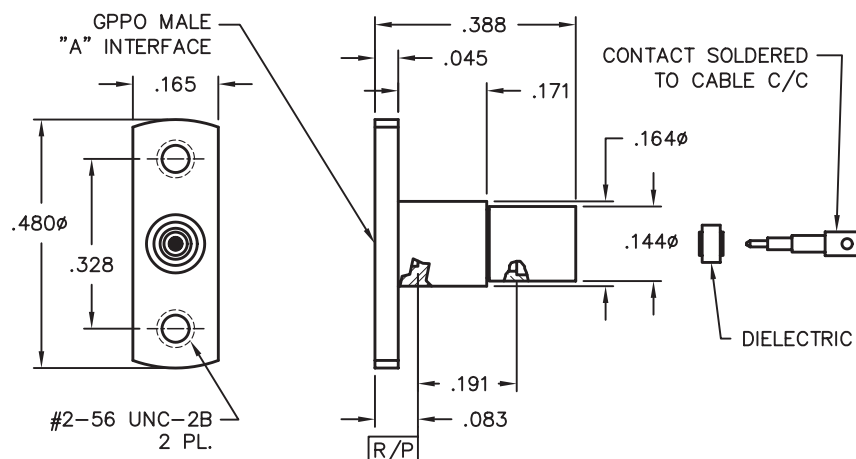
VSWR (TYP)

1.30:1 to 40 GHz

Assembly Procedure

AP01-119

Male Flange Mount to 0.116 S/R Cable



Catalog Number A

B001-K33-01	FD
-------------	----

B001-K35-01 SB

Tools Recommended

B096-A99-01

L096-A99-03

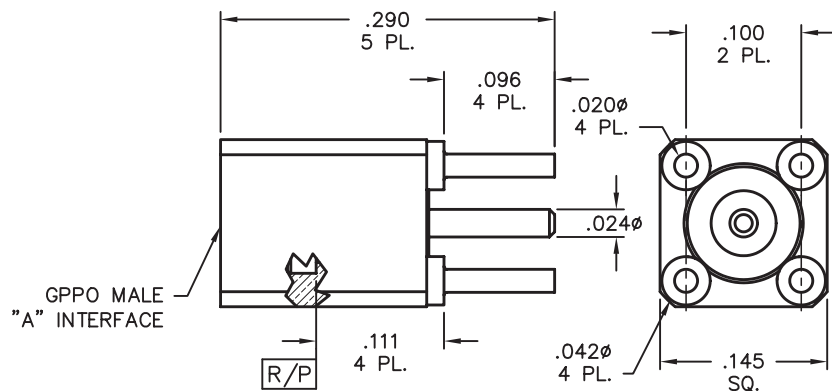
L096-A99-01

Assembly Procedure

AP01-106

GPPO PCB Mounts

Male PCB 4 Leg Thru Mount Cap C/C



Catalog Number A

B008-L13-01	FD
-------------	----

B008-L15-01 SB

VSWR (TYP)

1.35:1 to 26.5 GHz



GPPO PCB Mounts

Male PCB 4 Leg Thru Mount with Separate C/C

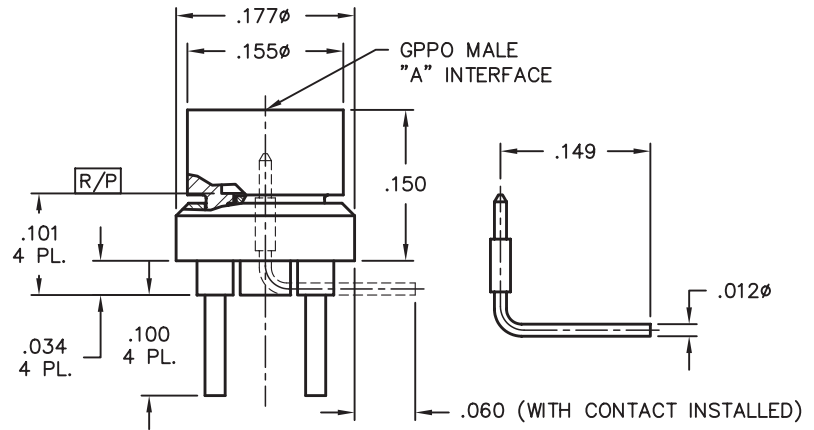
Catalog Number A

B008-P33-01 FD

B008-P35-01 SB

VSWR (TYP)

1.20:1 to 20 GHz



Male Straight to PCB Mount with Separate R/A Pin

Catalog Number A L Lengths

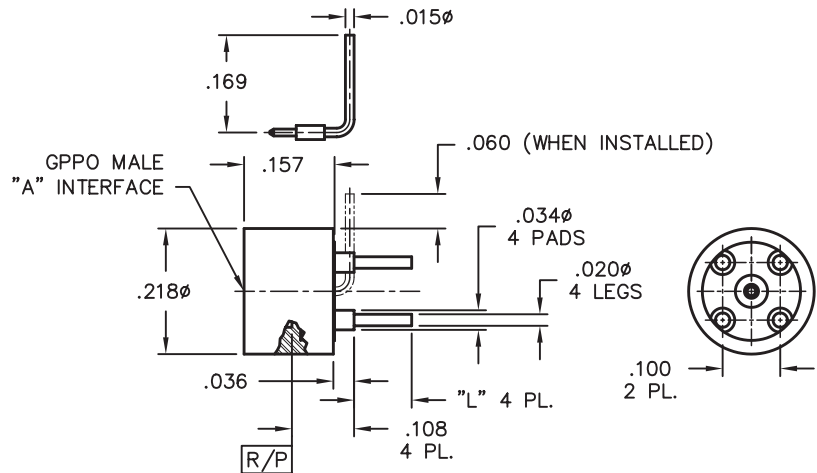
0118-959-1-SB-TAB SB .055/.100

0118-959-1-FD-TAB FD .055/.100

TAB = $L \times 10^3$ inches

VSWR (TYP)

1.20:1 to 20 GHz



Male Straight to PCB Mount

Catalog Number A L Lengths

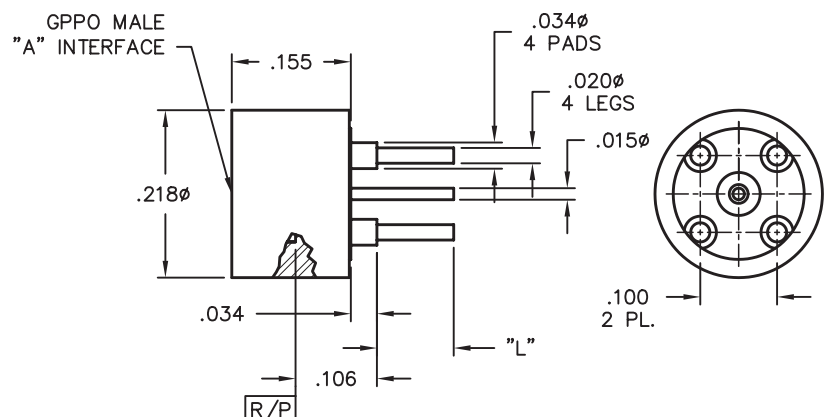
0118-960-1-FD-TAB FD .055/.100

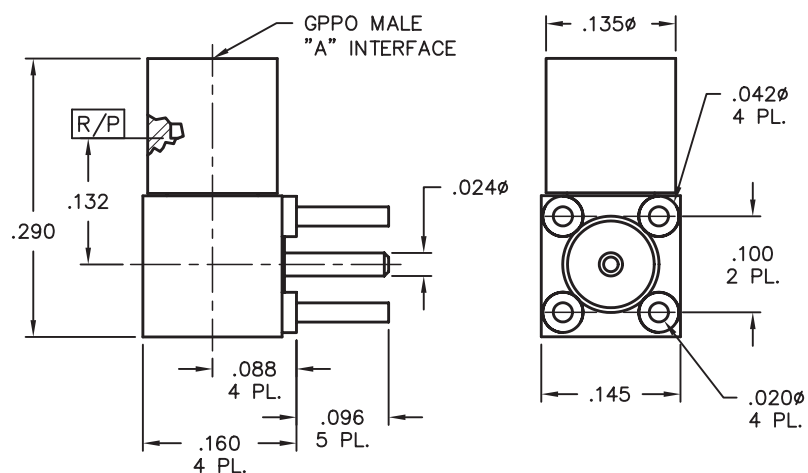
0118-960-1-SB-TAB SB .055/.100

TAB = $L \times 10^3$ inches

VSWR (TYP)

1.20:1 to 26.5 GHz



**Male R/A PCB 4 Leg Thru Mount Cap C/C**

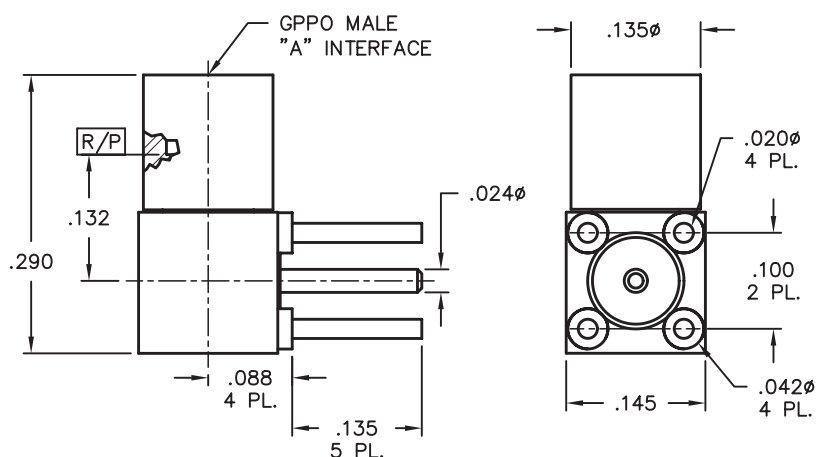
Catalog Number A

B009-P33-01 FD

B009-P35-01 SB

VSWR (TYP)

1.40:1 to 26.5 GHz

**Male R/A PCB Mount
0.135 Legs**

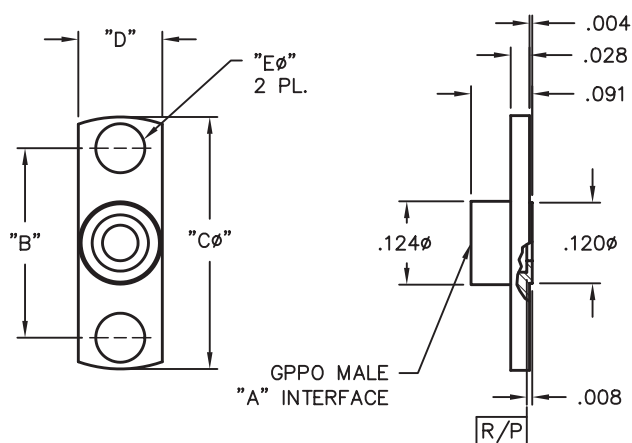
Catalog Number A

B009-P33-02 FD

B009-P35-02 SB

VSWR (TYP)

1.40:1 to 26.5 GHz

**GPPO Flange Mounts****Male Flange Mount Shroud**Catalog Number A B C ϕ D E ϕ

B001-A23-01 FD .282 .375 .125 .073

B001-A25-01 SB .282 .375 .125 .073

B001-A23-02 FD .481 .625 .150 .103

B001-A25-02 SB .481 .625 .150 .103

Tools Recommended

B090-A99-08 (for - 02 series)

B090-A99-09 (for - 01 series)

B090-A99-01



GPPO Flange Mounts

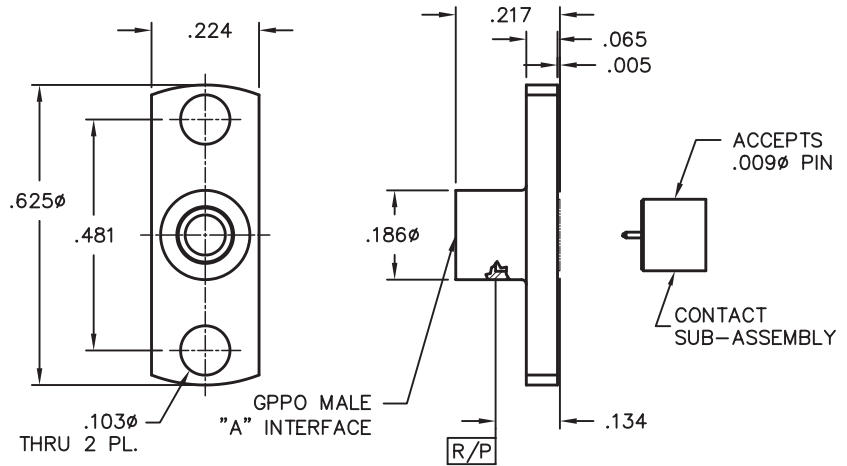
Male Flange Mount Shroud Accepts 0.009 Center Conductor

Catalog Number A

B001-N33-01	FD
B001-N35-01	SB

VSWR (TYP)

1.25:1 to 26.5 GHz
1.35:1 to 40 GHz



GPPO Edge Mounts

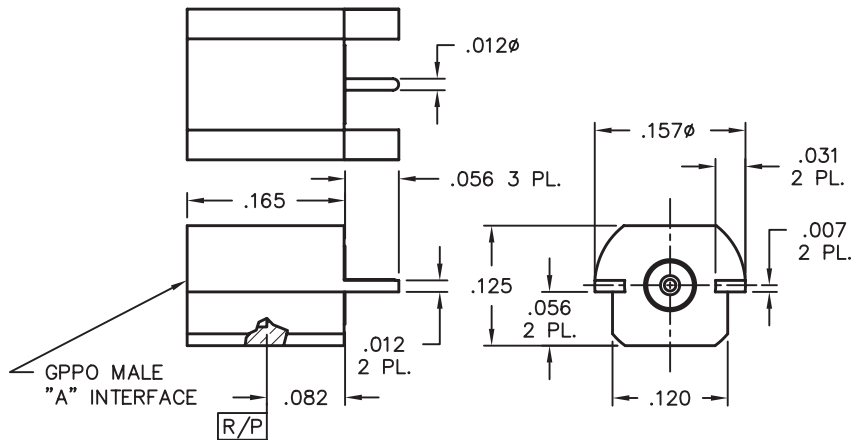
Male PCB Edge Mount

Catalog Number A

B010-L13-01	FD
B010-L15-01	SB

VSWR (TYP)

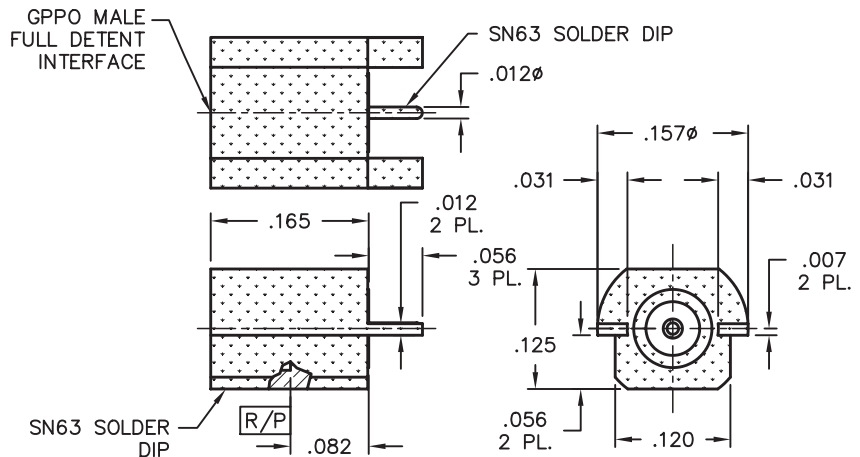
1.25:1 to 26.5 GHz



Male PCB Edge Mount High Temperature

Catalog Number

B010-L73-01-T



Male Edge Mount with Separate Pin

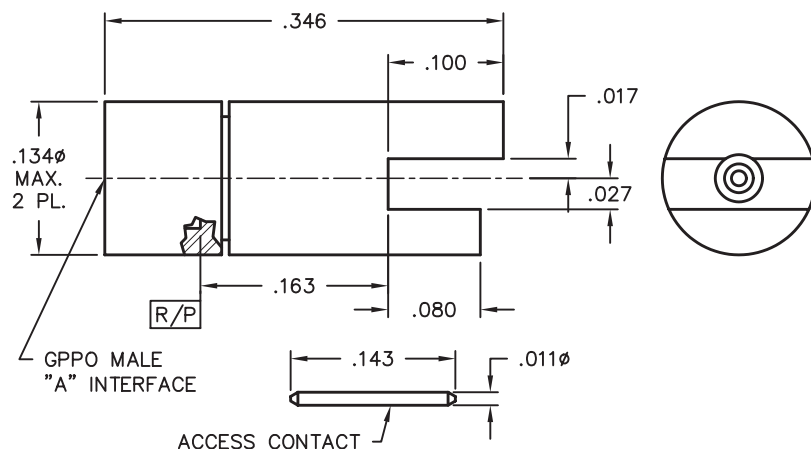
Catalog Number A

B010-L33-03 FD

B010-L35-03 SB

VSWR (TYP)

1.25:1 to 26.5 GHz



Male Edge Mount with Separate Pin

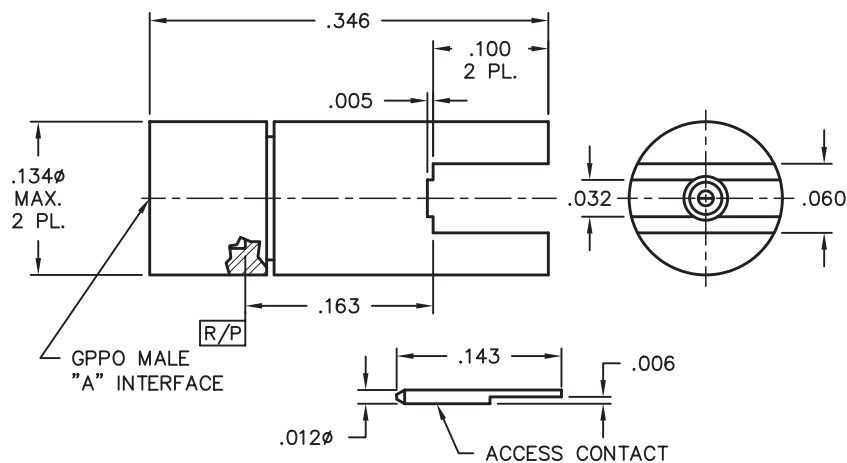
Catalog Number A

B010-L33-04 FD

B010-L35-04 SB

VSWR (TYP)

1.25:1 to 26.5 GHz

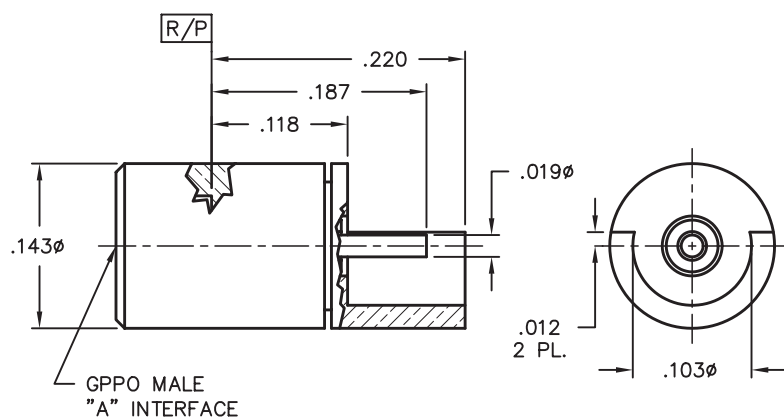


Male PCB Edge Mount

Catalog Number A

B010-L83-01 FD

B010-L85-01 SB

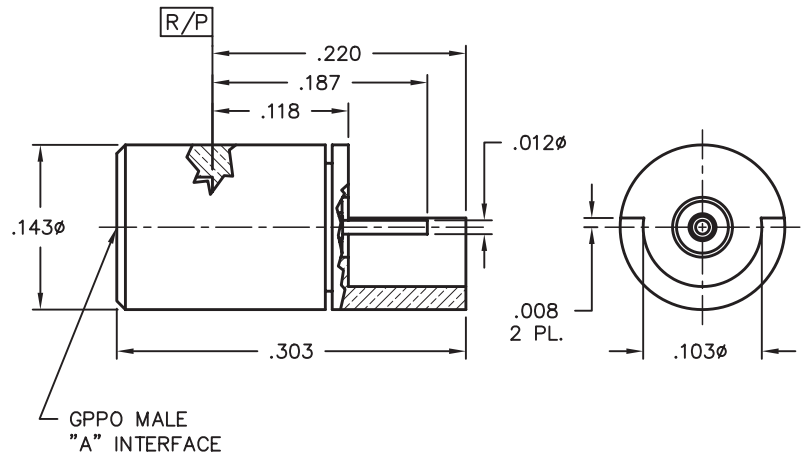


GPPO Edge Mounts

Male PCB Edge Mount

Catalog Number A

B010-L83-02	FD
B010-L85-02	SB



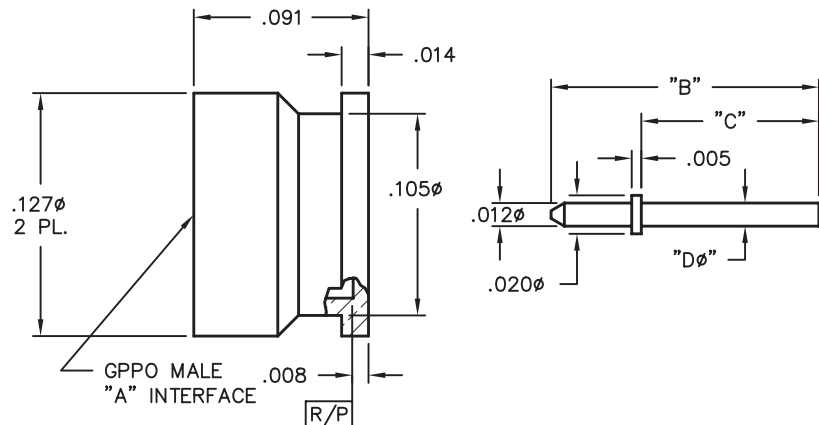
GPPO Surface Mounts

Male PCB Surface Mount with Separate Pin

Catalog Number	A	B	C	D ϕ
B012-L13-01	FD	.140	.093	.012
B012-L15-01	SB	.140	.093	.012
B012-L13-02	FD	.052	.005	.012
B012-L15-02	SB	.052	.005	.012
B012-L13-03	FD	.047	-	-
B012-L15-03	SB	.047	-	-
B012-L13-04	FD	.163	.093	.012
B012-L15-04	SB	.163	.093	.012

VSWR (TYP)

1.30:1 to 20 GHz



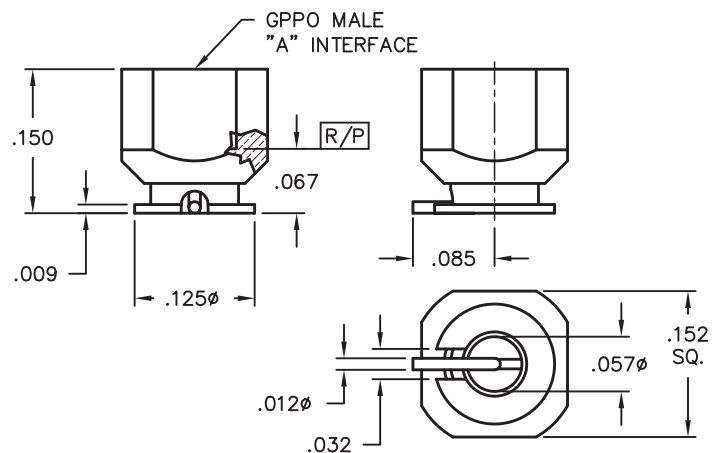
Male PCB Surface Mount

Catalog Number A

B012-P93-01	FD
B012-P95-01	SB

VSWR (TYP)

1.20:1 to 20 GHz



Male Coplanar Surface Mount

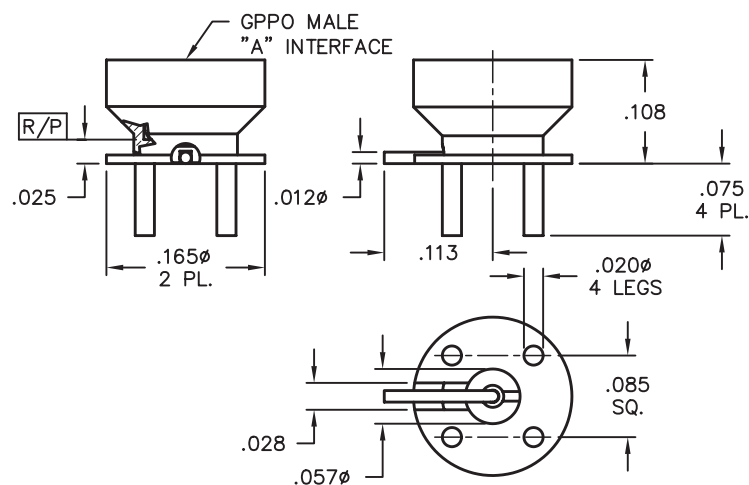
Catalog Number A

B012-P93-02 FD

B012-P95-02 SB

VSWR (TYP)

1.20:1 to 20 GHz



Male R/A Surface Mount

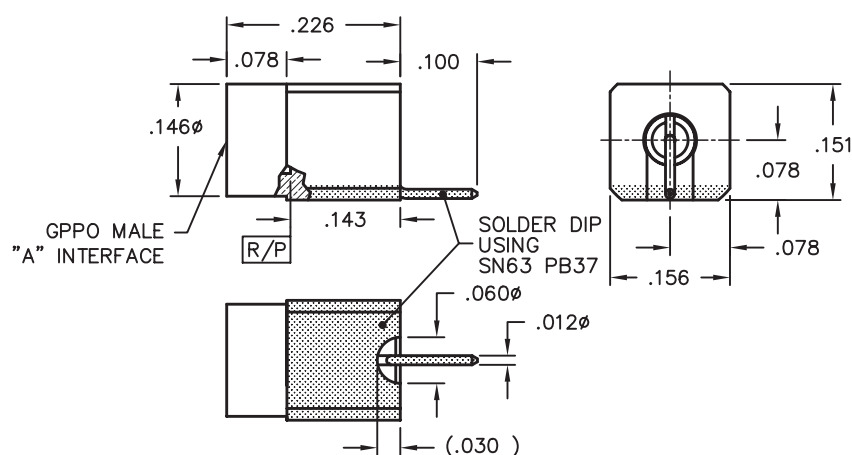
Catalog Number A

B013-L93-01 FD

B013-L95-01 LD

VSWR (TYP)

1.20:1 to 20 GHz



GPPO Thread-In Shrouds

Male Thread-in Shroud

Catalog Number A

B003-A23-01 FD

B003-A25-01 SB

Tools Recommended

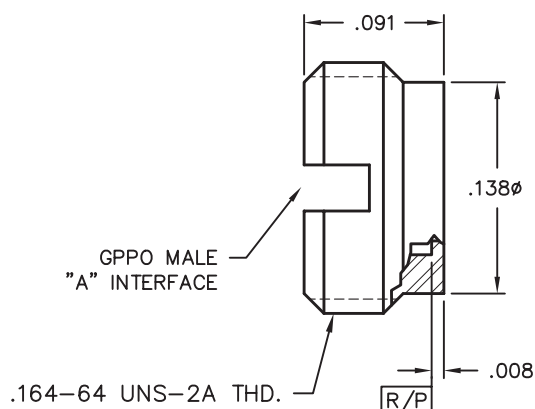
B090-A99-05

B097-A99-01 for FD

B097-A99-02 for SB

Assembly Procedure

AP01-101



GPPO Thread-In Shrouds

Male Thread-in

Catalog Number	A	B
B003-L33-01	FD	.015
B003-L35-01	SB	.015
B003-L33-02	FD	.067
B003-L35-02	SB	.065

VSWR (TYP)

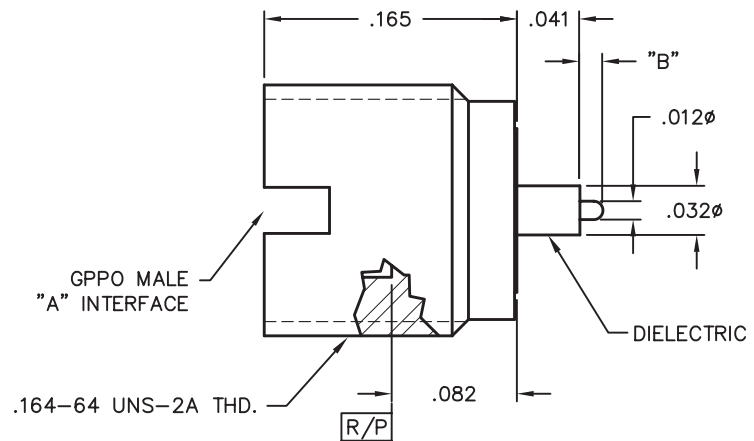
1.25:1 to 26.5 GHz

1.35:1 to 40 GHz

Tools Recommended

B097-A99-01 for FD

B097-A99-02 for SB



Male Thread-in

Catalog Number	A
B003-L33-03	FD
B003-L35-03	SB

VSWR (TYP)

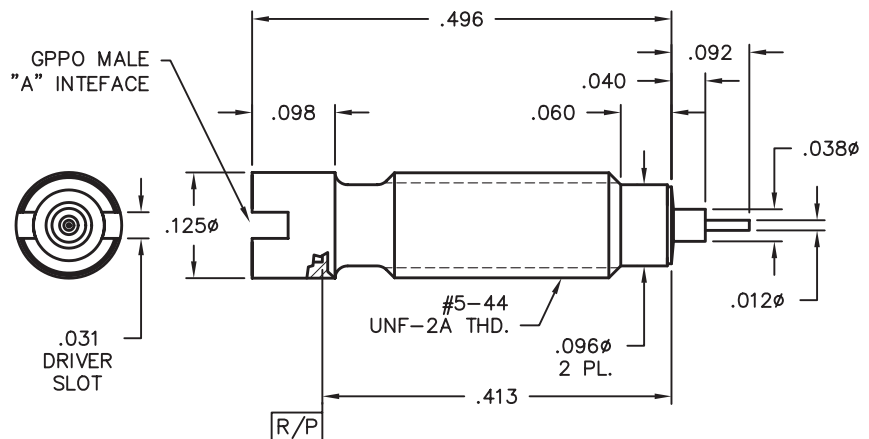
1.35:1 to 26.5 GHz

1.40:1 to 40 GHz

Tools Recommended

B097-A99-01 for FD

B097-A99-02 for SB



Male Thread-in

Catalog Number	A
B003-L33-05	FD
B003-L35-05	SB

VSWR (TYP)

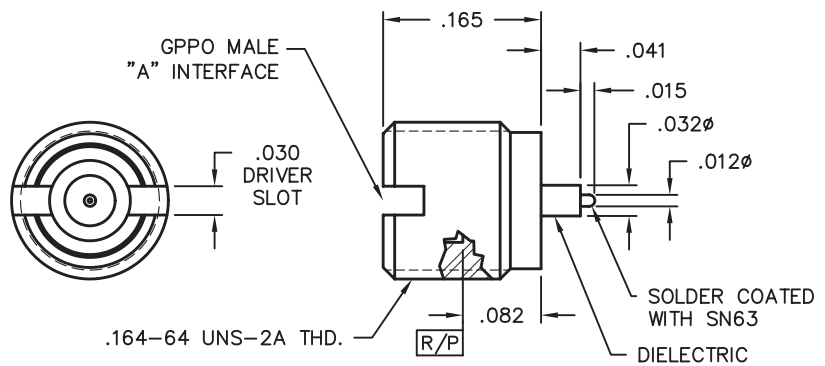
1.25:1 to 26.5 GHz

1.35:1 to 40 GHz

Tools Recommended

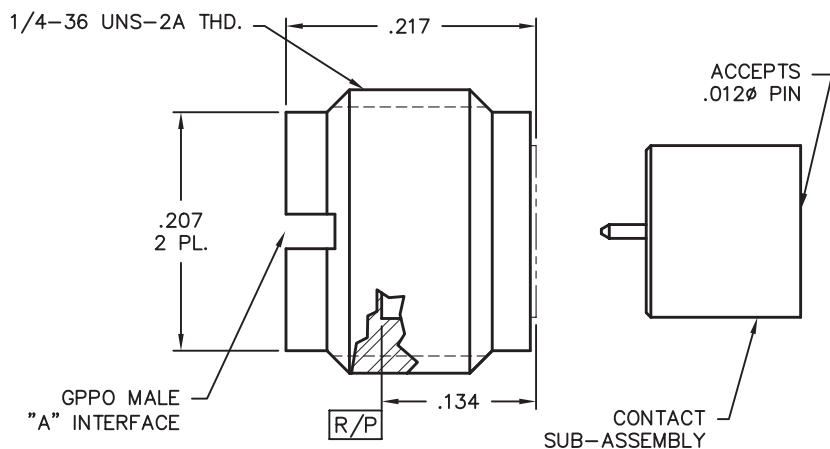
B097-A99-01 for FD

B097-A99-02 for SB



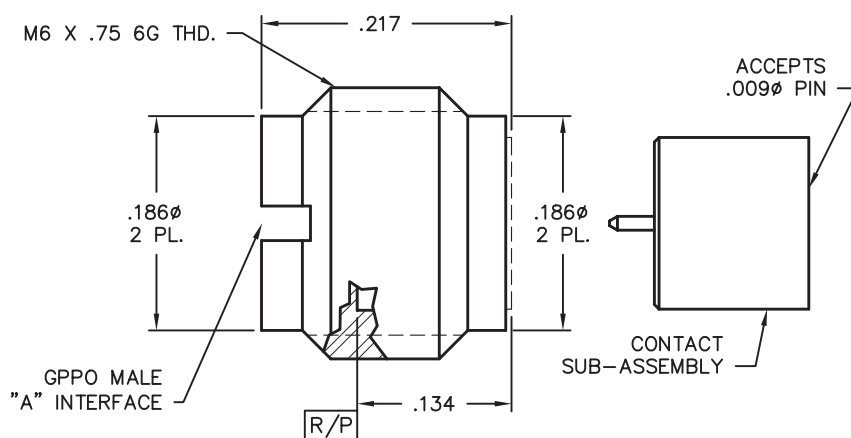
Male Thread-in Shroud Accepts .012 ϕ C/C

Catalog Number	A	Tools Recommended
B003-N33-01	FD	A090-A99-07
B003-N35-01	SB	B097-A99-01 for FD B097-A99-02 for SB
VSWR (TYP)		
1.25:1 to 26.5 GHz		
1.35:1 to 40 GHz		
Assembly Procedure		
AP01-104		



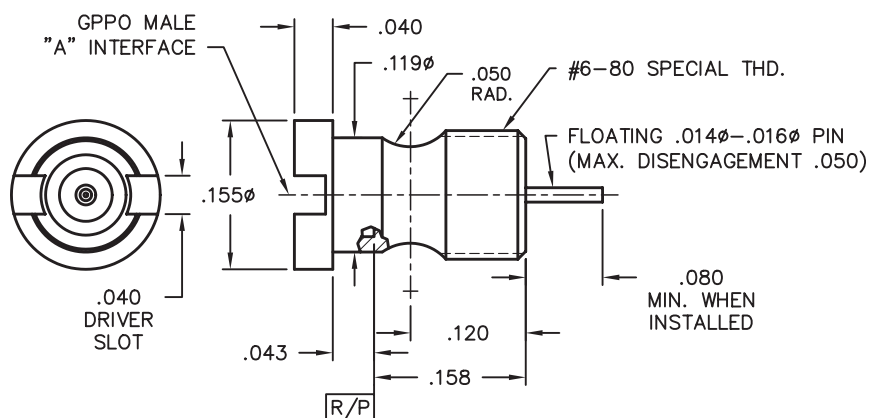
Male Thread-in Shroud Accepts .009 ϕ C/C

Catalog Number	A	Tools Recommended
B003-N33-02	FD	B097-A99-01 for FD
B003-N35-02	SB	B097-A99-02 for SB
VSWR (TYP)		
1.25:1 to 26.5 GHz		
1.35:1 to 40 GHz		



Male Thread-in to Stripline Launch with 0.015 Pin

Catalog Number	A	Tools Recommended
B024-L33-01	FD	B097-A99-01 for FD
B024-L35-01	SB	B097-A99-02 for SB
VSWR (TYP)		
1.25:1 to 26.5 GHz		
1.35:1 to 40 GHz		



GPPO Thread-In Shrouds

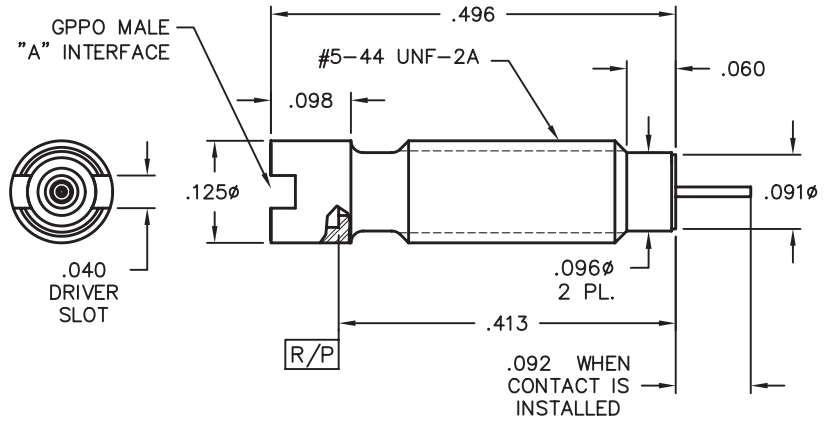
Male Thread-in

Catalog Number	A	Tools Recommended
B024-L33-02	FD	B097-A99-01 for FD
B024-L35-02	SB	B097-A99-02 for SB

VSWR (TYP)

1.35:1 to 26.5 GHz

1.40:1 to 40 GHz



GPPO Hermetic Shrouds

Male Hermetic Shroud Full Size

Catalog Number	A	L Lengths
B007-M43-01-TAB-X	FD	.030/.050/.070/.090
B007-M45-01-TAB-X	SB	.030/.050/.070/.090

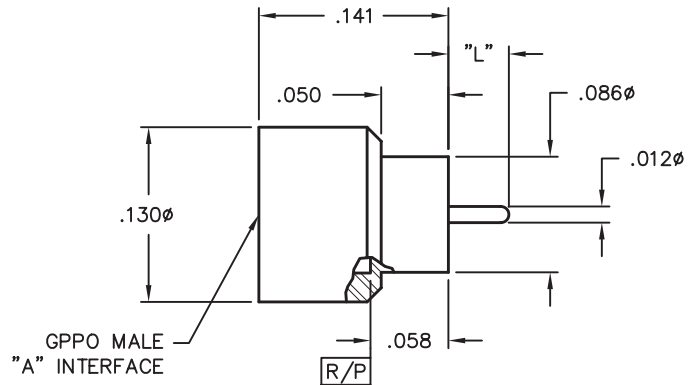
VSWR (TYP)

1.25:1 to 26.5 GHz

1.35:1 to 40 GHz

TAB = $L \times 10^3$ inches

X = Customer defined. Straight (S) or Radius (R) cut.



Male Hermetic Shroud Full Size

Catalog Number	A	L Lengths
B007-M46-01-TAB-X	SB	.030/.050/.070/.090

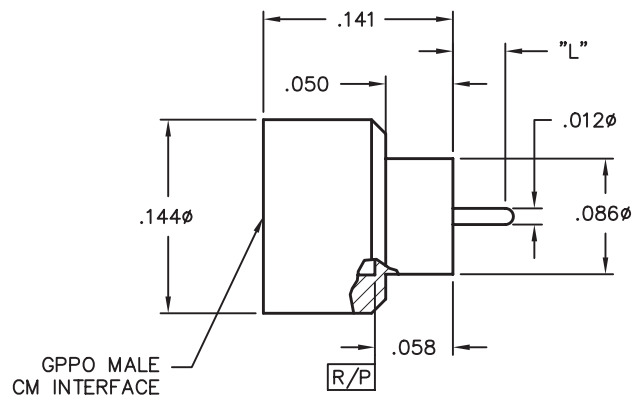
VSWR (TYP)

1.25:1 to 26.5 GHz

1.35:1 to 40 GHz

TAB = $L \times 10^3$ inches

X = Customer defined. Straight (S) or Radius (R) cut.

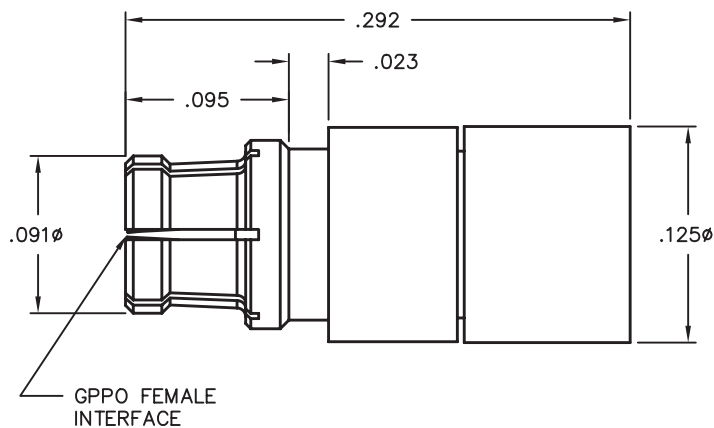


Female 50 Ohm Load

Catalog Number	Grade
B055-A11-01	TEST GRADE
B055-A11-02	FIELD GRADE

VSWR (TYP)

TEST GRADE : $1.15 + .011 \times F(\text{GHz})$:1 to 40 GHz
 FIELD GRADE : $1.15 + .013 \times F(\text{GHz})$:1 to 40 GHz

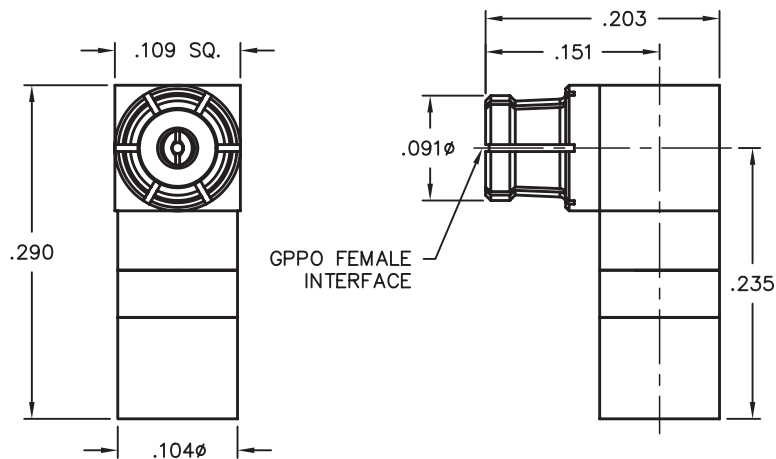


Female 50 Ohm R/A Load

Catalog Number	
B055-A11-05	

VSWR (TYP)

1.30:1 to 12 GHz

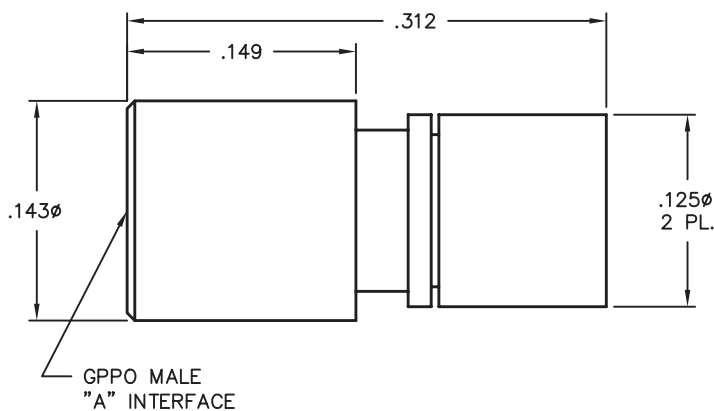


Male 50 Ohm Load

Catalog Number	A	B
B055-A13-01	FD	TEST GRADE
B055-A15-01	SB	TEST GRADE
B055-A13-02	FD	FIELD GRADE
B055-A15-02	SB	FIELD GRADE

VSWR (TYP)

TEST GRADE : 1.20:1 to 18 GHz, 1.30:1 to 40 GHz
 FIELD GRADE : 1.20:1 to 18 GHz, 1.50:1 to 40 GHz

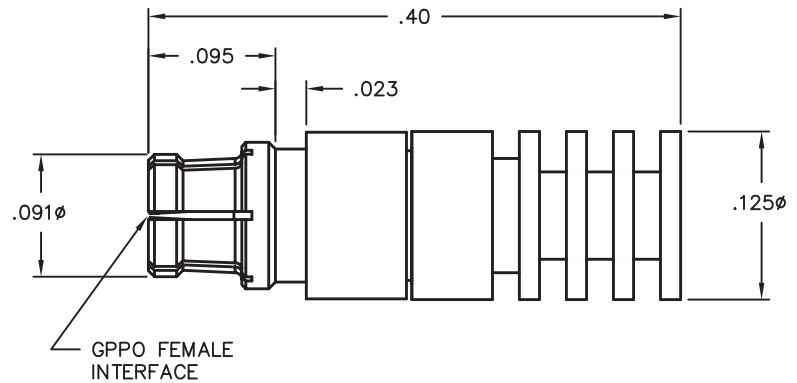


GPPO Loads

Female 1/2 Watt 50 Ohm Load

Catalog Number

B055-A11-06



GPPO Hermetic Seals

50 Ohm Hermetic Seal

Catalog Number

A

B

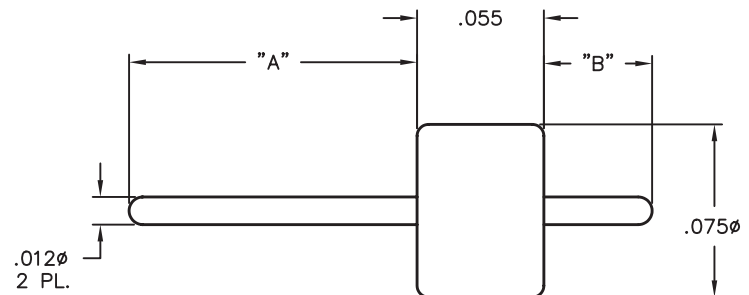
Y007-L42-01 0.125 0.047

Y007-L42-05 0.091 0.039

VSWR (TYP)

1.25:1 to 26.5 GHz

1.35:1 to 40 GHz

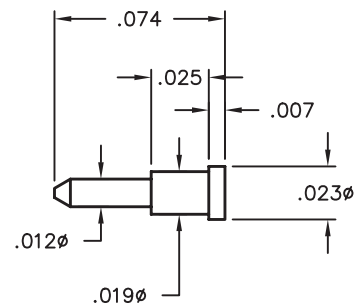


GPPO Pins

GPPO Pin

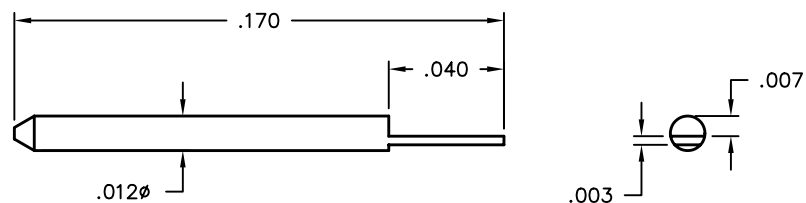
Catalog Number

Y071-L02-01



GPPO Pin[Catalog Number](#)

Y071-L92-01

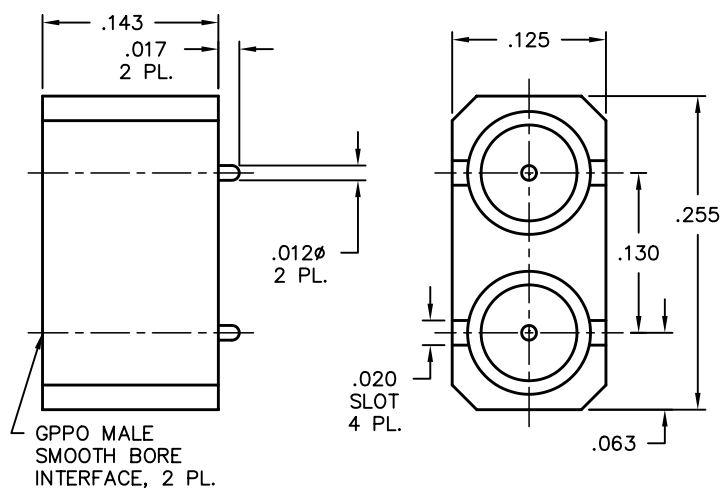
**GPPO Multiposition Blocks****Male 2-Position Smooth Bore Mounting Block**[Catalog Number](#)

B007-L45-15

Mating Block:

B007-L45-15-T

B007-L45-04-TAB



**Male 2-Position Smooth Bore
Mounting Block, Pre-Tinned**

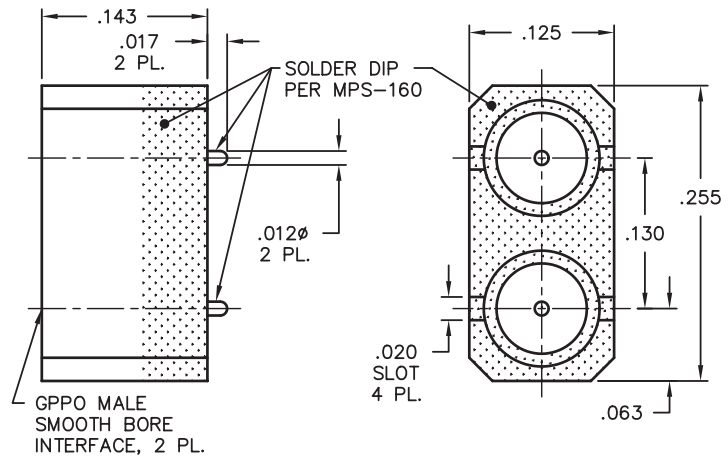
Catalog Number

B007-L45-15-T

Mating Block:

B007-L45-15

B007-L45-04-TAB



**Male 2-Position Smooth Bore
Mounting Block**

Catalog Number

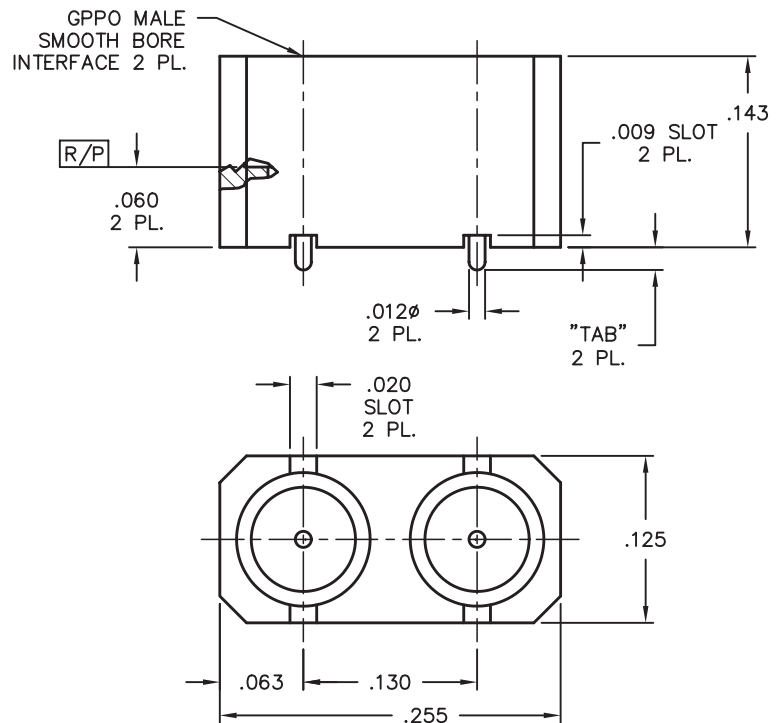
B007-L45-04-TAB

Mating Block:

B007-L45-15

B007-L45-15-T

TAB = $L \times 10^3$ inches



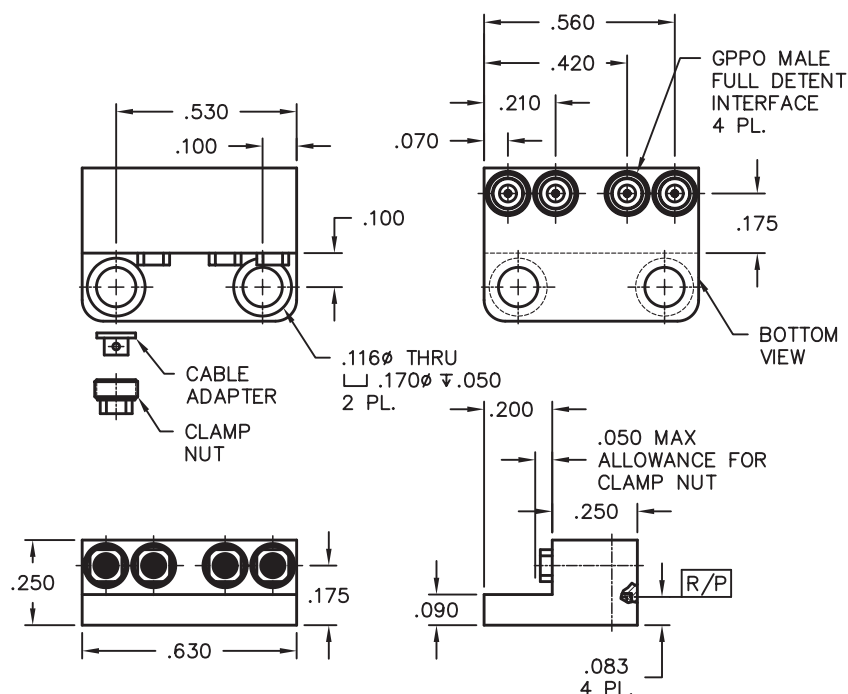
Male 4-Position Full Detent R/A to 0.047 Flex Cable

Catalog Number

B031-B93-01-4

Mating Block:

B031-B95-01-4



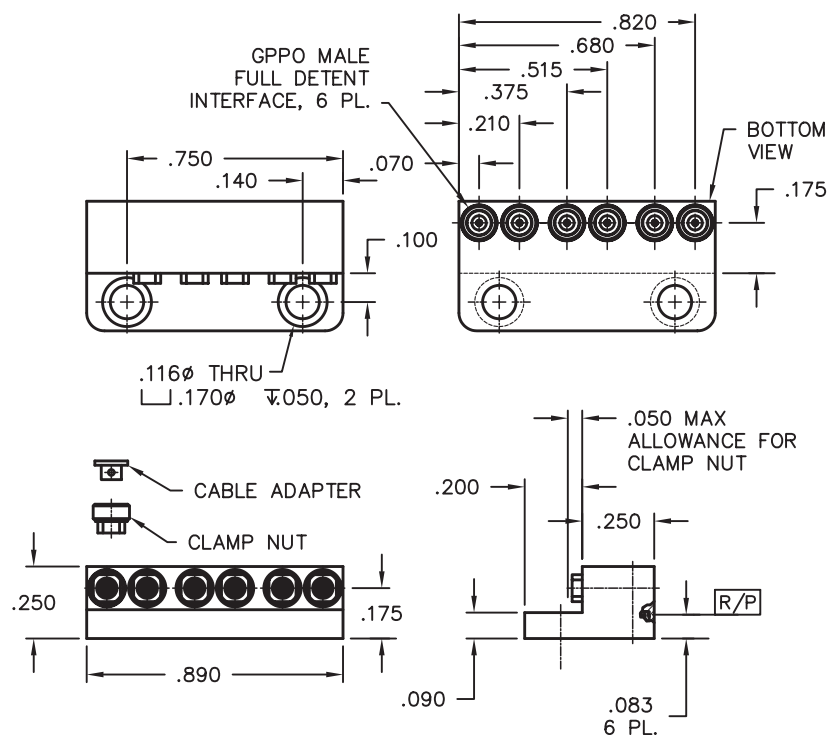
Male 6-Position Full Detent R/A to 0.047 Flex Cable

Catalog Number

B031-B93-01-6

Mating Block:

B031-B95-01-6



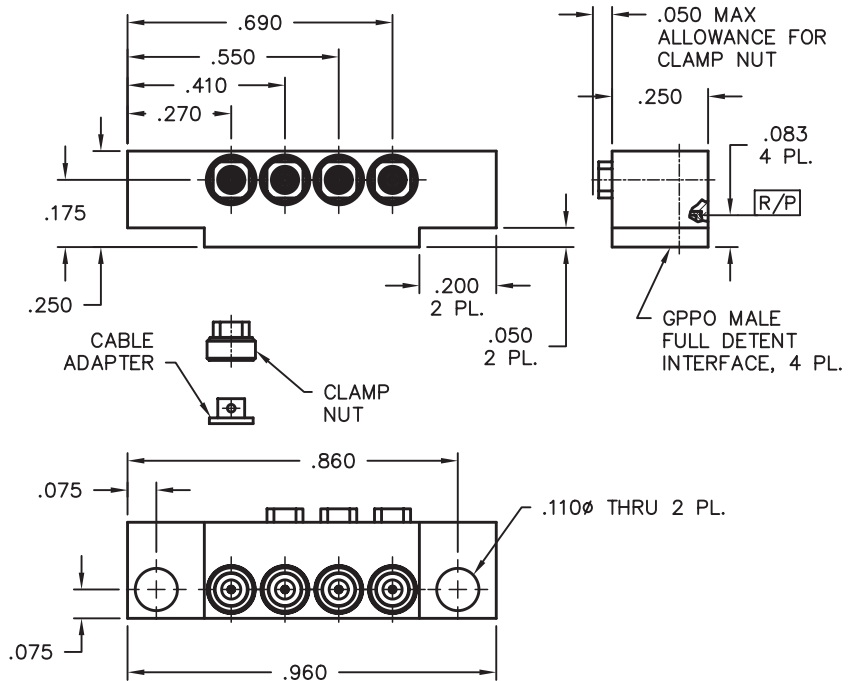
**Male 4-Position Full Detent R/A
to 0.047 Flex Cable**

Catalog Number

B031-B93-02-4

Mating Block:

B031-B95-02-4



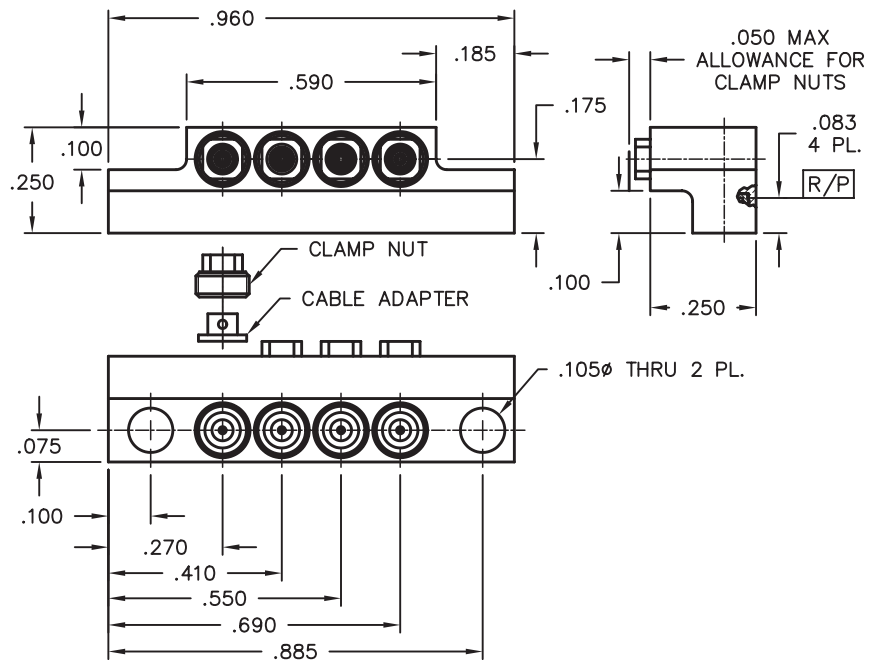
**Male 4-Position Full Detent R/A
to 0.047 Flex Cable**

Catalog Number

B031-B93-03-4

Mating Block:

B031-B95-03-4



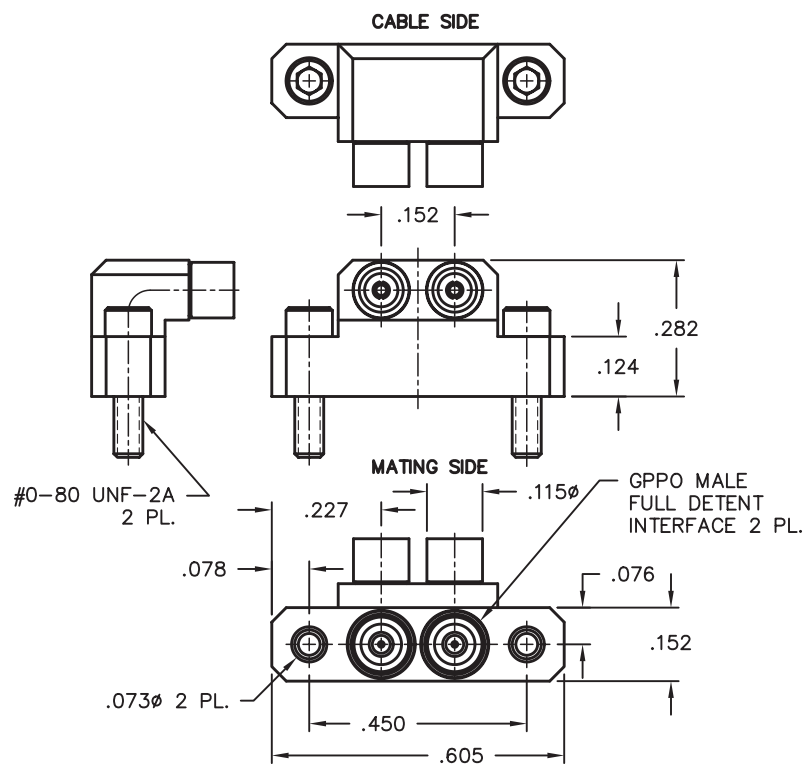
GPPO Male Full Detent Dual Block R/A to .086 Hand Formable Cable

Catalog Number

B011-A93-01

Mating Block:

B010-A95-13



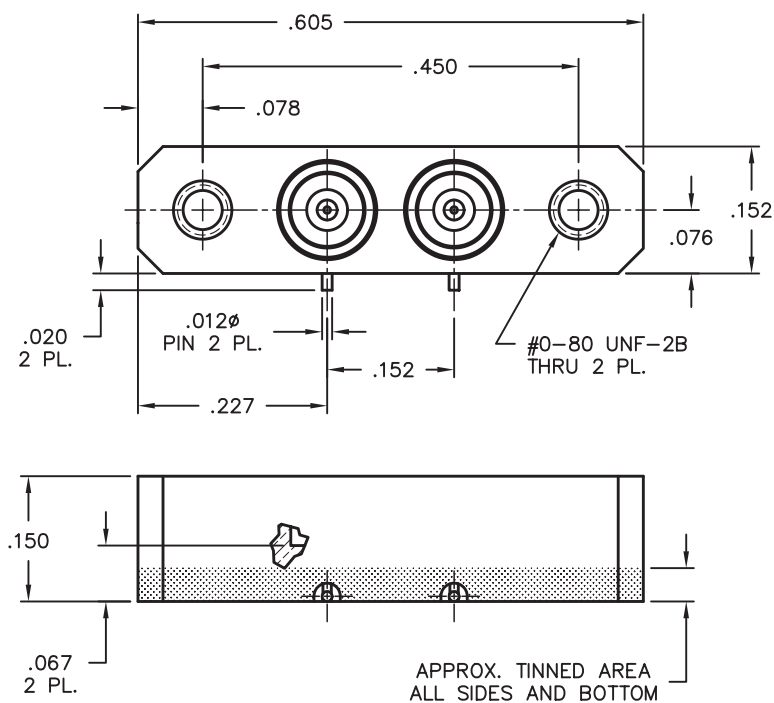
GPPO Smooth Bore Dual Shroud Block

Catalog Number

B010-A95-13

Mating Block:

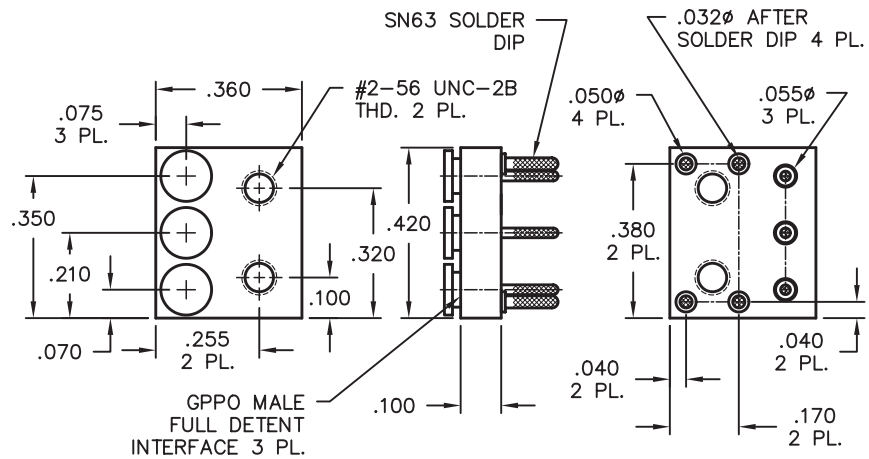
B011-A93-01



3-Position Straight GPPO Male Full Detent PWB Block Assembly

Catalog Number

B008-L13-05

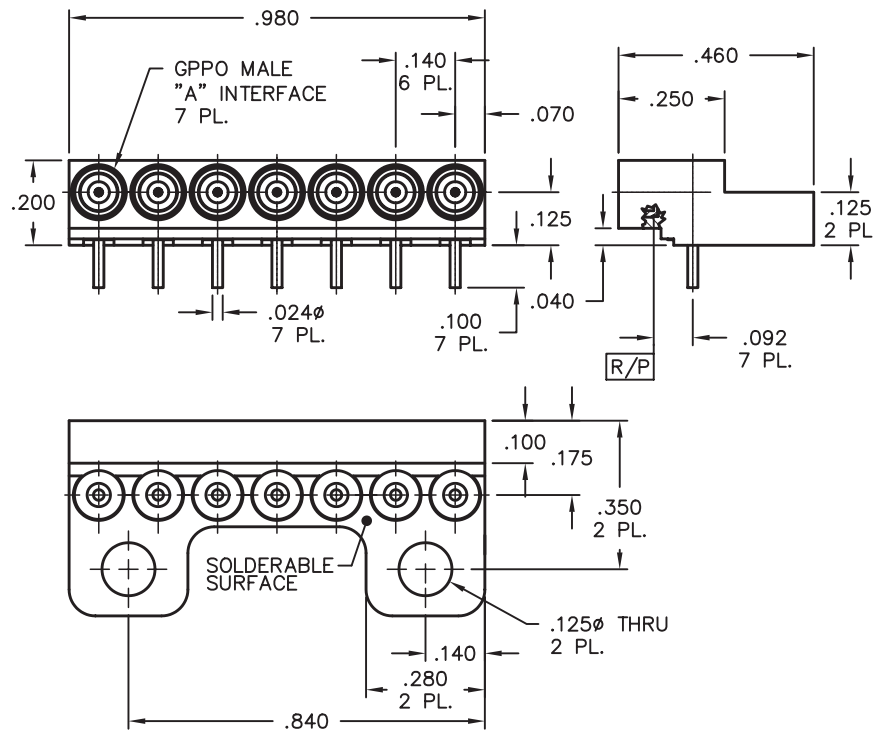


7-Position GPPO Male R/A PWB Block Assembly

Catalog Number

B030-L93-02-7

B030-L95-02-7



Male Smooth Bore 6-Position Mounting Block

Catalog Number

B010-A95-07

Mating Block:
B010-A93-07

Uses pin: Y071-L02-01

