

# P1dB cable assemblies



**YouForm™**  
RF CABLES

**REPLACE SEMI-RIGID CABLES**  
Same low price for ANY length up to 18 inches!  
Same unit cost for ANY quantity!  
Lengths longer than 18" also available.

**SMA STRAIGHT CABLES:**

**\$995**  
ALL CABLES 100% VSWR TESTED

**PRODUCT SPECS**  
For 0.141" conformable straight SMA  
each end:  
maximum VSWR = 1.35:1 to 18 GHz  
maximum IL = 0.4 dB + 0.055dB/inch  
to 18 GHz  
For 0.085" conformable straight SMA  
each end:  
maximum VSWR = 1.35:1 to 18 GHz  
maximum IL = 0.4 dB + 0.1 dB/inch to  
18 GHz

**2 CABLE DIAMETERS**  
.085/.102 (OD)  
.141/.161 (OD)

**SEE REVERSE SIDE  
FOR NEW SMA  
RIGHT ANGLE CABLES**

**KEY FEATURES**  
• 100% VSWR tested  
• Can be hand formed  
• Reformable  
• SMA anti-torque  
• Stainless-steel nut  
• 2-18 inch length—fixed price  
• Up to 25-50% less than the price  
of similar cables of same quality  
• Standard jacket color is blue

**TYPICAL  
RF & MICROWAVE  
APPLICATIONS**  
• Test Equipment  
• Portable Equipment  
• Systems & Racks  
• Radar Equipment  
• Base Stations  
• Test Bench  
• Antennas

Visit our website for additional information  
[www.rfmw.com/YouForm](http://www.rfmw.com/YouForm)  
Visit RFMW's Booth at the MTT-S Show!  
Samples available to qualified users.

**YouForm™ — The Alternative to Semi-Rigid Coaxial Cables**

RFMW, Inc. | Offices located throughout North America | (PH) 877.347.7349 | (PH) 408.414.1450  
(Fax) 408.414.1461 | Se habla Español: 954.476.8630 | sales@rfmw.com | www.rfmw.com



RFMW, Ltd. Is our exclusive sales and stocking distributor



# P1dB Product History

**2004:** Partnered with a high quality cable assembly manufacturer located in San Jose, Ca. and China - Partnered with RFMW, Ltd. as exclusive stocking distributor

Introduced low cost \$9.95ea Formable “Blue Jacket” 18 GHz cable assemblies

2-18 inches with high quality anti-torque, passivated stainless steel, SMA male hex coupling nuts on each end – (selling for about ½ the price of our competitors)

**2006:** Introduced low cost \$13.95ea and \$14.95ea Formable “Blue Jacket” 10 GHz cable assemblies 2-18 inches with **RIGHT ANGLE** anti-torque passivated stainless steel SMA hex coupling nuts

**2007:** Introduced custom built cable assemblies for unique customer applications with deliveries of 2-5 weeks from design to shipment

**2009:** Introduced low cost \$9.95ea RG-316 cable assemblies with **14 different RF coaxial connectors** up to 36 inches - (selling for about ½ the price of our competitors)

**2010:** Introduced low cost/high temp - 18GHz test cables for temperature chamber applications; built per customer specifications with 2-3 week delivery



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### SMA STRAIGHT CABLES:



#### PRODUCT SPECS

For 0.141" conformable straight SMAs each end:  
maximum VSWR = 1.35:1 to 18 GHz  
maximum IL = 0.4 dB + 0.055dB/inch to 18 GHz

For 0.085" conformable straight SMA each end:  
maximum VSWR = 1.35:1 to 18 GHz  
maximum IL = 0.4 dB + 0.1 dB/inch to 18 GHz



#### KEY FEATURES

- 100% VSWR tested
- Can be hand formed
- Reformable
- SMA anti-torque
- Stainless-steel nut
- 2-18 inch length—fixed price
- Up to 25-50% less than the price of similar cables of same quality
- Standard jacket color is blue

#### 2 CABLE DIAMETERS

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.141/.161 (OD)

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#### TYPICAL RF & MICROWAVE APPLICATIONS

- Test Equipment
- Portable Equipment
- Systems & Racks
- Radar Equipment
- Base Stations
- Test Bench
- Antennas

YouForm® cables can be manufactured and tested to your unique specifications.

Visit our website for additional information  
[www.rfmw.com/YouForm](http://www.rfmw.com/YouForm)

Visit RFMW's Booth at the MTT-S Show!  
Samples available to qualified users.



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**YouForm™**  
RF CABLES

## REPLACE SEMI-RIGID CABLES

Same low price for ANY length up to 18 inches!  
Same unit cost for ANY quantity!

**\$13.95 ea.**  
up to 18"  
100% VSWR Tested

**NEW  
RIGHT ANGLE  
CABLES!**

**\$14.95 ea.**  
up to 18"  
100% VSWR Tested

VSWR 1.35:1 max for each cable assembly:  
0.141"/0.161" Rt/A to Rt/A @ 10 GHz  
0.141"/0.161" Rt/A to Straight @ 10 GHz  
0.085"/0.102" Rt/A to Straight @ 10 GHz  
0.085"/0.102" Rt/A to Rt/A @ 10 GHz

Insertion loss typical:  
0.4 + 0.045"L (inch) = 0.141"  
0.4 + 0.07"L (inch) = 0.085"

**TO ORDER: FAX to 408-414-1461 or CALL 877-367-7369**

Se habla Español: 954.476.8630

Company Name: \_\_\_\_\_ Your Name: \_\_\_\_\_ Phone# \_\_\_\_\_

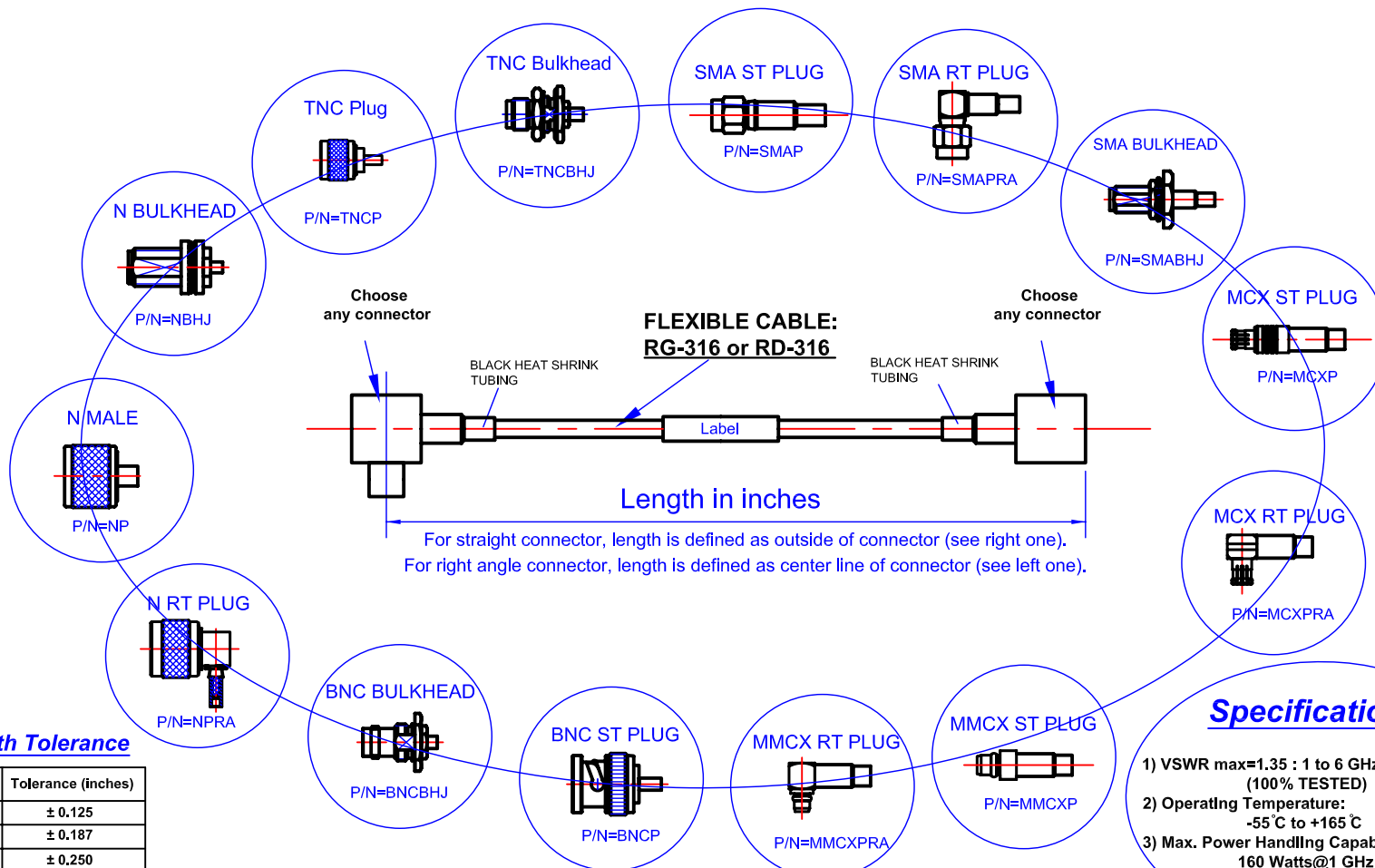
Order in 1-inch increments. Available in 2 to 18-inch lengths. (Also available in longer lengths, up to 120 inches, at higher prices.)

Qty.	Part Number	Length	Unit Cost	Totals
<input type="checkbox"/>	P1-SMAP/SMAP-085CJ _____-inch increments. SMA male straight to SMA male straight .085/.102 (OD)		\$ 9.95	\$ _____
<input type="checkbox"/>	P1-SMAP/SMAP-141CJ _____-inch increments. SMA male straight to SMA male straight .141/.161 (OD)		\$ 9.95	\$ _____
<input type="checkbox"/>	P1-SMAPRA/SMAPRA-085CJ _____-inch increments. SMA male right angle to SMA male right angle .085/.102 (OD)		\$ 14.95	\$ _____
<input type="checkbox"/>	P1-SMAP/SMAPRA-085CJ _____-inch increments. SMA male straight to SMA male right angle .085/.102 (OD)		\$ 13.95	\$ _____
<input type="checkbox"/>	P1-SMAPRA/SMAPRA-141CJ _____-inch increments. SMA male right angle to SMA male right angle .141/.161 (OD)		\$ 14.95	\$ _____
<input type="checkbox"/>	P1-SMAP/SMAPRA-141CJ _____-inch increments. SMA male straight to SMA male right angle .141/.161 (OD)		\$ 13.95	\$ _____

Offices located throughout North America. | (Ph) 877.367.7369 | (Ph) 408.414.1450 | [sales@rfmw.com](mailto:sales@rfmw.com) | [www.rfmw.com](http://www.rfmw.com)

# RF CABLE ASSEMBLY "MIX & MATCH" \$9.95 EA TO 36" LONG

(Add \$3.00 for N CONNECTOR) (Add \$3.00 for RD-316 DOUBLE SHIELDED)



## Length Tolerance

L (inches)	Tolerance (inches)
3 - 5.9	± 0.125
6 - 11.9	± 0.187
12 - 23.9	± 0.250
24 - 36.0	± 0.313
> 36	contact P1dB

## Specifications

- 1) VSWR max=1.35 : 1 to 6 GHz\* (100% TESTED)
- 2) Operating Temperature: -55°C to +165°C
- 3) Max. Power Handling Capability of RG316: 160 Watts@1 GHz

To Order Use the Following P/N: P1- \_\_\_\_\_ / \_\_\_\_\_ -R 316- \_\_\_\_\_  
connector#1 connector#2 length in inches

## Contact :

**P1dB EXCLUSIVE DISTRIBUTOR**

RFMW, LTD. San Jose, CA [sales@RFMW.com](mailto:sales@RFMW.com)

Tel: (408) 414 - 1450 or (877) 367 - 7369

## Note:

- 1) For SMA, TNC, BNC, please add "RP" in front of part number for Reverse-Polarity, e.g. RPSMAP=RP SMA Plug
- 2) N, TNC, BNC, RPSMA, RPTNC, RPBNC connector only rated to 3 GHz

**P1dB**

# P1dB Product History (Continued)

- **2011:** Introduced SMA,/SMA, Male, Female and N/SMA, Male, Female family of Precision low cost Adapters
- **2011:** Introduced Extended Boot option for P1dB RF Cable Assemblies
- **2012:** Introduced Low Loss/High Temp. 40 GHz AND 50 GHz Test Cables.
- **2012:** Soon to Introduce MHF (U.FL) RF Cable Assembly "Mix & Match"







# N to SMA and SMA to SMA adapters



## Precision Stainless Steel N to SMA Adapters Mix and Match for the same low price \$13.95 ea



Type M Male to SMA Female Adapter  
PART NO.: P1-ASP-MP34/SMA-F25



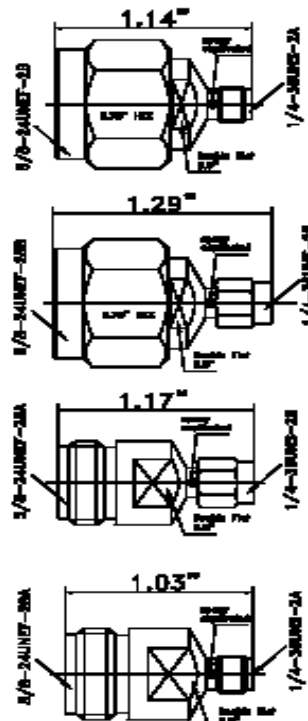
Type M Male to SMA Male Adapter  
PART NO.: P1-ASP-MP34/SMA-M25



Type M Female to SMA Male Adapter  
PART NO.: P1-ASP-MP34/SMA-M25



Type M Female to SMA Female Adapter  
PART NO.: P1-ASP-MP34/SMA-F25



Materials and Finish		
Body	Stainless Steel	Passivated
Connector Body/Shell	Stainless Steel	Passivated
Center Conductor	High Purity Copper	Gold over Nickel
Shielding	Stainless Steel	Passivated
Capacitors	None	None

### Electrical (Typical)

- Impedance: 50 Ohms
- Frequency Range: DC - 18 GHz
- VSWR: 1.25 : 1 (Max) for DC - 18 GHz
- Operating Temp. Range: -65 °C - +125 °C

### Mechanical (Typical)

- Connector: Mates with MIL-STD-348

RoHS Compliant: YES



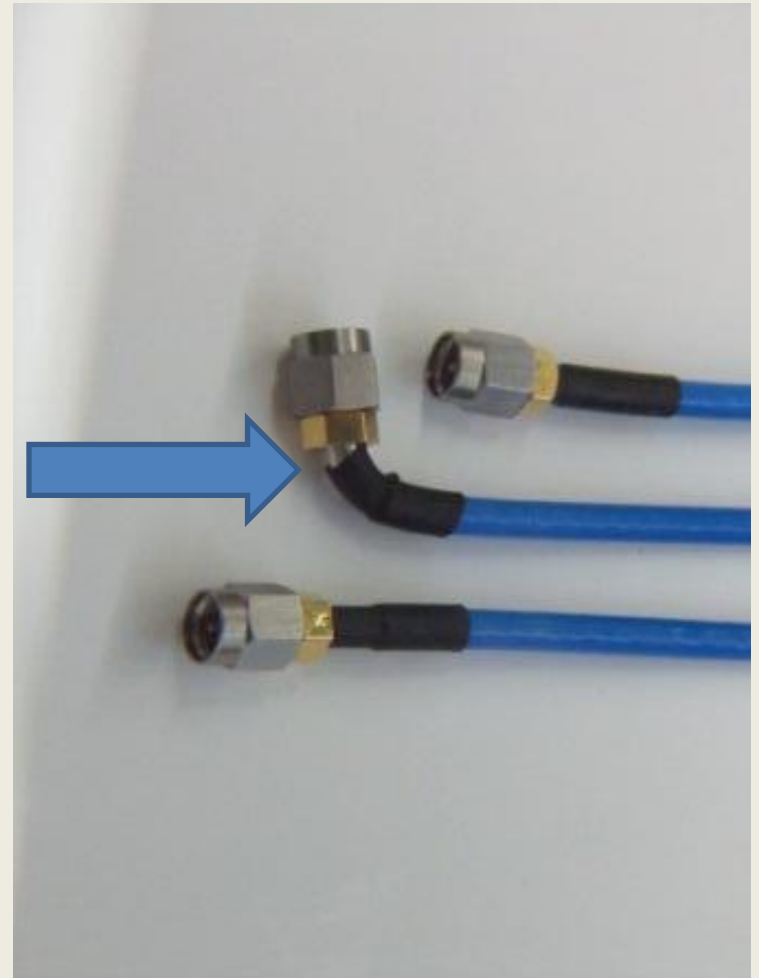
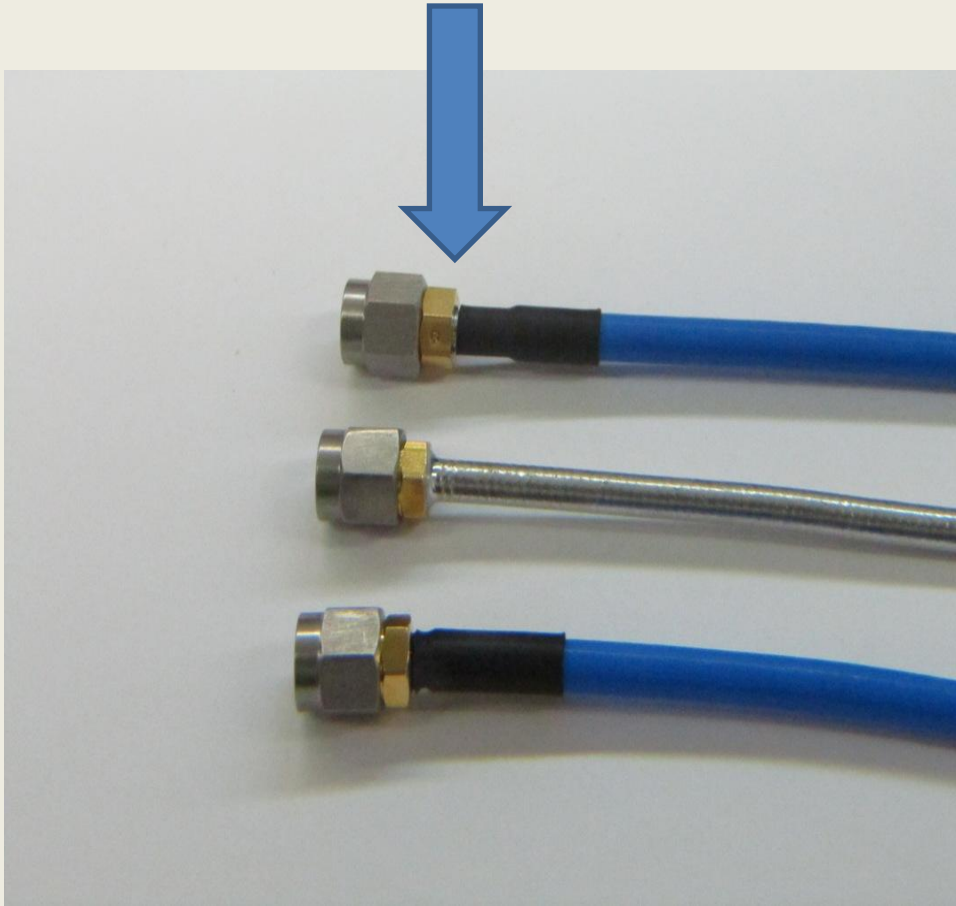
**P1dB**

**To order contact:**

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San Jose, CA  
Tel: (408) 414 - 1450 or (877) 367 - 7369  
Email: [sales@RFMW.com](mailto:sales@RFMW.com)  
Web: [www.rfmw.com](http://www.rfmw.com)  
[www.p1db.com](http://www.p1db.com)



# **EXCLUSIVE Tight Bends Without Outer Shield Breaking - Hand-Formable 18GHz Cable Assemblies**



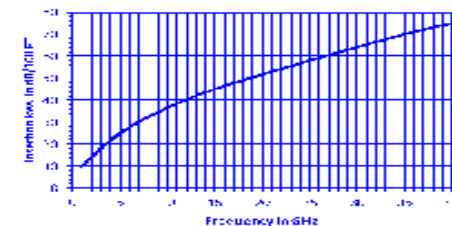
# 40GHz & 50 GHz Cables

**40 GHz Cable Specification**

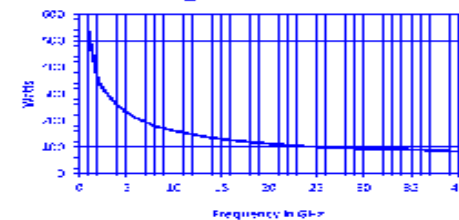
Nominal Impedance	50 ohms
Nominal velocity of propagation	84%
Time delay	1.2 ns/foot
Max. frequency	48 GHz
Temperature range	-65 to +200°C
RF leakage	>100 dB at 18 GHz
Min. Bending radius	0.75"
#1: Center contact (silver plated Copper)	0.036"
#2: Dielectric (EPTFE)	0.104"
#3: Shielding layer 1 (SC Foil)	0.106"
#3: Shielding layer 2/Braid	0.122"
#4: Jacket (FEP)	0.144"



**Cable Attenuation**



**Average Power**



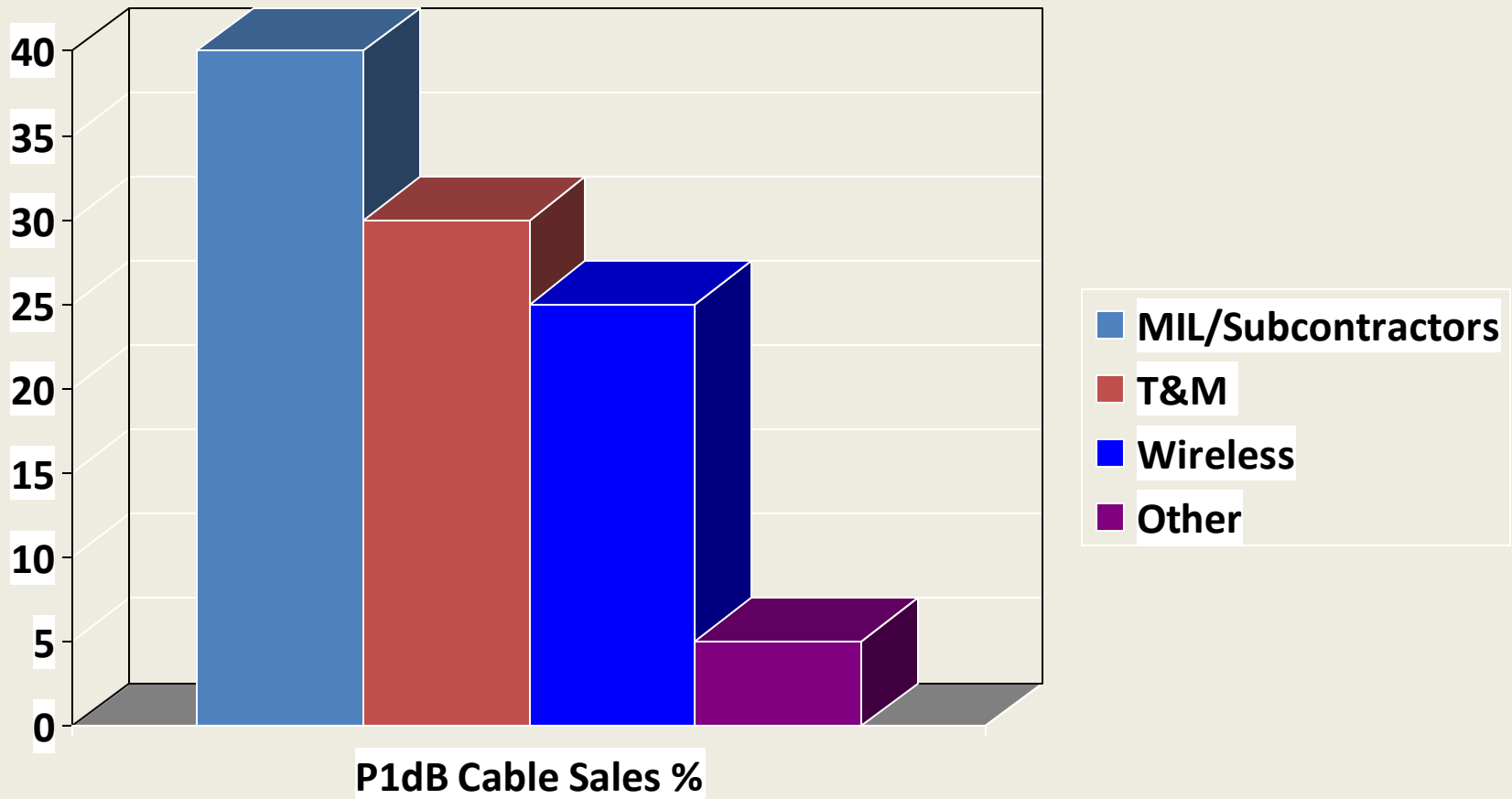
Connector1	Connector2	Cable	Cable Assembly PN	Operating Frequency
2.52 mm plug	2.52 mm plug	LL150	P1-KP/KP-LL150-XX (XX in length in inches)	40 GHz
2.4 mm plug	2.4 mm plug	LL150	P1-24P/24P-LL150-XX (XX in length in inches)	40 GHz
2.4 mm plug	2.52 mm plug	LL150	P1-24P/KP-LL150-XX (XX in length in inches)	40 GHz

**P1dB**

40 GHz low loss cable (PN: LL150)



# P1dB Cable Sales By Market



# China (PRC) Partner Facility

- Location: Zhenjiang Jiangsu, China; New building, 2009 Construction  
About 2 hours northwest of Shanghai
- Facilities: 15,000 sq feet. Addition in 2012 to our specifications
- Employees: 70 full time
- Quality: ISO 9001:2008 Certified



# PRC Facility

ISO9001:2008



# RF Test and Induction Soldering PRC Facility



# Assembly Line

## PRC Facility



# China Partner Facility

## Extensive US (San Jose, CA) Design/QA control

Induction solder attach of connectors onto Formable and Semi-Rigid Cable

Automatic precision stripping of flexible cable using Swiss made Schleunigers

Pneumatic crimping of connectors onto flexible assemblies

Solder attach of pins onto cable center contact

100% Interface Gauge and Visual Inspection

100% RF test on 50 ohm assemblies

100% Hi-Pot and Continuity

100% Torque Test of SMA Male Cable End Connectors

Sample Mechanical Pull Tests (cable assemblies)

Plating thickness measurements via in house high-end Fischer XRF

Passivation Integrity Tests via in-house Salt Fog





# San Jose, CA. Partner Facility

- Quick Turns, Low Volume Military and Medical end-use.
- Inspection & Shipping Point
- Final Inspection for PRC Built Products
- Prototype Sample cables
- Design of all connectors and cable assemblies
- 2600 sq feet



# P1dB Summary

- Very Strong Financials. No debt.
- Standard cables in stock at RFMW, Ltd.
- Custom cables 3-5 week delivery
- Quick delivery capability – 1-2 weeks ARO
- Custom Connector, Cable and Cable Assembly Design Capability
- Extensive RF and Microwave connector and cable product knowledge



# Next Slides Are Custom Cable Assemblies

## Featuring special connector designs:

SMA female right angle bulkhead mount

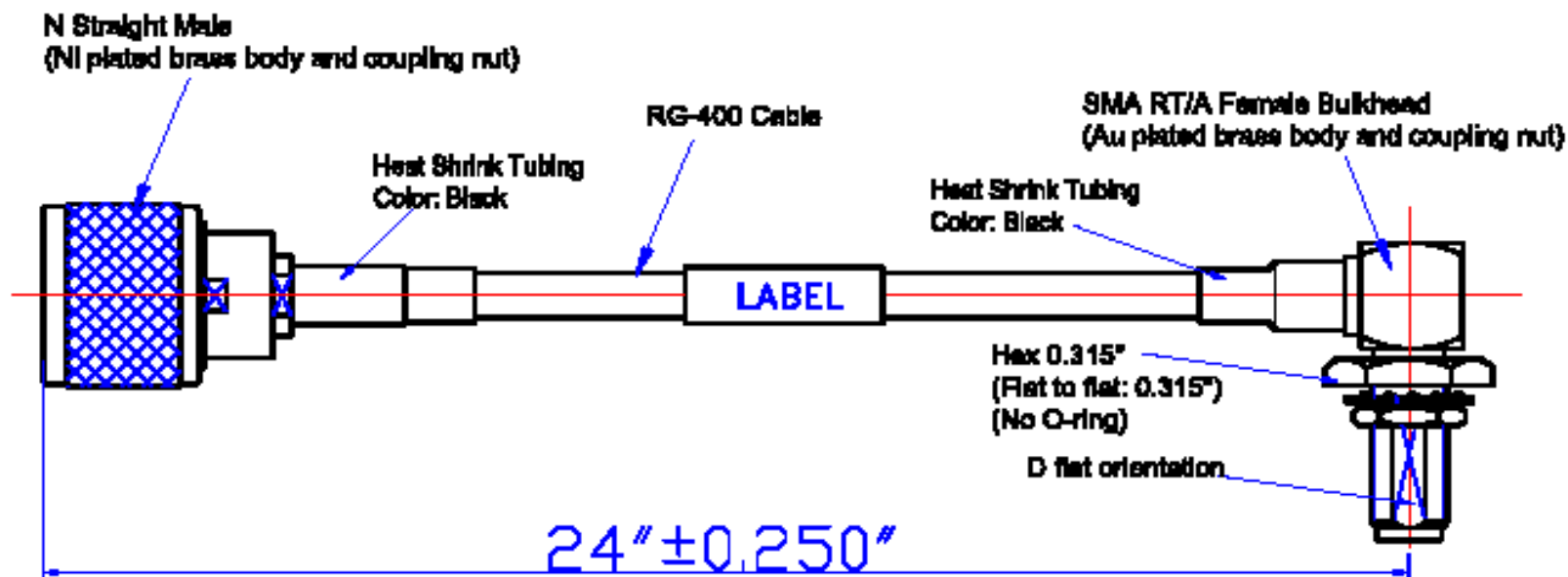
SMA reverse polarity right angle male

TNC reverse polarity sealed female bulkhead

SMB Female Bulkhead (female center contact)

SMA female for .034 semi-rigid cable





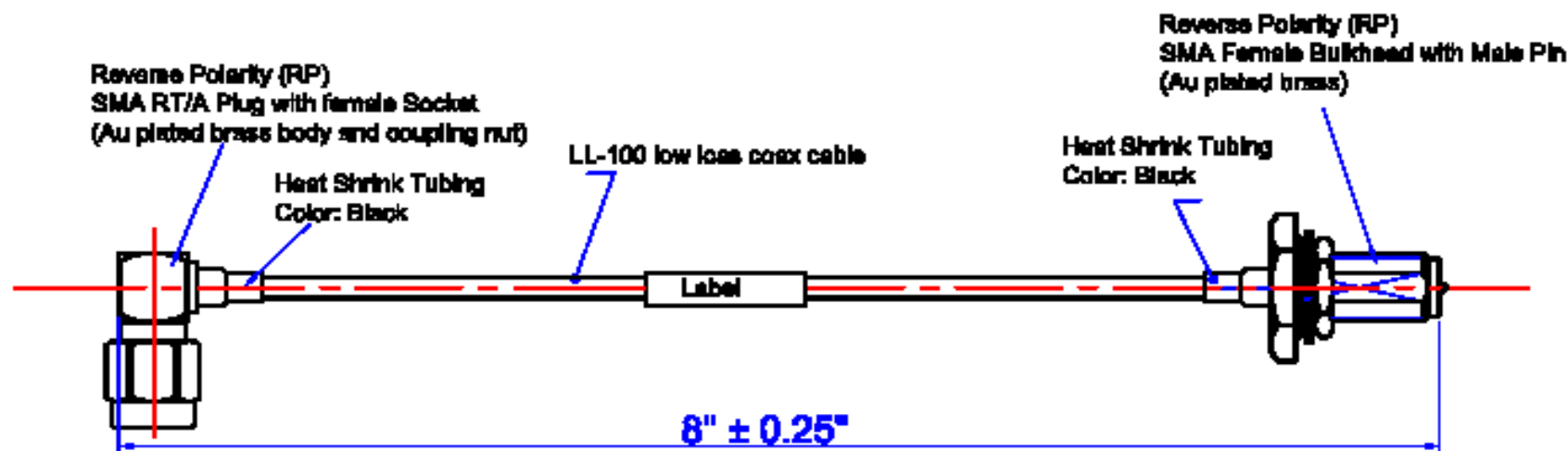
**Note:**

- 1) Frequency Range: 806 - 899 MHz
- 2) Label Part number

**Contact :**

**P1dB**  
**EXCLUSIVE DISTRIBUTOR**  
**RFMW, LTD.**  
 San Jose, CA  
[sales@RFMW.com](mailto:sales@RFMW.com)  
 Tel: (877) 367-7369

		SIZE A	SCALE NO	UPPER EXTENSION SPECIFIC TOLERANCE NOTES - NONE - NONE - NONE	<b>P1dB</b>
DESIGNED BY: P. Sa	DATE: 10/15/2008	REV. A	SHEET 1/1		
CHECKED BY: W. Lu	DATE: 10/16/2008	PART NO.		TITLE	
APPROVED BY: S. Lim	DATE: 10/16/2008	P1-00000000000000000000		N Male - SMA RT2A Female Bulkhead Cable Assembly	



**Note:**

- 1) Frequency Range: DC - 3 GHz
- 2) Label: Part number

**Recommended Mounting Hole**



ALL THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED AND DATE  
NOT BE DISCLOSED, USED AND REPRODUCED WITHOUT THE  
PERMISSION OF PMSL.

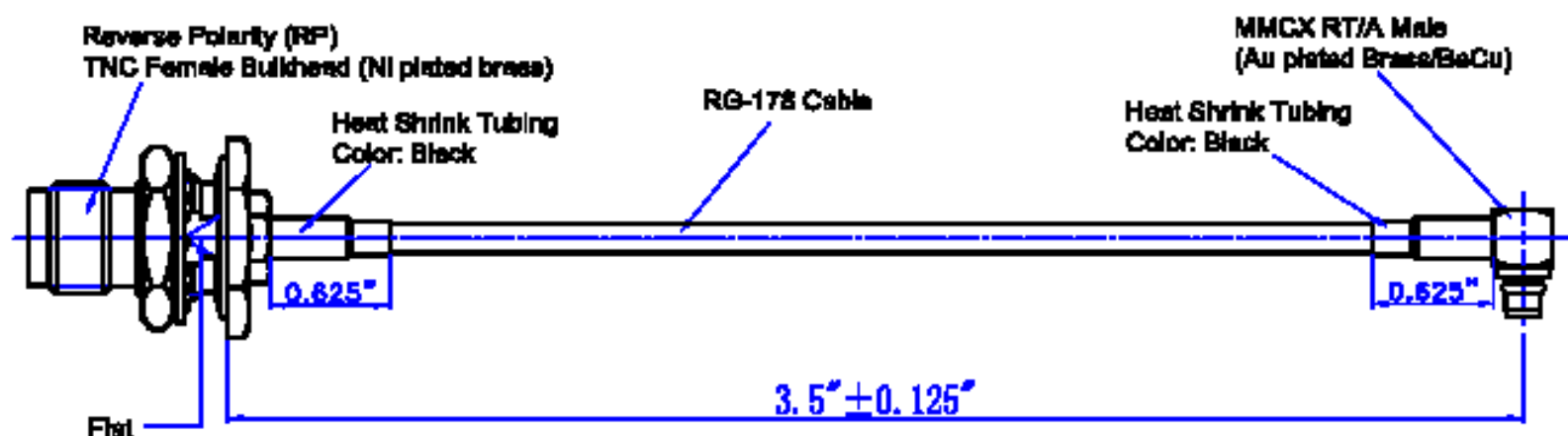
DESIGNED BY: P. Ma	DATE: 07/12/2008
CHECKED BY: M. Li	DATE: 07/08/08
APPROVED BY: S. Ma	DATE: 07/12/2008

REV. A	SCALE NO
REV. B	SHEET 1/1

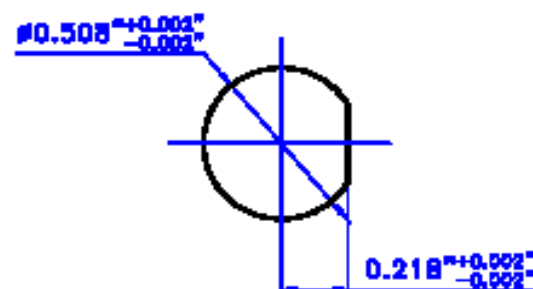
PART NO.  
P1-REMANPWA-REMANPWA-MR000-0

**P1dB**

TITLE  
RP SMA K&K, RP SMA Female Bulkhead, LL100 Low Loss Cable Assembly



### Recommended Mounting Hole Dimensions

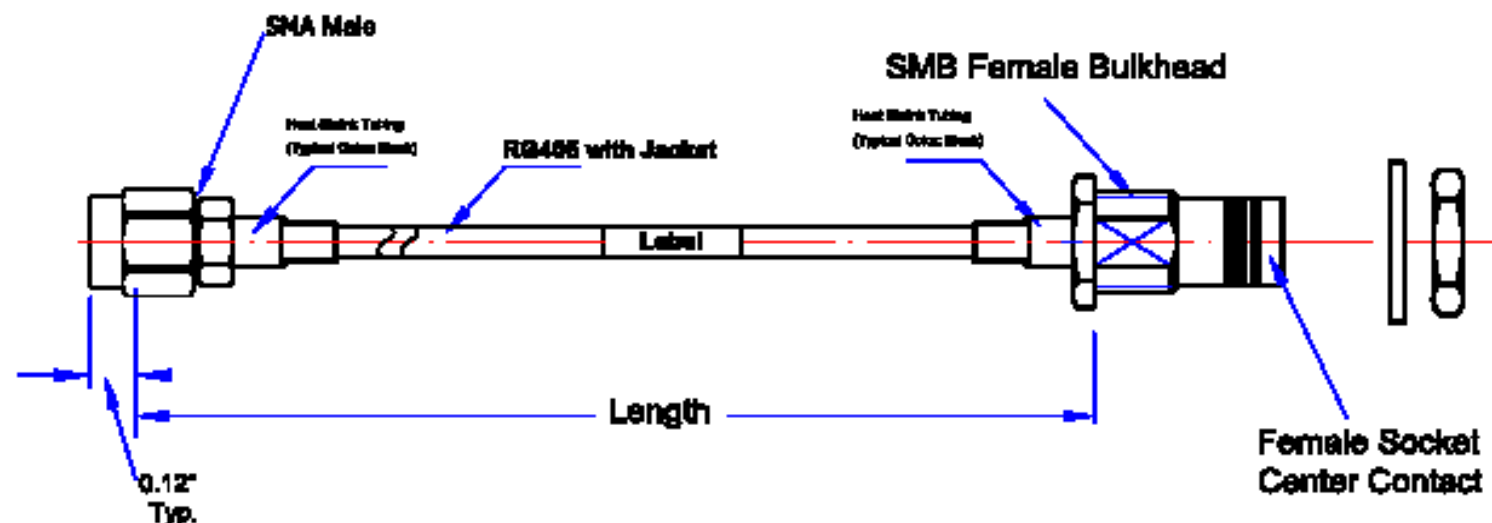


**Notes:**

- 2) NO part number label on the cables/ p/n and date code label on back only

[illegible]





**Note:**

- 1) Frequency Range: DC - 3 GHz
- 2) Label: Part Number and Date Code

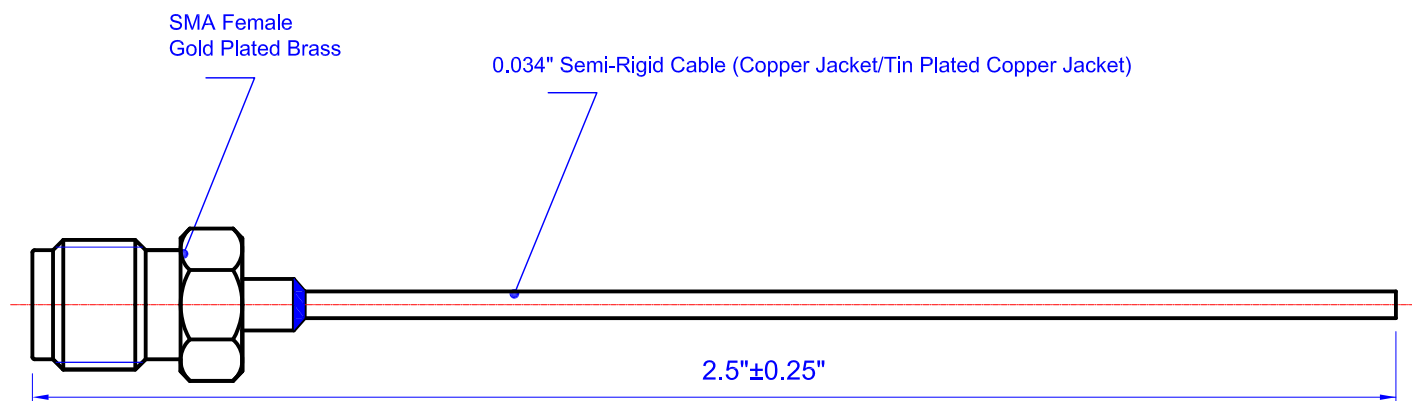
All the information contained herein is proprietary and shall not be disclosed, used or duplicated without written permission of P1dB.		SIZE A	SCALE NO	UNLESS OTHERWISE SPECIFIED TOLERANCES ARE AS SHOWN  Drawing.com © 2019	<b>P1dB</b>
		REV A	ISSUE 1/1		
		PART NO. P1-0000000000-00000000			
DRAWING BY: P. Jia	DATE: 12/15/2019				
CHECKED BY: W. Li	DATE: 12/15/2019				
APPROVED BY: B. Li	DATE: 12/15/2019				

### 0.034" Semi-Rigid Cable Assembly:

- \* 100% "go/no-go" VSWR test to 6 GHz
- \* 100% Hi-POT tested, Voltage = 500 volts
- \* Label: NO
- \* RoHS compliant

### 6 GHz RF Specifications @ 25°C

- \* VSWR: Max. 1.35 : 1



#### Contact :

**P1dB**

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San Jose, CA

[sales@RFMW.com](mailto:sales@RFMW.com)

Tel: (877) 367-7369

		SIZE A	SCALE NO	UNLESS OTHERWISE SPECIFIED TOLERANCES: XX = XXX = DIMENSIONS ARE IN INCHES	P1dB		
		REV. B	SHEET 1/1				
DRAWING BY: P. Xie	DATE: 6/28/2010	PART NO. P1-SMAJ/PIGTAIL-034SR-2				TITLE SMA Female 034 Semi-Rigid Cable Assembly	
CHECKED BY: W. Lu	DATE: 6/28/2010						
APPROVED BY: S. Ulett	DATE: 6/28/2010						

# P1dB Customers

