

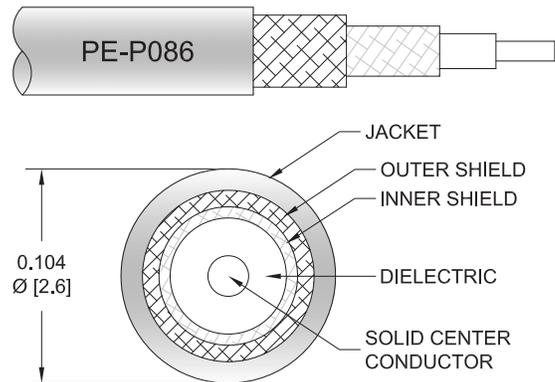
## SMPM Size 12 D38999 Contact Pin to SMA Male Cable Using PE-P086 Coax with HeatShrink, LF Solder



### PE3M0278

#### Configuration

- Connector 1: Push-on Mini SMP Pin PEMACTRF12P05
- Connector 2: SMA Male PE45135
- Cable Type: PE-P086
- Coax Flex Type: Flexible



#### Features

- Max Frequency: 18 GHz
- Can be installed in all D38999 size 12 inserts
- Lot traceability
- High speed RF cable assembly

#### Applications

- Military and Aerospace
- Avionics
- Industrial Automation

#### Description

The PE3M0278 from Pasternack is a D38999 contact cable assembly that is built with a size 12 mini SMP pin contact on one end and a SMA male connector on the other. Pasternack MIL-DTL-38999 (also known as D38999 or 38999) coaxial cable assembly products are used in applications requiring high quality such as laboratory RF test and measurement, rugged and designed for defense/military, production environments, general use, etc. This mini SMP to SMA cable assembly is a part of one of the largest selections of same-day ship coaxial cables for RF, microwave, and millimeter wave interconnect solutions. This high frequency D38999 cable assembly operates at a maximum frequency of 18 GHz.

The PE3M0278 RF cable has a FEP jacket of 0.163-inch diameter. This radio frequency cable assembly can withstand temperatures ranging from -65 to 165 degrees C. Our Mini SMP pin to SMA male cable has a maximum VSWR of 1.4:1. This flexible RF cable assembly with a 0.5-inch diameter has copper clad steel as the cable's inner conducting material and PTFE dielectric type.

Mini SMP pin to SMA male cable assembly is built with PE-P086, which is a flexible coax type. The Pasternack PE3M0278 flexible cable assembly has a 50 Ohm impedance and is double shielded. Additional dimensions, specifications, and CAD drawings for this mini SMP to SMA RF cable are available on our downloadable PDF datasheet.

Mini SMP pin to SMA male cable assembly is just one of more than one million in-stock RF products available. Pasternack is where to buy high quality custom RF cable assembly products for rugged and MIL-STD designed military/defense, aerospace, outdoor and harsh environment, microwave and millimeter wave radio transmitter receiver, component inter-connection and more for RF test & measurement labs, telecom, phase stable, phase and delay matching, and other radio frequency applications can be manufactured. Variations of mini SMP and SMA cable assemblies can also be built and will ship on the same day as well, search this website or contact us for assistance. For further information on similar products, our expert technical support and trained sales team can get you the ideal mini SMP to SMA RF cable assembly as per your requirements.

SMPM Size 12 D38999 Contact Pin to SMA Male Cable  
Using PE-P086 Coax with HeatShrink, LF Solder



**PE3M0278**

**Referenced Specifications**

IPC J-STD-001	Requirements for Soldered Electrical and Electronic Assemblies
IPC J-STD-006	Requirements for Electronic Grade Solder Alloys and Fluxed and Non-Fluxed Solid Solders for Electronic Soldering Applications
IPC/WHMA-A-620	Requirements and Acceptance for Cable and Wire Harness Assemblies
MIL-DTL-17	Cables, Radio Frequency, Flexible and Semirigid, General Specification for
MIL-PRF-39012	Connectors, Coaxial, Radio Frequency, General Specification for
MIL-STD-348	Radio Frequency Connector Interfaces for MIL-DTL-3643, MIL-DTL-3650, MIL-DTL-3655, MIL-DTL-25516, MIL-PRF-31031, MIL-PRF-39012, MIL-PRF-49142, MIL-PRF-55339, MIL-DTL-83517
SAE AS22520	Crimping Tools, Wire Termination, General Specification For
SAE AS23053	Insulation Sleeving, Electrical, Heat Shrinkable, General Specifications For
SAE AS5942	Marking of Electrical Insulating Materials
IPC J-STD-001	Requirements for Soldered Electrical and Electronic Assemblies

**Material Specifications**

Component	Specification
Cable	PE-P086 in accordance with PE-P086 datasheet
Connector 1	PEMACTRF12P05 in accordance with MIL-DTL-38999
Connector 2	PE45135 in accordance with MIL-STD-348A
Heat Shrink 1	M23053/5-105-0 in accordance with SAE AS23053
Heat Shrink 2	M23053/5-105-0 in accordance with SAE AS23053
Solder	SAC305 in accordance with J-STD-006

**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		18	GHz
VSWR			1.4:1	
Velocity of Propagation		70		%
RF Shielding	110			dB
Capacitance		29.4 [96.46]		pF/ft [pF/m]

**Specifications by Frequency**

SMPM Size 12 D38999 Contact Pin to SMA Male Cable  
Using PE-P086 Coax with HeatShrink, LF Solder



**PE3M0278**

Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
			Frequency		1000	2000	4500	9000	
PE3M0278	Custom Lengths Available	Insertion Loss (Typ.)	0.19	0.28	0.43	0.63	0.951	dB/ft	
			0.63	0.91	1.41	2.08	3.13	dB/m	
PE3M0278-6	6 inch	Insertion Loss (Typ.)	0.3	0.34	0.42	0.52	0.68	dB	0.0265
PE3M0278-12	12 inch	Insertion Loss (Typ.)	0.4	0.48	0.63	0.84	1.16	dB	0.033
PE3M0278-24	24 inch	Insertion Loss (Typ.)	0.59	0.76	1.06	1.47	2.11	dB	0.046
PE3M0278-36	36 inch	Insertion Loss (Typ.)	0.78	1.04	1.49	2.1	3.06	dB	0.059
PE3M0278-48	48 inch	Insertion Loss (Typ.)	0.97	1.31	1.91	2.73	4.01	dB	0.072
PE3M0278-60	60 inch	Insertion Loss (Typ.)	1.16	1.59	2.34	3.36	4.96	dB	0.085

The insertion loss data for the base model does not include loss due to the connectors. Each length includes insertion loss due to the connectors.

Loss due to Connector 1: 0.1 dB  
 Loss due to Connector 2: 0.1 dB  
 Base Weight: 0.033 pounds  
 Additional Weight per Foot: 0.013 pounds

Electrical Specification Notes:  
 Values at 25°C, sea level.

**Mechanical Specifications**

**Cable Assembly**

Description	Minimum	Typical	Maximum	Units
Length*			0 [0]	in [mm]
Cable Outer Diameter		0.163		in
Weight		0.033 [14.97]		lbs [g]
Repeated Minimum Bend Radius	0.5			in

**Cable Characteristics**

Description	Specification
Cable Type	PE-P086
Impedance	50 Ohms
Inner Conductor Type	Solid
Inner Conductor Material and Plating	Copper Clad Steel, Silver
Dielectric Type	PTFE
Number of Shields	2
Shield Layer 1	Silver Plated Copper Tape
Shield Layer 2	Silver Plated Copper Braid
Jacket Material	FEP

SMPM Size 12 D38999 Contact Pin to SMA Male Cable  
Using PE-P086 Coax with HeatShrink, LF Solder



**PE3M0278**

**Connector Characteristics**

Description	Connector 1	Connector 2
Type	Mini SMP Pin	SMA Male
Specification	MIL-DTL-38999	MIL-STD-348A
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Straight
Connection Method	Push-on	
Contact Size	12	
Mating Cycles	1,000	
Contact Material and Plating	Beryllium Copper, Gold	Brass, Gold
Contact Plating Specification		50µ in. minimum
Dielectric Type	PTFE	Teflon
Outer Conductor Material and Plating	Beryllium Copper, Gold	
Body Material and Plating	Beryllium Copper, Gold	Brass, Gold
Body Plating Specification		3µ in. minimum
Coupling Nut Material and Plating		Brass, Gold
Coupling Nut Plating Specification		3µ in. minimum
Hex Size		5/16 in
Torque		5 in-lbs [0.57 Nm]

Mechanical Specification Notes:

**Environmental Specifications**

Description	Specification
Temperature Operating Range	-65 to +125 deg C

**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:  
Values at 25°C, sea level.

SMPM Size 12 D38999 Contact Pin to SMA Male Cable  
Using PE-P086 Coax with HeatShrink, LF Solder



**PE3M0278**

**How to Order**

Part Number Configuration:

**PE3M0278**

- **xx**

**uu**

Unit of Measure:  
cm = Centimeters  
<blank> = Inches  
Length  
Base Number

Example: PE3M0278-12 = 12 inches long cable  
PE3M0278-100cm = 100 cm long cable

Cable Assembly Length Tolerances:

Imperial English		Metric	
"L" ≤ 1 ft	+0.5 in / -0 in	"L" ≤ 0.3 m	+12.5 mm / -0 mm
1 ft < "L" ≤ 5 ft	+1 in / -0 in	0.3 m < "L" ≤ 1.5 m	+25 mm / -0 mm
5 ft < "L" ≤ 10 ft	+2 in / -0 in	1.5 m < "L" ≤ 3 m	+50 mm / -0 mm
10 ft < "L" ≤ 25 ft	+3 in / -0 in	3 m < "L" ≤ 7.5 m	+75 mm / -0 mm
25 ft < "L"	+2%"L" / -0%"L"	7.5 m < "L"	+2%"L" / -0%"L"

\* Cable Length = "L"

SMPM Size 12 D38999 Contact Pin to SMA Male Cable Using PE-P086 Coax with HeatShrink, LF Solder from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMPM Size 12 D38999 Contact Pin to SMA Male Cable Using PE-P086 Coax with HeatShrink, LF Solder PE3M0278](https://www.pasternack.com/smpm-12-d38999-contact-pin-to-sma-male-cable-using-pe-p086-coax-with-heatshrink-lf-solder-pe3m0278-p.aspx)

URL: <https://www.pasternack.com/smpm-12-d38999-contact-pin-to-sma-male-cable-using-pe-p086-coax-with-heatshrink-lf-solder-pe3m0278-p.aspx>

The information contained within this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part in order to implement improvements. Pasternack Enterprises reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack Enterprises does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack Enterprises does not assume liability arising out of the use of any part or document.

# PE3M0278 CAD Drawing

SMPM Size 12 D38999 Contact Pin to SMA Male Cable Using PE-P086 Coax with HeatShrink, LF Solder

