

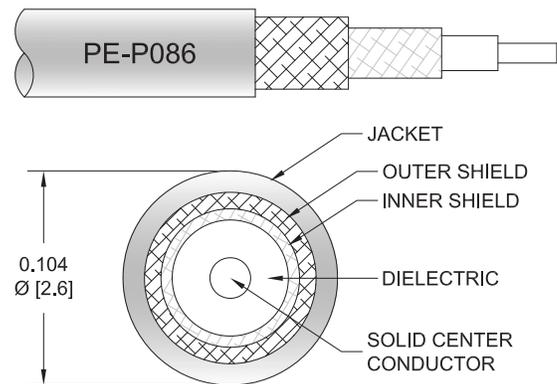
## SMPM Size 12 D38999 Contact Socket to SMA Male Cable Using PE-P086 Coax with HeatShrink, LF Solder



### PE3M0306

#### Configuration

- Connector 1: Push-on Mini SMP Socket PEMACTRF12S05
- 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 PE3M0306 from Pasternack is a D38999 contact cable assembly that is built with a size 12 Mini SMP socket 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 RF cable has a FEP jacket of 0.163-inch diameter. This PE3M0306 radio frequency cable assembly can withstand temperatures ranging from -65 to 125 degrees C. Our Mini SMP socket 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 socket to SMA male cable assembly is built with PE-P086, which is a flexible coax type. The Pasternack PE3M0306 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 socket 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.

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**PE3M0306**

**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   | PEMACTRF12S05 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**

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| Part Number | Length                   | Description           | F1        | F2   | F3   | F4   | F5    | Units | Weight (lbs) |
|-------------|--------------------------|-----------------------|-----------|------|------|------|-------|-------|--------------|
|             |                          |                       | Frequency |      | 1000 | 2000 | 4500  | 9000  |              |
| PE3M0306    | 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  |              |
| PE3M0306-6  | 6 inch                   | Insertion Loss (Typ.) | 0.3       | 0.34 | 0.42 | 0.52 | 0.68  | dB    | 0.0265       |
| PE3M0306-12 | 12 inch                  | Insertion Loss (Typ.) | 0.4       | 0.48 | 0.63 | 0.84 | 1.16  | dB    | 0.033        |
| PE3M0306-24 | 24 inch                  | Insertion Loss (Typ.) | 0.59      | 0.76 | 1.06 | 1.47 | 2.11  | dB    | 0.046        |
| PE3M0306-36 | 36 inch                  | Insertion Loss (Typ.) | 0.78      | 1.04 | 1.49 | 2.1  | 3.06  | dB    | 0.059        |
| PE3M0306-48 | 48 inch                  | Insertion Loss (Typ.) | 0.97      | 1.31 | 1.91 | 2.73 | 4.01  | dB    | 0.072        |
| PE3M0306-60 | 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                        |

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**Connector Characteristics**

| Description                          | Connector 1                 | Connector 2        |
|--------------------------------------|-----------------------------|--------------------|
| Type                                 | Mini SMP Socket             | 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 | Stainless Steel, Passivated |                    |
| 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.

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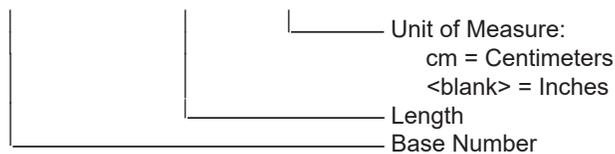


**PE3M0306**

**How to Order**

Part Number Configuration:

**PE3M0306 - xx uu**



Example: PE3M0306-12 = 12 inches long cable  
PE3M0306-100cm = 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 Socket 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 Socket to SMA Male Cable Using PE-P086 Coax with HeatShrink, LF Solder PE3M0306](https://www.pasternack.com/smpm-12-contact-socket-to-sma-male-cable-using-pe-p086-coax-with-heatshrink-lf-solder-pe3m0306-p.aspx)

URL: <https://www.pasternack.com/smpm-12-contact-socket-to-sma-male-cable-using-pe-p086-coax-with-heatshrink-lf-solder-pe3m0306-p.aspx>

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# PE3M0306 CAD Drawing

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

