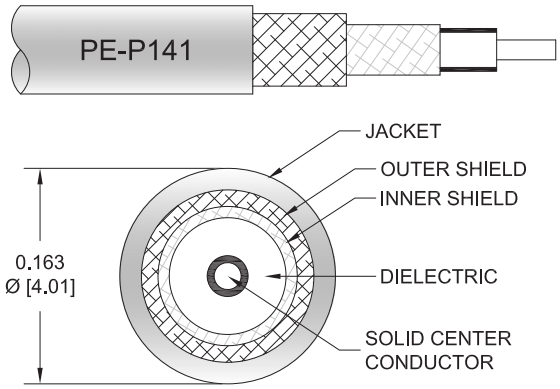
MIL Size 8 D38999 Contact Socket to SMA Male Cable Using PE-P141 Coax with HeatShrink, LF Solder

PE3M0299

Configuration

- Connector 1: Push-on M39029 Socket PEMACTRF8S11
- Connector 2: SMA Male PE4112
- Cable Type: PE-P141
- Coax Flex Type: Flexible



Features

- Max Frequency: 3 GHz
- Can be installed in all D38999 size 8 inserts
- Lot traceability
- High speed RF cable assembly

Applications

- Military and Aerospace
- Avionics
- Industrial Automation

Description

The PE3M0299 from Pasternack is a D38999 contact cable assembly that is built with a size 8 M39029 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 M39029 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 3 GHz.

The RF cable has a FEP jacket of 0.163-inch diameter. This PE3M0299 radio frequency cable assembly can withstand temperatures ranging from -65 to 125 degrees C. Our M39029 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.

M39029 socket to SMA male cable assembly is built with PE-P141, which is a flexible coax type. The Pasternack PE3M0299 flexible cable assembly has a 50 Ohm impedance and is double shielded. Additional dimensions, specifications, and CAD drawings for this M39029 to SMA RF cable are available on our downloadable PDF datasheet.

M39029 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 M39029 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 M39029 to SMA RF cable assembly as per your requirements.

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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-P141 in accordance with PE-P141 datasheet
Connector 1	PEMACTRF8S11 in accordance with MIL-DTL-38999
Connector 2	PE4112 in accordance with MIL-STD-348
Heat Shrink 1	M23053/5-106-0 in accordance with SAE AS23053
Heat Shrink 2	M23053/5-106-0 in accordance with SAE AS23053
Solder	SAC305 in accordance with J-STD-006

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		3	GHz
VSWR			1.4:1	
Velocity of Propagation		70		%
Capacitance		29.4 [96.46]		pF/ft [pF/m]

Specifications by Frequency

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PE3M0299

Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
		Frequency	250	500	1000	2500	3000	MHz	
PE3M0299	Custom Lengths Available	Insertion Loss (Typ.)	0.03	0.06	0.11	0.18	0.2	dB/ft	
			0.1	0.19	0.37	0.6	0.66	dB/m	
PE3M0299-6	6 inch	Insertion Loss (Typ.)	0.22	0.23	0.26	0.3	0.3	dB	0.0345
PE3M0299-12	12 inch	Insertion Loss (Typ.)	0.23	0.26	0.32	0.39	0.4	dB	0.049
PE3M0299-24	24 inch	Insertion Loss (Typ.)	0.26	0.32	0.43	0.57	0.6	dB	0.078
PE3M0299-36	36 inch	Insertion Loss (Typ.)	0.29	0.37	0.54	0.75	0.8	dB	0.107
PE3M0299-48	48 inch	Insertion Loss (Typ.)	0.32	0.43	0.65	0.93	1	dB	0.136
PE3M0299-60	60 inch	Insertion Loss (Typ.)	0.34	0.48	0.76	1.11	1.2	dB	0.165

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:	0.049	pounds
Additional Weight per Foot:	0.029	pounds

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

Mechanical Specifications

Cable Assembly

Description	Minimum	Typical	Maximum	Units
Cable Outer Diameter		0.163		in
Weight		0.049 [22.23]		lbs [g]

Cable Characteristics

Description	Specification
Cable Type	PE-P141
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

Connector Characteristics

Description	Connector 1	Connector 2
Type	M39029 Socket	SMA Male

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Connector Characteristics

Description	Connector 1	Connector 2
Specification	MIL-DTL-38999	MIL-STD-348
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Straight
Connection Method	Push-on	
Contact Size	8	
Mating Cycles	500	
Contact Material and Plating	Beryllium Copper, Gold	Brass, Gold
Contact Plating Specification		50 µin minimum
Dielectric Type	PTFE	PTFE
Outer Conductor Material and Plating	Beryllium Copper, Gold	
Body Material and Plating	Beryllium Copper, Gold	Stainless Steel, Gold
Body Plating Specification		10 µin minimum
Coupling Nut Material and Plating		Brass, Nickel
Coupling Nut Plating Specification		100 µin minimum
Hex Size		5/16 inch
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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PE3M0299

How to Order

Part Number Configuration: **PE3M0299 - xx uu**

- **uu** — Unit of Measure:
  - cm = Centimeters
  - <blank> = Inches
- **xx** — Length
- **PE3M0299** — Base Number

Example: PE3M0299-12 = 12 inches long cable
PE3M0299-100cm = 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"

MIL Size 8 D38999 Contact Socket to SMA Male Cable Using PE-P141 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: MIL Size 8 D38999 Contact Socket to SMA Male Cable Using PE-P141 Coax with HeatShrink, LF Solder PE3M0299

URL: https://www.pasternack.com/mil-8-contact-socket-to-sma-male-cable-using-pe-p141-coax-with-heatshrink-lf-solder-pe3m0299-p.aspx

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PE3M0299 CAD Drawing

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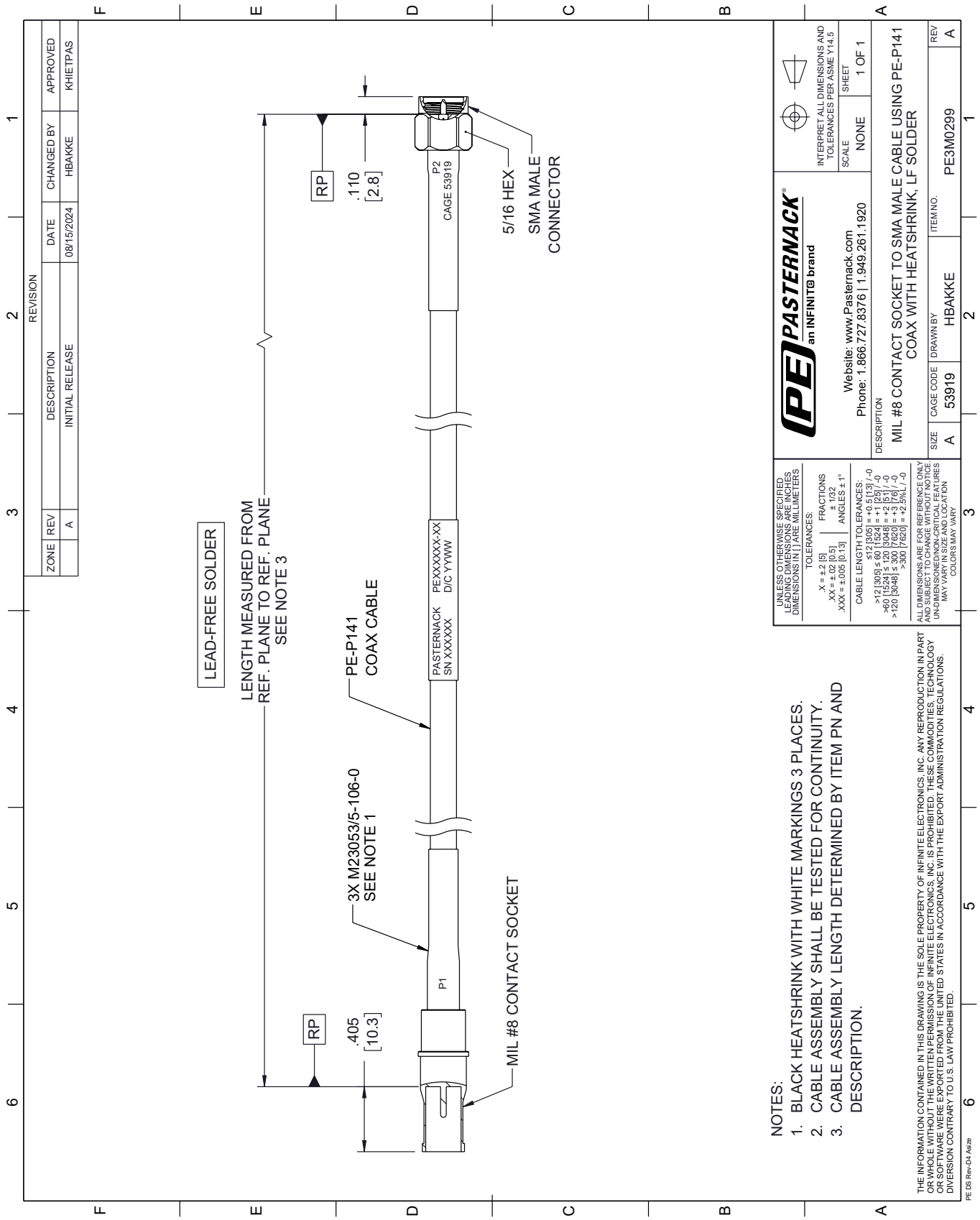

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