

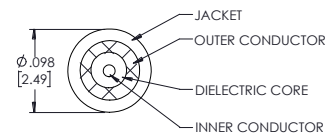
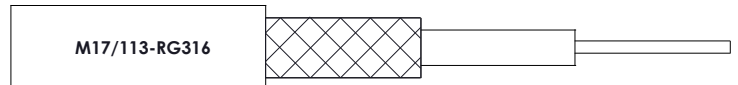
MIL Size 12 D38999 Contact Socket to SMA Male Cable Using M17/113-RG316 Coax with HeatShrink, LF Solder

PE3M0296



Configuration

- Connector 1: Push-on M39029 Socket PEMA TRF12S02
- Connector 2: SMA Male PE45145
- Cable Type: M17/113-RG316
- Coax Flex Type: Flexible



Features

- Max Frequency: 1 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 PE3M0296 from Pasternack is a D38999 contact cable assembly that is built with a size 12 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 700 MHz.

The RF cable has a FEP jacket of 0.098-inch diameter. This PE3M0296 radio frequency cable assembly can withstand temperatures ranging from -65 to 85 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 steel as the cable's inner conducting material and PTFE dielectric type.

M39029 socket to SMA male cable assembly is built with M17/113-RG316, which is a flexible coax type. The Pasternack PE3M0296 flexible cable assembly has a 50 Ohm impedance and is single 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	M17/113-RG316 in accordance with MIL-DTL-17
Connector 1	PEMACTRF12S02 in accordance with MIL-DTL-38999
Connector 2	PE45145 in accordance with MIL-STD-348A
Heat Shrink 1	M23053/5-104-0 in accordance with SAE AS23053
Heat Shrink 2	M23053/5-104-0 in accordance with SAE AS23053
Solder	SAC305 in accordance with J-STD-006

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		700	MHz
VSWR			1.4:1	
Velocity of Propagation		69.5		%
Capacitance		32 [104.99]		pF/ft [pF/m]
DC Resistance Inner Conductor		0.84 [2.76]		Ω/1000ft [Ω/Km]
Dielectric Withstanding Voltage (AC)			2,000	Vrms
Jacket Spark			2,000	Vrms

Specifications by Frequency

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Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
		Frequency	50	100	250	500	700	MHz	
PE3M0296	Custom Lengths Available	Insertion Loss (Typ.)	0.08	0.11	0.16	0.24	0.295	dB/ft	
			0.25	0.37	0.53	0.79	0.97	dB/m	
PE3M0296-6	6 inch	Insertion Loss (Typ.)	0.24	0.26	0.28	0.32	0.35	dB	0.0225
PE3M0296-12	12 inch	Insertion Loss (Typ.)	0.28	0.31	0.36	0.44	0.5	dB	0.025
PE3M0296-24	24 inch	Insertion Loss (Typ.)	0.35	0.42	0.52	0.68	0.79	dB	0.03
PE3M0296-36	36 inch	Insertion Loss (Typ.)	0.43	0.53	0.68	0.92	1.09	dB	0.035
PE3M0296-48	48 inch	Insertion Loss (Typ.)	0.5	0.64	0.84	1.16	1.38	dB	0.04
PE3M0296-60	60 inch	Insertion Loss (Typ.)	0.58	0.75	1	1.39	1.68	dB	0.045

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:	0.025 pounds
Additional Weight per Foot:	0.005 pounds

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

Mechanical Specifications

Cable Assembly

Description	Minimum	Typical	Maximum	Units
Cable Outer Diameter		0.098		in
Weight		0.025 [11.34]		lbs [g]

Cable Characteristics

Description	Specification
Cable Type	M17/113-RG316
Impedance	50 Ohms
Inner Conductor Type	Stranded
Inner Conductor Material and Plating	Steel, Silver
Dielectric Type	PTFE
Number of Shields	1
Shield Layer 1	Silver Coated Copper
Jacket Material	FEP

Connector Characteristics

Description	Connector 1	Connector 2
Type	M39029 Socket	SMA Male
Specification	MIL-DTL-38999	MIL-STD-348A

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Connector Characteristics

Description	Connector 1	Connector 2
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Straight
Connection Method	Push-on	
Contact Size	12	
Mating Cycles	500	
Contact Material and Plating	Beryllium Copper, Gold	Brass, Gold
Dielectric Type	PTFE	PTFE
Outer Conductor Material and Plating	Beryllium Copper, Gold	
Body Material and Plating	Stainless Steel, Passivated	Brass, Gold
Coupling Nut Material and Plating		Brass, Gold
Hex Size		5/16 inch
Torque		5 in-lbs [0.57 Nm]

Mechanical Specification Notes:

Environmental Specifications

Description	Specification
Temperature Operating Range	-65 to +85 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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PE3M0296

How to Order

Part Number Configuration:

PE3M0296

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

Example: PE3M0296-12 = 12 inches long cable
PE3M0296-100cm = 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 12 D38999 Contact Socket to SMA Male Cable Using M17/113-RG316 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 12 D38999 Contact Socket to SMA Male Cable Using M17/113-RG316 Coax with HeatShrink, LF Solder PE3M0296](https://www.pasternack.com/mil-12-contact-socket-to-sma-male-cable-using-m17-113-rg316-coax-with-heatshrink-lf-solder-pe3m0296-p.aspx)

URL: <https://www.pasternack.com/mil-12-contact-socket-to-sma-male-cable-using-m17-113-rg316-coax-with-heatshrink-lf-solder-pe3m0296-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.

PE3M0296 CAD Drawing

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