

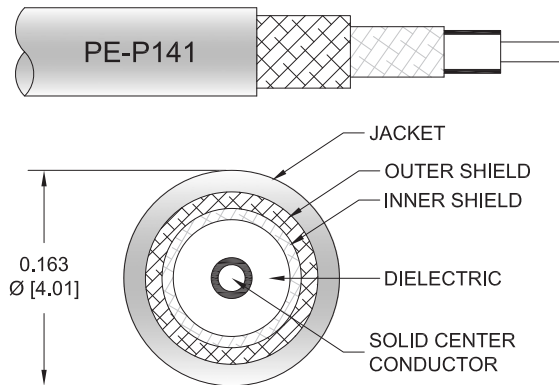
MIL Size 8 D38999 Contact Socket to MIL Size 8 D38999 Contact Socket Cable Using PE-P141 Coax with HeatShrink, LF Solder



PE3M0409

Configuration

- Connector 1: Push-on M39029 Socket
- Connector 2: Push-on M39029 Socket
- 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 PE3M0409 from Pasternack is a D38999 cable assembly that is built with a M39029 Socket contact on one end and a M39029 Socket 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 M39029 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 PE3M0409 RF cable has a FEP jacket of 0.163-inch diameter. This radio frequency cable assembly can withstand temperatures ranging from -65 to 125 degrees C. Our M39029 Socket to M39029 Socket 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. The PE3M0409 in-series RF cable has 0.8 inches of repeated minimum bend radius along with 110 dB of minimum RF shielding.

M39029 Socket to M39029 Socket cable assembly is built with PE-P141, which is a flexible coax type. The Pasternack PE3M0409 flexible cable assembly has a 50 Ohm impedance and is double shielded. Additional dimensions, specifications, and CAD drawings for this M39029 to M39029 RF cables are available on our downloadable PDF datasheet.

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

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



PE3M0409

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	in accordance with MIL-DTL-38999
Connector 2	in accordance with MIL-DTL-38999
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		%
RF Shielding	110			dB
Capacitance		29.4 [96.46]		pF/ft [pF/m]

Specifications by Frequency

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



PE3M0409

Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
			Frequency		250	500	1000	2500	
PE3M0409	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	
PE3M0409-6	6 inch	Insertion Loss (Typ.)	0.22	0.23	0.26	0.3	0.3	dB	0.0345
PE3M0409-12	12 inch	Insertion Loss (Typ.)	0.23	0.26	0.32	0.39	0.4	dB	0.049
PE3M0409-24	24 inch	Insertion Loss (Typ.)	0.26	0.32	0.43	0.57	0.6	dB	0.078
PE3M0409-36	36 inch	Insertion Loss (Typ.)	0.29	0.37	0.54	0.75	0.8	dB	0.107
PE3M0409-48	48 inch	Insertion Loss (Typ.)	0.32	0.43	0.65	0.93	1	dB	0.136
PE3M0409-60	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]
Repeated Minimum Bend Radius	0.8			in

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

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



PE3M0409

Connector Characteristics

Description	Connector 1	Connector 2
Type	M39029 Socket	M39029 Socket
Specification	MIL-DTL-38999	MIL-DTL-38999
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Straight
Connection Method	Push-on	Push-on
Contact Size	8	8
Mating Cycles	500	500
Contact Material and Plating	Beryllium Copper, Gold	Beryllium Copper, Gold
Dielectric Type	PTFE	PTFE
Outer Conductor Material and Plating	Beryllium Copper, Gold	Beryllium Copper, Gold
Body Material and Plating	Beryllium Copper, Gold	Beryllium Copper, Gold

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.

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



PE3M0409

How to Order



Example: PE3M0409-12 = 12 inches long cable
PE3M0409-100cm = 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 MIL Size 8 D38999 Contact Socket 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.

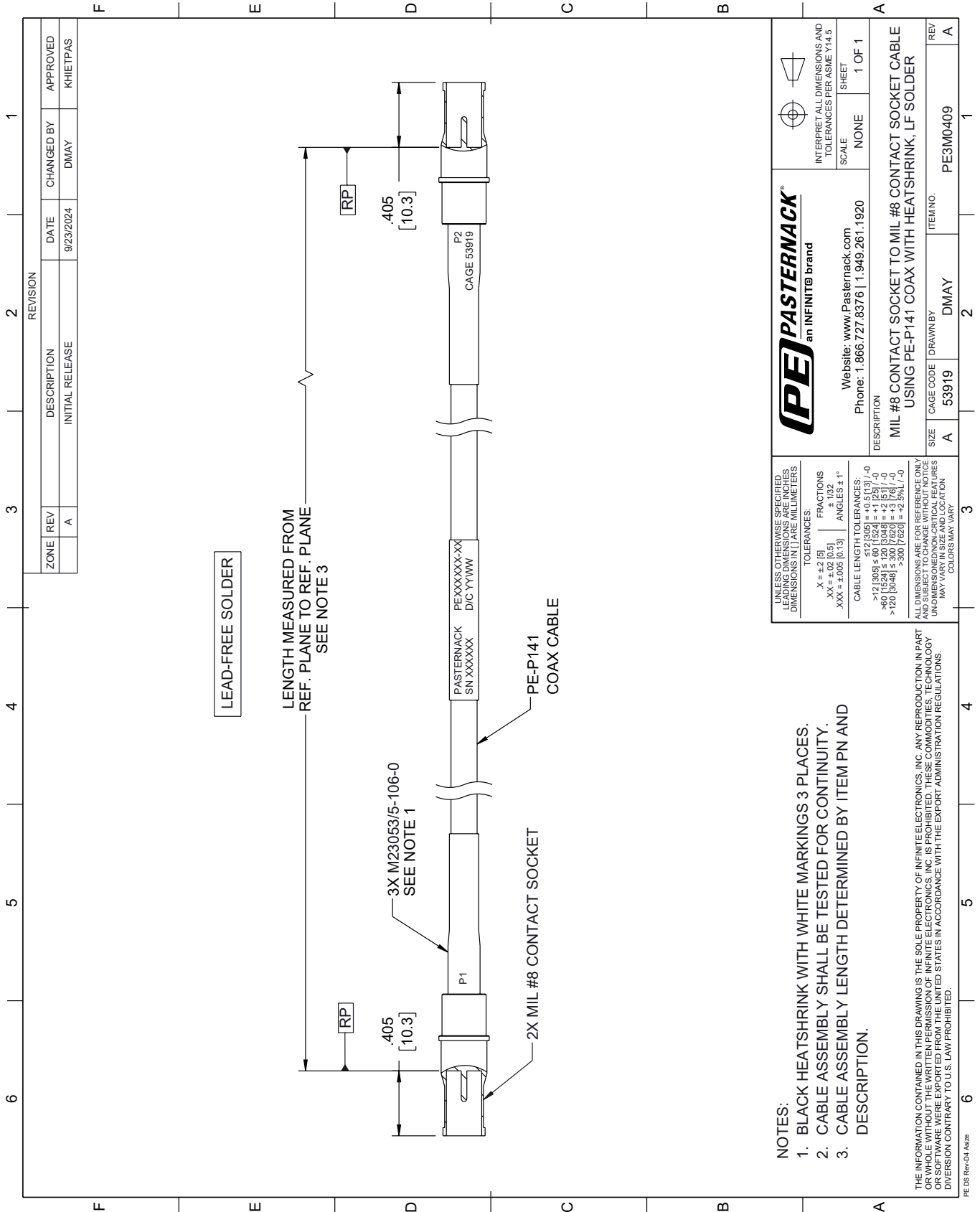
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [MIL Size 8 D38999 Contact Socket to MIL Size 8 D38999 Contact Socket Cable Using PE-P141 Coax with HeatShrink, LF Solder PE3M0409](#)

URL: <https://www.pasternack.com/mil-8-contact-socket-to-mil-8-contact-socket-cable-using-pe-p141-coax-with-heatshrink-lf-solder-pe3m0409-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 impliment 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.

PE3M0409 CAD Drawing

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



NOTES:

1. BLACK HEATSHRINK WITH WHITE MARKINGS 3 PLACES.
2. CABLE ASSEMBLY SHALL BE TESTED FOR CONTINUITY.
3. CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF INFINITE ELECTRONICS, INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF INFINITE ELECTRONICS, INC. IS PROHIBITED. THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

PE DS Rev-D4 Add2

UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE IN INCHES. DIMENSIONS IN [] ARE MILLIMETERS.

TOLERANCES:

.X = ±.2 [5]
.XX = ±.02 [0.5]
.XXX = ±.005 [0.13]

FRACTIONS
± 1/32

ANGLES ± 1°

CABLE LENGTH TOLERANCES:

±12 [305] ≤ 60 [1524] = ±0.5 [13] / -0
>60 [1524] ≤ 120 [3048] = ±2 [51] / -0
>120 [3048] ≤ 300 [7620] = ±2.5 [64] / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY. UNDIMENSIONED NON-CRITICAL FEATURES MAY VARY IN SIZE AND LOCATION. COLORS MAY VARY.

(PE) PASTERNAK®
an INFINITI® brand

Website: www.Pasternack.com
Phone: 1.866.727.8376 | 1.949.261.1920

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

SCALE: NONE
SHEET: 1 OF 1

DESCRIPTION	SIZE	CAGE CODE	DRAWN BY	ITEM NO.	REV
MIL #8 CONTACT SOCKET TO MIL #8 CONTACT SOCKET CABLE USING PE-P141 COAX WITH HEATSHRINK, LF SOLDER	A	53919	DMAY	PE3M0409	A