

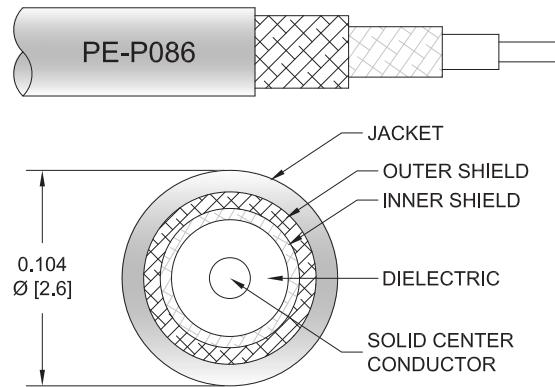
## BMZ Size 8 D38999 Contact Pin (40 GHz) to BMZ Size 8 D38999 Contact Socket Cable Using PE-P086 Coax with Heat Shrink, LF Solder



### PE3M0431

#### Configuration

- Connector 1: Push-on BMZ Pin
- Connector 2: Push-on BMZ Socket
- Cable Type: PE-P086
- Coax Flex Type: Flexible



#### Features

- Max Frequency: 18 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 PE3M0431 from Pasternack is a D38999 contact cable assembly that is built with a size 8 BMZ pin contact connection on one end and a BMZ 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 BMZ to BMZ 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 PE3M0431 RF cable has a FEP jacket of 0.104-inch diameter. This radio frequency cable assembly can withstand temperatures ranging from -65 to 165 degrees C. Our BMZ pin to BMZ socket cable has a maximum VSWR of 1.4:1. This 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 PE3M0431 in-series RF cable has 0.500 inches of repeated minimum bend radius along with 110 dB of minimum RF shielding.

BMZ pin to BMZ socket cable assembly is built with PE-P086, which is a flexible coax type. The Pasternack PE3M0431 flexible cable assembly has a 50 Ohm impedance and is double shielded. Additional dimensions, specifications, and CAD drawings for this BMZ to BMZ RF cable are available on our downloadable PDF datasheet.

BMZ pin to BMZ 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 BMZ 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 BMZ to BMZ RF cable assembly as per your requirements.

BMZ Size 8 D38999 Contact Pin (40 GHz) to BMZ Size 8 D38999 Contact Socket Cable Using PE-P086 Coax with Heat Shrink, LF Solder



## PE3M0431

### 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	in accordance with MIL-DTL-38999
Connector 2	in accordance with MIL-DTL-38999
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

## BMZ Size 8 D38999 Contact Pin (40 GHz) to BMZ Size 8 D38999 Contact Socket Cable Using PE-P086 Coax with Heat Shrink, LF Solder



### PE3M0431

Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
		Frequency	1000	2000	4500	9000	18000	MHz	
PE3M0431	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	
PE3M0431-6	6 inch	Insertion Loss (Typ.)	0.3	0.34	0.42	0.52	0.68	dB	0.0265
PE3M0431-12	12 inch	Insertion Loss (Typ.)	0.4	0.48	0.63	0.84	1.16	dB	0.033
PE3M0431-24	24 inch	Insertion Loss (Typ.)	0.59	0.76	1.06	1.47	2.11	dB	0.046
PE3M0431-36	36 inch	Insertion Loss (Typ.)	0.78	1.04	1.49	2.1	3.06	dB	0.059
PE3M0431-48	48 inch	Insertion Loss (Typ.)	0.97	1.31	1.91	2.73	4.01	dB	0.072
PE3M0431-60	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		0.104		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

BMZ Size 8 D38999 Contact Pin (40 GHz) to BMZ Size 8 D38999 Contact Socket Cable Using PE-P086 Coax with Heat Shrink, LF Solder



## PE3M0431

### Connector Characteristics

Description	Connector 1	Connector 2
Type	BMZ Pin	BMZ 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	Stainless Steel, Gold	Beryllium Copper, Gold
Body Material and Plating	Stainless Steel, Gold	Stainless Steel, Passivated

Mechanical Specification Notes:

### Environmental Specifications

Description	Specification
Temperature Operating Range	-65 to +165 deg C

### Compliance Certifications

(see product page for current document)

### Plotted and Other Data

Notes:

Values at 25°C, sea level.

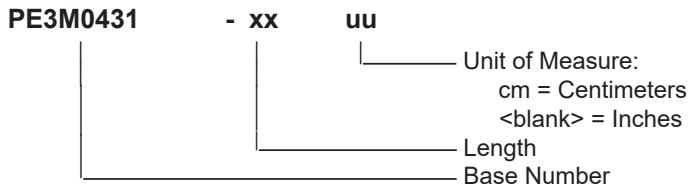
## BMZ Size 8 D38999 Contact Pin (40 GHz) to BMZ Size 8 D38999 Contact Socket Cable Using PE-P086 Coax with Heat Shrink, LF Solder



### PE3M0431

#### How to Order

Part Number Configuration:



Example: PE3M0431-12 = 12 inches long cable  
PE3M0431-100cm = 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"

BMZ Size 8 D38999 Contact Pin (40 GHz) to BMZ Size 8 D38999 Contact Socket Cable Using PE-P086 Coax with Heat Shrink, 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.

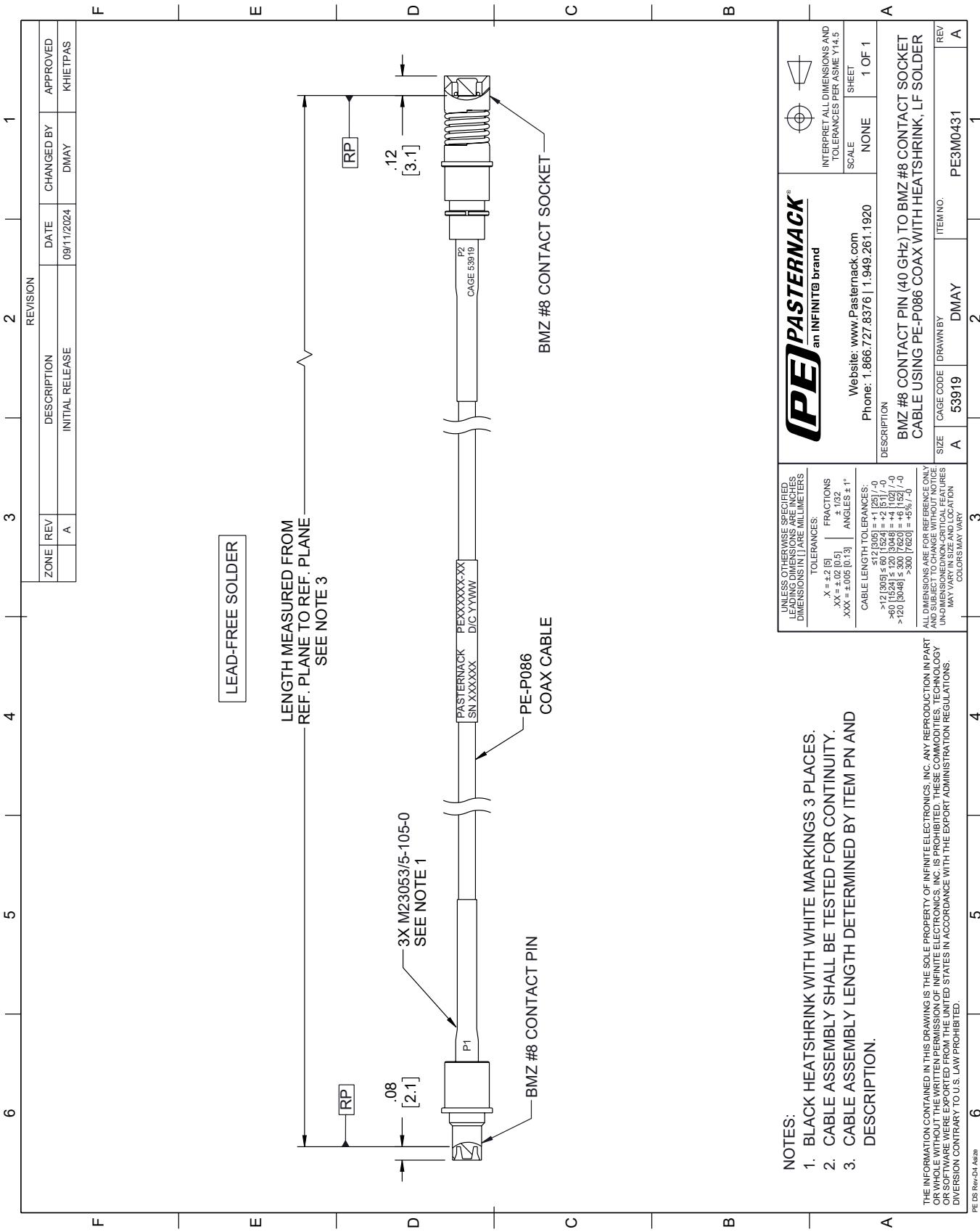
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [BMZ Size 8 D38999 Contact Pin \(40 GHz\) to BMZ Size 8 D38999 Contact Socket Cable Using PE-P086 Coax with Heat Shrink, LF Solder PE3M0431](https://www.pasternack.com/bmz-8-contact-pin-(40-ghz)-to-bmz-8-contact-socket-cable-using-pe-p086-coax-with-heatshrink-lf-solder-pe3m0431-p.aspx)

URL: [https://www.pasternack.com/bmz-8-contact-pin-\(40-ghz\)-to-bmz-8-contact-socket-cable-using-pe-p086-coax-with-heatshrink-lf-solder-pe3m0431-p.aspx](https://www.pasternack.com/bmz-8-contact-pin-(40-ghz)-to-bmz-8-contact-socket-cable-using-pe-p086-coax-with-heatshrink-lf-solder-pe3m0431-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.

# PE3M0431 CAD Drawing

BMZ Size 8 D38999 Contact Pin (40 GHz) to BMZ Size 8 D38999 Contact Socket Cable Using PE-P086 Coax with Heat Shrink, LF Solder



OTES

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

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF INFINITE ELECTRONICS, INC. ANY REPRODUCTION, INFART OR DISCLOSURE, IN WHOLE OR IN PART, IS PROHIBITED, EXCEPT BY AUTHORIZED PERSONNEL OF INFINITE ELECTRONICS, INC. IN DIVISION CONTRACT, OR AS AUTHORIZED BY LAW, PROVIDED THAT IT IS HELD IN CONFIDENCE AND IS NOT USED FOR OTHER PURPOSES.

CABLE USING PE-P086 COAX WITH HEATSHRINK, LF SOLDER				REV
SIZE	CAGE CODE	DRAWN BY	ITEM NO.	
A	53919	DMAY	PE3M0431	A

© 2023 Infinite Electronics, Inc. Pasternack is a registered trademark of Infinite Electronics, Inc.

+1 (866) 558-2786 | sales@pasternack.com | [pasternack.com](http://pasternack.com)