



7/16 DIN Male to 7/16 DIN Male Low PIM Cable  
120 Inch Length Using 1/2 inch Superflexible Coax  
with HeatShrink, LF Solder, RoHS

## RF Cable Assemblies Technical Data Sheet

PE39803-120

### Configuration

- Connector 1: 7/16 DIN Male
- Connector 2: 7/16 DIN Male
- Cable Type: 1/2" Superflexible

### Features

- 1/2" Flexible and 1/2" Superflexible cable
- 100% RF and PIM Tested
- Low Insertion Loss
- Low Return Loss at 2.7 GHz
- -160 dBc PIM Rating
- Velocity of Propagation at 82%

### Applications

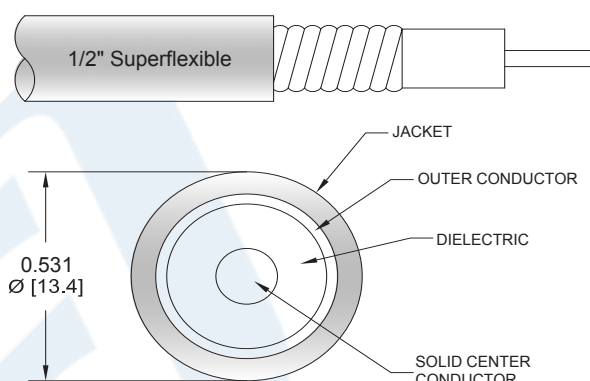
- General Purpose
- Laboratory Use
- Low PIM Applications

### Description

Pasternack's corrugated cable assemblies are ideal for applications where durability and high power are needed. These high quality 50 ohm cable assemblies are constructed with a solid copper clad aluminum inner conductor, a foam dielectric, corrugated copper tube, and a tough polyethylene jacket. The solid inner and outer conductors are designed to help minimize intermodulation distortion (IMD) in communications applications. Durability is ensured thanks to the injection molded boot on the connectors for added strain relief. Our carefully selected assemblies provide the highest quality on the market with PIM ratings of -160 dBc and low return loss. Available in 1/2" flexible and 1/2" superflexible cable types in 7/16 DIN and type N connector configurations.

### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		2.7	GHz
Return Loss			-26	dB
Velocity of Propagation		82		%
Passive Intermodulation			-160	dBc
Capacitance		24.4 [80.05]		pF/ft [pF/m]
Inductance		0.06 [0.2]		uH/ft [uH/m]
DC Resistance Inner Conductor		0.92 [3.02]		Ω/1000ft [Ω/Km]
DC Resistance Outer Conductor		1.13 [3.71]		Ω/1000ft [Ω/Km]



Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [7/16 DIN Male to 7/16 DIN Male Low PIM Cable 120 Inch Length Using 1/2 inch Superflexible Coax with HeatShrink, LF Solder, RoHS PE39803-120](#)



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### Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	1	2.2	2.7			GHz
Insertion Loss (Typ.)	0.32	0.5	0.56			dB
Return Loss (Max.)	-30	-28	-26			dB

#### Electrical Specification Notes:

Insertion loss does not include the loss of the connectors.

Insertion loss is estimated as  $0.05 \times \sqrt{f(\text{GHz})}$  dB per connector.

Passive intermodulation is measured with two 20W tones.

### Mechanical Specifications

#### Cable Assembly

Length*	120 in [304.8 cm]
Diameter	0.535 in [13.59 mm]
Weight	1.502 lbs [681.3 g]

#### Cable

Cable Type	1/2" Superflexible
Impedance	50 Ohms
Inner Conductor Type	Solid
Inner Conductor Material and Plating	Copper Clad Aluminum
Dielectric Type	PE (F)
Outer Conductor Material and Plating	Helically Corrugated Copper Tube
Outer Conductor Diameter	0.484 in [12.29 mm]
Jacket Material	PE, Black
Jacket Diameter	0.531 in [13.49 mm]
One Time Minimum Bend Radius	0.59 in [14.99 mm]
Repeated Minimum Bend Radius	1.18 in [29.97 mm]
Typical Flex Cycles	20
Flat Plate Crush	85.6 lbs/in [1.53 Kg/mm]
Tensile Strength	225 lbs [102.06 Kg]

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### Connectors

Description	Connector 1	Connector 2
Type	7/16 DIN Male	7/16 DIN Male
Impedance	50 Ohms	50 Ohms
Contact Material and Plating	Brass, Silver	Brass, Silver
Dielectric Type	PTFE	PTFE
Outer Conductor Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Body Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Coupling Nut Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Hex Size	32 mm	32 mm
Torque	18.417 ft-lbs [24.97 Nm]	18.417 ft-lbs [24.97 Nm]

Mechanical Specification Notes:

\*All cable assemblies have a length tolerance of 1.5% or  $\pm 3/8"$ , whichever is greater.

**Compliance Certifications** (see [product page](#) for current document)

### Plotted and Other Data

Notes:

- Values at 25°C, sea level.

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## RF Cable Assemblies Technical Data Sheet

PE39803-120

### How to Order

Part Number Configuration:

PE39803

- xx

uu

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

Example: PE39803-12 = 12 inches long cable  
PE39803-100cm = 100 cm long cable

7/16 DIN Male to 7/16 DIN Male Low PIM Cable 120 Inch Length Using 1/2 inch Superflexible Coax with HeatShrink, LF Solder, RoHS from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

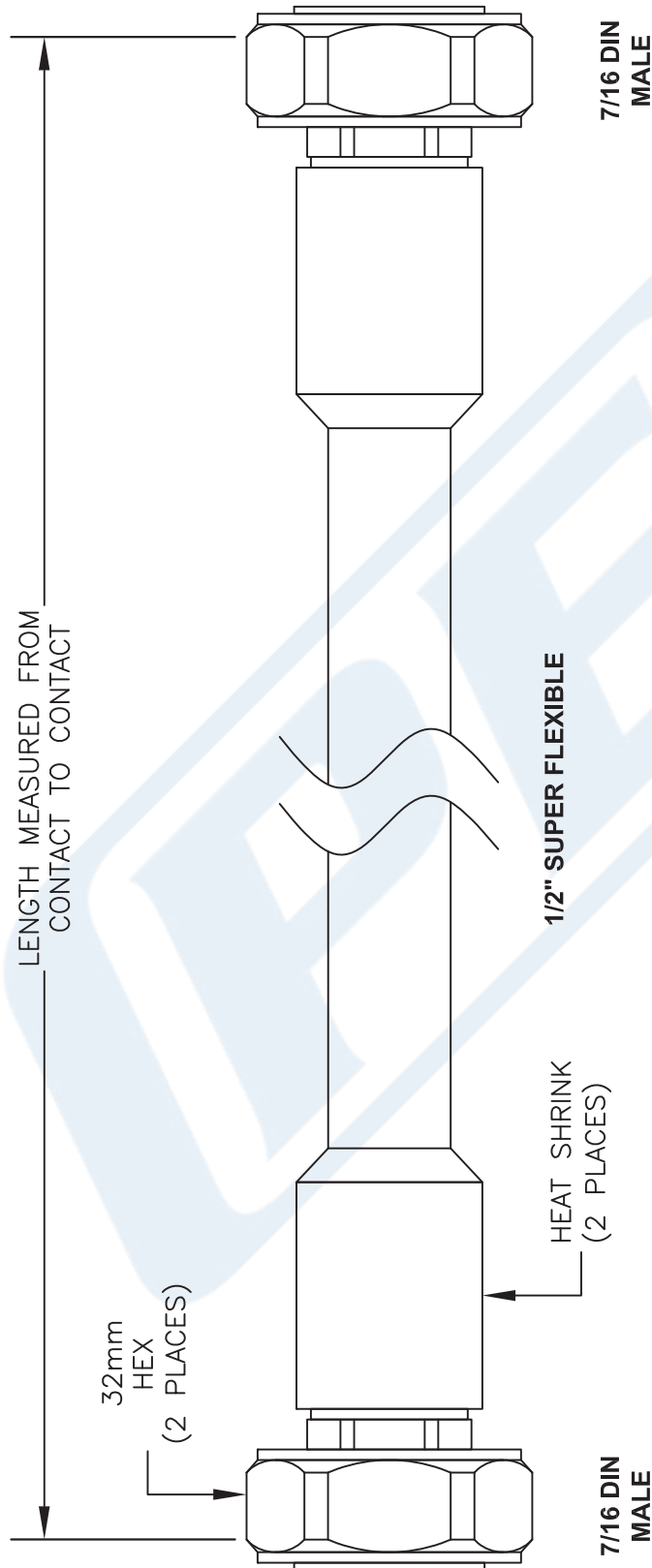
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

# PE39803-120 CAD Drawing

7/16 DIN Male to 7/16 DIN Male Low PIM Cable 120 Inch Length Using  
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## STANDARD TOLERANCES

.X  $\pm 0.2$   
.XX  $\pm 0.1$   
.XXX  $\pm 0.05$

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES



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DWG TITLE

**PE39803**

NOTES:  
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.  
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.  
3. DIMENSIONS ARE IN INCHES [mm].

FSCM NO. 53919

CAD FILE 110916

SCALE N/A

SIZE A

41742