



MIL-DTL-17 SMA Male to SMA Male Cable Using M17/113-RG316 Coax

RF Cable Assemblies Technical Data Sheet

PE3M0090

Configuration

- Connector 1: SMA Male
- Connector 2: SMA Male
- Cable Type: M17/113-RG316

Features

- Max Frequency 3 GHz
- 69.5% Phase Velocity
- FEP Jacket
- Lot Traceability
- J-STD-Soldering
- Qualified (QPL) cable and connectors
- RF Test Plots
- Test Report
- In stock and ready to ship

Applications

- Hi-Rel
- MIL-DTL-17 Requirements
- Avionics
- IFF
- SATCOM
- ECM

Description

Pasternack's MIL-DTL-17 cable assemblies are part of our full line of reliable RF components available for same-day shipping. These commercial-off-the-shelf (COTS), military grade cable assemblies are designed and processed with high reliability in mind. MIL-PRF-39012 connectors and MIL-C-17 coaxial cable are assembled using J-STD soldering processes and WHMA-A-620 workmanship criteria. The combination of materials, processing and acceptance testing work together to create a dependable cable assembly for applications where performance over time is important or the cost of failure is high. Each finished MIL-DTL-17 cable assembly is traceable to its component lots and a test report is available for every lot produced.

Our MIL-DTL-17 cable assembly datasheet specifications and drawing with dimensions are shown below in this PDF. Pasternack's broad catalog of RF, microwave and millimeter wave cable assemblies allow designers to configure and customize their signal connections however they like. Whether the need is to provide reliable mil-spec connections or fielding dependable RF cable assemblies, Pasternack has the right cable assemblies for the job. Pasternack can also expertly build your custom cable assemblies for you and ship same day.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [MIL-DTL-17 SMA Male to SMA Male Cable Using M17/113-RG316 Coax PE3M0090](#)



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Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		3	GHz
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)			750	Vrms

Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	0.05	0.1	0.4	1	3	GHz
Insertion Loss (Max.)	0.075	0.11	0.21	0.38	0.58	dB/ft
	0.25	0.36	0.69	1.25	1.9	

Electrical Specification Notes:

Insertion Loss does not include the loss of the connectors. Insertion Loss is estimated as 0.1dB per connector.

Mechanical Specifications

Cable Assembly

Cable

Cable Type	M17/113-RG316
Impedance	50 Ohms
Inner Conductor Type	Stranded
Inner Conductor Material and Plating	Copper Clad Steel, Silver
Dielectric Type	PTFE
Number of Shields	1
Shield Layer 1	Silver Clad Copper
Outer Conductor Diameter	0.081 in [2.06 mm]
Jacket Material	FEP
Jacket Diameter	0.098 in [2.49 mm]

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Connectors

Description	Connector 1	Connector 2
Type	SMA Male	SMA Male
Specification	MIL-PRF-39012	MIL-PRF-39012
Impedance	50 Ohms	50 Ohms
Contact Material and Plating	Brass, Gold	Brass, Gold
Contact Plating Specification	ASTM B488	ASTM B488
Dielectric Type	Teflon	Teflon
Body Material and Plating	Steel, Passivated	Steel, Passivated
Body Plating Specification	QQ-P-35	QQ-P-35
Coupling Nut Material and Plating	Steel, Passivated	Steel, Passivated
Coupling Nut Plating Specification	QQ-P-35	QQ-P-35
Seal Gasket Material	Silicone Rubber	Silicone Rubber

Mechanical Specification Notes:

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

Environmental Specifications

Temperature

Operating Range -55 to +165 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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PE3M0090

How to Order

Part Number Configuration:

PE3M0090

- **xx**

uu

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

Example: PE3M0090-12 = 12 inches long cable
PE3M0090-100cm = 100 cm long cable

MIL-DTL-17 SMA Male to SMA Male Cable Using M17/113-RG316 Coax 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.

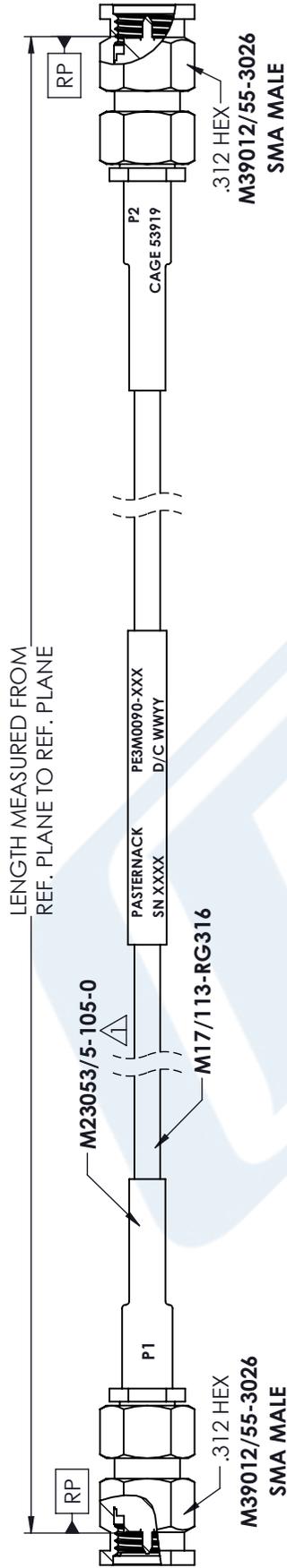
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URL: <https://www.pasternack.com/sma-male-sma-male-m17-113-rg316-cable-assembly-pe3m0090-p.aspx>

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.

PE3M0090 CAD Drawing

MIL-DTL-17 SMA Male to SMA Male Cable Using M17/113-RG316 Coax



.312 HEX
M39012/55-3026
SMA MALE

P2
CAGE 53919

PASTERNAK
SN XXXX
PE3M0090-XXX
D/C WWYY

M23053/5-105-0

M17/113-RG316

P1

.312 HEX
M39012/55-3026
SMA MALE

LENGTH MEASURED FROM
REF. PLANE TO REF. PLANE

STANDARD	TOLERANCES
.X	±0.2
.XX	±0.01
.XXX	±0.005

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

NOTES:

1. BLACK HEAT SHRINK WITH WHITE MARKINGS 3 PLACES.



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DWG TITLE

PE3M0090

- 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].

CAGE CODE 53919

CAD FILE 08/29/18

SCALE N/A

SIZE A

CN2379