

SMA Male to SMA Female Cable Using RG316-DS Coax with HeatShrink



PE3171/HS

Configuration

- Connector 1: SMA Male
- Connector 2: SMA Female
- Cable Type: RG316-DS
- Coax Flex Type: Flexible

Features

- Max Frequency 3 GHz
- 70% Phase Velocity
- Double Shielded
- FEP Jacket



Applications

- General Purpose
- Laboratory Use

Description

Pasternack's PE3171/HS SMA male to SMA female cable using RG316-DS coax is part of our full line of RF components available for same-day shipping. Pasternack's flexible RF cable assemblies are ideal for applications where tight bends and flexure are required. This Pasternack SMA to SMA cable assembly has a male to female gender configuration with 50 ohm flexible RG316-DS coax. The PE3171/HS SMA male to SMA female cable assembly operates to 3 GHz. The double shielding of this Pasternack cable assembly provides excellent shielding effectiveness.

Custom versions of most RF cable assemblies can be built and shipped same day. Custom cable assembly lengths can be obtained by specifying the desired length on the web site at time of order or by contacting a sales representative. Other available RF cable assembly value added services include connector orientation or clocking, heat shrink booting and custom labeling. RF testing can also be performed to document the electrical performance of your cable assembly.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		3	GHz
VSWR		1.4:1		
Velocity of Propagation		70		%
Capacitance		29.4 [96.46]		pF/ft [pF/m]

Specifications by Frequency

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PE3171/HS

Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
		Frequency	100	250	500	1000	3000	MHz	
PE3171/HS	Custom Lengths Available	Insertion Loss (Typ.)	0.08	0.13	0.194	0.29	0.535	dB/ft	
			0.27	0.42	0.64	0.96	1.76	dB/m	
PE3171/HS-6	6 inch	Insertion Loss (Typ.)	0.25	0.27	0.3	0.35	0.47	dB	0.028
PE3171/HS-12	12 inch	Insertion Loss (Typ.)	0.29	0.33	0.4	0.49	0.74	dB	0.035
PE3171/HS-24	24 inch	Insertion Loss (Typ.)	0.37	0.46	0.59	0.78	1.27	dB	0.05
PE3171/HS-36	36 inch	Insertion Loss (Typ.)	0.45	0.59	0.79	1.07	1.81	dB	0.064
PE3171/HS-48	48 inch	Insertion Loss (Typ.)	0.53	0.72	0.98	1.36	2.34	dB	0.078

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:	0.035 pounds
Additional Weight per Inch:	0.00117 pounds

Mechanical Specifications

Cable Assembly

Weight	0.035 lbs [15.88 g]
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Cable

Cable Type	RG316-DS
Impedance	50 Ohms
Inner Conductor Type	Stranded
Inner Conductor Material and Plating	Copper Clad Steel, Silver
Dielectric Type	PTFE
Number of Shields	2
Shield Layer 1	Silver Plated Copper Braid
Shield Layer 2	Silver Plated Copper Braid
Jacket Material	FEP, Tan
Jacket Diameter	0.114 in [2.9 mm]
Repeated Minimum Bend Radius	0.591 in [15.01 mm]

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Connectors

Description	Connector 1	Connector 2
Type	SMA Male	SMA Female
Specification	MIL-STD-348A	
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Straight
Contact Material and Plating	Brass, Gold	
Contact Plating Specification	30 µin minimum	
Dielectric Type	PTFE	
Body Material and Plating	Brass, Nickel	Brass, Nickel
Body Plating Specification	100 µin minimum	
Coupling Nut Material and Plating	Brass, Nickel	
Coupling Nut Plating Specification	100 µin minimum	
Hex Size	5/16 inch	
Torque	5 in-lbs 0.57 Nm	

Environmental Specifications

Operating Range Temperature -55 to +165 deg C

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

Plotted and Other Data

Notes:

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PE3171/HS

Typical Performance Data

How to Order

Part Number Configuration:

PE3171/HS - xx uu

Unit of Measure:
cm = Centimeters
<blank> = Inches

Length

Base Number

Example: PE3171/HS-12 = 12 inches long cable
PE3171/HS-100cm = 100 cm long cable

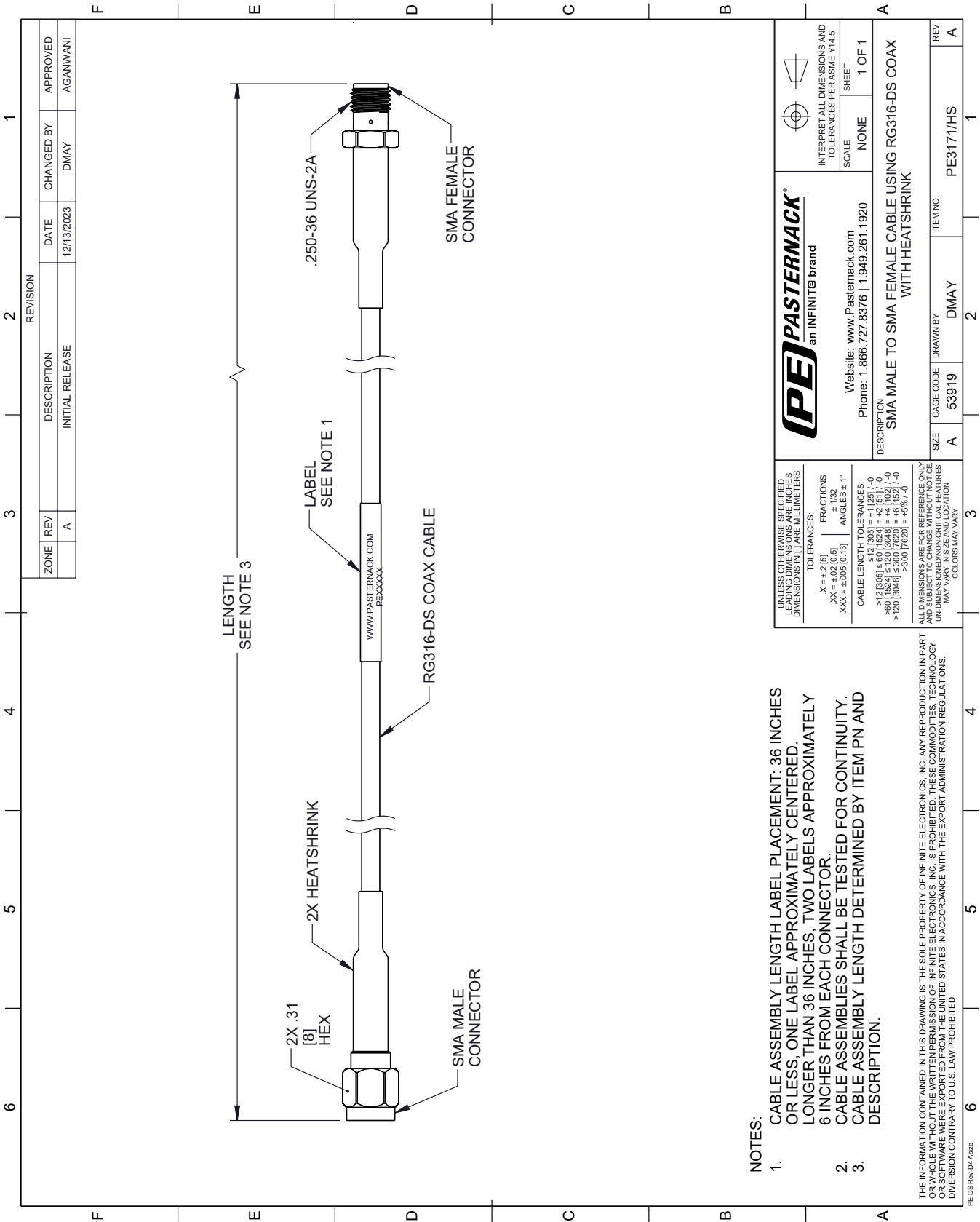
SMA Male to SMA Female Cable Using RG316-DS Coax with HeatShrink from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMA Male to SMA Female Cable Using RG316-DS Coax with HeatShrink PE3171/HS](#)

URL: <https://www.pasternack.com/sma-male-to-sma-female-cable-using-rg316-ds-with-heatshrink-pe3171-hs-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.

PE3171/HS CAD Drawing
SMA Male to SMA Female Cable Using RG316-DS Coax with HeatShrink



NOTES:

- 1. CABLE ASSEMBLY LENGTH LABEL PLACEMENT: 36 INCHES OR LESS, ONE LABEL APPROXIMATELY CENTERED, LONGER THAN 36 INCHES, TWO LABELS APPROXIMATELY 6 INCHES FROM EACH CONNECTOR.
- 2. CABLE ASSEMBLIES SHALL BE TESTED FOR CONTINUITY.
- 3. CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.

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UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE INCHES AND TRAILING DIMENSIONS ARE MILLIMETERS

TOLERANCES:

X = ±.2 [5]	FRACTIONS ±.132
.XX = ±.02 [0.5]	ANGLES ± 1°
.XXX = ±.005 [0.13]	

CABLE LENGTH TOLERANCES:

≤ 12 [305] = +.1 [25] / -0
> 12 [305] ≤ 60 [1524] = +.2 [51] / -0
> 60 [1524] ≤ 120 [3048] = +.3 [76] / -0
> 120 [3048] ≤ 300 [7620] = +.5 [127] / -0
> 300 [7620] = +.5% / -0

PE PASTERNAK
an INFINITI® brand

Website: www.Pasternack.com
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DESCRIPTION
SMA MALE TO SMA FEMALE CABLE USING RG316-DS COAX WITH HEATSHRINK

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

SCALE NONE

SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	CHANGED BY	APPROVED
	A	INITIAL RELEASE	12/13/2023	DMAY	AGANWANI

SIZE	CAGE CODE	DRAWN BY	ITEM NO.	REV
A	53919	DMAY	PE3171/HS	A