

Black FAKRA Plug to SMA Female Cable  
Using LMR-100A-UF Coax

**RF Cable Assemblies Technical Data Sheet**

**PE3C8643**

**Configuration**

- Connector 1: FAKRA Plug
- Connector 2: SMA Female
- Cable Type: LMR-100A-UF

**Features**

- Max Frequency 4 GHz
- Shielding Effectivity > 90 dB
- 66% Phase Velocity
- Double Shielded
- TPE Jacket

**Applications**

- General Purpose
- Laboratory Use

**Description**

Pasternack's PE3C8643 black FAKRA plug to SMA female cable using LMR-100A-UF 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 FAKRA to SMA cable assembly has a plug to female gender configuration with 50 ohm flexible LMR-100A-UF coax. The PE3C8643 FAKRA plug to SMA female cable assembly operates to 4 GHz. The double shielding of this Pasternack cable assembly provides excellent shielding effectiveness of better than 90 dB.

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.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Black FAKRA Plug to SMA Female Cable Using LMR-100A-UF Coax PE3C8643](#)

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#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		4	GHz
VSWR			1.4:1	
Velocity of Propagation		66		%
RF Shielding	90			dB
Group Delay		1.54 [5.05]		ns/ft [ns/m]
Capacitance		30.8 [101.05]		pF/ft [pF/m]
Inductance		0.077 [0.25]		uH/ft [uH/m]
DC Resistance Inner Conductor		81 [265.75]		$\Omega$ /1000ft [ $\Omega$ /Km]
DC Resistance Outer Conductor		9.5 [31.17]		$\Omega$ /1000ft [ $\Omega$ /Km]
Jacket Spark			2,000	Vrms

#### Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	0.1	0.25	0.5	1	4	GHz
Insertion Loss (Max.)	1.1	1.1	1.2	1.2	1.5	dB
	3.51	3.66	3.82	4.07	4.95	
VSWR (Max.)	1.4:1	1.4:1	1.4:1	1.4:1	1.4:1	
Return Loss (Max.)	15.56	15.563	15.563	15.563	15.563	dB

#### Mechanical Specifications

##### Cable Assembly

Length*	0 in [0 mm]
Diameter	0 in [0 mm]
Weight	0.012 lbs [5.44 g]

##### Cable

Cable Type	LMR-100A-UF
Impedance	50 Ohms
Inner Conductor Type	Solid
Inner Conductor Material and Plating	Copper
Dielectric Type	PE
Number of Shields	2
Shield Layer 1	Aluminum Tape
Shield Layer 2	Tinned Copper

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Jacket Material	TPE, Black
Jacket Diameter	0.11 in [2.79 mm]
One Time Minimum Bend Radius	0.25 in [6.35 mm]
Repeated Minimum Bend Radius	1 in [25.4 mm]
Bending Moment	0.1 lbs-ft [0.14 N-m]
Flat Plate Crush	10 lbs/in [0.18 Kg/mm]
Tensile Strength	15 lbs [6.8 Kg]

#### Connectors

Description	Connector 1	Connector 2
Type	FAKRA Plug	SMA Female
Specification		MIL-STD-348
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Straight
Mating Cycles		100
Contact Material and Plating	Phosphor Bronze, Gold	Beryllium Copper, Gold
Dielectric Type	PTFE	PTFE
Outer Conductor Material and Plating	Brass, Nickel	Brass, Nickel
Body Material and Plating	Plastic	Brass, Nickel

#### Environmental Specifications

##### Temperature

Operating Range -40 to +85 deg C

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

#### Plotted and Other Data

Notes:

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**PE3C8643**

**How to Order**

Part Number Configuration:

**PE3C8643**

- **xx**

**uu**

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

Example: PE3C8643-12 = 12 inches long cable  
PE3C8643-100cm = 100 cm long cable

Black FAKRA Plug to SMA Female Cable Using LMR-100A-UF 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.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Black FAKRA Plug to SMA Female Cable Using LMR-100A-UF Coax PE3C8643](https://www.pasternack.com/fakra-plug-sma-female-lmr-100a-uf-cable-assembly-pe3c8643-p.aspx)

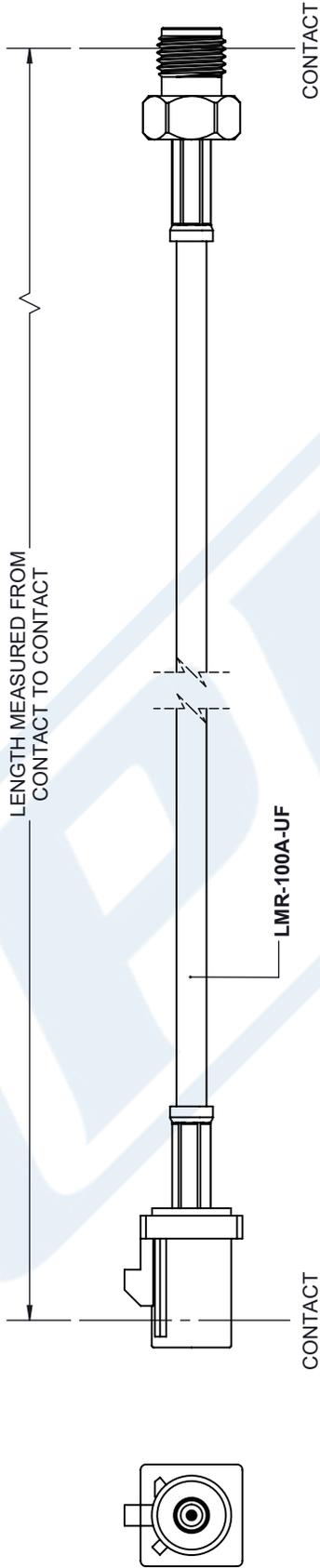
URL: <https://www.pasternack.com/fakra-plug-sma-female-lmr-100a-uf-cable-assembly-pe3c8643-p.aspx>

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.

# PE3C8643 CAD Drawing

Black FAKRA Plug to SMA Female Cable Using LMR-100A-UF Coax

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL RELEASE	11/12/2021
		APPROVED A. GANWANI



FAKRA PLUG  
A CODING  
BLACK COLOR

SMA MALE

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

TOLERANCES:  
 .X = ±.2 [ .508]      FRACTIONS ± 1/32  
 .XX = ±.02 [ .51]      ANGLES ± 1°  
 .XXX = ±.005 [ .13]

CABLE LENGTH (L), TOLERANCES:  
 L ≤ 12 [305] = +1 [25] / -0  
 12 [305] < L ≤ 60 [1524] = +2 [51] / -0  
 60 [1524] < L ≤ 120 [3048] = +4 [102] / -0  
 120 [3048] < L ≤ 300 [7620] = +6 [152] / -0  
 300 [7620] < L = +5% / -0

ALL DIMENSIONS SHOWN  
ARE FOR REFERENCE ONLY.

**PE PASTERNAK**  
an INFINITE brand

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SIZE A    CAGE CODE 53919    DRAWN BY K.DANG    ITEM NO. PE3C8643    REV A

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

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