



MCX Plug Connector Crimp/Solder Attachment for RG316,  
RG174, RG188, LMR-100, PE-B100, PE-C100, 0.100 inch

## RF Connectors Technical Data Sheet

PE4551

### Configuration

- MCX Plug Connector
- CECC 22220
- 50 Ohms
- Straight Body Geometry
- Connector Interface Types: RG316, RG174, RG188, LMR-100, PE-B100, PE-C100, .100 inch

### Features

- Max. Operating Frequency 3 GHz
- Good VSWR of 1.3:1
- Gold Plated Brass Contact
- 30 µin minimum contact plating

### Applications

- General Purpose Test
- Custom Cable Assemblies

### Description

Pasternack's PE4551 MCX plug connector with crimp/solder attachment for RG316, RG174, RG188, LMR-100, PE-B100, PE-C100 and .100 inch is part of our full line of RF components available for same-day shipping. Our MCX plug connector operates up to a maximum frequency of 3 GHz and offers good VSWR of 1.3:1.

Our MCX plug connector PE4551 datasheet specifications and drawing with dimensions are shown below in this PDF. Pasternack's broad catalog of RF, microwave and millimeter wave connectors allows designers to configure and customize their signal connections however they like. Whether the need is to provide an I/O for a board design, or simply create a custom cable assembly configuration, Pasternack has the right connector for the job. Pasternack can also expertly build your custom cable assemblies for you and ship same-day.

### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		3	GHz
VSWR			1.3:1	
Operating Voltage (AC)			250	Vrms

### Mechanical Specifications

#### Size

Length	0.79 in [20.07 mm]
Width/Dia.	0.217 in [5.51 mm]
Weight	0.009 lbs [4.08 g]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [MCX Plug Connector Crimp/Solder Attachment for RG316, RG174, RG188, LMR-100, PE-B100, PE-C100, 0.100 inch PE4551](#)



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### Material Specifications

Description	Material	Plating
Contact	Brass	Gold 30 µin minimum
Insulation	PTFE	
Body	Brass	Nickel 100 µin minimum

### Environmental Specifications

#### Temperature

Operating Range -55 to +155 deg C

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

### Plotted and Other Data

Notes:

MCX Plug Connector Crimp/Solder Attachment for RG316, RG174, RG188, LMR-100, PE-B100, PE-C100, 0.100 inch 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: [MCX Plug Connector Crimp/Solder Attachment for RG316, RG174, RG188, LMR-100, PE-B100, PE-C100, 0.100 inch PE4551](#)

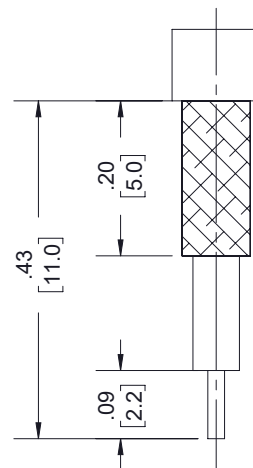
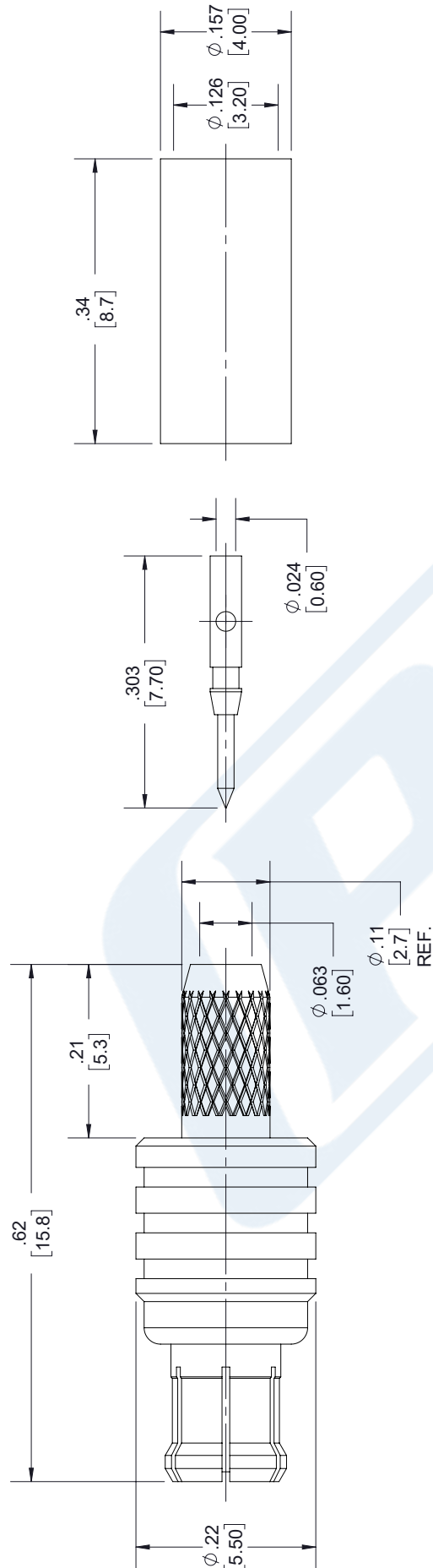
URL: <https://www.pasternack.com/mcx-plug-standard-rg316-rg174-rg188-connector-pe4551-p.aspx>

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.

# PE4551 CAD Drawing

MCX Plug Connector Crimp/Solder Attachment for RG316, RG174,  
RG188, LMR-100, PE-B100, PE-C100, 0.100 inch

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PCR PE4551 20200917	10/10/2020	SRAUTUS



## STRIPPING DIMENSIONS

## CRIMP SIZE REQUIRED

CONTACT: SOLDER  
FERRULE: .138" HEX CRIMP TOOL

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS	
TOLERANCES:	FRACTIONS
.X = ± .2	[.08]
.XX = ± .02	[.51]
.XXX = ± .005	[.13]
CABLE LENGTH (L) TOLERANCES:	ANGLES ± 1°
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.	

<b>PE PASTERNAK</b> an INFINITE brand Pasternack Enterprises, Inc. P.O. Box 16759, Irvine, CA 92623. Phone: 1.949.261.1920   1.866.727.8376 Fax: 1.949.261.7451 Website: www.pasternack.com E-mail: sales@pasternack.com	
SIZE	ITEM NO.
A	53919
CAGE CODE	DRAWN BY
53919	SLI
REV	PE4551
A	

THIRD-ANGLE PROJECTION	
THE INFORMATION AND DESIGN INFORMATION IS THE PROPERTY OF PASTERNAK CORPORATION ALL RIGHTS RESERVED.	
SHEET	OF
1	1
SCALE	N/A



RP SMA Female Bulkhead Connector Crimp/Solder  
Attachment For RG174, RG316, RG188, .235 inch D Hole

TECHNICAL DATA SHEET

PE4859

**RP SMA Female Bulkhead Connector Crimp/Solder Attachment For RG174, RG316, RG188, .235 inch D Hole**

**Configuration**

Connector	SMA Female Reverse Polarity
Connector Interface Type	RG174, RG316, RG188
Cable Attachment Method (Shield/Contact)	Crimp/Solder
Body Style	Straight
Mount Method	Bulkhead

**Electrical Specifications**

Impedance, Ohms	50
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**Mechanical Specifications**

**Size**

Length, in [mm]	0.905 [22.99]
Width/Dia., in [mm]	0.312 [7.92]
Weight, lbs [g]	0.006 [2.72]

**Connector**

Type	SMA Female Reverse Polarity
Contact Material and Plating	Gold
Body Material and Plating	Brass, Nickel
Dielectric Type	PTFE

**Compliance Certifications** (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

RoHS Compliant	Yes
REACH Compliant	06/18/2012

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [RP SMA Female Bulkhead Connector Crimp/Solder Attachment For RG174, RG316, RG188, .235 inch D Hole PE4859](#)

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.



RP SMA Female Bulkhead Connector Crimp/Solder  
Attachment For RG174, RG316, RG188, .235 inch D Hole

TECHNICAL DATA SHEET

PE4859

**Plotted and Other Data**

Notes:

Values at 25 °C, sea level

RP SMA Female Bulkhead Connector Crimp/Solder Attachment For RG174, RG316, RG188, .235 inch D Hole from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and fiber optic products maintain a 99% availability and are part of the broadest selection in the industry.

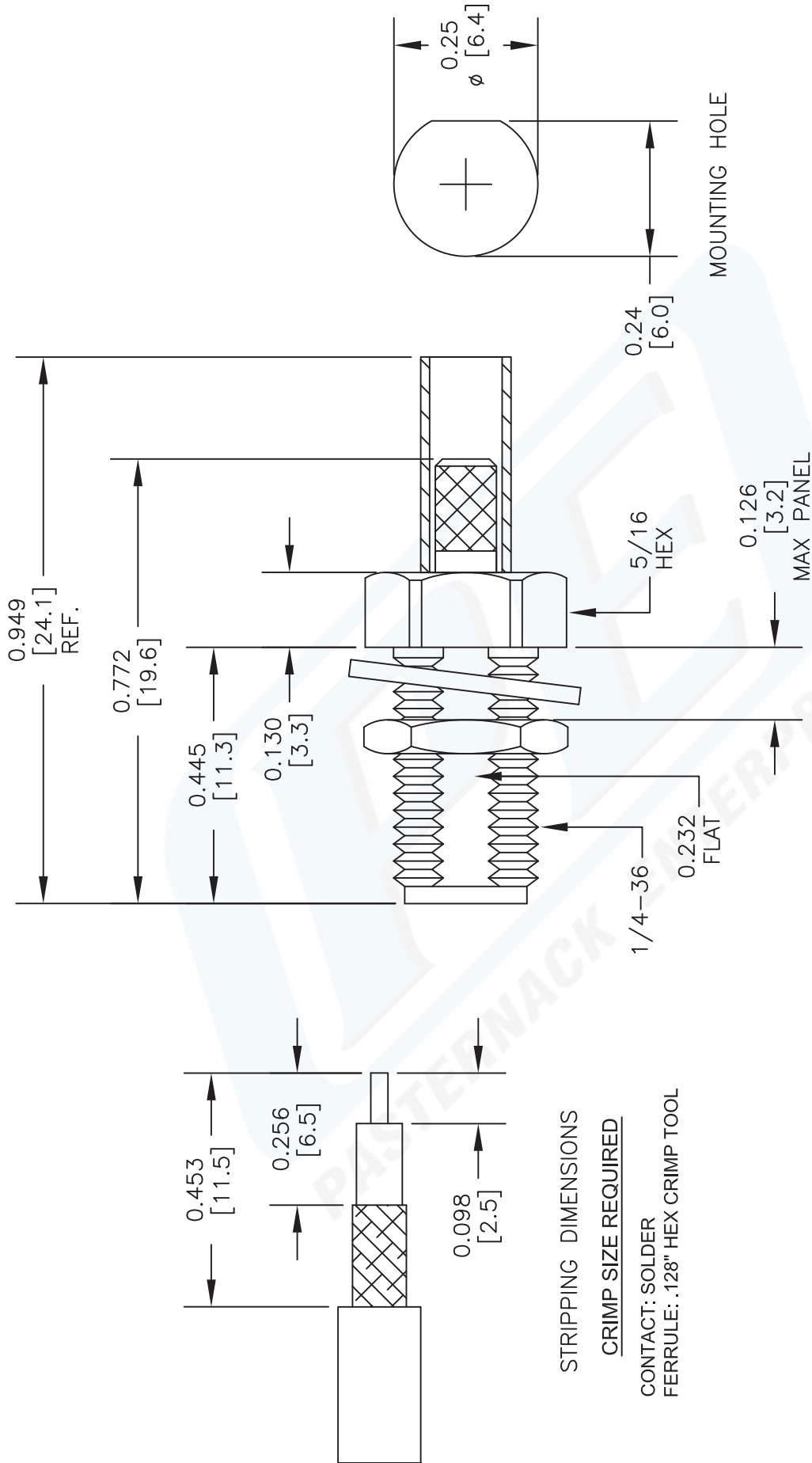
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [RP SMA Female Bulkhead Connector Crimp/Solder Attachment For RG174, RG316, RG188, .235 inch D Hole PE4859](http://www.pasternack.com/sma-female-reverse-polarity-rg174-rg316-rg188-connector-pe4859-p.aspx)

URL: <http://www.pasternack.com/sma-female-reverse-polarity-rg174-rg316-rg188-connector-pe4859-p.aspx>

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# PE4859 CAD Drawing

RP SMA Female Bulkhead Connector Crimp/Solder Attachment  
For RG174, RG316, RG188, .235 inch D Hole



DWG TITLE

**PE4859**

- 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].
  4. FITS MIL-C-17 AND EQUIVALENT CABLES.

FSCM NO. 53919

CAD FILE 120913

SCALE N/A

SIZE A

2233

**PE PASTERNAK®**

Pasternack Enterprises, Inc.  
P.O. Box 16759 | Irvine | CA | 92623  
Phone: (949) 261-1920 | Fax: (949) 261-7451  
Website: www.pasternack.com | E-Mail: sales@pasternack.com



# LMR®-100A Flexible Low Loss Communications Coax

## Ideal for...

- Drop-in Replacement for RG-316/RG-174 (uses standard connectors)
- Jumper Assemblies in Wireless Communications Systems
- Short Antenna Feeder runs
- Any application (e.g. WLL, GPS, LMR, WLAN, WISP, WiMax, SCADA, Mobile Antennas) requiring an easily routed, low loss RF cable

• **LMR®-PVC** is designed for low loss general-purpose indoor/outdoor applications and is somewhat more flexible than the standard polyethylene jacketed LMR.

• **LMR®-PVC-W** is a white-jacketed version of LMR-PVC for marine and other indoor/outdoor applications where color compatibility is desired.

• **Flexibility** and bendability are hallmarks of the LMR-100A cable design. The flexible outer conductor enables the tightest bend radius available for any cable of similar size and performance.

• **Low Loss** is another hallmark feature of LMR-100A. Size for size LMR has the lowest loss of any flexible cable and comparable loss to semirigid hard-line cables.

• **RF Shielding** is 50 dB greater than typical single shielded coax (40 dB). The multi-ply bonded foil outer conductor is rated conservatively at > 90 dB (i.e. >180 dB between two adjacent cables).

• **Weatherability:** LMR-100A cables designed for outdoor exposure incorporate the best materials for UV resistance and have life expectancy in excess of 20 years.

• **Connectors:** A wide variety of connectors are available for LMR-100A cable, including all common interface types, reverse polarity, and a choice of solder or non-solder center pins. Most LMR connectors employ crimp outer attachment using standard hex crimp sizes.

• **Cable Assemblies:** All LMR-100A cable types are available as pre-terminated cable assemblies. Refer to the section on FlexTech for further details.

Part Description					Stock
Part Number	Application	Jacket	Color	Code	
LMR-100A-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54037	
LMR-100A-PVC	Indoor/Outdoor	PVC	Black	54119	
LMR-100A-PVC-W	Indoor/Outdoor	PVC	White	54200	

PVC = Poly Vinyl Chloride; MTO = Made to Order



Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BCCS	0.018	(0.46)
Dielectric	Solid PE	0.060	(1.52)
Outer Conductor	Aluminum Tape	0.065	(1.65)
Overall Braid	Tinned Copper	0.083	(2.11)
Jacket	(see table above)	0.110	(2.79)

Mechanical Specifications			
Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	0.25	(6.4)
Bend Radius: repeated	in. (mm)	1	(25.4)
Bending Moment	ft-lb (N-m)	0.1	(0.014)
Weight	lb/ft (kg/m)	0.0092	(.014)
Tensile Strength	lb (kg)	15	(6.8)
Flat Plate Crush	lb/in. (kg/mm)	10	(0.18)

Environmental Specifications			
Performance Property	°F	°C	
Installation Temperature Range	-40/+185	-40/+85	
Storage Temperature Range	-94/+185	-70/+85	
Operating Temperature Range	-40/+185	-40/+85	

Electrical Specifications			
Performance Property	Units	US	(metric)
Velocity of Propagation	%	66	
Dielectric Constant	NA	2.30	
Time Delay	nS/ft (nS/m)	1.54	(5.05)
Impedance	ohms	50	
Capacitance	pF/ft (pF/m)	30.8	(101.1)
Inductance	uH/ft (uH/m)	0.077	(0.25)
Shielding Effectiveness	dB	>90	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	81.0	(266)
Outer Conductor	ohms/1000ft (/km)	9.5	(31.2)
Voltage Withstand	Volts DC	500	
Jacket Spark	Volts RMS	2000	
Peak Power	kW	0.6	

### Attenuation vs. Frequency (typical)



Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	5800
<b>Attenuation dB/100 ft</b>	3.9	5.1	8.9	10.9	15.8	22.8	30.1	33.2	35.2	39.8	64.1
<b>Attenuation dB/100 m</b>	12.9	16.7	29.4	35.8	51.9	74.9	98.7	109.0	115.5	130.6	210.3
<b>Avg. Power kW</b>	0.230	0.180	0.100	0.083	0.057	0.039	0.029	0.027	0.025	0.022	0.013

**Calculate Attenuation** =  $(0.709140) \cdot \sqrt{\text{FMHz}} + (0.001740) \cdot \text{FMHz}$  (interactive calculator available at <http://www.timesmicrowave/telecom>)  
**Attenuation:** VSWR=1.0 ; Ambient = +25°C (77°F) **Power:** VSWR=1.0; Ambient = +40°C; Inner Conductor = 100°C (212°F);  
 Sea Level; dry air; atmospheric pressure; no solar loading



## Connectors

Interface	Description	Part Number	Stock Code	VSWR ** Freq. (GHz)	Coupling Nut	Inner Contact Attach	Outer Contact Attach	Finish* Body /Pin	Length in (mm)	Width in (mm)	Weight lb (g)
SMA male	Straight Plug	TC-100-SM	3190-1551	<1.25:1 (<3)	Hex	Solder	Crimp	SS/G	1.0 (25.4)	0.32 (8.1)	0.015 (6.8)
TNC male	Straight Plug	TC-100-TM	3190-1552	<1.25:1 (<3)	Knurl	Solder	Crimp	S/G	1.4 (35.6)	0.59 (15.0)	0.045 (20.4)

\* Finish metals: N=Nickel, S=Silver, G=Gold, SS=Stainless Steel, A=Alballoy \*\*VSWR spec based on 3 foot cable with a connector pair



## Install Tools

Type	Part Number	Stock Code	Description
Crimp Tool	CT-240/200/195/100	3190-667	Crimp tool for LMR-100, 195, 200 and 240 connectors
Cutting Tool	CCT-01	3190-1544	Cable end flush cut tool
Replacement Blade	RB-01	3190-1609	Replacement blade for cutting tool

