



# SMA Female Bulkhead Mount Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250

## RF Connectors Technical Data Sheet

PE45681

### Configuration

- SMA Female Connector
- 50 Ohms
- Straight Body Geometry
- Connector Interface Types: PE-1/4SFHC, SPP-250-LL-PL, SPO-250, SPF-250
- Bulkhead
- Low PIM Design

### Features

- Max. Operating Frequency 6 GHz
- PIM levels lower than -155 dBc
- Silver Plated Beryllium Copper Contact

### Applications

- General Purpose Test
- Rack and Panel Mount Applications
- Wireless Communications
- Custom Cable Assemblies
- Low PIM Applications

### Description

Pasternack's PE45681 SMA female bulkhead connector with solder/solder attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250 and SPF-250 is part of our full line of RF components available for same-day shipping. Our SMA female connector operates up to a maximum frequency of 6 GHz. The SMA female connector also has low passive intermodulation of -155 dBc. This SMA bulkhead connector allows designers to create external connections on their product enclosures, and can be used in a variety of other rack mount and panel mount applications.

Our SMA female bulkhead connector PE45681 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      |         | 6       | GHz   |
| Passive Intermodulation              |         |         | -155    | dBc   |
| Dielectric Withstanding Voltage (AC) |         |         | 750     | Vrms  |

### Performance by Frequency

| Description     | F1      | F2     | F3 | F4 | F5 | Units |
|-----------------|---------|--------|----|----|----|-------|
| Frequency Range | DC to 3 | 3 to 6 |    |    |    | GHz   |
| VSWR, Max       | 1.15:1  | 1.25:1 |    |    |    |       |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMA Female Bulkhead Mount Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250 PE45681](#)



SMA Female Bulkhead Mount Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250

RF Connectors  
Technical Data Sheet

PE45681

**Mechanical Specifications**

|             |                    |
|-------------|--------------------|
| <b>Size</b> |                    |
| Length      | 0.925 in [23.5 mm] |
| Width/Dia.  | 0.49 in [12.45 mm] |
| Weight      | 0.02 lbs [9.07 g]  |

**Material Specifications**

| Description     | Material         | Plating   |
|-----------------|------------------|-----------|
| Contact         | Beryllium Copper | Silver    |
| Insulation      | PTFE             |           |
| Outer Conductor | Brass            | Tri-Metal |
| Body            | Brass            | Tri-Metal |

**Environmental Specifications**

|                    |                   |
|--------------------|-------------------|
| <b>Temperature</b> |                   |
| Operating Range    | -40 to +155 deg C |

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

**Plotted and Other Data**

Notes:

SMA Female Bulkhead Mount Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250 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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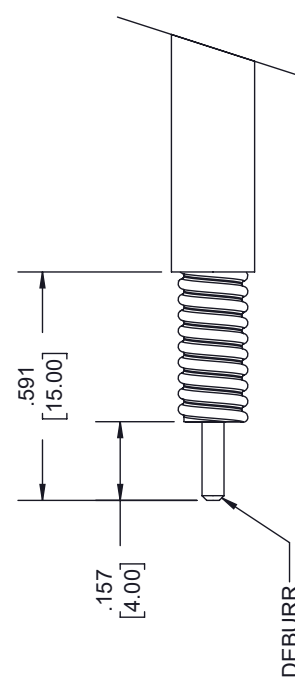
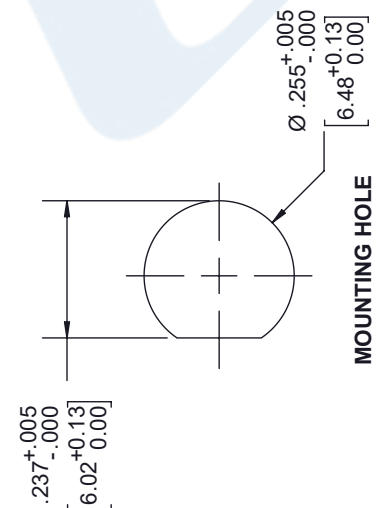
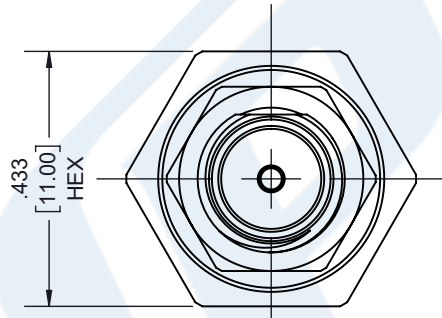
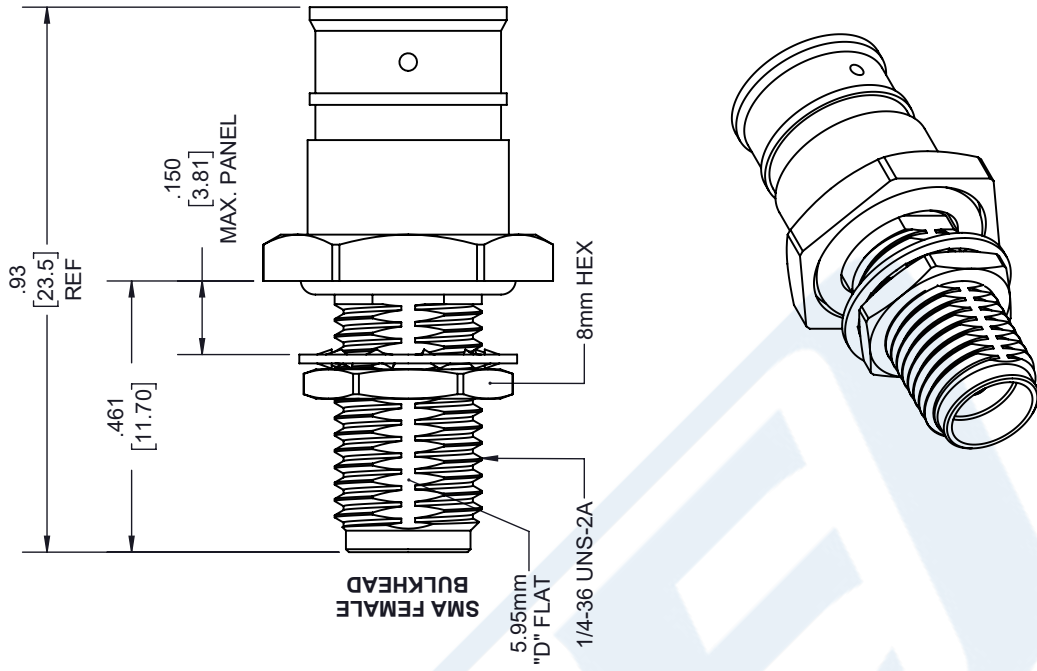
URL: <https://www.pasternack.com/sma-female-pe-1-4sfhc-spp-250-llpl-connector-pe45681-p.aspx>

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# PE45681 CAD Drawing

SMA Female Bulkhead Mount Low PIM Connector Solder Attachment  
for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250

| REVISIONS |                 |           |          |
|-----------|-----------------|-----------|----------|
| REV.      | DESCRIPTION     | DATE      | APPROVED |
| A         | INITIAL RELEASE | 1/13/2021 | S. ELLIS |



THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

REV A

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E-mail: sales@pasternack.com

SIZE A | CAGE CODE 53919 | DRAWN BY K.DANG | ITEM NO. PE45681

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

TOLERANCES:

.X = ±.2 [5.08] | 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.

**STRIPPING DIMENSIONS**

NOTES:

- CABLE ATTACHMENT:  
• OUTER: SOLDER.  
• INNER: SOLDER.

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PE45681

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- 50 Ohms
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### Description

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### Electrical Specifications

| Description                          | Minimum | Typical | Maximum | Units |
|--------------------------------------|---------|---------|---------|-------|
| Frequency Range                      | DC      |         | 6       | GHz   |
| Passive Intermodulation              |         |         | -155    | dBc   |
| Dielectric Withstanding Voltage (AC) |         |         | 750     | Vrms  |

### Performance by Frequency

| Description     | F1      | F2     | F3 | F4 | F5 | Units |
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| Frequency Range | DC to 3 | 3 to 6 |    |    |    | GHz   |
| VSWR, Max       | 1.15:1  | 1.25:1 |    |    |    |       |

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RF Connectors  
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PE45681

**Mechanical Specifications**

|             |                    |
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| <b>Size</b> |                    |
| Length      | 0.925 in [23.5 mm] |
| Width/Dia.  | 0.49 in [12.45 mm] |
| Weight      | 0.02 lbs [9.07 g]  |

**Material Specifications**

| Description     | Material         | Plating   |
|-----------------|------------------|-----------|
| Contact         | Beryllium Copper | Silver    |
| Insulation      | PTFE             |           |
| Outer Conductor | Brass            | Tri-Metal |
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**Environmental Specifications**

|                    |                   |
|--------------------|-------------------|
| <b>Temperature</b> |                   |
| Operating Range    | -40 to +155 deg C |

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

**Plotted and Other Data**

Notes:

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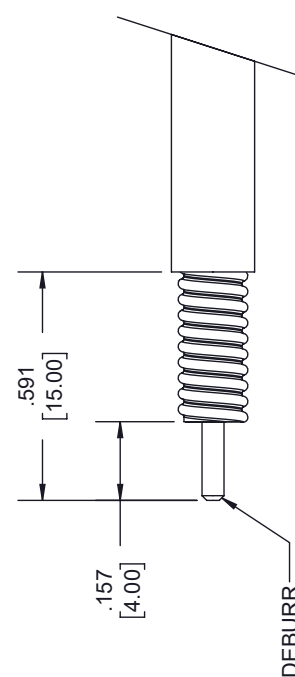
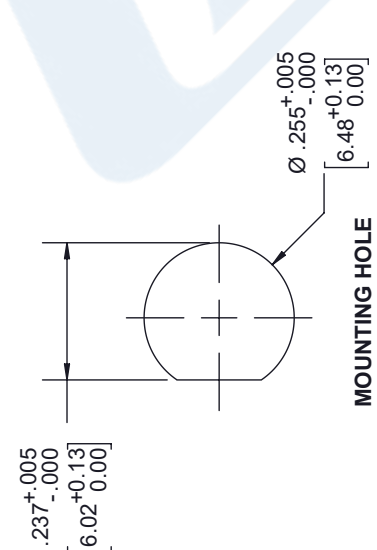
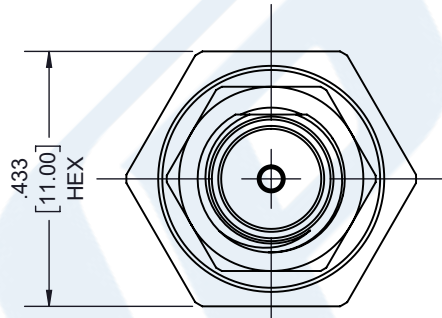
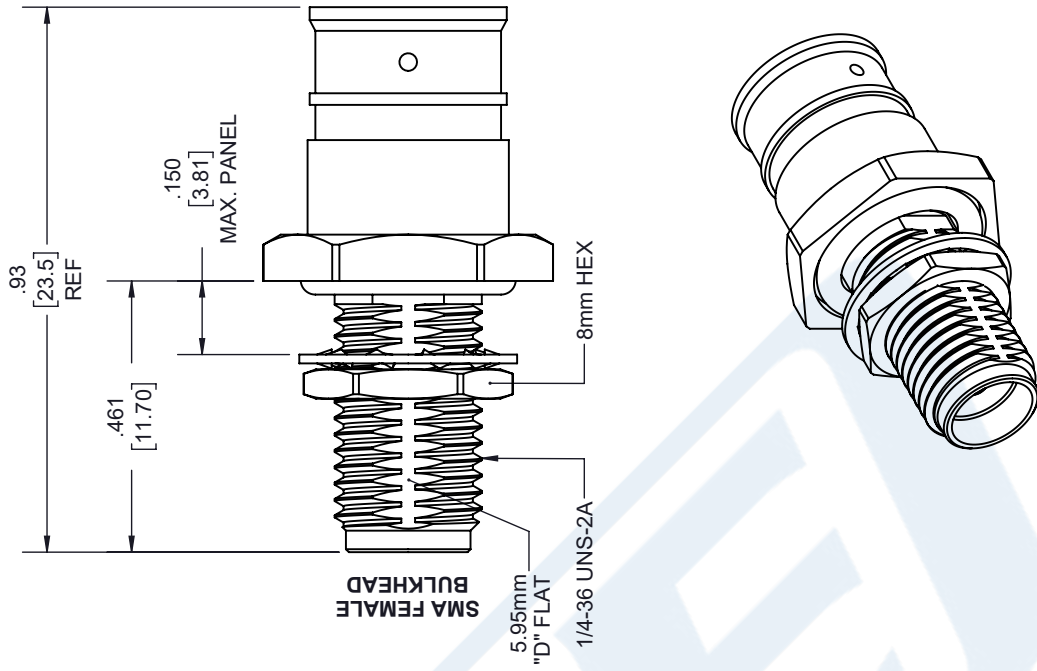
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THIRD-ANGLE PROJECTION

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SCALE N/A

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ITEM NO. PE45681

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CAGE CODE 53919

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## Low Loss 1/4 Superflexible Helical Corrugated Coax Cable with Black PE Jacket

### RF Cables Technical Data Sheet

PE-1/4SFHC

#### Configuration

- Low Loss Corrugated Cable
- 1 Shield(s)

#### Features

- Low Passive Intermodulation
- Solid copper outer conductor provides the highest possible RF shielding
- Excellent return loss performance
- Highly foamed dielectric provides low attenuation
- Superflexible helically corrugated copper outer conductor enables a small bending radius

#### Description

Our corrugated cables and Low PIM connector combinations result in cable assemblies with excellent Passive Intermodulation performance. Solid copper outer conductors provide the highest possible RF shielding. This Superflexible cable features excellent return loss performance. The highly foamed dielectric and optimized dimensions of these cables result in excellent low attenuation values. The Superflexible helically corrugated copper outer conductor allows for a small bending radius.

#### Electrical Specifications

| Description                          | Minimum | Typical      | Maximum | Units        |
|--------------------------------------|---------|--------------|---------|--------------|
| Frequency Range                      | DC      |              | 20.4    | GHz          |
| Cutoff Frequency                     |         | 25           |         | GHz          |
| Impedance                            |         | 50           |         | Ohms         |
| Velocity of Propagation              |         | 82           |         | %            |
| Shielding Effectiveness              | 120     |              |         | dB           |
| Dielectric Withstanding Voltage (DC) |         |              | 900     | Vdc          |
| Jacket Spark                         |         |              | 2,000   | Vrms         |
| Inner Conductor DC Resistance        |         |              | 3.2     | Ohms/1000ft  |
| Outer Conductor DC Resistance        |         |              | 2.53    | Ohms/1000ft  |
| Nominal Capacitance                  |         | 24.4 [80.05] |         | pF/ft [pF/m] |
| Nominal Inductance                   |         | 0.059 [0.19] |         | uH/ft [uH/m] |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Low Loss 1/4 Superflexible Helical Corrugated Coax Cable with Black PE Jacket PE-1/4SFHC](#)



## Low Loss 1/4 Superflexible Helical Corrugated Coax Cable with Black PE Jacket

### RF Cables Technical Data Sheet

PE-1/4SFHC

#### Performance by Frequency Band

| Description           | F1    | F2   | F3   | F4    | F5    | Units    |
|-----------------------|-------|------|------|-------|-------|----------|
| Frequency             | 0.03  | 0.15 | 0.45 | 0.9   | 1.5   | GHz      |
| Attenuation, Typ      | 0.94  | 2.14 | 3.75 | 5.46  | 7.26  | dB/100ft |
|                       | 3.08  | 7.02 | 12.3 | 17.91 | 23.82 | dB/100m  |
| Input Power (CW), Max | 2,090 | 924  | 520  | 360   | 278   | Watts    |

| Description           | F6    | F7    | F8    | F9    | F10   | Units    |
|-----------------------|-------|-------|-------|-------|-------|----------|
| Frequency             | 1.8   | 2     | 2.2   | 2.5   | 3     | GHz      |
| Attenuation, Typ      | 8.02  | 8.52  | 8.99  | 9.67  | 10.73 | dB/100ft |
|                       | 26.31 | 27.95 | 29.49 | 31.73 | 35.2  | dB/100m  |
| Input Power (CW), Max | 250   | 238   | 230   | 210   | 190   | Watts    |

#### Mechanical Specifications

|                                 |                          |
|---------------------------------|--------------------------|
| Diameter                        | 0.303 in [7.7 mm]        |
| Weight                          | 0.048 lbs/ft [0.07 kg/m] |
| Number of Bends, Min            | 20                       |
| Min. Bend Radius (Installation) | 0.5 in [12.7 mm]         |
| Min. Bend Radius (Repeated)     | 1 in [25.4 mm]           |
| Tensile Strength                | 79 lbs [35.83 kg]        |

#### Construction Specifications

| Description     | Material and Plating             | Diameter           |
|-----------------|----------------------------------|--------------------|
| Inner Conductor | Copper Clad Aluminum, 1 Strand   | 0.074 in [1.88 mm] |
| Conductor Type  | Solid                            |                    |
| Dielectric      | PE (F)                           | 0.187 in [4.75 mm] |
| First Shield    | Helically Corrugated Copper Tube | 0.25 in [6.35 mm]  |
| Jacket          | PE, Black                        | 0.303 in [7.7 mm]  |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Low Loss 1/4 Superflexible Helical Corrugated Coax Cable with Black PE Jacket PE-1/4SFHC](#)



## Low Loss 1/4 Superflexible Helical Corrugated Coax Cable with Black PE Jacket

### RF Cables Technical Data Sheet

PE-1/4SFHC

#### Environmental Specifications

##### Temperature

Operating Range

-55 to +85 deg C

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

#### Plotted and Other Data

Notes:

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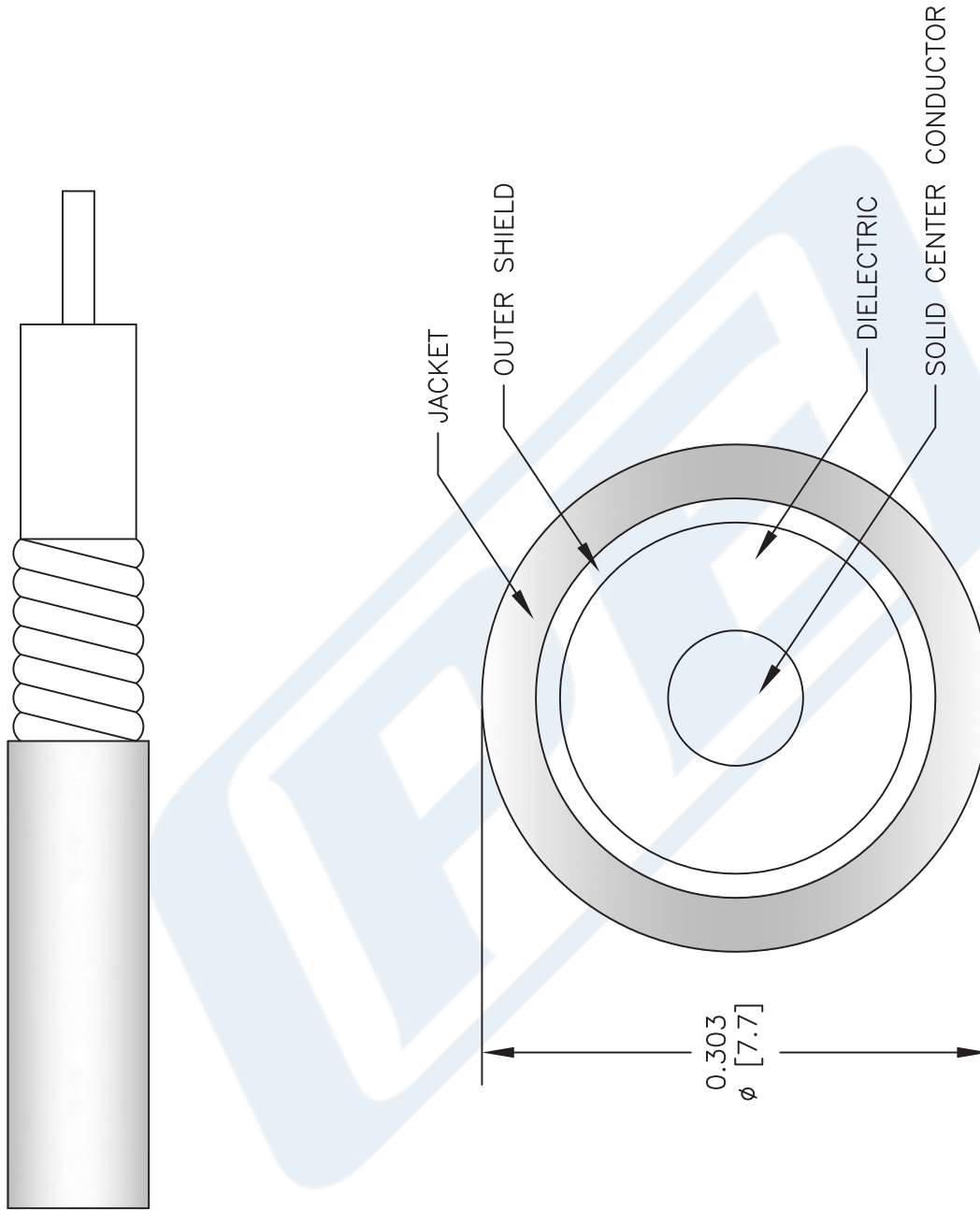
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URL: <https://www.pasternack.com/50-ohm-low-loss-corrugated-1-4-superflexible-helical-coax-pe-1-4sfhc-p.aspx>

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# PE-1/4SFHC CAD Drawing

Low Loss 1/4 Superflexible Helical Corrugated Coax Cable with Black PE Jacket



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].

DWG TITLE  
**PE-1/4SFHC**

FSCM NO. 53919

CAD FILE 092112

SCALE N/A

SIZE A

2233

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 Pasternack Enterprises, Inc.  
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