



## 4.1/9.5 Mini DIN Male Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250

### RF Connectors Technical Data Sheet

PE45651

#### Configuration

- 4.1/9.5 Mini DIN Male Connector
- 50 Ohms
- Right Angle Body Geometry
- Connector Interface Types: PE-1/4SFHC, SPP-250-LL-PL, SPO-250, SPF-250
- Low PIM Design

#### Features

- Max. Operating Frequency 6 GHz
- PIM levels lower than -160 dBc
- Silver Plated Brass Contact

#### Applications

- General Purpose Test
- Custom Cable Assemblies
- Wireless Communications
- Low PIM Applications

#### Description

Pasternack's PE45651 4.1/9.5 Mini DIN male right angle 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 4.1/9.5 Mini DIN male connector operates up to a maximum frequency of 6 GHz. The 4.1/9.5 Mini DIN male connector also has low passive intermodulation of -160 dBc. Its right angle body geometry allows for easier connections in tight spaces.

Our 4.1/9.5 Mini DIN male right angle connector PE45651 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              |         |         | -160    | dBc   |
| Dielectric Withstanding Voltage (AC) |         |         | 1,000   | Vrms  |

#### Performance by Frequency

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

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [4.1/9.5 Mini DIN Male Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250 PE45651](#)



4.1/9.5 Mini DIN Male Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250

RF Connectors  
Technical Data Sheet

PE45651

**Mechanical Specifications**

**Size**

Length 1.11 in [28.19 mm]  
Width/Dia. 0.94 in [23.88 mm]

**Material Specifications**

| Description  | Material | Plating   |
|--------------|----------|-----------|
| Contact      | Brass    | Silver    |
| Insulation   | PTFE     |           |
| Body         | Brass    | Tri-Metal |
| Coupling Nut | Brass    | Tri-Metal |
| O-Ring       | Silicone |           |

Mechanical Specification Notes:  
Interface Conforms to IEC 61169-11

**Environmental Specifications**

**Temperature**

Operating Range -40 to +155 deg C

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

**Plotted and Other Data**

Notes:

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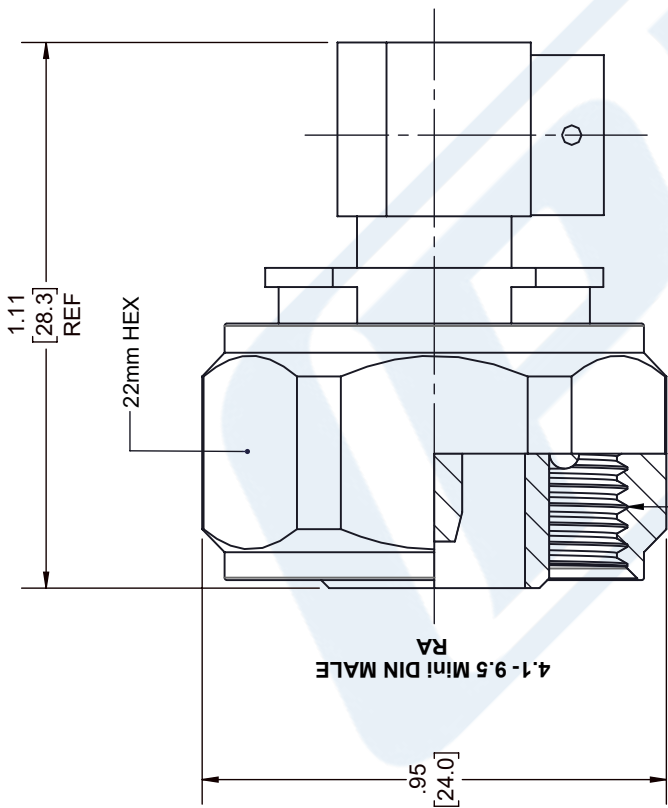
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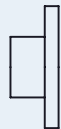
# PE45651 CAD Drawing

4.1/9.5 Mini DIN Male Right Angle Low PIM Connector Solder Attachment  
for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250

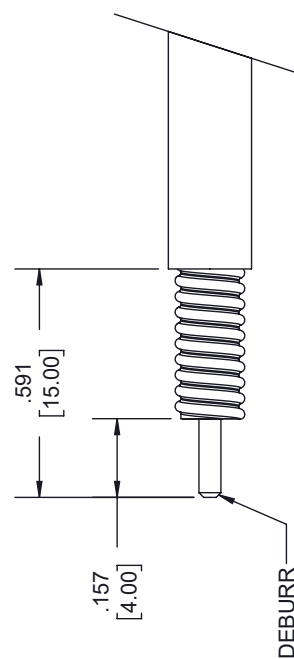
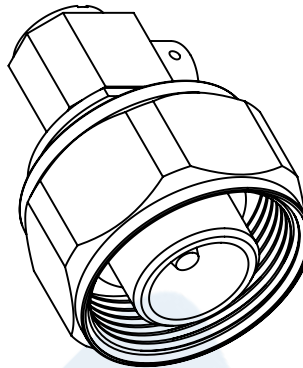
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| REV.      | DESCRIPTION     | DATE     | APPROVED |
| A         | INITIAL RELEASE | 1/8/2021 | S. ELLIS |



COUPLING NUT



PTFE INSULATOR



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

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

TOLERANCES:

|              |        |                              |                 |
|--------------|--------|------------------------------|-----------------|
| .X = ±.2     | [.008] | 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% L / -0    |

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THIRD-ANGLE PROJECTION

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SIZE A CAGE CODE 53919 DRAWN BY K.DANG ITEM NO. PE45651 REV A



## 4.1/9.5 Mini DIN Male Right Angle Low PIM Connector Solder Attachment for PE-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250

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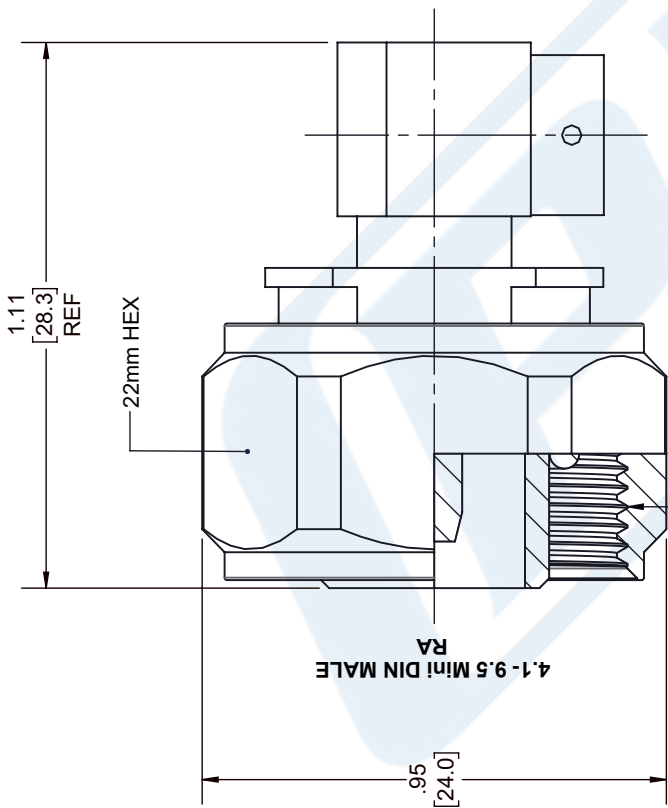
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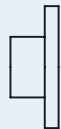
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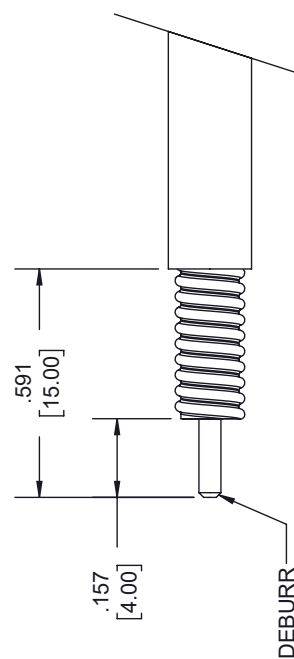
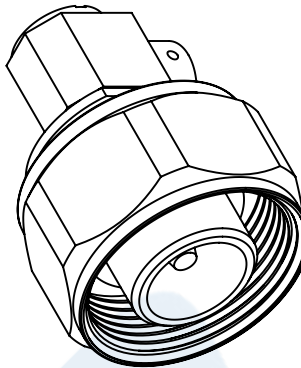
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     300 [7620] < L = +5% / -0

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ITEM NO. PE45651

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# Low Loss SPF-250 Rated Corrugated Coax Cable with Black FRPE Jacket Superflexible Fire Rated

## RF Cables Technical Data Sheet

### Times Microwave Systems Coax Cable Specification

#### Configuration

- Low Loss Corrugated Cable
- 1 Shield(s)

#### Features

- PIM < -160 dBc
- UL Listed, Type CMR Riser Rated Cable
- Lightweight and Extremely Flexible
- Low Loss Dielectric 83% VoP
- Shielding > 100 dB
- Fire Rated Low Smoke Polyolefin Jacket

#### Applications

- Distributed Antenna Systems (DAS)
- UL Listed, Type CMR Riser
- Applications
  - Low Smoke Requirements
  - Small Cell
- Outdoor Applications
- Antenna Jumpers

#### Description

SPF-250 low loss, low PIM Fire Retardant coax cable by Times Microwave is part of our full line of RF components available for same-day shipping. The SPF-250 coaxial cable features a low loss dielectric with an 83% velocity of propagation (VoP), solid copper center conductor and a helically corrugated, copper outer conductor. This cable is UL listed, type CMR (riser) rated coax. These features combine to make the Times Microwave SPF-250 a super flexible, low PIM coax cable that is well suited for use as an antenna jumper cable, Distributed Antenna Systems (DAS), small cell, and other applications where Fire Rated material is required. The durable UV and sunlight resistant black flame retardant, non-halogen, polyethylene jacket makes this cable appropriate for a wide range of indoor or outdoor applications.

Our datasheet specifications and drawing with dimensions for Times Microwave SPF-250 coax cable are shown below in this PDF. Whether the need is to provide a low PIM jumper connection, low PIM feeder cable or simply create a custom cable assembly configuration, Pasternack has the right SPF-250 low PIM cable assembly for the job. See our web site to find the right connector cable combination for your application.

#### Electrical Specifications

| Description             | Minimum | Typical      | Maximum | Units        |
|-------------------------|---------|--------------|---------|--------------|
| Frequency Range         | DC      |              | 5.8     | GHz          |
| Impedance               |         | 50           |         | Ohms         |
| Velocity of Propagation |         | 83           |         | %            |
| Passive Intermodulation |         |              | -160    | dBc          |
| Nominal Capacitance     |         | 24 [78.74]   |         | pF/ft [pF/m] |
| Nominal Inductance      |         | 0.054 [0.18] |         | 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 SPF-250 Rated Corrugated Coax Cable with Black FRPE Jacket Superflexible Fire Rated SPF-250](#)



## Low Loss SPF-250 Rated Corrugated Coax Cable with Black FRPE Jacket Superflexible Fire Rated

### RF Cables Technical Data Sheet

#### Performance by Frequency Band

| Description           | F1    | F2    | F3    | F4    | F5    | Units    |
|-----------------------|-------|-------|-------|-------|-------|----------|
| Frequency             | 0.45  | 1.5   | 2     | 2.5   | 5.8   | GHz      |
| Attenuation, Typ      | 4.1   | 7.8   | 9.13  | 10.33 | 16.65 | dB/100ft |
|                       | 13.45 | 25.59 | 29.95 | 33.89 | 54.63 | dB/100m  |
| Input Power (CW), Max | 1,110 | 580   | 500   | 440   | 280   | Watts    |

#### Mechanical Specifications

|                                 |                          |
|---------------------------------|--------------------------|
| Diameter                        | 0.303 in [7.7 mm]        |
| Weight                          | 0.057 lbs/ft [0.08 Kg/m] |
| Min. Bend Radius (Installation) | 1.25 in [31.75 mm]       |
| Bending Moment                  | 0.5 lbs-ft [0.68 N-m]    |

#### Construction Specifications

| Description     | Material and Plating  | Diameter          |
|-----------------|-----------------------|-------------------|
| Inner Conductor | Copper Clad Aluminum1 | 0.075 in 1.91 mm  |
| Conductor Type  | Solid                 |                   |
| Dielectric      | Foam PE               | 0.177 in 4.5 mm   |
| Outer Conductor | Copper<br>Corrugated  | 0.252 in 6.4 mm   |
| Jacket          | FRPE, Black           | 0.303 in [7.7 mm] |

#### Environmental Specifications

|                    |                  |
|--------------------|------------------|
| <b>Temperature</b> |                  |
| Operating Range    | -40 to +85 deg C |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Low Loss SPF-250 Rated Corrugated Coax Cable with Black FRPE Jacket Superflexible Fire Rated SPF-250](#)



## Low Loss SPF-250 Rated Corrugated Coax Cable with Black FRPE Jacket Superflexible Fire Rated

### RF Cables Technical Data Sheet

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

#### Plotted and Other Data

Notes:

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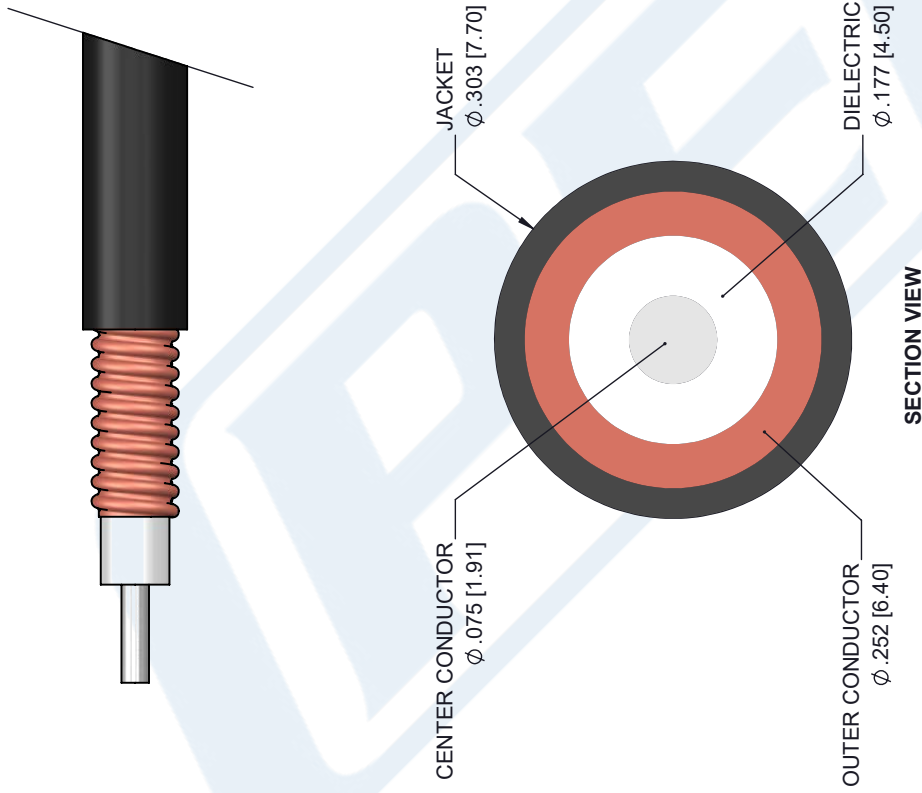
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**TIMES** MICROWAVE SYSTEMS **SPF-250 CAD Drawing**  
 Low Loss SPF-250 Rated Corrugated Coax Cable with  
 Black FRPE Jacket Superflexible Fire Rated

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