



## QMA Male Right Angle Connector Solder Attachment for SPP-250-LLPL, Low PIM

### RF Connectors Technical Data Sheet

**PE45431**

#### Configuration

- QMA Male Connector
- 50 Ohms
- Right Angle Body Geometry
- SPP-250-LLPL Interface Type
- Solder/Solder Attachment

#### Features

- Max. Operating Frequency 6 GHz
- Good VSWR of 1.35:1
- PIM levels lower than -145 dBc
- Silver Plated Brass Contact

#### Applications

- General Purpose Test
- Custom Cable Assemblies
- Low PIM Interconnects
- Distributed Antenna Systems (DAS)
- Low PIM Jumpers
- Low PIM Testing
- Low PIM Connections

#### Description

Pasternack's PE45431 QMA male right angle connector with solder/solder attachment for SPP-250-LLPL is part of our full line of RF components available for same-day shipping. Our QMA male connector operates up to a maximum frequency of 6 GHz and offers good VSWR of 1.35:1. The QMA male connector also has low passive intermodulation of -145 dBc. Its right angle body geometry allows for easier connections in tight spaces.

Our QMA male right angle connector PE45431 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   |
| VSWR                    |         |         | 1.35:1  |       |
| Insertion Loss          |         |         | 0.1     | dB    |
| Passive Intermodulation |         |         | -145    | dBc   |
| Operating Voltage (AC)  |         |         | 250     | Vrms  |
| Insulation Resistance   | 5,000   |         |         | MOhms |

Electrical Specification Notes:  
Insertion Loss is  $0.04 \times \sqrt{F(\text{GHz})}$

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [QMA Male Right Angle Connector Solder Attachment for SPP-250-LLPL, Low PIM PE45431](#)



QMA Male Right Angle Connector Solder  
Attachment for SPP-250-LLPL, Low PIM

**RF Connectors Technical Data Sheet**

**PE45431**

**Material Specifications**

| Description     | Material        | Plating   |
|-----------------|-----------------|-----------|
| Contact         | Brass           | Silver    |
| Insulation      | PTFE            |           |
| Outer Conductor | Phosphor Bronze | Tri-Metal |
| Body            | Brass           | Tri-Metal |
| Coupling Nut    | Brass           | Tri-Metal |
| Gasket          | Silicone Rubber |           |

**Environmental Specifications**

**Temperature**

Operating Range

-55 to +165 deg C

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

**Plotted and Other Data**

Notes:

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [QMA Male Right Angle Connector Solder Attachment for SPP-250-LLPL, Low PIM PE45431](#)

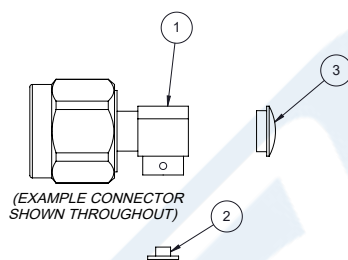


## QMA Male Right Angle Connector Solder Attachment for SPP-250-LLPL, Low PIM

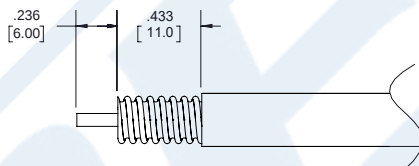
### RF Connectors Technical Data Sheet

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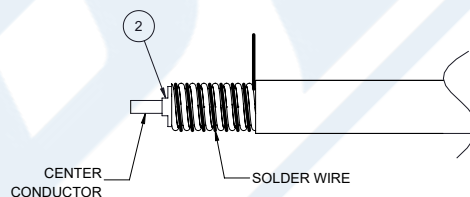
#### Assembly Instruction



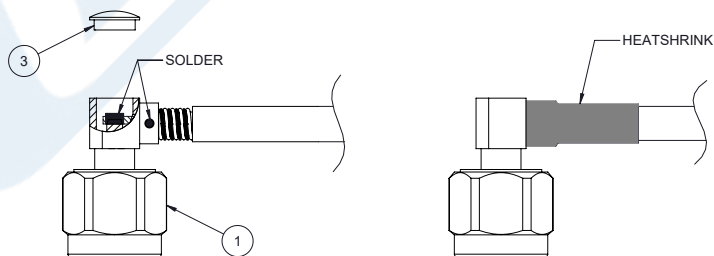
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## QMA Male Right Angle Connector Solder Attachment for SPP-250-LLPL, Low PIM

### RF Connectors Technical Data Sheet

**PE45431**

QMA Male Right Angle Connector Solder Attachment for SPP-250-LLPL, Low PIM 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.

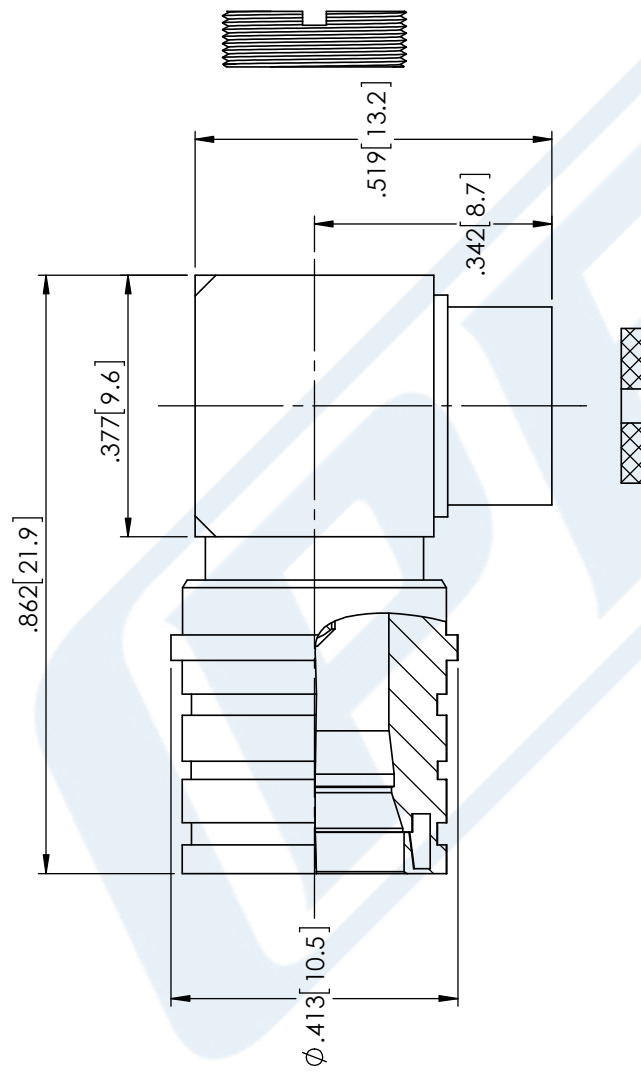
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PE45431 CAD Drawing

QMA Male Right Angle Connector Solder Attachment for SPP-250-LLPL, Low PIM



| STANDARD TOLERANCES |        |
|---------------------|--------|
| .X                  | ±0.2   |
| .XX                 | ±0.01  |
| .XXX                | ±0.005 |

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

**[PE]**

**PASTERNAK®**  
THE ENGINEER'S RF SOURCE

Pasternack Enterprises, Inc.

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**Website:** [www.pasternack.com](http://www.pasternack.com) | **E-Mail:** [sales@pasternack.com](mailto:sales@pasternack.com)

|           |         |
|-----------|---------|
| DWG TITLE | PE45431 |
| CAGE CODE | 53919   |

|                                                                                                                                                                                     |          |          |       |     |      |   |        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|-------|-----|------|---|--------|
| NOTES:<br>1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.<br>2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.<br>3. DIMENSIONS ARE IN INCHES [mm]. | CAD FILE | 11/22/17 | SCALE | N/A | SIZE | A | CN2245 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|-------|-----|------|---|--------|



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- Low PIM Connections

#### Description

Pasternack's PE45431 QMA male right angle connector with solder/solder attachment for SPP-250-LLPL is part of our full line of RF components available for same-day shipping. Our QMA male connector operates up to a maximum frequency of 6 GHz and offers good VSWR of 1.35:1. The QMA male connector also has low passive intermodulation of -145 dBc. Its right angle body geometry allows for easier connections in tight spaces.

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**RF Connectors Technical Data Sheet**

**PE45431**

**Material Specifications**

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**Environmental Specifications**

**Temperature**

Operating Range

-55 to +165 deg C

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

**Plotted and Other Data**

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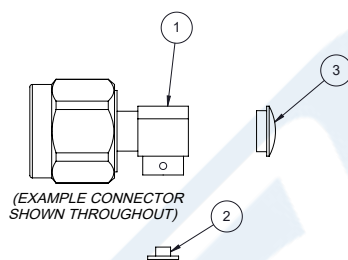


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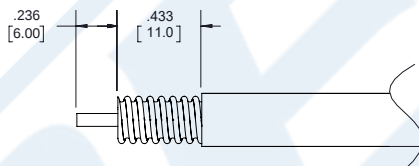
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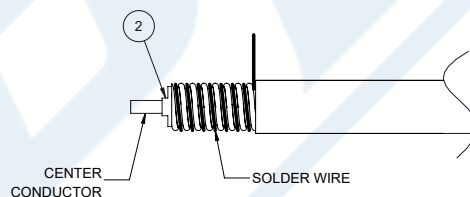
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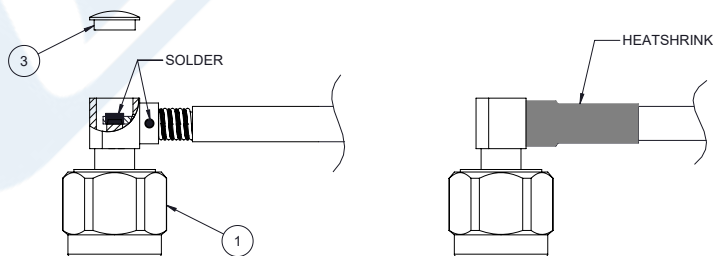
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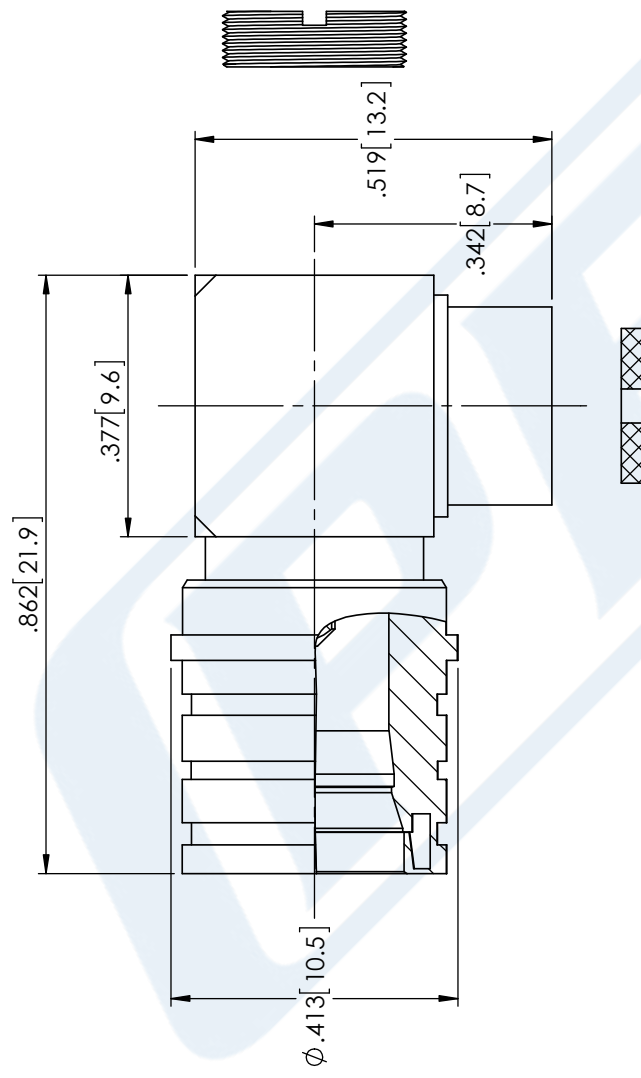
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PE45431 CAD Drawing

QMA Male Right Angle Connector Solder Attachment for SPP-250-LLPL, Low PIM



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**PE**  
THE ENGINEER'S RF SOURCE

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|           |         |
|-----------|---------|
| DWG TITLE | PE45431 |
| CAGE CODE | 53919   |

|                                                                                                                                                                                     |          |          |       |     |      |   |        |
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## Low Loss SPP-250-LLPL Plenum Rated Corrugated Coax Cable with Blue FEP Jacket Superflexible

### RF Cables Technical Data Sheet


**SPP-250-LLPL**

#### Times Microwave Systems Coax Cable Specification Configuration

- Low Loss, Plenum Corrugated Cable

#### Features

- PIM < -160 dBc
- UL910 Plenum Rated Cable
- Lightweight and Extremely Flexible
- Low Loss
- Great Shielding >100 dB
- UV Resistant Jacket

#### Applications

- Distributed Antenna Systems (DAS)
- Plenum Installations
- Small Cells
- Multi-Carrier Communication Systems
- PIM Testing

#### Description

SPP-250-LLPL low loss plenum rated coax cable by Times Microwave is part of our full line of RF components available for same-day shipping. The SPP-250-LLPL coaxial cable features a low loss dielectric, solid copper center conductor and a helically corrugated, copper outer conductor. These features combine to make the Times Microwave SPP-250-LLPL an extremely flexible, low PIM coax cable that is well suited for Distributed Antenna Systems (DAS), plenum installations or small cells. The tough, FEP jacket provides moisture and UV protection.

Our datasheet specifications and drawing with dimensions for Times Microwave SPP-250-LLPL 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 SPP-250-LLPL cable assemblies for the job.

#### Electrical Specifications

| Description                   | Minimum | Typical      | Maximum | Units        |
|-------------------------------|---------|--------------|---------|--------------|
| Frequency Range               | DC      |              | 5.8     | GHz          |
| Impedance                     |         | 50           |         | Ohms         |
| Velocity of Propagation       |         | 76           |         | %            |
| Shielding Effectiveness       | 100     |              |         | dB           |
| Passive Intermodulation       |         |              | -160    | dBc          |
| Inner Conductor DC Resistance |         |              | 3       | Ohms/1000ft  |
| Nominal Capacitance           |         | 27 [88.58]   |         | pF/ft [pF/m] |
| Nominal Inductance            |         | 0.067 [0.22] |         | 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 SPP-250-LLPL Plenum Rated Corrugated Coax Cable with Blue FEP Jacket Superflexible SPP-250-LLPL](#)



## Low Loss SPP-250-LLPL Plenum Rated Corrugated Coax Cable with Blue FEP Jacket Superflexible

### RF Cables Technical Data Sheet


**SPP-250-LLPL**

#### Performance by Frequency Band

| Description           | F1    | F2    | F3    | F4    | F5    | Units    |
|-----------------------|-------|-------|-------|-------|-------|----------|
| Frequency             | 0.45  | 1.9   | 2.3   | 4.9   | 5.8   | GHz      |
| Attenuation, Typ      | 3.8   | 8.1   | 9     | 13.5  | 14.8  | dB/100ft |
|                       | 12.47 | 26.57 | 29.53 | 44.29 | 48.56 | dB/100m  |
| Input Power (CW), Max | 1,010 | 470   | 430   | 280   | 260   | Watts    |

#### Mechanical Specifications

|                                 |                          |
|---------------------------------|--------------------------|
| Diameter                        | 0.28 in [7.11 mm]        |
| Weight                          | 0.072 lbs/ft [0.11 Kg/m] |
| Min. Bend Radius (Installation) | 1.25 in [31.75 mm]       |
| Bending Moment                  | 0.8 lbs-ft [1.08 N-m]    |

#### Construction Specifications

| Description     | Material and Plating | Diameter           |
|-----------------|----------------------|--------------------|
| Inner Conductor | Copper, 1 Strands    | 0.068 in [1.73 mm] |
| Conductor Type  | Solid                |                    |
| Dielectric      | PTFE                 | 0.19 in [4.83 mm]  |
| Outer Conductor | Copper<br>Corrugated | 0.25 in [6.35 mm]  |
| Jacket          | FEP, Blue            | 0.28 in [7.11 mm]  |

#### Environmental Specifications

|                                |                   |
|--------------------------------|-------------------|
| Temperature<br>Operating Range | -55 to +200 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 SPP-250-LLPL Plenum Rated Corrugated Coax Cable with Blue FEP Jacket Superflexible SPP-250-LLPL](#)



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### RF Cables Technical Data Sheet



**SPP-250-LLPL**

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

#### Plotted and Other Data

Notes:

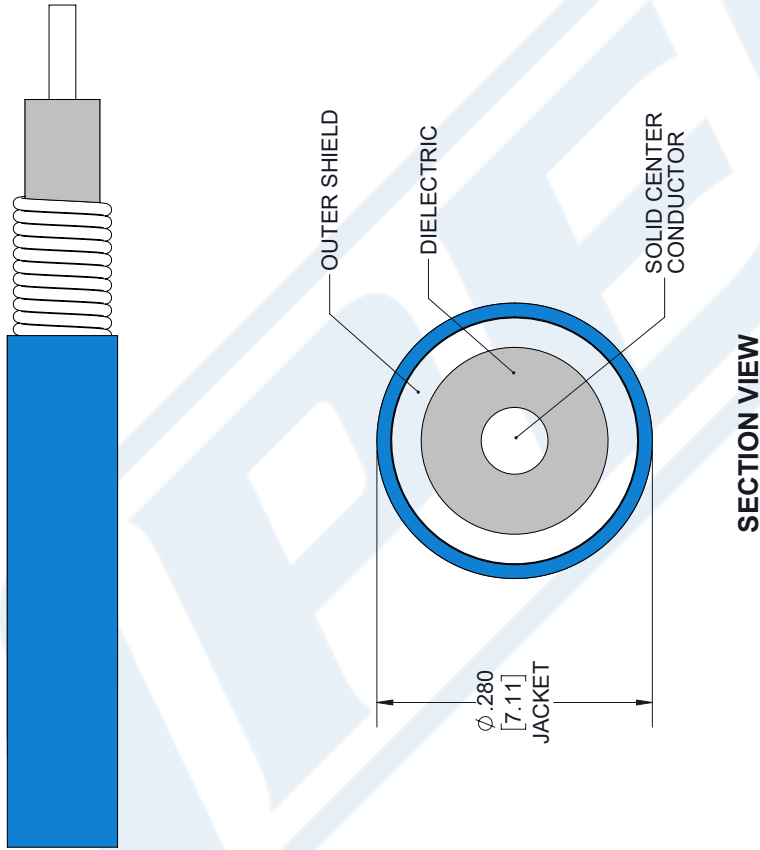
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**TIMES** MICROWAVE SYSTEMS **SPP-250-LLPL CAD Drawing**  
 Low Loss SPP-250-LLPL Plenum Rated Corrugated Coax  
 Cable with Blue FEP Jacket Superflexible



| STANDARD TOLERANCES |        |
|---------------------|--------|
| .X                  | ±0.2   |
| .XX                 | ±0.01  |
| .XXX                | ±0.005 |

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

|                                                                                                                                                                                                                                                                                                                                                      |                                  |                 |                                                                                                                                                                                     |             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|  <b>PASTERNAK®</b><br>THE ENGINEER'S RF SOURCE<br>Pasternack Enterprises, Inc.<br>P.O. Box 16759   Irvine   CA   92623<br><b>Phone:</b> (949) 261-1920   <b>Fax:</b> (949) 261-7451<br><b>Website:</b> www.pasternack.com   <b>E-Mail:</b> sales@pasternack.com | DWG TITLE<br><b>SPP-250-LLPL</b> |                 | NOTES:<br>1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.<br>2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.<br>3. DIMENSIONS ARE IN INCHES [mm]. |             |
|                                                                                                                                                                                                                                                                                                                                                      | <b>CAGE CODE</b> 53919           | CAD FILE 022118 | SCALE N/A                                                                                                                                                                           | SIZE A 7361 |