

## 25 M Plenum Rated 4.3-10 to SMA F/M SPP-250-LLPL Low PIM Cable Jumper

**CASPP250LLPL005-25M**



### Configuration

- Connector 1: 4.3-10 Female
- Connector 2: SMA Male
- Cable Type: SPP-250-LLPL

### Features

- Max Frequency 5.8 GHz
- Low PIM: -160 dBc Max
- UL 910 Plenum Rated
- FEP Jacket
- Shielding Effectivity > 100 dB
- 100% Tested with PIM Test Results Marked on Cable
- 1.25 Inch Minimum Bend Radius
- Low Loss with Excellent VSWR



### Applications

- Distributed Antennas Systems (DAS)
- Low PIM Applications
- Plenum Installations
- Multi-Carrier Communication Systems

### Description

PolyPhaser CASPP250LLPL005-25M is a 25 M Plenum Rated 4.1/9.5 Mini DIN to 4.3-10 M/F SPP-250-LLPL Low PIM Cable Jumper built using high quality components by skilled technicians to ensure a reliable product. The 4.1/9.5 Mini DIN Male to 4.3-10 Female jumper connections are designed to industry standard interface dimensions to ensure superior performance. These low PIM corrugated cable assemblies are durable and plenum rated for applications that require these parameters. All PolyPhaser cable assemblies are available for same day shipment to fulfill your urgent needs. This high-quality RF coaxial assembly is perfect in many RF Interconnect applications such as distributed antenna systems (DAS), plenum installations, low PIM applications, and many other RF systems. The CASPP250LLPL005-25M 4.1/9.5 Mini DIN to 4.3-20 low PIM cable assembly is the perfect companion to PolyPhaser line of products, particularly when used as an antenna jumper.

The quarter inch low PIM plenum rated coax used in these 4.1/9.5 Mini DIN to 4.3-20 assemblies is a .250 inch diameter copper corrugated coax with a blue FEP jacket. This cable's PTFE dielectric is low loss material with a phase velocity of 76% and offers excellent passive intermodulation (PIM) performance better than -160 dBc. The construction of the quarter inch copper corrugated jumper results in a minimum bend radius of 1.25 inches. The cable assembly's combination of 4.1/9.5 Mini DIN to 4.3-20 M/F and Times Microwave's SPP-250-LLPL low PIM plenum rated cable supports a maximum operation frequency of 5.8 GHz. Each cable assembly is installed with heat shrink booting on each end and a PIM label with the measured PIM level. You can find detailed performance specifications in the product datasheet. All PolyPhaser assemblies are tested and inspected prior to shipping.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications:  
[25 M Plenum Rated 4.3-10 to SMA F/M SPP-250-LLPL Low PIM Cable Jumper CASPP250LLPL005-25M](#)

## 25 M Plenum Rated 4.3-10 to SMA F/M SPP-250-LLPL Low PIM Cable Jumper

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#### Electrical Specifications

| Description                   | Minimum | Typical      | Maximum | Units           |
|-------------------------------|---------|--------------|---------|-----------------|
| Frequency Range               | DC      |              | 5.8     | GHz             |
| VSWR                          |         |              | 1.4:1   |                 |
| Velocity of Propagation       |         | 76           |         | %               |
| RF Shielding                  | 100     |              |         | dB              |
| Passive Intermodulation       |         |              | -155    | dBc             |
| Capacitance                   |         | 27 [88.58]   |         | pF/ft [pF/m]    |
| Inductance                    |         | 0.067 [0.22] |         | uH/ft [uH/m]    |
| DC Resistance Inner Conductor |         | 3 [9.84]     |         | Ω/1000ft [Ω/Km] |
| Operating Voltage (AC)        |         |              | 750     | Vrms            |

#### Specifications by Frequency

| Description           | F1   | F2   | F3   | F4   | F5    | Units |
|-----------------------|------|------|------|------|-------|-------|
| Frequency             | 0.45 | 0.7  | 1    | 2.5  | 5.8   | GHz   |
| Insertion Loss (Max.) | 3.17 | 3.76 | 4.51 | 7.84 | 12.33 | dB    |

##### Electrical Specification Notes:

PIM test results vary between cables

The Insertion Loss data above is based on the performance specifications of the coax used in this assembly. The Insertion Loss includes an estimated insertion loss of  $0.04 \cdot \sqrt{f(\text{GHz})}$  dB per connector.

#### Mechanical Specifications

##### Size

|        |                    |
|--------|--------------------|
| Length | 984.25 in [25 m]   |
| Weight | 6.01 lbs [2.73 Kg] |

##### Cable

|                                      |                                  |
|--------------------------------------|----------------------------------|
| Cable Type                           | SPP-250-LLPL                     |
| Impedance                            | 50 Ohms                          |
| Inner Conductor Type                 | Solid                            |
| Inner Conductor Material and Plating | Copper, Bare                     |
| Dielectric Type                      | PTFE                             |
| Number of Shields                    | 1                                |
| Shield Layer 1                       | Helically Corrugated Copper Tube |
| Outer Conductor Material and Plating | Copper                           |
| Outer Conductor Diameter             | 0.25 in [6.35 mm]                |

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|                              |                       |
|------------------------------|-----------------------|
| Jacket Material              | FEP, Blue             |
| Jacket Diameter              | 0.28 in [7.11 mm]     |
| One Time Minimum Bend Radius | 1.25 in [31.75 mm]    |
| Bending Moment               | 0.8 lbs-ft [1.08 N-m] |

#### Connectors

| Description                          | Connector 1                | Connector 2      |
|--------------------------------------|----------------------------|------------------|
| Type                                 | 4.3-10 Female              | SMA Male         |
| Impedance                            | 50 Ohms                    | 50 Ohms          |
| Contact Material and Plating         | Phosphor Bronze, Silver    | Brass, Gold      |
| Dielectric Type                      | PTFE                       | PTFE             |
| Outer Conductor Material and Plating | Phosphor Bronze, Tri-Metal |                  |
| Body Material and Plating            | Brass, Tri-Metal           | Brass, Tri-Metal |
| Coupling Nut Material and Plating    |                            | Brass, Tri-Metal |
| Seal Gasket Material                 |                            | Silicone Rubber  |

#### Environmental Specifications

##### Temperature

|                 |                   |
|-----------------|-------------------|
| Operating Range | -55 to +200 deg C |
| Storage Range   | -55 to +200 deg C |
| Plenum Rating   | UL910             |

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## 25 M Plenum Rated 4.3-10 to SMA F/M SPP-250-LLPL Low PIM Cable Jumper

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### Compliance Certifications

#### Plotted and Other Data

Notes:

- Values at 25°C, sea level.

PolyPhaser protects and increases the reliability of global RF communications networks, including transportation, telecommunications, defense, security and industrial applications, with superior RF surge protection technologies including DC Block, DC Pass and Ultra Low PIM. Backed by responsive service and expert technical support PolyPhaser continually expands its product offering and services to serve engineers' urgent needs for RF components in mission critical communication networks.

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URL: <https://www.polyphaser.com/25-m-plenum-rated-43-10-to-sma-f-m-spp-250-llpl-low-pim-cable-jumper-caspp250llpl005-25m-p.aspx>

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CASPP250LLPL005-25M CAD Drawing

