



## Plenum N Male to SMA Male Low PIM Cable Using SPP-250-LLPL Coax Using Times Microwave Parts

### RF Cable Assemblies Technical Data Sheet

PE3C6213

#### Configuration

- Connector 1: TC-250-NM-LP  
N Male
- Connector 2: TC-SPP250-SM-LP  
SMA Male
- Cable: SPP-250-LLPL

#### Features

- Max Frequency 5.8 GHz
- Low PIM: -160 dBc Max
- Shielding Effectivity > 100 dB
- 76% Phase Velocity
- FEP Jacket
- 100% Tested with PIM Test Results Marked on Cable
- UL910 Plenum Rated Cable
- Lightweight and Extremely Flexible
- Low Loss with Excellent VSWR
- IP67 (when mated)
- Using Times Microwave Components

#### Applications

- General Purpose
- Laboratory Use
- Low PIM Applications
- Distributed Antenna Systems (DAS)
- Plenum Installations
- Multi-Carrier Communication Systems
- PIM Testing

#### Description

Pasternack's PE3C6213 type N male to SMA male cable using SPP-250-LLPL coax is part of our full line of RF components available for same-day shipping. Pasternack's corrugated RF cable assemblies are ideal for applications where durability and high power are needed. This Pasternack type N to SMA cable assembly has a male to male gender configuration with 50 ohm corrugated SPP-250-LLPL coax. The PE3C6213 type N male to SMA male cable assembly operates to 5.8 GHz. Our low PIM design also offers excellent passive intermodulation performance with PIM levels better than -160 dBc. Times Microwave cable is used in each assembly and TMS components are used to form connections with the super flexible low PIM cable. These cable assemblies are expertly built to satisfy your specific need with high quality Times Microwave Systems manufactured parts.

Custom versions of most RF cable assemblies can be built and shipped same day. Custom cable assembly lengths can be obtained by specifying the desired length on the web site at time of order or by contacting a sales representative. Other available RF cable assembly value added services include connector orientation or clocking, heat shrink booting and custom labeling. RF testing can also be performed to document the electrical performance of your cable assembly.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Plenum N Male to SMA Male Low PIM Cable Using SPP-250-LLPL Coax Using Times Microwave Parts PE3C6213](#)





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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       |         | -165         | -160    | 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] |

#### Specifications by Frequency

| Description           | F1    | F2    | F3    | F4    | F5    | Units |
|-----------------------|-------|-------|-------|-------|-------|-------|
| Frequency             | 0.45  | 0.7   | 1     | 2.5   | 5.8   | GHz   |
| Insertion Loss (Max.) | 0.038 | 0.048 | 0.057 | 0.094 | 0.148 | dB/ft |
|                       | 0.12  | 0.16  | 0.19  | 0.31  | 0.49  | dB/m  |

#### Electrical Specification Notes:

PIM test results vary between cables

Insertion Loss does not include the loss of the connectors. Insertion Loss is estimated as  $0.1 \cdot \sqrt{F(\text{GHz})}$  dB for the N male connector and 0.15 for the SMA male connector.

#### Mechanical Specifications

##### Cable Assembly

| Description                  | Minimum | Typical     | Maximum | Units   |
|------------------------------|---------|-------------|---------|---------|
| Jacket Diameter              |         | 0.28 [7.11] |         | in [mm] |
| One Time Minimum Bend Radius | 1.25    |             |         | in      |
| Bending Moment               |         | 0.8         |         | lbs-ft  |

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#### Cable Characteristics

| Description                          | Specification                    |
|--------------------------------------|----------------------------------|
| Cable Type                           | SPP-250-LLPL                     |
| Impedance                            | 50 Ohms                          |
| Inner Conductor Type                 | Solid                            |
| Inner Conductor Material and Plating | Copper                           |
| 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]                |
| Jacket Material                      | FEP, Blue                        |

#### Connector Characteristics

| Description                        | Connector 1             | Connector 2       |
|------------------------------------|-------------------------|-------------------|
| Type                               | N Male                  | SMA Male          |
| Impedance                          | 50 Ohms                 | 50 Ohms           |
| Contact Material and Plating       | Phosphor Bronze, Silver | Brass, Silver     |
| Contact Plating Specification      | 196 µin                 | 196 µin           |
| Dielectric Type                    | PTFE                    | PTFE              |
| Body Material and Plating          | Brass, Tri-Metal        | Brass, Tri-Metal  |
| Body Plating Specification         | 118 µin                 | 118 µin           |
| Coupling Nut Material and Plating  | Brass, Tri-Metal        | Brass, Tri-Metal  |
| Coupling Nut Plating Specification | 118 µin                 | 118 µin           |
| Torque                             | 9.74 in-lbs 1.1 Nm      | 10 in-lbs 1.13 Nm |

Mechanical Specification Notes:

#### Environmental Specifications

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

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

#### Plotted and Other Data

Notes:

- Values at 25°C, sea level.

#### Typical Performance Data



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#### How to Order

Part Number Configuration:

**PE3C6213**

- **xx**

**uu**

Unit of Measure:  
cm = Centimeters  
<blank> = Inches  
Length  
Base Number

Example: PE3C6213-12 = 12 inches long cable  
PE3C6213-100cm = 100 cm long cable

Plenum N Male to SMA Male Low PIM Cable Using SPP-250-LLPL Coax Using Times Microwave Parts 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.

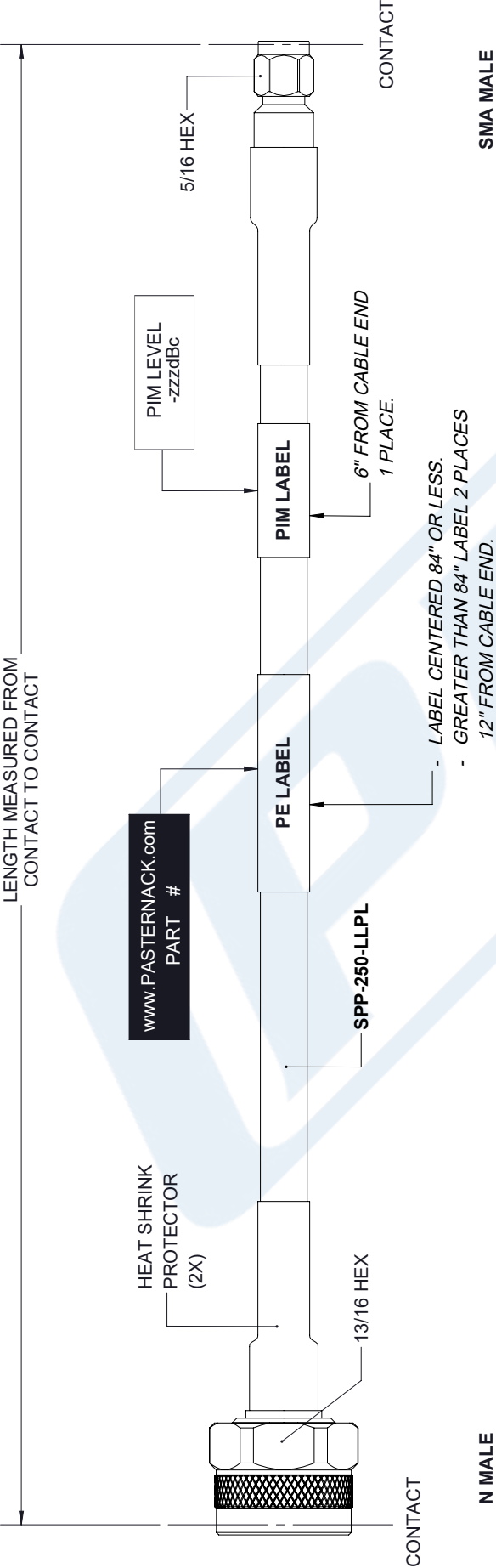
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Plenum N Male to SMA Male Low PIM Cable Using SPP-250-LLPL Coax Using Times Microwave Parts PE3C6213](https://www.pasternack.com/n-male-sma-male-spp250llpl-cable-assembly-pe3c6213-p.aspx)

URL: <https://www.pasternack.com/n-male-sma-male-spp250llpl-cable-assembly-pe3c6213-p.aspx>

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**PE3C6213 CAD Drawing**  
Plenum N Male to SMA Male Low PIM Cable Using SPP-  
250-LLPL Coax Using Times Microwave Parts

| REVISIONS |                 |          |          |
|-----------|-----------------|----------|----------|
| REV.      | DESCRIPTION     | DATE     | APPROVED |
| A         | INITIAL RELEASE | 04/09/19 | SELLIS   |



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|---|-------------|
| UNLESS OTHERWISE SPECIFIED<br>LEADING DIMENSIONS ARE IN INCHES<br>DIMENSIONS IN [ ] ARE MILLIMETERS |             |
| TOLERANCES:   | FRACTIONS   |
| X±.2 [5.08]   | ±.132       |
| XX±.01 [.25]  | ±.13        |
| XXX±.005 [.13]  | ANGLES ± 1° |
| ALL DIMENSIONS SHOWN<br>ARE FOR REFERENCE ONLY.   |             |
| THIRD-ANGLE PROJECTION  |             |

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| A   | 53919       |
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