



## N Female Bulkhead to N Male Cable Using PE-141FLEX Coax, RoHS

### RF Cable Assemblies Technical Data Sheet

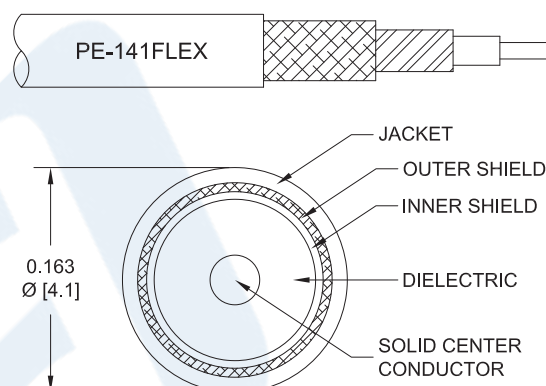
PE3CA1050

#### Configuration

- Connector 1: N Female Bulkhead
- Connector 2: N Male
- Cable Type: PE-141FLEX

#### Features

- Design operates to 18 GHz
- Shielding effectivity > 90dB
- One time minimum bend radius: 0.4 inch
- Typical N Type VSWR 1.31:1 to 18 GHz



#### Applications

- High Performance RF equipment interconnect
- Flexible in cabinet or in the rack requirements
- Inside the box RF routing
- General purpose lighter duty lab use

#### Description

These new high performance flexible cables are made using our PE-141FLEX coax and our new low profile connectors. The high performance flexible design is well suited for connecting RF devices in rack-mount systems, inside RF equipment and for general lab hookup where a more expensive test cable is not required. These cables are similar to the PE30X series which have retractable coupling nuts and thick wall SMA connectors. The heavier duty PE35X test series cables have similar performance, but include a heavy duty strain relief mechanism and extra booting material as well as a thick wall SMA connector to increase the ruggedness of the PE35X cables for use in more demanding test environments.

PE-141FLEX is a flexible cable alternate to Semi Rigid coax and has a solid PTFE resulting in a 69.5% phase velocity. The smooth wall formed by the Braid over Spiral Ribbon design allows for a flexible cable that has similar performance to a solid wall 141 Semi Rigid (RG402) cable.

#### Electrical Specifications

| Description             | Minimum | Typical      | Maximum | Units        |
|-------------------------|---------|--------------|---------|--------------|
| Frequency Range         | DC      |              | 18      | GHz          |
| VSWR                    |         |              | 1.4:1   |              |
| Return Loss             | -15.56  |              |         | dB           |
| Velocity of Propagation |         | 69.5         |         | %            |
| RF Shielding            | 90      |              |         | dB           |
| Group Delay             |         | 1.44 [4.72]  |         | ns/ft [ns/m] |
| Capacitance             |         | 29.4 [96.46] |         | pF/ft [pF/m] |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Female Bulkhead to N Male Cable Using PE-141FLEX Coax, RoHS PE3CA1050](#)



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Operating Voltage (AC) 335 Vrms

#### Specifications by Frequency

| Description           | F1     | F2     | F3     | F4    | F5 | Units  |
|-----------------------|--------|--------|--------|-------|----|--------|
| Frequency             | 3      | 6      | 12     | 18    |    | GHz    |
| Insertion Loss (Max.) | 0.45   | 0.65   | 0.95   | 1.19  |    | dB/ft  |
|                       | [1.48] | [2.13] | [3.12] | [3.9] |    | [dB/m] |
| VSWR (Max.)           | 1.18:1 | 1.25:1 | 1.3:1  | 1.4:1 |    |        |
| Power Handling (Max.) | 215    | 150    | 105    | 88    |    | Watts  |

#### Electrical Specification Notes:

Insertion Loss Max is based on cable and does not include connector loss

#### Mechanical Specifications

##### Cable Assembly

##### Cable

|                                      |                            |
|--------------------------------------|----------------------------|
| Cable Type                           | PE-141FLEX                 |
| Impedance                            | 50 Ohms                    |
| Inner Conductor Type                 | Solid                      |
| Inner Conductor Material and Plating | Copper Clad Steel, Silver  |
| Dielectric Type                      | PTFE                       |
| Number of Shields                    | 2                          |
| Shield Layer 1                       | Silver Plated Copper Tape  |
| Shield Layer 2                       | Silver Plated Copper Braid |
| Jacket Material                      | FEP                        |
| Jacket Diameter                      | 0.163 in [4.14 mm]         |
| One Time Minimum Bend Radius         | 0.39 in [9.91 mm]          |
| Repeated Minimum Bend Radius         | 1.57 in [39.88 mm]         |

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**Connectors**

| Description                       | Connector 1            | Connector 2   |
|-----------------------------------|------------------------|---------------|
| Type                              | N Female Bulkhead      | N Male        |
| Impedance                         | 50 Ohms                | 50 Ohms       |
| Mating Cycles                     | 500                    | 500           |
| Contact Material and Plating      | Beryllium Copper, Gold | Brass, Gold   |
| Dielectric Type                   | PTFE                   | PTFE          |
| Coupling Nut Material and Plating | Brass, Nickel          | Brass, Nickel |
| Hex Size                          |                        | 3/4 Inch      |
| Body Material and Plating         | Brass, Nickel          | Brass, Nickel |

**Environmental Specifications**

**Temperature**

Operating Range

-40 to +150 deg C

**Compliance Certifications** (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

RoHS Compliant

Yes

REACH Compliant

12/17/2015

**Plotted and Other Data**

Notes:

- Values at 25°C, sea level.

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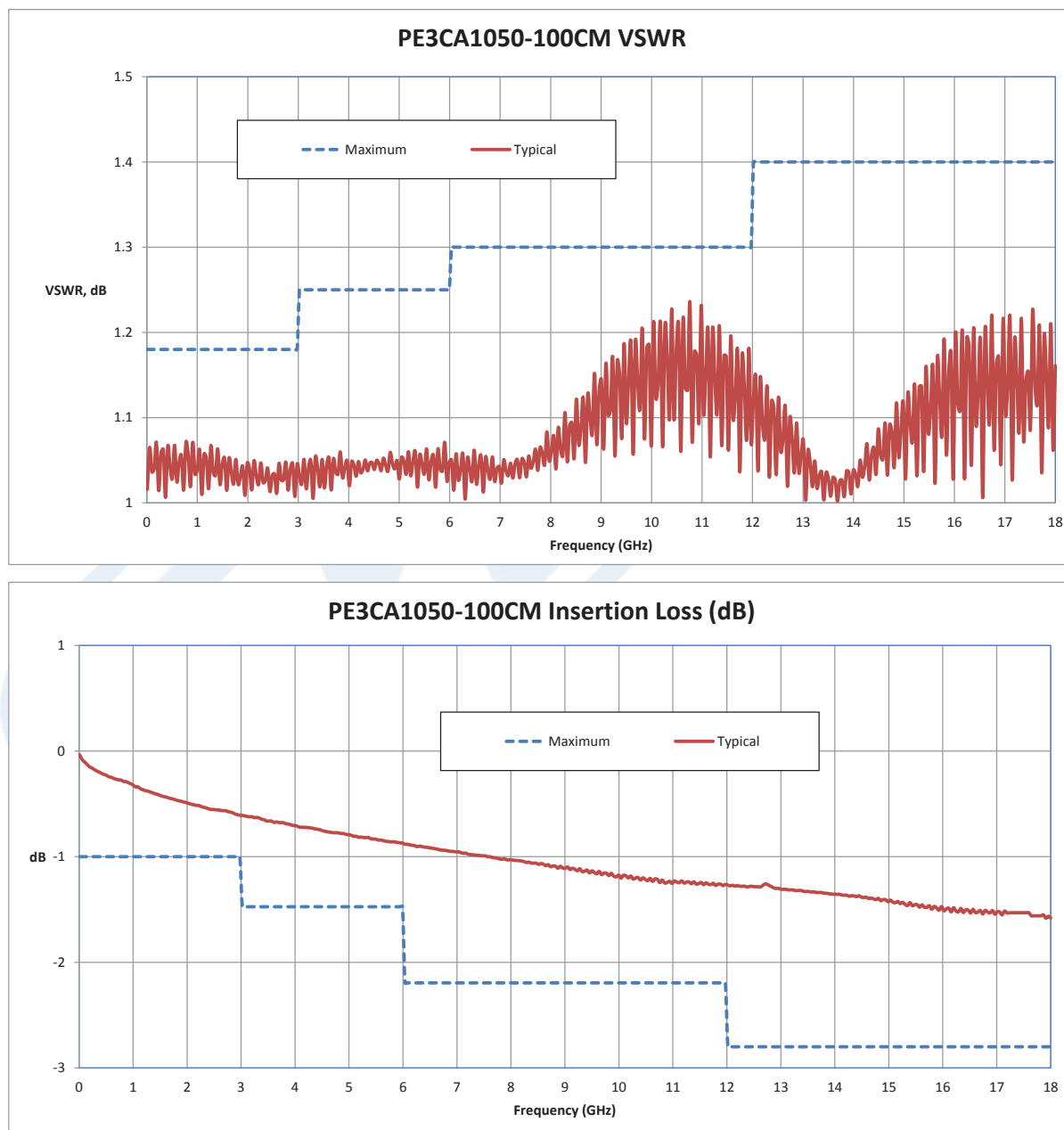


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Typical Performance Data



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## N Female Bulkhead to N Male Cable Using PE-141FLEX Coax, RoHS

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#### How to Order

Part Number Configuration:

**PE3CA1050**

- **xx**

**uu**

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

Example: PE3CA1050-12 = 12 inches long cable  
PE3CA1050-100cm = 100 cm long cable

N Female Bulkhead to N Male Cable Using PE-141FLEX Coax, RoHS from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

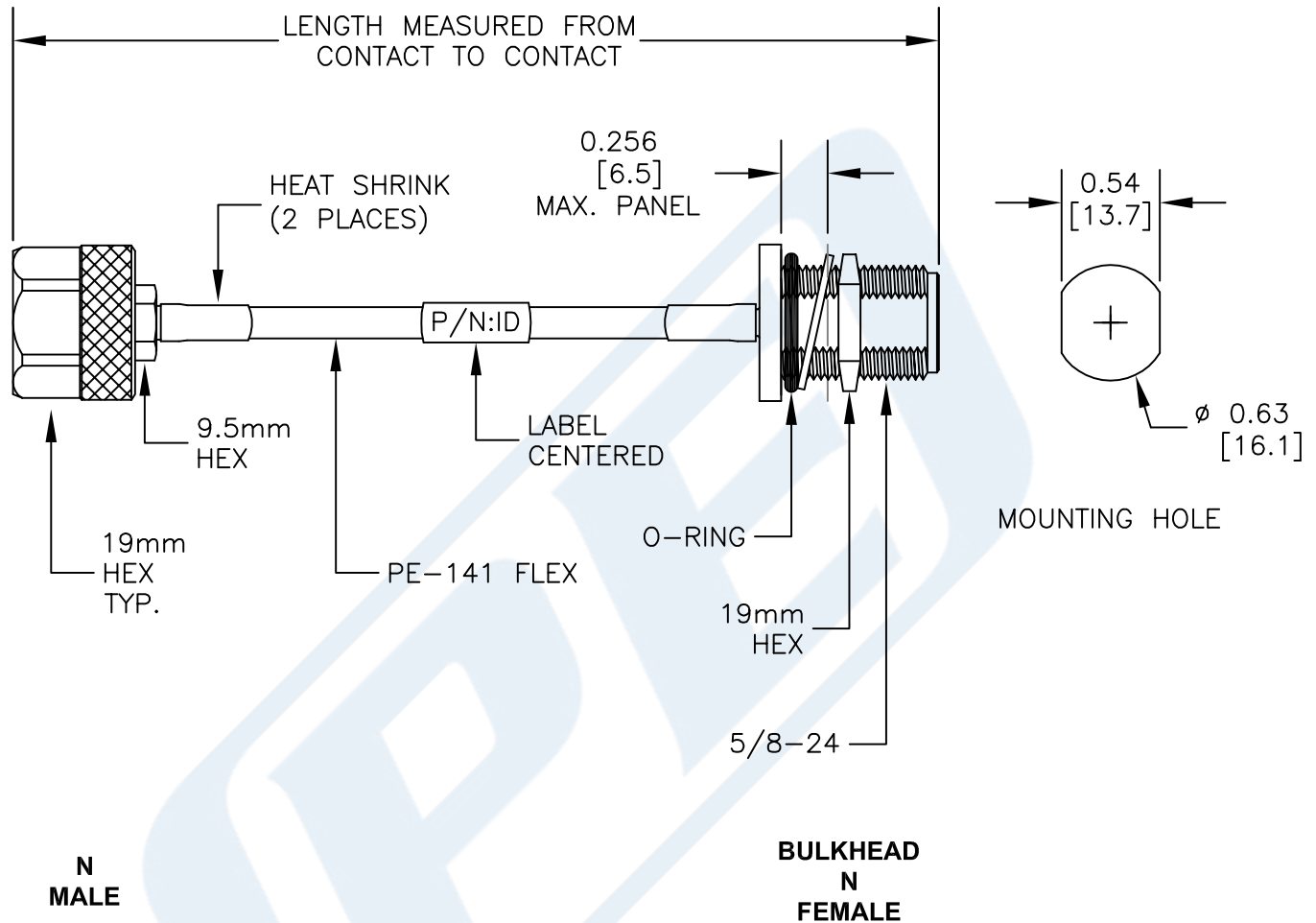
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URL: <http://www.pasternack.com/n-female-n-male-pe-141flex-cable-assembly-pe3ca1050-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

# PE3CA1050 CAD Drawing

N Female Bulkhead to N Male Cable Using PE-141FLEX Coax, RoHS



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#### 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].
4. LENGTH TOLERANCE IS  $\pm 1.5\%$  OR  $3/8"$ , WHICHEVER IS GREATER.

DWG TITLE

**PE3CA1050**

**FSCM NO. 53919**

CAD FILE

032715

SCALE N/A

SIZE A

150