

## 2 dBi Embedded PCB Antenna 2,400-2,500 MHz UMCX Connector

### Antennas Technical Data Sheet

PE51213

#### Features

- Highly efficient printed circuit board (PCB) design
- Designed for omni-directional applications
- Low profile, compact size
- IPEX, U.FL, UMCX compatible connector

#### Applications

- Integrate into self contained wireless equipment
- Embedded applications requiring integration flexibility
- 2.4 GHz

#### Description

The PE51213 is a 2.4 GHz omni-directional antenna designed to directly integrate into devices requiring wireless capability. By embedding these antennas directly into a device, the need for external antennas is eliminated. The omni-directional design of the PE51213 makes it ideal for multipoint and mobile wireless systems since it provides 360 degree of coverage. This antenna features a 1.13mm coax lead terminated with a U.FL/IPX connector. Custom cable lengths and connector options are also available.

#### Configuration

|                   |                        |
|-------------------|------------------------|
| Design            | PCB                    |
| Application Band  | WLAN                   |
| Band Type         | Single                 |
| Radiation Pattern | Omni Directional       |
| Polarization      | Vertical or Horizontal |
| Cable Type        | 1.13mm                 |
| Cable Length      | 3.38 in [85.85 mm]     |
| Connector Type    | UMCX Plug              |
| Number of Ports   | 1                      |

#### Electrical Specifications

| Description     | Minimum | Typical | Maximum | Units |
|-----------------|---------|---------|---------|-------|
| Frequency Range | 2,400   |         | 2,500   | GHz   |
| Input VSWR      |         |         | 2.3:1   |       |
| Impedance       |         | 50      |         | Ohms  |
| Gain            |         | 2       |         | dBi   |

#### Specifications by Band

| Description           | Band 1      | Band 2 | Band 3 | Band 4 | Band 5 | Units  |
|-----------------------|-------------|--------|--------|--------|--------|--------|
| Range                 | 2,400-2,500 |        |        |        |        | MHz    |
| Gain                  | 2           |        |        |        |        | dBi    |
| Horizontal Beam Width | 360         |        |        |        |        | Degees |
| Vertical Beam Width   | 50          |        |        |        |        | Degees |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [2 dBi Embedded PCB Antenna 2,400-2,500 MHz UMCX Connector PE51213](#)



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**Mechanical Specifications**

**Size**

|                |                    |
|----------------|--------------------|
| Overall Length | 1.7 in [43.18 mm]  |
| Width          | 1.4 in [35.56 mm]  |
| Height         | 0.04 in [1.02 mm]  |
| Weight         | 0.06 lbs [27.22 g] |

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

**Plotted and Other Data**

Notes:

2 dBi Embedded PCB Antenna 2,400-2,500 MHz UMCX Connector 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: [2 dBi Embedded PCB Antenna 2,400-2,500 MHz UMCX Connector PE51213](#)

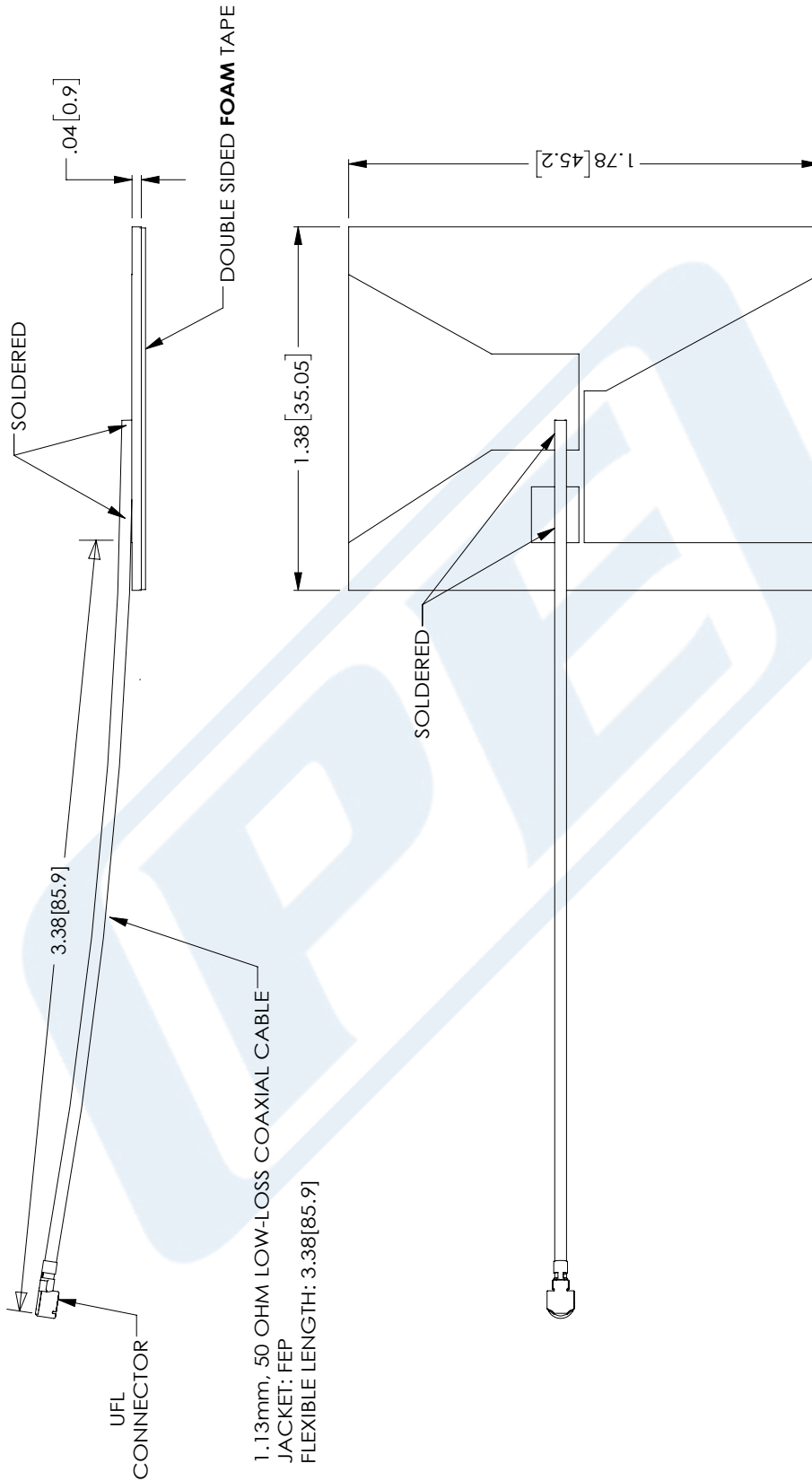
URL: <https://www.pasternack.com/single-antenna-2.4-2.5-ghz-2-dbi-gain-umcx-pe51213-p.aspx>

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.

# PE51213 CAD Drawing

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| REVISIONS |                 |            |          |
|-----------|-----------------|------------|----------|
| REV.      | DESCRIPTION     | DATE       | APPROVED |
| A         | INITIAL RELEASE | 06/18/2020 | KHIETPAS |



1.13mm, 50 OHM LOW-LOSS COAXIAL CABLE  
 JACKET: FEP  
 FLEXIBLE LENGTH: 3.38[85.9]

|  |   |  |
|--|---|--|
| UNLESS OTHERWISE SPECIFIED<br>LEADING DIMENSIONS ARE INCHES<br>DIMENSIONS IN [ ] ARE MILLIMETERS<br><br>TOLERANCES:<br>.X = ±.2 [5.08]    FRACTIONS ± 1/32<br>.XX = ±.02 [.51]    ANGLES ± 1°<br>.XXX = ±.005 [.13]<br>CABLE LENGTH (L) TOLERANCES:<br>L ≤ 12 [305] = +1 [25] / -0<br>12 [305] < L ≤ 60 [1524] = +2 [51] / -0<br>60 [1524] < L ≤ 120 [3048] = +4 [102] / -0<br>120 [3048] < L ≤ 300 [7620] = +6 [152] / -0<br>300 [7620] < L = +5% / -0<br>ALL DIMENSIONS SHOWN<br>ARE FOR REFERENCE ONLY. | <b>PE PASTERNAK</b><br>an INFINITE brand<br><br>Pasternack Enterprises, Inc.<br>P.O. Box 16759, Irvine, CA 92623.<br>Phone: 1.949.261.1920   1.866.727.8376<br>Fax: 1.949.261.7451<br>Website: www.pasternack.com<br>E-mail: sales@pasternack.com | THIRD-ANGLE PROJECTION<br>THE INFORMATION AND<br>DESIGN INFORMATION<br>IS THE PROPERTY OF<br>PASTERNAK CORPORATION<br>ALL RIGHTS RESERVED. |
|  |   | SHEET 1 OF 1<br><br>SCALE N/A  |

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