



UMCX 2.1 Plug to UMCX 2.1 Plug Cable  
Using 0.81mm Coax, RoHS

TECHNICAL DATA SHEET

PE3CA1056

Pasternack's UMCX 2.1 series ultra-miniature coaxial cable assemblies (also called 2.1mm UMCX) have a mated connection height of only 2.1mm. They are constructed using a flexible micro-coax cable and are compatible with products such as Hirose U.FL, IPEX MHF and other UMCX connector and cable manufactures. Our UMCX 2.1 plug connectors are comparable in design to the Hirose U.FL connectors and the IPEX MHF series connectors. Pasternack also provided three additional connector options for our in-series 0.81mm micro-coax jumper cables including UMCX 2.1, WMCX 1.6 and HMCX32 1.2 connectors.

These small form factor, flexible micro-coax jumper cables provide a low profile RF connection perfect for board-to-board connectivity such as mini-PCI circuit boards. With performance up to 6 GHz, these UMCX jumper cables are ideal for wireless applications including Wi-Fi, Bluetooth, GPS, ZigBee, LTE and many others. Our UMCX 2.1 cable assemblies are available from stock in standard lengths, and custom lengths are available upon request. Standard length UMCX 2.5 cables ship same day they are ordered.

**Features**

- 2.1mm mated assembly height
- Operate from DC to 6 GHz
- 100% RF and Continuity tested
- Compatible with Hirose U.FL and IPEX MHF products
- Small foot print with easy snap on/off mating

**Applications**

- Wireless LAN, Mini PCI
- Mobile Antenna/GPS/Radio Systems
- PDA/PCS/Cellular Handset applications
- Wireless Communications systems ( LAN, GSM, PCS, WCDMA, UMTS)

**Configuration**

|             |               |
|-------------|---------------|
| Connector 1 | UMCX 2.1 Plug |
| Connector 2 | UMCX 2.1 Plug |
| Cable Type  | 0.81mm        |

**Electrical Specifications**

|                 |             |
|-----------------|-------------|
| Frequency Range | DC to 6 GHz |
| Impedance       | 50 Ohms     |
| Max VSWR        | 1.55:1      |

**Performance by Frequency**

**Frequency 1**

|                |                        |
|----------------|------------------------|
| Frequency      | 250 MHz                |
| VSWR           | 1.4:1                  |
| Return Loss    | 15.56 dB               |
| Insertion Loss | 0.55 dB/ft [1.80 dB/m] |

**Frequency 2**

|                |                        |
|----------------|------------------------|
| Frequency      | 500 MHz                |
| VSWR           | 1.4:1                  |
| Return Loss    | 15.56 dB               |
| Insertion Loss | 0.78 dB/ft [2.56 dB/m] |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [UMCX 2.1 Plug to UMCX 2.1 Plug Cable Using 0.81mm Coax, RoHS PE3CA1056](#)



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**Frequency 3**

|                |                       |
|----------------|-----------------------|
| Frequency      | 1000 MHz              |
| VSWR           | 1.4:1                 |
| Return Loss    | 15.56 dB              |
| Insertion Loss | 1.25 dB/ft [4.1 dB/m] |

**Frequency 4**

|                |                       |
|----------------|-----------------------|
| Frequency      | 2.5 GHz               |
| VSWR           | 1.4:1                 |
| Return Loss    | 15.56 dB              |
| Insertion Loss | 1.9 dB/ft [6.23 dB/m] |

**Frequency 5**

|                |                        |
|----------------|------------------------|
| Frequency      | 6 GHz                  |
| VSWR           | 1.55:1                 |
| Return Loss    | 13.32 dB               |
| Insertion Loss | 2.89 dB/ft [9.48 dB/m] |

**Mechanical Specifications**

**Temperature**

|                             |                   |
|-----------------------------|-------------------|
| Temperature Operating Range | -55 to +125 deg C |
|-----------------------------|-------------------|

**Size**

**Cable**

|                         |                    |
|-------------------------|--------------------|
| Cable Type              | 0.81mm             |
| Inner Conductor Type    | Stranded           |
| Cable Inner Conductor   | Copper, Silver     |
| No of Shields           | 1                  |
| Cable Outer Conductor 1 | Tinned Copper      |
| Dielectric Type         | FEP                |
| Jacket Material         | FEP                |
| Jacket Diameter         | 0.032 in [0.81 mm] |

**Connector 1**

|               |               |
|---------------|---------------|
| Type          | UMCX 2.1 Plug |
| Configuration | Straight      |

**Connector 2**

|               |               |
|---------------|---------------|
| Type          | UMCX 2.1 Plug |
| Configuration | Straight      |

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

|                |     |
|----------------|-----|
| RoHS Compliant | Yes |
|----------------|-----|

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**Plotted and Other Data**

Notes:

- Values at +25 °C, sea level

**How to Order**

Part Number Configuration:

**PE3CA1056**

- xx

uu

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

Example: PE3CA1056-12 = 12 inches long cable  
PE3CA1056-100cm = 100 cm long cable

UMCX 2.1 Plug to UMCX 2.1 Plug Cable Using 0.81mm 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.

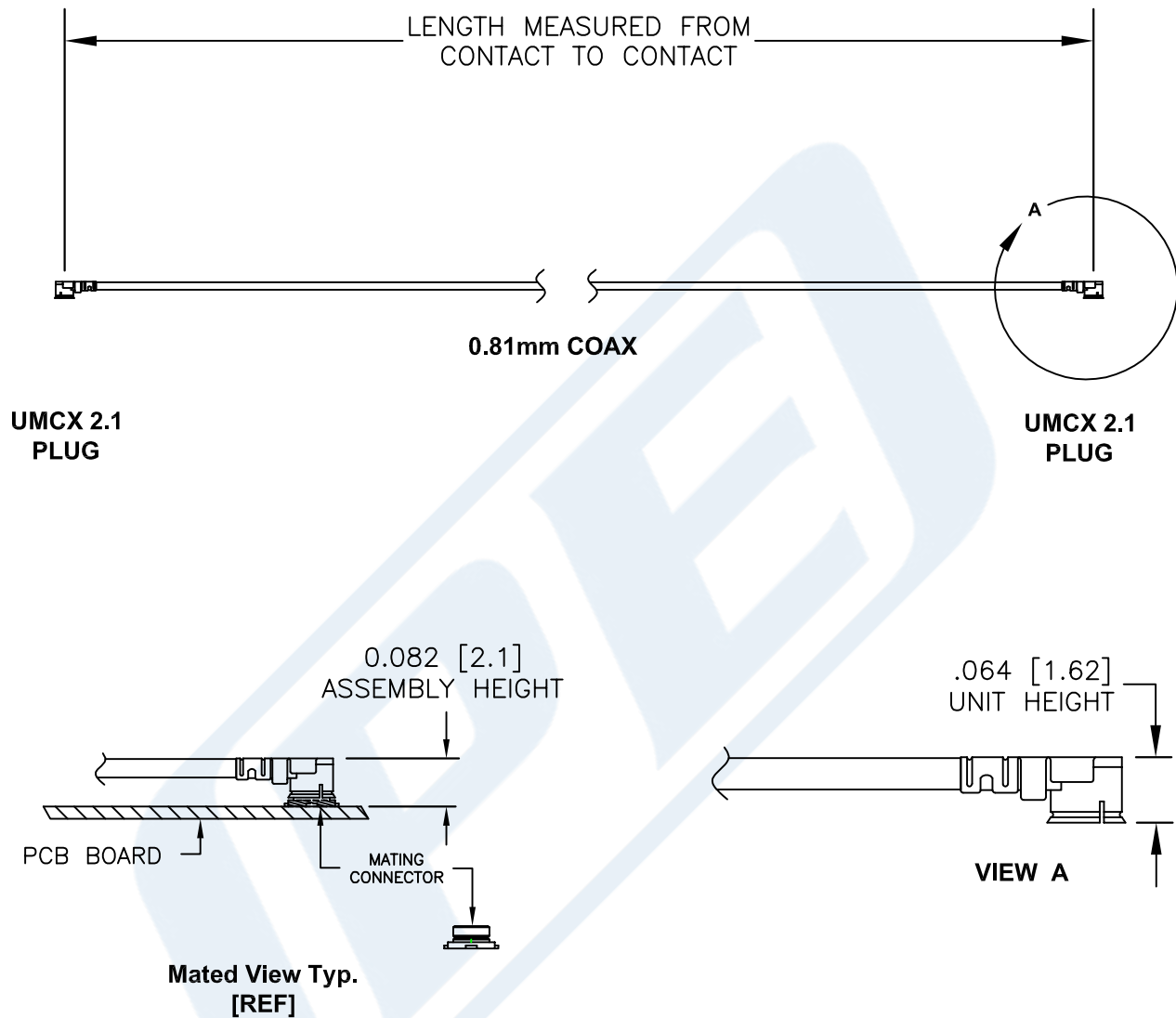
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [UMCX 2.1 Plug to UMCX 2.1 Plug Cable Using 0.81mm Coax, RoHS PE3CA1056](http://www.pasternack.com/umcx-2.1-plug-umcx-2.1-plug-0.81mm-cable-assembly-pe3ca1056-p.aspx)

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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.

# PE3CA1056 CAD Drawing

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UMCX connectors are similar to U.FL\*  
\*U.FL is a Registered Trademark of  
Hirose Electronic Group



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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

**PE3CA1056**

**FSCM NO. 53919**

CAD FILE

011515

SCALE N/A

SIZE A

200