# UMCX 2.5 Plug to UMCX 2.5 Plug Cable 12 Inch Length Using RG178-DS Coax, RoHS

## TECHNICAL DATA SHEET                    PE3CA1055-12

Pasternack's UMCX 2.5 series ultra-miniature coaxial cable assemblies (also called 2.5mm UMCX) have a mated connection height of only 2.5mm. 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 2.5 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. UMCX 2.5 are available in the following coax types; 0.81mm, 1.13mm, 1.37mm, RG178 and RG178-DS.

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 2.5 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

- 2.5mm 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 2.5 Plug |
| Connector 2 | UMCX 2.5 Plug |
| Cable Type | RG178-DS |

## 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 | 0.14 dB |

**Frequency 2**

| | |
|---|---|
| Frequency | 500 MHz |
| VSWR | 1.4:1 |
| Return Loss | 15.56 dB |
| Insertion Loss | 0.24 dB |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: UMCX 2.5 Plug to UMCX 2.5 Plug Cable 12 Inch Length Using RG178-DS Coax, RoHS PE3CA1055-12

## UMCX 2.5 Plug to UMCX 2.5 Plug Cable 12 Inch Length Using RG178-DS Coax, RoHS

**Frequency 3**
| | |
|---|---|
| Frequency | 1000 MHz |
| VSWR | 1.4:1 |
| Return Loss | 15.56 dB |
| Insertion Loss | 0.44 dB |

**Frequency 4**
| | |
|---|---|
| Frequency | 2.5 GHz |
| VSWR | 1.4:1 |
| Return Loss | 15.56 dB |
| Insertion Loss | 0.65 dB |

**Frequency 5**
| | |
|---|---|
| Frequency | 6 GHz |
| VSWR | 1.55:1 |
| Return Loss | 13.32 dB |
| Insertion Loss | 1.56 dB |

### Mechanical Specifications

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

**Size**
| | |
|---|---|
| Length | 12 in [304.8 mm] |

**Cable**
| | |
|---|---|
| Cable Type | RG178-DS |
| Inner Conductor Type | Stranded |
| Cable Inner Conductor | Copper, Silver |
| No of Shields | 1 |
| Cable Outer Conductor | Tinned Copper |
| Dielectric Type | FEP |
| Jacket Material | FEP |
| Jacket Diameter | 0.086 in  [2.18 mm] |

**Connector 1**
| | |
|---|---|
| Type | UMCX 2.5 Plug |
| Configuration | Straight |

**Connector 2**
| | |
|---|---|
| Type | UMCX 2.5 Plug |
| Configuration | Straight |

**Compliance Certifications** (visit www.Pasternack.com for current document)
| | |
|---|---|
| RoHS Compliant | Yes |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: UMCX 2.5 Plug to UMCX 2.5 Plug Cable 12 Inch Length Using RG178-DS Coax, RoHS PE3CA1055-12

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## UMCX 2.5 Plug to UMCX 2.5 Plug Cable 12 Inch Length Using RG178-DS Coax, RoHS

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|---|---|

### Plotted and Other Data

Notes:
- Values at +25 °C, sea level

### How to Order

Part Number Configuration:          **PE3CA1055      -  xx      uu**

Unit of Measure:
- cm = Centimeters
- &lt;blank&gt; = Inches

Length

Base Number

Example:     PE3CA1055-12 = 12 inches long cable
PE3CA1055-100cm = 100 cm long cable

UMCX 2.5 Plug to UMCX 2.5 Plug Cable 12 Inch Length Using RG178-DS 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.
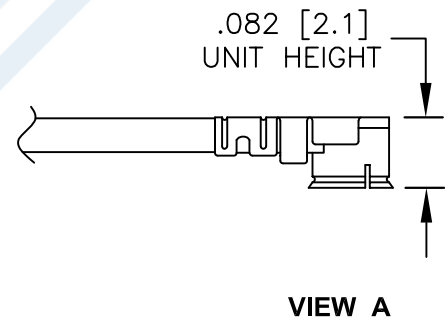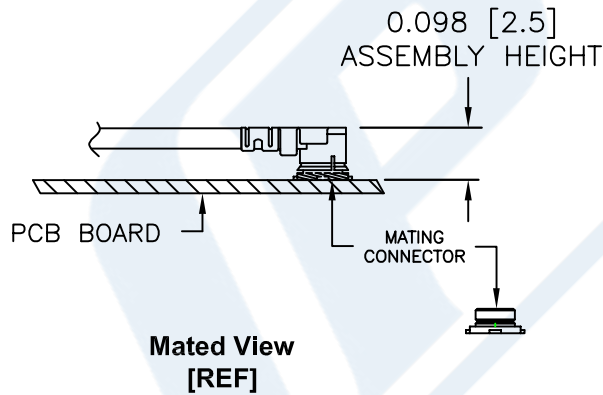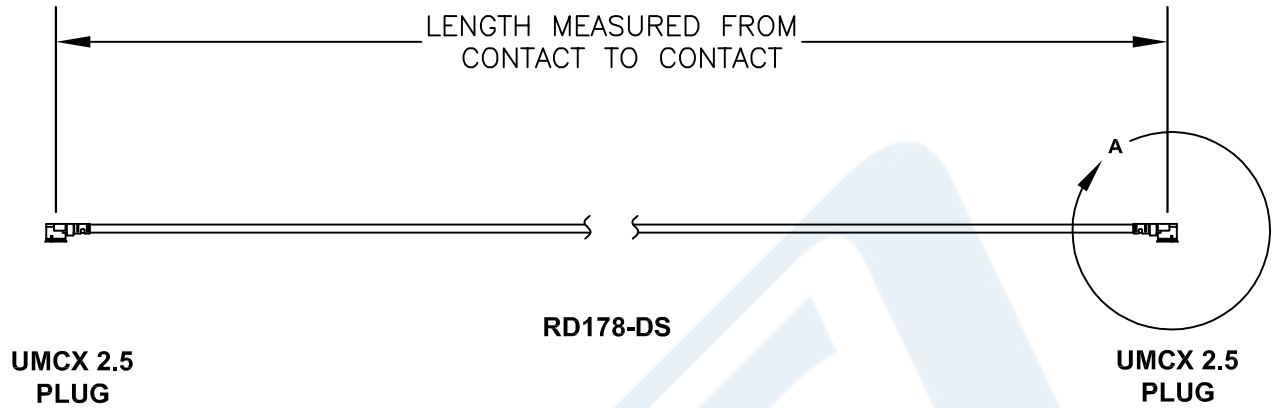
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URL: http://www.pasternack.com/umcx-2.5-plug-umcx-2.5-plug-rg178-ds-cable-assembly-pe3ca1055-12-p.aspx

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.

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LENGTH MEASURED FROM
CONTACT TO CONTACT

A

RD178-DS

UMCX 2.5
PLUG

UMCX 2.5
PLUG

0.098 [2.5]
ASSEMBLY HEIGHT

.082 [2.1]
UNIT HEIGHT

PCB BOARD

MATING
CONNECTOR

**Mated View
[REF]**

VIEW A

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

## PASTERNACK®
### THE ENGINEER'S RF SOURCE
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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 ± 1.5% OR 3/8", WHICHEVER IS GREATER.

| DWG TITLE | | | | |
|---|---|---|---|---|
| PE3CA1055 | | FSCM NO. 53919 | | |
| CAD FILE | 011515 | SCALE N/A | SIZE A | 200 |

PE3CA1055-12 REV 1.0

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