

# PLC50E-78A

## 7/8"R Low Loss Coaxial Cable

**PROSE**

- 7/8" Foam Insulation Low Loss Coaxial Cable
- Corrugated copper outer conductor
- Black PE jacket
- Recommended operating frequency: 1~4000 MHz
- This product is used for telecommunication system
- Outdoor application, UV resistance, halogen free



Photo for reference

### Material

|                          |                              |
|--------------------------|------------------------------|
| Inner conductor material | Copper tube                  |
| Dielectric material      | Foam PE                      |
| Outer conductor material | Corrugated copper(Annularly) |
| Jacket material          | PE, Black, Halogen free      |

### Dimensions

|                     |               |
|---------------------|---------------|
| Nominal size        | 7/8" Low Loss |
| Inner conductor OD. | Ø 9.45 mm     |
| Dielectric OD.      | Ø 22.6 mm     |
| Outer conductor OD. | Ø 25.4 mm     |
| Jacket OD.          | Ø 27.6 mm     |

### Reference standard

|               |                          |
|---------------|--------------------------|
| UV Resistance | UL 1581 or IEC 60068-2-5 |
|---------------|--------------------------|

### Electrical Specification

|                                  |              |
|----------------------------------|--------------|
| Impedance                        | 50 ± 1 Ω     |
| Relative Velocity of Propagation | 88 %         |
| Capacitance                      | 76 pF/m      |
| Inductance                       | 0.185 μH/m   |
| Maximum Operating Frequency      | 4.9 GHz      |
| Cut-off Frequency                | 4.9 GHz      |
| Peak Power Rating                | 95 kW        |
| Insulation Resistance            | ≥ 10 GΩ x km |

|                           |           |
|---------------------------|-----------|
| DC Breakdown Voltage      | 10000 V   |
| Jacket Spark Test Voltage | 8000 Vrms |

## Environmental Specification

|                          |                |
|--------------------------|----------------|
| Installation Temperature | -25°C to +60°C |
| Operating Temperature    | -40°C to +85°C |
| Storage Temperature      | -70°C to +85°C |
| RoHS                     | Compliant      |

## Standard Conditions

|                                     |       |
|-------------------------------------|-------|
| Attenuation, Ambient Temperature    | 20°C  |
| Average Power, Ambient Temperature  | 40°C  |
| Average Power, Inner Conductor Temp | 100°C |

## Mechanical Specification

|                                    |         |
|------------------------------------|---------|
| Tensile strength                   | 1450 N  |
| Min. bending radius (single)       | 120 mm  |
| Min. bending radius (repeated)     | 250 mm  |
| Number of bends, minimum (typical) | 15 (50) |
| Bending moment                     | 18 Nm   |
| Recommended hanger spacing         | 1.0 m   |

## Return Loss

|                     |                           |
|---------------------|---------------------------|
| Return loss(Band A) | ≤ -26dB 800 to 1000MHz    |
| Return loss(Band B) | ≤ -24dB 1700 to 2700MHz   |
| Return loss(Band C) | ≤ -20.8dB 3300 to 4000MHz |

## Attenuation

| Frequency (MHz) | Attenuation (dB/100m) | Average Power(kW) |
|-----------------|-----------------------|-------------------|
| 100             | 1.11                  | 9.30              |
| 200             | 1.60                  | 6.40              |
| 300             | 1.99                  | 4.82              |
| 400             | 2.31                  | 4.16              |
| 450             | 2.49                  | 3.81              |
| 700             | 3.25                  | 2.80              |

# PLC50E-78A

## 7/8”R Low Loss Coaxial Cable

**PROSE**

|      |      |      |
|------|------|------|
| 800  | 3.42 | 2.75 |
| 900  | 3.61 | 2.62 |
| 960  | 3.73 | 2.59 |
| 1000 | 3.84 | 2.56 |
| 1800 | 5.35 | 1.79 |
| 2000 | 5.62 | 1.70 |
| 2100 | 5.83 | 1.64 |
| 2200 | 6.01 | 1.60 |
| 2500 | 6.48 | 1.48 |
| 2600 | 6.72 | 1.35 |
| 2700 | 6.75 | 1.25 |
| 3000 | 7.20 | 1.17 |
| 3500 | 7.78 | 1.08 |
| 3600 | 7.88 | 1.07 |
| 3800 | 8.15 | 1.03 |
| 4000 | 8.58 | 0.98 |

\*Maximum attenuation value shall be 105% of the nominal attenuation value.

### Marking on cable

|                                                                    |
|--------------------------------------------------------------------|
| PROSE _ PLC50E-78A _ 50Ω _ _ _ _ (DD+MM+SS+YY+NNNNN) _ _ _ _ XXXXm |
| Remark1: Printing Interval: 1m, within ±0.5% accuracy.             |
| Remark2: (DD+MM+SS+YY+NNNNN) means cable code.                     |
| Remark3: XXXXm means cable meter.                                  |

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