

# PRC50FR-114BG D

## 1-1/4" Leaky Cable

**PROSE**

- 1-1/4" Foam Insulation Leaky Cable
- Slotted copper foil outer conductor
- Black flame retardant polyolefin jacket
- Recommended operating frequency: 75~1000 MHz
- CPR B2ca-s1a,d0,a1
- The leaky cable is used in tunnels and subway, etc.
- Indoor application, flame retardant, low smoke, halogen free

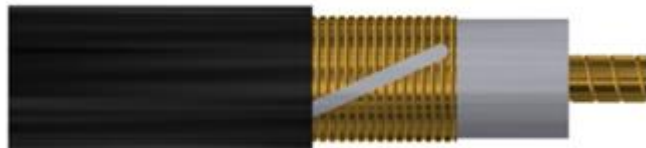


Photo for reference

### Material

|                                               |                                                 |
|-----------------------------------------------|-------------------------------------------------|
| Inner conductor material                      | Helical Copper Tube                             |
| Dielectric material                           | Foam PE                                         |
| Outer conductor material                      | Copper foil                                     |
| Jacket material                               | Flame retardant polyolefin, Black, Halogen free |
| Note: Tape may be used around outer conductor |                                                 |

### Dimensions

|                     |           |
|---------------------|-----------|
| Nominal size        | 1-1/4"    |
| Inner conductor OD. | Ø 12.8 mm |
| Dielectric OD.      | Ø 32.4 mm |
| Outer conductor OD. | Ø 32.8 mm |
| Jacket OD.          | Ø 36.8 mm |

### Reference standard

|                          |                                                                  |
|--------------------------|------------------------------------------------------------------|
| Flame retardant property | IEC 60332-1-2, IEC 60754-1/-2, IEC 61034-2<br>CPR B2ca-s1a,d0,a1 |
|--------------------------|------------------------------------------------------------------|

### Electrical Specification

|                                  |              |
|----------------------------------|--------------|
| Impedance                        | 50 ± 2 Ω     |
| Capacitance                      | 75 pF/m      |
| Insulation Resistance            | ≥5000 MΩx km |
| Insulation Voltage               | 10000 V      |
| Jacket Spark Test Voltage        | 10000 V      |
| Relative Velocity of Propagation | 89 %         |

|                                  |                                         |
|----------------------------------|-----------------------------------------|
| Peak power rating                | 200 kW                                  |
| Operating Frequency Band         | 75~1000 MHz                             |
| Optimum Operating Frequency Band | 300~960 MHz                             |
| Stop Band                        | 240~270 MHz & 480~540 MHz & 720~800 MHz |
| VSWR                             | ≤1.3 75 MHz to 150MHz                   |
|                                  | ≤1.3 300MHz to 480MHz                   |
|                                  | ≤1.3 580MHz to 700MHz                   |
|                                  | ≤1.3 800MHz to 960MHz                   |

## Environmental Specification

|                          |                |
|--------------------------|----------------|
| Installation Temperature | -40°C to +80°C |
| Operating Temperature    | -55°C to +85°C |
| Storage Temperature      | -55°C to +85°C |
| RoHS                     | Compliant      |

## Polarization mode

|              |            |          |
|--------------|------------|----------|
| Polarization | 5-150MHz   | Radial   |
|              | 300-960MHz | Vertical |

## Mechanical Specification

|                            |           |
|----------------------------|-----------|
| Minimum Bend Radius:       |           |
| Single Bend                | 350 mm    |
| Multiple Bend              | 600 mm    |
| Bending Moment             | 15.5 N·m  |
| Minimum Distance to Wall   | 50 mm     |
| Recommended Hanger Spacing | 0.8~1.2 m |
| Tensile Strength           | 2500 N    |

## Standard Conditions

|                                            |                      |
|--------------------------------------------|----------------------|
| Attenuation Test Method                    | IEC 61196-4          |
| Max. Attenuation                           | Nominal value *105%  |
| Attenuation Ambient Temperature            | 20 °C                |
| Average power, ambient temperature         | 40 °C                |
| Average power, inner conductor temperature | 100 °C               |
| Max. Coupling Loss                         | Nominal value +10 dB |
| Coupling Loss Test Method                  | IEC 61196-4          |

## Attenuation and Coupling Loss

| Frequency<br>(MHz) | Attenuation<br>(dB/100m) | Coupling Loss (2m) 50%<br>(dB) | Coupling Loss (2m) 95%<br>(dB) |
|--------------------|--------------------------|--------------------------------|--------------------------------|
| 75                 | 0.82                     | 55                             | 67                             |
| 100                | 0.95                     | 55                             | 65                             |
| 150                | 1.21                     | 57                             | 69                             |
| 350                | 1.94                     | 62                             | 67                             |
| 400                | 2.04                     | 61                             | 66                             |
| 430                | 2.15                     | 62                             | 67                             |
| 450                | 2.19                     | 61                             | 66                             |
| 470                | 2.23                     | 62                             | 66                             |
| 700                | 3.03                     | 55                             | 63                             |
| 800                | 3.23                     | 51                             | 57                             |
| 900                | 3.61                     | 49                             | 55                             |
| 960                | 3.87                     | 51                             | 55                             |
| 1000               | 4.04                     | 53                             | 57                             |

## Marking on cable

|                                                                                                                |
|----------------------------------------------------------------------------------------------------------------|
| PROSE _ PRC50FR-114BG D _ 50Ω _ _ _ _ "B2ca, s1a, d0, a1" _ _ CE _ _ _ _ (DD+MM+SS+YY+NNNNN)_ _ _<br>_ _ 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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