

# HJ7RPV-50



HJ7-50A, HELIAX® Plenum Rated Air Dielectric Coaxial Cable, corrugated copper, 1-5/8 in, off-white PVC jacket

## Product Classification

|                       |                   |
|-----------------------|-------------------|
| <b>Brand</b>          | HELIAX®           |
| <b>Product Series</b> | HJ7-50A           |
| <b>Product Type</b>   | Air coaxial cable |

## Construction Materials

|                                 |                   |
|---------------------------------|-------------------|
| <b>Jacket Material</b>          | PVC               |
| <b>Dielectric Material</b>      | PE                |
| <b>Flexibility</b>              | Standard          |
| <b>Inner Conductor Material</b> | Copper tube       |
| <b>Jacket Color</b>             | Off-white         |
| <b>Outer Conductor Material</b> | Corrugated copper |

## Dimensions

|                             |   |
|-----------------------------|---|
| <b>Nominal Size</b>         | 1-5/8 in                                |
| <b>Cable Volume</b>         | 14.0 ft <sup>3</sup> /kft   1300.6 L/km |
| <b>Cable Weight</b>         | 1.55 kg/m   1.04 lb/ft                  |
| <b>Diameter Over Jacket</b> | 48.514 mm   1.910 in                    |
| <b>Inner Conductor OD</b>   | 18.0340 mm   0.7100 in                  |
| <b>Outer Conductor OD</b>   | 46.482 mm   1.830 in                    |

## Electrical Specifications

|  |                                |
|--|--------------------------------|
| <b>Cable Impedance</b>                 | 50 ohm ±0.5 ohm                |
| <b>Capacitance</b>                     | 22.1 pF/ft   72.5 pF/m         |
| <b>dc Resistance, Inner Conductor</b>  | 0.722 ohms/km   0.220 ohms/kft |
| <b>dc Resistance, Outer Conductor</b>  | 0.328 ohms/km   0.100 ohms/kft |
| <b>dc Test Voltage</b>                 | 11000 V                        |
| <b>Inductance</b>                      | 1.870 μH/m   0.570 μH/ft       |
| <b>Insulation Resistance</b>           | 100000 Mohms•km                |
| <b>Jacket Spark Test Voltage (rms)</b> | 10000 V                        |
| <b>Operating Frequency Band</b>        | 1 – 2700 MHz                   |
| <b>Peak Power</b>                      | 305.0 kW                       |
| <b>Power Attenuation</b>               | 3.356                          |
| <b>Velocity</b>                        | 92 %                           |

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## Environmental Specifications

|                                 |                                     |
|---------------------------------|-------------------------------------|
| <b>Installation Temperature</b> | -5 °C to +60 °C (+23 °F to +140 °F) |
| <b>Operating Temperature</b>    | -20 °C to +85 °C (-4 °F to +185 °F) |
| <b>Storage Temperature</b>      | -20 °C to +85 °C (-4 °F to +185 °F) |

## Mechanical Specifications

|  |                              |
|--|------------------------------|
| <b>Bending Moment</b>                      | 40.7 N-m   30.0 ft lb        |
| <b>Fire Retardancy Test Method</b>         | NFPA 262/CATVP/CMP           |
| <b>Flat Plate Crush Strength</b>           | 175.0 lb/in   3.1 kg/mm      |
| <b>Minimum Bend Radius, Multiple Bends</b> | 508.00 mm   20.00 in         |
| <b>Number of Bends, minimum</b>            | 15                           |
| <b>Number of Bends, typical</b>            | 30                           |
| <b>Pressurization, maximum</b>             | 0 N/mm <sup>2</sup>   30 psi |
| <b>Tensile Strength</b>                    | 340 kg   750 lb              |

## Note

|                         |   |
|-------------------------|---|
| <b>Performance Note</b> | Values typical, unless otherwise stated |
|-------------------------|---|

## Standard Conditions

|   |                 |
|---|-----------------|
| <b>Attenuation, Ambient Temperature</b>           | 20 °C   68 °F   |
| <b>Average Power, Ambient Temperature</b>         | 40 °C   104 °F  |
| <b>Average Power, Inner Conductor Temperature</b> | 100 °C   212 °F |

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## Attenuation

| Frequency (MHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) |
|-----------------|------------------------|-------------------------|--------------------|
| 0.5             | 0.045                  | 0.014                   | 243.45             |
| 1               | 0.064                  | 0.02                    | 171.92             |
| 1.5             | 0.079                  | 0.024                   | 140.23             |
| 2               | 0.091                  | 0.028                   | 121.34             |
| 10              | 0.204                  | 0.062                   | 53.85              |
| 20              | 0.291                  | 0.089                   | 37.86              |
| 30              | 0.358                  | 0.109                   | 30.77              |
| 50              | 0.465                  | 0.142                   | 23.67              |
| 85              | 0.612                  | 0.187                   | 17.99              |
| 88              | 0.623                  | 0.19                    | 17.67              |
| 100             | 0.666                  | 0.203                   | 16.53              |
| 108             | 0.693                  | 0.211                   | 15.88              |
| 150             | 0.824                  | 0.251                   | 13.37              |
| 174             | 0.891                  | 0.271                   | 12.36              |
| 200             | 0.959                  | 0.292                   | 11.48              |
| 204             | 0.969                  | 0.295                   | 11.36              |
| 300             | 1.19                   | 0.363                   | 9.25               |
| 400             | 1.389                  | 0.423                   | 7.92               |
| 450             | 1.481                  | 0.451                   | 7.43               |
| 460             | 1.499                  | 0.457                   | 7.35               |
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| 500             | 1.569                  | 0.478                   | 7.02               |
| 512             | 1.589                  | 0.484                   | 6.93               |
| 600             | 1.733                  | 0.528                   | 6.35               |
| 700             | 1.887                  | 0.575                   | 5.84               |
| 800             | 2.032                  | 0.619                   | 5.42               |
| 824             | 2.066                  | 0.63                    | 5.33               |
| 894             | 2.162                  | 0.659                   | 5.09               |
| 960             | 2.25                   | 0.686                   | 4.89               |
| 1000            | 2.302                  | 0.702                   | 4.78               |
| 1218            | 2.573                  | 0.784                   | 4.28               |
| 1250            | 2.611                  | 0.796                   | 4.22               |
| 1500            | 2.898                  | 0.883                   | 3.80               |
| 1700            | 3.114                  | 0.949                   | 3.54               |
| 1794            | 3.213                  | 0.979                   | 3.43               |
| 1800            | 3.219                  | 0.981                   | 3.42               |
| 2000            | 3.422                  | 1.043                   | 3.22               |
| 2100            | 3.521                  | 1.073                   | 3.13               |
| 2200            | 3.619                  | 1.103                   | 3.04               |
| 2300            | 3.714                  | 1.132                   | 2.96               |
| 2500            | 3.902                  | 1.189                   | 2.82               |
| 2700            | 4.084                  | 1.245                   | 2.70               |

\* Values typical, guaranteed within 5%

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## Regulatory Compliance/Certifications

### Agency

UL/ETL Certification

RoHS 2011/65/EU

ISO 9001:2015

China RoHS SJ/T 11364-2014

### Classification

CATVP/CMP

Compliant by Exemption

Designed, manufactured and/or distributed under this quality management system

Above Maximum Concentration Value (MCV)

