

HJ9HP-50

HJ9-50, HELIAX® High Power Air Dielectric Coaxial Cable, corrugated copper, 5 in, black PE jacket



OBSOLETE

Product Classification

| | |
|-----------------------|-------------------|
| Product Type | Air coaxial cable |
| Product Brand | HELIAX® |
| Product Series | HJ9HP-50 |

General Specifications

| | |
|---------------------|----------|
| Flexibility | Standard |
| Jacket Color | Black |

Dimensions

| | |
|-----------------------------|-------------------------------|
| Diameter Over Jacket | 132.08 mm 5.2 in |
| Inner Conductor OD | 51.308 mm 2.02 in |
| Outer Conductor OD | 127 mm 5 in |
| Nominal Size | 5 in |
| Cable Volume | 10,869.651 L/km 117 ft³/kft |

Electrical Specifications

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|---------------------------------------|------------------------------------|
| Cable Impedance | 50 ohm \pm 0.5 ohm |
| Capacitance | 68.241 pF/m 20.8 pF/ft |
| dc Resistance, Inner Conductor | 0.328 ohms/km 0.1 ohms/kft |
| dc Resistance, Outer Conductor | 0.131 ohms/km 0.04 ohms/kft |
| dc Test Voltage | 26000 V |
| Inductance | 0.187 μ H/m 0.057 μ H/ft |

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| Insulation Resistance | 100000 MOhms-km |
| Jacket Spark Test Voltage (rms) | 12000 V |
| Operating Frequency Band | 1 – 960 MHz |
| Peak Power | 1690 kW |
| Power Attenuation | 13.348 |
| Velocity | 96 % |

Attenuation

| Frequency (MHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) |
|------------------------|-------------------------------|--------------------------------|---------------------------|
| 1.0 | 0.021 | 0.006 | 1,690 |
| 1.5 | 0.026 | 0.008 | 1,690 |
| 2.0 | 0.03 | 0.009 | 1,464.06 |
| 10.0 | 0.069 | 0.021 | 634.45 |
| 20.0 | 0.1 | 0.03 | 438.44 |
| 30.0 | 0.124 | 0.038 | 351.85 |
| 50.0 | 0.165 | 0.05 | 265.34 |
| 85.0 | 0.223 | 0.068 | 196.5 |
| 88.0 | 0.227 | 0.069 | 192.63 |
| 100.0 | 0.245 | 0.075 | 178.93 |
| 108.0 | 0.256 | 0.078 | 171.11 |
| 150.0 | 0.31 | 0.095 | 141.08 |
| 174.0 | 0.339 | 0.103 | 129.13 |
| 200.0 | 0.369 | 0.112 | 118.74 |
| 204.0 | 0.373 | 0.114 | 117.33 |
| 300.0 | 0.473 | 0.144 | 92.58 |
| 400.0 | 0.567 | 0.173 | 77.25 |
| 450.0 | 0.611 | 0.186 | 71.64 |
| 460.0 | 0.62 | 0.189 | 70.64 |
| 500.0 | 0.654 | 0.199 | 66.93 |
| 512.0 | 0.664 | 0.203 | 65.91 |
| 600.0 | 0.737 | 0.225 | 59.42 |
| 700.0 | 0.816 | 0.249 | 53.66 |
| 800.0 | 0.893 | 0.272 | 49.07 |
| 824.0 | 0.91 | 0.278 | 48.1 |
| 894.0 | 0.962 | 0.293 | 45.52 |

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960.0 1.01 0.308 43.36

Material Specifications

| | |
|---------------------------------|-------------------|
| Dielectric Material | PTFE |
| Jacket Material | PE |
| Inner Conductor Material | Copper tube |
| Outer Conductor Material | Corrugated copper |

Mechanical Specifications

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|--|----------------------------------|
| Minimum Bend Radius, multiple Bends | 1270 mm 50 in |
| Number of Bends, minimum | 15 |
| Number of Bends, typical | 30 |
| Tensile Strength | 454 kg 1,000.897 lb |
| Bending Moment | 200 ft lb 271.164 N-m |
| Flat Plate Crush Strength | 4.286 kg/mm 240 lb/in |
| Pressurization, maximum | 0.207 N/mm ² 30 psi |

Environmental Specifications

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|---|--------------------------------------|
| Installation temperature | -40 °C to +60 °C (-40 °F to +140 °F) |
| Operating Temperature | -55 °C to +85 °C (-67 °F to +185 °F) |
| Storage Temperature | -70 °C to +85 °C (-94 °F to +185 °F) |
| Attenuation, Ambient Temperature | 68 °F 20 °C |
| Average Power, Ambient Temperature | 104 °F 40 °C |
| Average Power, Inner Conductor Temperature | 302 °F 150 °C |

Packaging and Weights

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|---------------------|-----------------------|
| Cable weight | 5.06 kg/m 3.4 lb/ft |
|---------------------|-----------------------|

Regulatory Compliance/Certifications

| Agency | Classification |
|---------------|--|
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |

