



HJ8-50B

HJ8-50B, HELIAX® Standard Air Dielectric Coaxial Cable, corrugated copper, 3 in, black PE jacket

Construction Materials

| | |
|--------------------------|-------------------|
| Jacket Material | PE |
| Dielectric Material | PP |
| Flexibility | Standard |
| Inner Conductor Material | Copper tube |
| Jacket Color | Black |
| Outer Conductor Material | Corrugated copper |

Dimensions

| | |
|----------------------|---|
| Nominal Size | 3 in |
| Cable Volume | 36.7 ft ³ /kft 3409.4 L/km |
| Cable Weight | 2.65 kg/m 1.78 lb/ft |
| Diameter Over Jacket | 76.454 mm 3.010 in |
| Inner Conductor OD | 28.9560 mm 1.1400 in |
| Outer Conductor OD | 72.390 mm 2.850 in |

Electrical Specifications

| | |
|---------------------------------|--------------------------------|
| Cable Impedance | 50 ohm ±0.5 ohm |
| Capacitance | 21.7 pF/ft 71.2 pF/m |
| dc Resistance, Inner Conductor | 0.492 ohms/km 0.150 ohms/kft |
| dc Resistance, Outer Conductor | 0.229 ohms/km 0.070 ohms/kft |
| dc Test Voltage | 16000 V |
| Inductance | 1.870 µH/m 0.570 µH/ft |
| Insulation Resistance | 100000 Mohms•km |
| Jacket Spark Test Voltage (rms) | 10000 V |
| Operating Frequency Band | 1 – 1640 MHz |
| Peak Power | 640.0 kW |
| Power Attenuation | 5.997 |
| Velocity | 93% |

Environmental Specifications

| | |
|--------------------------|--------------------------------------|
| Installation Temperature | -40 °C to +60 °C (-40 °F to +140 °F) |
| Operating Temperature | -40 °C to +85 °C (-40 °F to +185 °F) |
| Storage Temperature | -70 °C to +85 °C (-94 °F to +185 °F) |

General Specifications

| | |
|-------|---------|
| Brand | HELIAX® |
|-------|---------|

Mechanical Specifications

| | |
|----------------|-----------------------|
| Bending Moment | 40.7 N-m 30.0 ft lb |
|----------------|-----------------------|

HJ8-50B

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|-------------------------------------|------------------------------|
| Flat Plate Crush Strength | 175.0 lb/in 3.1 kg/mm |
| Minimum Bend Radius, Multiple Bends | 762.00 mm 30.00 in |
| Number of Bends, minimum | 15 |
| Number of Bends, typical | 25 |
| Pressurization, maximum | 0 N/mm ² 30 psi |
| Tensile Strength | 340 kg 750 lb |

Note

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|------------------|---|
| Performance Note | Values typical, unless otherwise stated |
|------------------|---|

Standard Conditions

| | |
|--|-----------------|
| Attenuation, Ambient Temperature | 20 °C 68 °F |
| Average Power, Ambient Temperature | 40 °C 104 °F |
| Average Power, Inner Conductor Temperature | 121 °C 250 °F |

HJ8-50B

Attenuation

| Frequency (MHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) |
|-----------------|------------------------|-------------------------|--------------------|
| 0.5 | 0.029 | 0.009 | 640.00 |
| 1 | 0.041 | 0.013 | 475.54 |
| 1.5 | 0.051 | 0.015 | 387.10 |
| 2 | 0.059 | 0.018 | 334.39 |
| 10 | 0.135 | 0.041 | 146.12 |
| 20 | 0.194 | 0.059 | 101.58 |
| 30 | 0.24 | 0.073 | 81.88 |
| 50 | 0.317 | 0.096 | 62.16 |
| 85 | 0.424 | 0.129 | 46.43 |
| 88 | 0.432 | 0.132 | 45.55 |
| 100 | 0.464 | 0.141 | 42.41 |
| 108 | 0.484 | 0.148 | 40.62 |
| 150 | 0.584 | 0.178 | 33.72 |
| 174 | 0.635 | 0.194 | 30.96 |
| 200 | 0.689 | 0.21 | 28.56 |
| 204 | 0.697 | 0.212 | 28.24 |
| 300 | 0.874 | 0.266 | 22.50 |
| 400 | 1.039 | 0.317 | 18.93 |
| 450 | 1.117 | 0.34 | 17.62 |
| 500 | 1.192 | 0.363 | 16.51 |
| 512 | 1.209 | 0.369 | 16.27 |
| 600 | 1.335 | 0.407 | 14.74 |
| 700 | 1.47 | 0.448 | 13.38 |
| 800 | 1.601 | 0.488 | 12.29 |
| 824 | 1.631 | 0.497 | 12.06 |
| 894 | 1.719 | 0.524 | 11.45 |
| 960 | 1.8 | 0.549 | 10.93 |
| 1000 | 1.849 | 0.563 | 10.64 |
| 1218 | 2.104 | 0.641 | 9.35 |
| 1250 | 2.14 | 0.652 | 9.19 |
| 1500 | 2.418 | 0.737 | 8.14 |

Regulatory Compliance/Certifications

| Agency | Classification |
|---------------|--|
| ISO 9001:2008 | Designed, manufactured and/or distributed under this quality management system |