



FSJ4RK-50B, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 1/2 in, black non-halogenated, fire retardant polyolefin jacket B2ca-s1a-d0-a1 (CPR testing is conducted annually please reference the website for latest classification)

Product Classification

| | |
|-----------------------|---|
| Product Type | Coaxial wireless cable |
| Product Brand | HELIAX® SureFlex® |
| Product Series | FSJ4-50B |
| Ordering Note | CommScope® standard product in Asia Pacific |

General Specifications

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|---------------------|---------------|
| Flexibility | Superflexible |
| Jacket Color | Black |

Dimensions

| | |
|---------------------------------|---------------------|
| Diameter Over Dielectric | 8.89 mm 0.35 in |
| Diameter Over Jacket | 13.462 mm 0.53 in |
| Inner Conductor OD | 3.556 mm 0.14 in |
| Outer Conductor OD | 12.192 mm 0.48 in |
| Nominal Size | 1/2 in |

Electrical Specifications

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|---------------------------------------|-------------------------------|
| Cable Impedance | 50 ohm ±1 ohm |
| Capacitance | 82.7 pF/m 25.207 pF/ft |
| dc Resistance, Inner Conductor | 2.69 ohms/km 0.82 ohms/kft |
| dc Resistance, Outer Conductor | 5.12 ohms/km 1.561 ohms/kft |
| dc Test Voltage | 2500 V |
| Inductance | 0.207 µH/m 0.063 µH/ft |
| Insulation Resistance | 100000 MOhms-km |

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| Jacket Spark Test Voltage (rms) | 4000 V |
| Operating Frequency Band | 1 – 10200 MHz |
| Peak Power | 22.5 kW |
| Velocity | 81 % |

Attenuation

| Frequency (MHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) |
|------------------------|-------------------------------|--------------------------------|---------------------------|
| 1.0 | 0.327 | 0.1 | 22.5 |
| 1.5 | 0.401 | 0.122 | 22.5 |
| 2.0 | 0.463 | 0.141 | 22.5 |
| 10.0 | 1.044 | 0.318 | 10.12 |
| 20.0 | 1.485 | 0.453 | 7.11 |
| 30.0 | 1.828 | 0.557 | 5.78 |
| 50.0 | 2.377 | 0.724 | 4.44 |
| 85.0 | 3.13 | 0.954 | 3.38 |
| 88.0 | 3.187 | 0.971 | 3.32 |
| 100.0 | 3.406 | 1.038 | 3.1 |
| 108.0 | 3.546 | 1.081 | 2.98 |
| 150.0 | 4.214 | 1.285 | 2.51 |
| 174.0 | 4.558 | 1.389 | 2.32 |
| 200.0 | 4.908 | 1.496 | 2.15 |
| 204.0 | 4.96 | 1.512 | 2.13 |
| 300.0 | 6.095 | 1.858 | 1.73 |
| 400.0 | 7.121 | 2.17 | 1.48 |
| 450.0 | 7.592 | 2.314 | 1.39 |
| 460.0 | 7.684 | 2.342 | 1.37 |
| 500.0 | 8.042 | 2.451 | 1.31 |
| 512.0 | 8.148 | 2.483 | 1.3 |
| 600.0 | 8.891 | 2.71 | 1.19 |
| 700.0 | 9.683 | 2.951 | 1.09 |
| 800.0 | 10.431 | 3.179 | 1.01 |
| 824.0 | 10.605 | 3.232 | 1 |
| 894.0 | 11.101 | 3.383 | 0.95 |
| 960.0 | 11.555 | 3.522 | 0.91 |
| 1000.0 | 11.824 | 3.604 | 0.89 |

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|---------|--------|--------|------|
| 1218.0 | 13.226 | 4.031 | 0.8 |
| 1250.0 | 13.423 | 4.091 | 0.79 |
| 1500.0 | 14.906 | 4.543 | 0.71 |
| 1700.0 | 16.027 | 4.885 | 0.66 |
| 1794.0 | 16.537 | 5.04 | 0.64 |
| 1800.0 | 16.57 | 5.05 | 0.64 |
| 2000.0 | 17.624 | 5.371 | 0.6 |
| 2100.0 | 18.137 | 5.528 | 0.58 |
| 2200.0 | 18.641 | 5.682 | 0.57 |
| 2300.0 | 19.138 | 5.833 | 0.55 |
| 2500.0 | 20.11 | 6.129 | 0.53 |
| 2700.0 | 21.056 | 6.418 | 0.5 |
| 3000.0 | 22.432 | 6.837 | 0.47 |
| 3400.0 | 24.198 | 7.375 | 0.44 |
| 3600.0 | 25.055 | 7.636 | 0.42 |
| 3700.0 | 25.478 | 7.765 | 0.41 |
| 3800.0 | 25.898 | 7.893 | 0.41 |
| 3900.0 | 26.314 | 8.02 | 0.4 |
| 4000.0 | 26.727 | 8.146 | 0.4 |
| 4100.0 | 27.136 | 8.271 | 0.39 |
| 4200.0 | 27.542 | 8.394 | 0.38 |
| 4300.0 | 27.946 | 8.517 | 0.38 |
| 4400.0 | 28.346 | 8.639 | 0.37 |
| 4500.0 | 28.744 | 8.761 | 0.37 |
| 4600.0 | 29.139 | 8.881 | 0.36 |
| 4700.0 | 29.531 | 9.001 | 0.36 |
| 4800.0 | 29.921 | 9.119 | 0.35 |
| 4900.0 | 30.308 | 9.238 | 0.35 |
| 5000.0 | 30.693 | 9.355 | 0.34 |
| 6000.0 | 34.427 | 10.493 | 0.31 |
| 8000.0 | 41.403 | 12.619 | 0.26 |
| 8800.0 | 44.054 | 13.427 | 0.24 |
| 10000.0 | 47.914 | 14.603 | 0.22 |

Material Specifications

Dielectric Material

Foam PE

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|---------------------------------|--|
| Jacket Material | Non-halogenated, fire retardant polyolefin |
| Inner Conductor Material | Copper-clad aluminum wire |
| Outer Conductor Material | Corrugated copper |

Mechanical Specifications

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| Minimum Bend Radius, multiple Bends | 31.75 mm 1.25 in |
| Minimum Bend Radius, single Bend | 31.75 mm 1.25 in |
| Number of Bends, minimum | 30 |
| Number of Bends, typical | 50 |
| Tensile Strength | 79 kg 174.165 lb |
| Bending Moment | 2.7 N-m 23.897 in lb |
| Flat Plate Crush Strength | 2 kg/mm 111.995 lb/in |

Environmental Specifications

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| Installation temperature | -40 °C to +60 °C (-40 °F to +140 °F) |
| Operating Temperature | -40 °C to +60 °C (-40 °F to +140 °F) |
| Storage Temperature | -40 °C to +60 °C (-40 °F to +140 °F) |
| Attenuation, Ambient Temperature | 68 °F 20 °C |
| Average Power, Ambient Temperature | 104 °F 40 °C |
| Average Power, Inner Conductor Temperature | 212 °F 100 °C |
| EN50575 CPR Cable EuroClass Fire Performance | B2ca |
| EN50575 CPR Cable EuroClass Smoke Rating | s1a |
| EN50575 CPR Cable EuroClass Droplets Rating | d0 |
| EN50575 CPR Cable EuroClass Acidity Rating | a1 |
| Fire Retardancy Test Method | IEC 60332-1-2 NFPA 130-2010 UL 1666/CATVR/CMR |
| Smoke Index Test Method | IEC 61034 |
| Toxicity Index Test Method | IEC 60754-1 IEC 60754-2 |

Packaging and Weights

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|---------------------|-------------------------|
| Cable weight | 0.24 kg/m 0.161 lb/ft |
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Regulatory Compliance/Certifications

| Agency | Classification |
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| CENELEC | EN 50575 compliant, Declaration of Performance (DoP) available |
| CHINA-ROHS | Below maximum concentration value |
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |
| REACH-SVHC | Compliant as per SVHC revision on www.commscope.com/ProductCompliance |
| ROHS | Compliant |
| UL/ETL Certification | CATVR/CMR |

