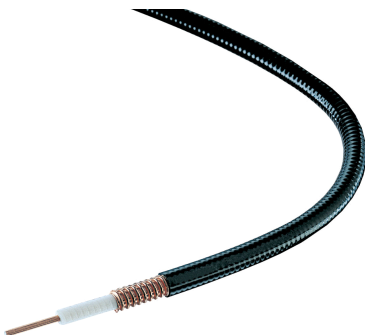


# Product Specifications

COMMSCOPE®



## FSJ2RK-50

**FSJ2-50, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 3/8 in, black non-halogenated, fire retardant polyolefin jacket B2ca-s1a,d0**

### Product Classification

|                |                        |
|----------------|------------------------|
| Brand          | HELIAX®   SureFlex®    |
| Product Series | FSJ2-50                |
| Product Type   | Coaxial wireless cable |

### Standards And Qualifications

|                             |                 |
|-----------------------------|-----------------|
| EN50575 CPR Cable EuroClass | B2ca   s1a   d0 |
|-----------------------------|-----------------|

### Construction Materials

|                          |                                            |
|--------------------------|--------------------------------------------|
| Jacket Material          | Non-halogenated, fire retardant polyolefin |
| Outer Conductor Material | Corrugated copper                          |
| Dielectric Material      | Foam PE                                    |
| Flexibility              | Superflexible                              |
| Inner Conductor Material | Copper-clad aluminum wire                  |
| Jacket Color             | Black                                      |

### Dimensions

|                          |                        |
|--------------------------|------------------------|
| Nominal Size             | 3/8 in                 |
| Cable Weight             | 0.09 lb/ft   0.13 kg/m |
| Diameter Over Dielectric | 7.112 mm   0.280 in    |
| Diameter Over Jacket     | 10.922 mm   0.430 in   |
| Inner Conductor OD       | 2.7940 mm   0.1100 in  |
| Outer Conductor OD       | 9.652 mm   0.380 in    |

### Electrical Specifications

|                                 |                                    |
|---------------------------------|------------------------------------|
| Cable Impedance                 | 50 ohm $\pm$ 1 ohm                 |
| Capacitance                     | 24.0 pF/ft   80.0 pF/m             |
| dc Resistance, Inner Conductor  | 1.290 ohms/kft   4.232 ohms/km     |
| dc Resistance, Outer Conductor  | 1.520 ohms/kft   4.987 ohms/km     |
| dc Test Voltage                 | 2300 V                             |
| Inductance                      | 0.200 $\mu$ H/m   0.061 $\mu$ H/ft |
| Insulation Resistance           | 100000 Mohms•km                    |
| Jacket Spark Test Voltage (rms) | 4000 V                             |
| Operating Frequency Band        | 1 – 13400 MHz                      |
| Peak Power                      | 13.2 kW                            |

# Product Specifications

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Velocity 83%

## Environmental Specifications

|                          |                                      |
|--------------------------|--------------------------------------|
| 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) |

## General Specifications

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

## Mechanical Specifications

|                                     |                               |
|-------------------------------------|-------------------------------|
| Bending Moment                      | 2.3 N-m   1.7 ft lb           |
| Fire Retardancy Test Method         | NFPA 130-2010   UL 1666/CATVR |
| Flat Plate Crush Strength           | 100.0 lb/in   1.8 kg/mm       |
| Minimum Bend Radius, Multiple Bends | 25.40 mm   1.00 in            |
| Minimum Bend Radius, Single Bend    | 25.40 mm   1.00 in            |
| Number of Bends, minimum            | 30                            |
| Number of Bends, typical            | 50                            |
| Smoke Index Test Method             | IEC 61034                     |
| Tensile Strength                    | 95 kg   210 lb                |
| Toxicity Index Test Method          | IEC 60754-1   IEC 60754-2     |

## Note

|                  |                                         |
|------------------|-----------------------------------------|
| 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 | 100 °C   212 °F |

## Return Loss/VSWR

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|------|------------------|
| 680–960 MHz    | 1.2  | 20.80            |
| 1700–2200 MHz  | 1.2  | 20.80            |
| 2200–2700 MHz  | 1.43 | 15.00            |

# Product Specifications

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## Attenuation

| Frequency (MHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) |
|-----------------|------------------------|-------------------------|--------------------|
| 0.5             | 0.27                   | 0.082                   | 13.20              |
| 1               | 0.383                  | 0.117                   | 13.20              |
| 1.5             | 0.469                  | 0.143                   | 13.20              |
| 2               | 0.542                  | 0.165                   | 13.20              |
| 10              | 1.219                  | 0.372                   | 6.97               |
| 20              | 1.732                  | 0.528                   | 4.91               |
| 30              | 2.128                  | 0.649                   | 3.99               |
| 50              | 2.762                  | 0.842                   | 3.08               |
| 85              | 3.626                  | 1.105                   | 2.34               |
| 88              | 3.691                  | 1.125                   | 2.30               |
| 100             | 3.943                  | 1.202                   | 2.16               |
| 108             | 4.103                  | 1.25                    | 2.07               |
| 150             | 4.864                  | 1.482                   | 1.75               |
| 174             | 5.254                  | 1.601                   | 1.62               |
| 200             | 5.65                   | 1.722                   | 1.50               |
| 204             | 5.709                  | 1.74                    | 1.49               |
| 300             | 6.99                   | 2.13                    | 1.22               |
| 400             | 8.139                  | 2.481                   | 1.04               |
| 450             | 8.665                  | 2.641                   | 0.98               |
| 500             | 9.166                  | 2.794                   | 0.93               |
| 512             | 9.283                  | 2.829                   | 0.92               |
| 600             | 10.107                 | 3.081                   | 0.84               |
| 700             | 10.983                 | 3.347                   | 0.77               |
| 800             | 11.807                 | 3.599                   | 0.72               |
| 824             | 11.998                 | 3.657                   | 0.71               |
| 894             | 12.542                 | 3.823                   | 0.68               |
| 960             | 13.04                  | 3.974                   | 0.65               |
| 1000            | 13.334                 | 4.064                   | 0.64               |
| 1218            | 14.861                 | 4.529                   | 0.57               |
| 1250            | 15.075                 | 4.595                   | 0.56               |
| 1500            | 16.68                  | 5.084                   | 0.51               |
| 1700            | 17.887                 | 5.452                   | 0.48               |
| 1794            | 18.436                 | 5.619                   | 0.46               |
| 1800            | 18.47                  | 5.629                   | 0.46               |
| 2000            | 19.599                 | 5.974                   | 0.43               |
| 2100            | 20.147                 | 6.141                   | 0.42               |
| 2200            | 20.685                 | 6.305                   | 0.41               |
| 2300            | 21.214                 | 6.466                   | 0.40               |
| 2500            | 22.247                 | 6.78                    | 0.38               |
| 2700            | 23.249                 | 7.086                   | 0.37               |
| 3000            | 24.701                 | 7.529                   | 0.34               |
| 3400            | 26.558                 | 8.094                   | 0.32               |
| 3700            | 27.899                 | 8.503                   | 0.30               |
| 4000            | 29.201                 | 8.9                     | 0.29               |
| 5000            | 33.316                 | 10.154                  | 0.26               |
| 6000            | 37.158                 | 11.325                  | 0.23               |
| 8000            | 44.264                 | 13.491                  | 0.19               |
| 8800            | 46.943                 | 14.308                  | 0.18               |
| 10000           | 50.826                 | 15.491                  | 0.17               |
| 12000           | 57.001                 | 17.373                  | 0.15               |

\* Values typical, guaranteed within 5%

# Product Specifications

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FSJ2RK-50

## Regulatory Compliance/Certifications

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