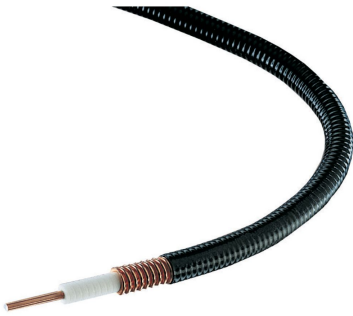


# FSJ4-50B

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FSJ4-50B, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 1/2 in, black PE jacket (Halogen free jacketing non-fire-retardant)

## Product Classification

|                       |                                      |
|-----------------------|--------------------------------------|
| <b>Product Type</b>   | Coaxial wireless cable               |
| <b>Product Brand</b>  | HELIAX®   SureFlex®                  |
| <b>Product Series</b> | FSJ4-50B                             |
| <b>Ordering Note</b>  | CommScope® standard product (Global) |

## General Specifications

|                         |                                                  |
|-------------------------|--------------------------------------------------|
| <b>Flexibility</b>      | Superflexible                                    |
| <b>Jacket Color</b>     | Black                                            |
| <b>Performance Note</b> | Attenuation values typical, guaranteed within 5% |

## Dimensions

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

## Electrical Specifications

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

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|                                        |                 |
|----------------------------------------|-----------------|
| <b>Insulation Resistance</b>           | 100000 MOhms-km |
| <b>Jacket Spark Test Voltage (rms)</b> | 5000 V          |
| <b>Operating Frequency Band</b>        | 1 – 10200 MHz   |
| <b>Peak Power</b>                      | 22.5 kW         |
| <b>Velocity</b>                        | 81 %            |

## VSWR/Return Loss

| <b>Frequency Band</b> | <b>VSWR</b> | <b>Return Loss (dB)</b> |
|-----------------------|-------------|-------------------------|
| <b>680–800 MHz</b>    | 1.201       | 20.79                   |
| <b>800–960 MHz</b>    | 1.201       | 20.79                   |
| <b>1700–2200 MHz</b>  | 1.201       | 20.79                   |
| <b>2300–2700 MHz</b>  | 1.201       | 20.79                   |

## Attenuation

| <b>Frequency (MHz)</b> | <b>Attenuation (dB/100 m)</b> | <b>Attenuation (dB/100 ft)</b> | <b>Average Power (kW)</b> |
|------------------------|-------------------------------|--------------------------------|---------------------------|
| <b>1.0</b>             | 0.327                         | 0.1                            | 22.5                      |
| <b>1.5</b>             | 0.401                         | 0.122                          | 22.5                      |
| <b>2.0</b>             | 0.463                         | 0.141                          | 22.5                      |
| <b>10.0</b>            | 1.044                         | 0.318                          | 10.14                     |
| <b>20.0</b>            | 1.485                         | 0.453                          | 7.12                      |
| <b>30.0</b>            | 1.828                         | 0.557                          | 5.79                      |
| <b>50.0</b>            | 2.377                         | 0.724                          | 4.45                      |
| <b>85.0</b>            | 3.13                          | 0.954                          | 3.38                      |
| <b>88.0</b>            | 3.187                         | 0.971                          | 3.32                      |
| <b>100.0</b>           | 3.406                         | 1.038                          | 3.11                      |
| <b>108.0</b>           | 3.546                         | 1.081                          | 2.98                      |
| <b>150.0</b>           | 4.214                         | 1.285                          | 2.51                      |
| <b>174.0</b>           | 4.558                         | 1.389                          | 2.32                      |
| <b>200.0</b>           | 4.908                         | 1.496                          | 2.16                      |
| <b>204.0</b>           | 4.96                          | 1.512                          | 2.13                      |
| <b>300.0</b>           | 6.095                         | 1.858                          | 1.74                      |
| <b>400.0</b>           | 7.121                         | 2.17                           | 1.49                      |
| <b>450.0</b>           | 7.592                         | 2.314                          | 1.39                      |
| <b>460.0</b>           | 7.684                         | 2.342                          | 1.38                      |
| <b>500.0</b>           | 8.042                         | 2.451                          | 1.32                      |

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|               |        |       |      |
|---------------|--------|-------|------|
| <b>512.0</b>  | 8.148  | 2.483 | 1.3  |
| <b>600.0</b>  | 8.891  | 2.71  | 1.19 |
| <b>700.0</b>  | 9.683  | 2.951 | 1.09 |
| <b>800.0</b>  | 10.431 | 3.179 | 1.01 |
| <b>824.0</b>  | 10.605 | 3.232 | 1    |
| <b>894.0</b>  | 11.101 | 3.383 | 0.95 |
| <b>960.0</b>  | 11.555 | 3.522 | 0.92 |
| <b>1000.0</b> | 11.824 | 3.604 | 0.89 |
| <b>1218.0</b> | 13.226 | 4.031 | 0.8  |
| <b>1250.0</b> | 13.423 | 4.091 | 0.79 |
| <b>1500.0</b> | 14.906 | 4.543 | 0.71 |
| <b>1700.0</b> | 16.027 | 4.885 | 0.66 |
| <b>1794.0</b> | 16.537 | 5.04  | 0.64 |
| <b>1800.0</b> | 16.57  | 5.05  | 0.64 |
| <b>2000.0</b> | 17.624 | 5.371 | 0.6  |
| <b>2100.0</b> | 18.137 | 5.528 | 0.58 |
| <b>2200.0</b> | 18.641 | 5.682 | 0.57 |
| <b>2300.0</b> | 19.138 | 5.833 | 0.55 |
| <b>2500.0</b> | 20.11  | 6.129 | 0.53 |
| <b>2700.0</b> | 21.056 | 6.418 | 0.5  |
| <b>3000.0</b> | 22.432 | 6.837 | 0.47 |
| <b>3400.0</b> | 24.198 | 7.375 | 0.44 |
| <b>3600.0</b> | 25.055 | 7.636 | 0.42 |
| <b>3700.0</b> | 25.478 | 7.765 | 0.42 |
| <b>3800.0</b> | 25.898 | 7.893 | 0.41 |
| <b>3900.0</b> | 26.314 | 8.02  | 0.4  |
| <b>4000.0</b> | 26.727 | 8.146 | 0.4  |
| <b>4100.0</b> | 27.136 | 8.271 | 0.39 |
| <b>4200.0</b> | 27.542 | 8.394 | 0.38 |
| <b>4300.0</b> | 27.946 | 8.517 | 0.38 |
| <b>4400.0</b> | 28.346 | 8.639 | 0.37 |
| <b>4500.0</b> | 28.744 | 8.761 | 0.37 |
| <b>4600.0</b> | 29.139 | 8.881 | 0.36 |
| <b>4700.0</b> | 29.531 | 9.001 | 0.36 |
| <b>4800.0</b> | 29.921 | 9.119 | 0.35 |

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|                |        |        |      |
|----------------|--------|--------|------|
| <b>4900.0</b>  | 30.308 | 9.238  | 0.35 |
| <b>5000.0</b>  | 30.693 | 9.355  | 0.34 |
| <b>6000.0</b>  | 34.427 | 10.493 | 0.31 |
| <b>8000.0</b>  | 41.403 | 12.619 | 0.26 |
| <b>8800.0</b>  | 44.054 | 13.427 | 0.24 |
| <b>10000.0</b> | 47.914 | 14.603 | 0.22 |

## Material Specifications

|                                 |                           |
|---------------------------------|---------------------------|
| <b>Dielectric Material</b>      | Foam PE                   |
| <b>Jacket Material</b>          | PE                        |
| <b>Inner Conductor Material</b> | Copper-clad aluminum wire |
| <b>Outer Conductor Material</b> | Corrugated copper         |

## Mechanical Specifications

|                                            |                         |
|--------------------------------------------|-------------------------|
| <b>Minimum Bend Radius, multiple Bends</b> | 31.75 mm   1.25 in      |
| <b>Minimum Bend Radius, single Bend</b>    | 31.75 mm   1.25 in      |
| <b>Number of Bends, minimum</b>            | 20                      |
| <b>Number of Bends, typical</b>            | 50                      |
| <b>Tensile Strength</b>                    | 79 kg   174.165 lb      |
| <b>Bending Moment</b>                      | 2.7 N-m   23.897 in lb  |
| <b>Flat Plate Crush Strength</b>           | 2 kg/mm   111.995 lb/in |

## Environmental Specifications

|                                                   |                                      |
|---------------------------------------------------|--------------------------------------|
| <b>Installation temperature</b>                   | -40 °C to +60 °C (-40 °F to +140 °F) |
| <b>Operating Temperature</b>                      | -55 °C to +85 °C (-67 °F to +185 °F) |
| <b>Storage Temperature</b>                        | -70 °C to +85 °C (-94 °F to +185 °F) |
| <b>Attenuation, Ambient Temperature</b>           | 68 °F   20 °C                        |
| <b>Average Power, Ambient Temperature</b>         | 104 °F   40 °C                       |
| <b>Average Power, Inner Conductor Temperature</b> | 212 °F   100 °C                      |

## Packaging and Weights

|                     |                         |
|---------------------|-------------------------|
| <b>Cable weight</b> | 0.21 kg/m   0.141 lb/ft |
|---------------------|-------------------------|

## Regulatory Compliance/Certifications

# FSJ4-50B

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## Agency

CENELEC

CHINA-ROHS

ISO 9001:2015

REACH-SVHC

ROHS

## Classification

EN 50575 compliant, Declaration of Performance (DoP) available

Below maximum concentration value

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

Compliant as per SVHC revision on [www.commscope.com/ProductCompliance](http://www.commscope.com/ProductCompliance)

Compliant

