

F1A-PNMDR-36N



FSJ1-50A SureFlex® Jumper with interface types N Male and 7-16 DIN Male Right Angle, 0.91 m

Product Classification

| | |
|-----------------------|---------------------|
| Product Type | SureFlex® standard |
| Product Brand | HELIAX® SureFlex® |
| Product Series | FSJ1-50A |

General Specifications

| | |
|---|---------------|
| Body Style, Connector A | Straight |
| Body Style, Connector B | Right angle |
| Interface, Connector A | N Male |
| Interface, Connector B | 7-16 DIN Male |
| Specification Sheet Revision Level | A |

Dimensions

| | |
|---------------------|-------------------|
| Length | 0.91 m 2.986 ft |
| Nominal Size | 1/4 in |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|-----------------------|-------------|-------------------------|
| 700–3000 MHz | 1.288 | 18 |

Jumper Assembly Sample Label

F1A-PNMDR-36N



Environmental Specifications

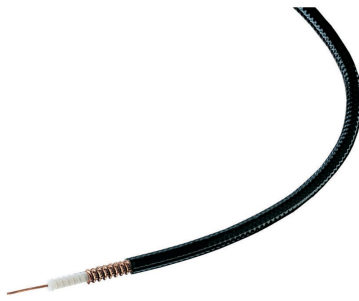
Immersion Test Method Meets IEC 60529:2001, IP68 in mated condition

Regulatory Compliance/Certifications

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

Included Products

- 35422-33 – Heat Treated FSJ1-50A, HELIAX® Superflexible Low Density Foam Coaxial Cable, corrugated copper, 1/4 in, black PE Jacket
- 35422-75 – Heat Treated FSJ1RK-50B, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 1/4 in, black non-halogenated, fire retardant polyolefin jacket
- FSJ1-50A – FSJ1-50A, HELIAX® Superflexible Low Density Foam Coaxial Cable, corrugated copper, 1/4 in, black PE jacket
- FSJ1RK-50A – FSJ1-50A, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 1/4 in, black non-halogenated, fire retardant polyolefin jacket, B2ca s1a dO a1 Compliant



Heat Treated FSJ1-50A, HELIAX® Superflexible Low Density Foam Coaxial Cable, corrugated copper, 1/4 in, black PE Jacket

Product Classification

| | |
|-----------------------|------------------------|
| Product Type | Coaxial wireless cable |
| Product Brand | HELIAX® |
| Product Series | FSJ1-50A |

General Specifications

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

Dimensions

| | |
|---------------------------------|---------------------|
| Diameter Over Dielectric | 4.826 mm 0.19 in |
| Diameter Over Jacket | 7.366 mm 0.29 in |
| Inner Conductor OD | 1.905 mm 0.075 in |
| Outer Conductor OD | 6.35 mm 0.25 in |
| Nominal Size | 1/4 in |

Electrical Specifications

| | |
|---------------------------------------|----------------------------|
| Cable Impedance | 50 ohm ±1 ohm |
| Capacitance | 79.4 pF/m 24.201 pF/ft |
| dc Resistance, Inner Conductor | 9.843 ohms/km 3 ohms/kft |
| dc Resistance, Outer Conductor | 6.562 ohms/km 2 ohms/kft |
| dc Test Voltage | 1600 V |
| Inductance | 0.2 µH/m 0.061 µH/ft |
| Insulation Resistance | 100000 MOhms-km |

35422-33

| | |
|--|---------------|
| Jacket Spark Test Voltage (rms) | 5000 V |
| Operating Frequency Band | 1 – 18000 MHz |
| Peak Power | 6.4 kW |
| Velocity | 82 % |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|-----------------------|-------------|-------------------------|
| 680–960 MHz | 1.201 | 20.79 |
| 1700–2200 MHz | 1.201 | 20.79 |
| 2200–2700 MHz | 1.433 | 14.99 |

Attenuation

| Frequency (MHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) |
|------------------------|-------------------------------|--------------------------------|
| 0.5 | 0.407 | 0.124 |
| 1.0 | 0.577 | 0.176 |
| 1.5 | 0.707 | 0.215 |
| 2.0 | 0.816 | 0.249 |
| 10.0 | 1.833 | 0.559 |
| 20.0 | 2.6 | 0.792 |
| 30.0 | 3.192 | 0.973 |
| 50.0 | 4.136 | 1.261 |
| 85.0 | 5.419 | 1.652 |
| 88.0 | 5.516 | 1.681 |
| 100.0 | 5.889 | 1.795 |
| 108.0 | 6.12 | 1.867 |
| 150.0 | 7.25 | 2.21 |
| 174.0 | 7.825 | 2.385 |
| 200.0 | 8.408 | 2.563 |
| 204.0 | 8.495 | 2.589 |
| 300.0 | 10.373 | 3.162 |
| 400.0 | 12.051 | 3.673 |
| 450.0 | 12.817 | 3.906 |
| 500.0 | 13.545 | 4.128 |
| 512.0 | 13.715 | 4.18 |
| 600.0 | 14.909 | 4.544 |

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| | | |
|---------|---------|--------|
| 700.0 | 16.175 | 4.93 |
| 800.0 | 17.362 | 5.292 |
| 824.0 | 17.637 | 5.376 |
| 894.0 | 18.42 | 5.614 |
| 960.0 | 19.134 | 5.832 |
| 1000.0 | 19.556 | 5.96 |
| 1218.0 | 21.738 | 6.626 |
| 1250.0 | 22.044 | 6.719 |
| 1500.0 | 24.326 | 7.414 |
| 1700.0 | 26.038 | 7.936 |
| 1794.0 | 26.813 | 8.172 |
| 1800.0 | 26.862 | 8.187 |
| 2000.0 | 28.455 | 8.673 |
| 2100.0 | 29.227 | 8.908 |
| 2200.0 | 29.984 | 9.139 |
| 2300.0 | 30.727 | 9.365 |
| 2500.0 | 32.174 | 9.806 |
| 2700.0 | 33.576 | 10.233 |
| 3000.0 | 35.602 | 10.851 |
| 3400.0 | 38.183 | 11.638 |
| 3700.0 | 40.041 | 12.204 |
| 4000.0 | 41.841 | 12.753 |
| 5000.0 | 47.5 | 14.477 |
| 6000.0 | 52.747 | 16.077 |
| 8000.0 | 62.37 | 19.01 |
| 8800.0 | 65.974 | 20.108 |
| 10000.0 | 71.173 | 21.693 |
| 12000.0 | 79.393 | 24.198 |
| 14000.0 | 87.172 | 26.569 |
| 15800.0 | 93.872 | 28.611 |
| 16000.0 | 94.601 | 28.833 |
| 18000.0 | 101.745 | 31.01 |

Material Specifications

Dielectric Material

Foam PE

Jacket Material

PE

35422-33

| | |
|---------------------------------|---------------------------|
| Inner Conductor Material | Copper-clad aluminum wire |
| Outer Conductor Material | Corrugated copper |

Mechanical Specifications

| | |
|--|---------------------------|
| Minimum Bend Radius, multiple Bends | 25.4 mm 1 in |
| Minimum Bend Radius, single Bend | 25.4 mm 1 in |
| Number of Bends, minimum | 15 |
| Number of Bends, typical | 20 |
| Tensile Strength | 68 kg 149.914 lb |
| Bending Moment | 1.1 N-m 9.736 in lb |
| Flat Plate Crush Strength | 1.8 kg/mm 100.795 lb/in |

Environmental Specifications

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

Packaging and Weights

| | |
|---------------------|-------------------------|
| Cable weight | 0.07 kg/m 0.047 lb/ft |
|---------------------|-------------------------|

Regulatory Compliance/Certifications

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





Heat Treated FSJ1RK-50B, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 1/4 in, black non-halogenated, fire retardant polyolefin jacket

Product Classification

| | |
|-----------------------|------------------------|
| Product Type | Coaxial wireless cable |
| Product Brand | HELIAX® |
| Product Series | FSJ1-50B |

General Specifications

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

Dimensions

| | |
|---------------------------------|---------------------|
| Diameter Over Dielectric | 4.826 mm 0.19 in |
| Diameter Over Jacket | 7.62 mm 0.3 in |
| Inner Conductor OD | 1.905 mm 0.075 in |
| Outer Conductor OD | 6.35 mm 0.25 in |
| Nominal Size | 1/4 in |

Electrical Specifications

| | |
|---------------------------------------|----------------------------|
| Cable Impedance | 50 ohm ±1 ohm |
| Capacitance | 79.4 pF/m 24.201 pF/ft |
| dc Resistance, Inner Conductor | 9.843 ohms/km 3 ohms/kft |
| dc Resistance, Outer Conductor | 6.562 ohms/km 2 ohms/kft |
| dc Test Voltage | 1600 V |
| Inductance | 0.2 µH/m 0.061 µH/ft |
| Insulation Resistance | 100000 MOhms-km |

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| | |
|--|---------------|
| Jacket Spark Test Voltage (rms) | 4000 V |
| Operating Frequency Band | 1 – 18000 MHz |
| Peak Power | 6.4 kW |
| Velocity | 82 % |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|-----------------------|-------------|-------------------------|
| 680–960 MHz | 1.201 | 20.79 |
| 1700–2200 MHz | 1.201 | 20.79 |
| 2200–2700 MHz | 1.433 | 14.99 |

Attenuation

| Frequency (MHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) |
|------------------------|-------------------------------|--------------------------------|---------------------------|
| 1.0 | 0.577 | 0.176 | 6.4 |
| 1.5 | 0.707 | 0.215 | 6.4 |
| 2.0 | 0.816 | 0.249 | 6.4 |
| 10.0 | 1.833 | 0.559 | 3.99 |
| 20.0 | 2.6 | 0.792 | 2.81 |
| 30.0 | 3.192 | 0.973 | 2.29 |
| 50.0 | 4.136 | 1.261 | 1.77 |
| 85.0 | 5.419 | 1.652 | 1.35 |
| 88.0 | 5.516 | 1.681 | 1.33 |
| 100.0 | 5.889 | 1.795 | 1.24 |
| 108.0 | 6.125 | 1.867 | 1.19 |
| 150.0 | 7.25 | 2.21 | 1.01 |
| 174.0 | 7.825 | 2.385 | 0.93 |
| 200.0 | 8.408 | 2.563 | 0.87 |
| 204.0 | 8.495 | 2.589 | 0.86 |
| 300.0 | 10.373 | 3.162 | 0.71 |
| 400.0 | 12.051 | 3.673 | 0.61 |
| 450.0 | 12.817 | 3.906 | 0.57 |
| 460.0 | 12.965 | 3.952 | 0.56 |
| 500.0 | 13.545 | 4.128 | 0.54 |
| 512.0 | 13.715 | 4.18 | 0.53 |
| 600.0 | 14.909 | 4.544 | 0.49 |

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| | | | |
|---------------|--------|--------|------|
| 700.0 | 16.175 | 4.93 | 0.45 |
| 800.0 | 17.362 | 5.292 | 0.42 |
| 824.0 | 17.637 | 5.376 | 0.41 |
| 894.0 | 18.42 | 5.614 | 0.4 |
| 960.0 | 19.134 | 5.832 | 0.38 |
| 1000.0 | 19.556 | 5.96 | 0.37 |
| 1218.0 | 21.738 | 6.626 | 0.34 |
| 1250.0 | 22.044 | 6.719 | 0.33 |
| 1500.0 | 24.326 | 7.414 | 0.3 |
| 1700.0 | 26.038 | 7.936 | 0.28 |
| 1794.0 | 26.813 | 8.172 | 0.27 |
| 1800.0 | 26.862 | 8.187 | 0.27 |
| 2000.0 | 28.455 | 8.673 | 0.26 |
| 2100.0 | 29.227 | 8.908 | 0.25 |
| 2200.0 | 29.984 | 9.139 | 0.24 |
| 2300.0 | 30.727 | 9.365 | 0.24 |
| 2500.0 | 32.174 | 9.806 | 0.23 |
| 2700.0 | 33.576 | 10.233 | 0.22 |
| 3000.0 | 35.602 | 10.851 | 0.21 |
| 3400.0 | 38.183 | 11.638 | 0.19 |
| 3600.0 | 39.428 | 12.017 | 0.19 |
| 3700.0 | 40.041 | 12.204 | 0.18 |
| 3800.0 | 40.647 | 12.389 | 0.18 |
| 3900.0 | 41.247 | 12.571 | 0.18 |
| 4000.0 | 41.841 | 12.753 | 0.17 |
| 4100.0 | 42.429 | 12.932 | 0.17 |
| 4200.0 | 43.012 | 13.11 | 0.17 |
| 4300.0 | 43.59 | 13.286 | 0.17 |
| 4400.0 | 44.163 | 13.46 | 0.17 |
| 4500.0 | 44.73 | 13.633 | 0.16 |
| 4600.0 | 45.293 | 13.805 | 0.16 |
| 4700.0 | 45.852 | 13.975 | 0.16 |
| 4800.0 | 46.405 | 14.144 | 0.16 |
| 4900.0 | 46.955 | 14.311 | 0.16 |
| 5000.0 | 47.5 | 14.477 | 0.15 |

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| | | | |
|----------------|---------|--------|------|
| 6000.0 | 52.747 | 16.077 | 0.14 |
| 8000.0 | 62.37 | 19.01 | 0.12 |
| 8800.0 | 65.974 | 20.108 | 0.11 |
| 10000.0 | 71.173 | 21.693 | 0.1 |
| 12000.0 | 79.393 | 24.198 | 0.09 |
| 14000.0 | 87.172 | 26.569 | 0.08 |
| 15800.0 | 93.872 | 28.611 | 0.08 |
| 16000.0 | 94.601 | 28.833 | 0.08 |
| 18000.0 | 101.745 | 31.01 | 0.07 |

Material Specifications

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

Mechanical Specifications

| | |
|--|---------------------------|
| Minimum Bend Radius, multiple Bends | 25.4 mm 1 in |
| Minimum Bend Radius, single Bend | 25.4 mm 1 in |
| Number of Bends, minimum | 15 |
| Number of Bends, typical | 20 |
| Tensile Strength | 68 kg 149.914 lb |
| Bending Moment | 1.1 N-m 9.736 in lb |
| Flat Plate Crush Strength | 1.8 kg/mm 100.795 lb/in |

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) |
| Attenuation, Ambient Temperature | 68 °F 20 °C |
| Average Power, Ambient Temperature | 104 °F 40 °C |
| Average Power, Inner Conductor Temperature | 212 °F 100 °C |
| Fire Retardancy Test Method | UL 1666/CATVR/CMR |
| Smoke Index Test Method | IEC 61034 |

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Toxicity Index Test Method

IEC 60754-1 | IEC 60754-2

Packaging and Weights

Cable weight

0.07 kg/m | 0.047 lb/ft

Regulatory Compliance/Certifications

Agency

Classification

ISO 9001:2015

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

UL/ETL Certification

Compliant



FSJ1-50A



FSJ1-50A, HELIAX® Superflexible Low Density Foam Coaxial Cable, corrugated copper, 1/4 in, black PE jacket

Product Classification

| | |
|-----------------------|------------------------|
| Product Type | Coaxial wireless cable |
| Product Brand | HELIAX® SureFlex® |
| Product Series | FSJ1-50A MLOC |

General Specifications

| | |
|-------------------------|--|
| Product Number | 887009902/00 SZ887009902/00 |
| Flexibility | Superflexible |
| Jacket Color | Black |
| Performance Note | Attenuation values typical, guaranteed within 5% |

Dimensions

| | |
|---------------------------------|---------------------|
| Diameter Over Dielectric | 4.826 mm 0.19 in |
| Diameter Over Jacket | 7.366 mm 0.29 in |
| Inner Conductor OD | 1.905 mm 0.075 in |
| Outer Conductor OD | 6.35 mm 0.25 in |
| Nominal Size | 1/4 in |

Electrical Specifications

| | |
|---------------------------------------|----------------------------------|
| Cable Impedance | 50 ohm \pm 1 ohm |
| Capacitance | 79.4 pF/m 24.201 pF/ft |
| dc Resistance, Inner Conductor | 9.843 ohms/km 3 ohms/kft |
| dc Resistance, Outer Conductor | 7.216 ohms/km 2.199 ohms/kft |
| dc Test Voltage | 1600 V |
| Inductance | 0.2 μ H/m 0.061 μ H/ft |

FSJ1-50A

| | |
|--|-----------------|
| Insulation Resistance | 100000 MOhms-km |
| Jacket Spark Test Voltage (rms) | 5000 V |
| Operating Frequency Band | 1 – 18000 MHz |
| Peak Power | 6.4 kW |
| Velocity | 82 % |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|-----------------------|-------------|-------------------------|
| 680–960 MHz | 1.201 | 20.8 |
| 1700–2200 MHz | 1.201 | 20.8 |
| 2200–2700 MHz | 1.433 | 15 |

Attenuation

| Frequency (MHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) |
|------------------------|-------------------------------|--------------------------------|---------------------------|
| 1.0 | 0.577 | 0.176 | 6.4 |
| 1.5 | 0.707 | 0.215 | 6.4 |
| 2.0 | 0.816 | 0.249 | 6.4 |
| 10.0 | 1.833 | 0.559 | 3.99 |
| 20.0 | 2.6 | 0.792 | 2.81 |
| 30.0 | 3.192 | 0.973 | 2.29 |
| 50.0 | 4.136 | 1.261 | 1.77 |
| 85.0 | 5.419 | 1.652 | 1.35 |
| 88.0 | 5.516 | 1.681 | 1.33 |
| 100.0 | 5.889 | 1.795 | 1.24 |
| 108.0 | 6.125 | 1.867 | 1.19 |
| 150.0 | 7.25 | 2.21 | 1.01 |
| 174.0 | 7.825 | 2.385 | 0.93 |
| 200.0 | 8.408 | 2.563 | 0.87 |
| 204.0 | 8.495 | 2.589 | 0.86 |
| 300.0 | 10.373 | 3.162 | 0.71 |
| 400.0 | 12.051 | 3.673 | 0.61 |
| 450.0 | 12.817 | 3.906 | 0.57 |
| 460.0 | 12.965 | 3.952 | 0.56 |
| 500.0 | 13.545 | 4.128 | 0.54 |
| 512.0 | 13.715 | 4.18 | 0.53 |

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| | | | |
|---------------|--------|--------|------|
| 600.0 | 14.909 | 4.544 | 0.49 |
| 700.0 | 16.175 | 4.93 | 0.45 |
| 800.0 | 17.362 | 5.292 | 0.42 |
| 824.0 | 17.637 | 5.376 | 0.41 |
| 894.0 | 18.42 | 5.614 | 0.4 |
| 960.0 | 19.134 | 5.832 | 0.38 |
| 1000.0 | 19.556 | 5.96 | 0.37 |
| 1218.0 | 21.738 | 6.626 | 0.34 |
| 1250.0 | 22.044 | 6.719 | 0.33 |
| 1500.0 | 24.326 | 7.414 | 0.3 |
| 1700.0 | 26.038 | 7.936 | 0.28 |
| 1794.0 | 26.813 | 8.172 | 0.27 |
| 1800.0 | 26.862 | 8.187 | 0.27 |
| 2000.0 | 28.455 | 8.673 | 0.26 |
| 2100.0 | 29.227 | 8.908 | 0.25 |
| 2200.0 | 29.984 | 9.139 | 0.24 |
| 2300.0 | 30.727 | 9.365 | 0.24 |
| 2500.0 | 32.174 | 9.806 | 0.23 |
| 2700.0 | 33.576 | 10.233 | 0.22 |
| 3000.0 | 35.602 | 10.851 | 0.21 |
| 3400.0 | 38.183 | 11.638 | 0.19 |
| 3600.0 | 39.428 | 12.017 | 0.19 |
| 3700.0 | 40.041 | 12.204 | 0.18 |
| 3800.0 | 40.647 | 12.389 | 0.18 |
| 3900.0 | 41.247 | 12.571 | 0.18 |
| 4000.0 | 41.841 | 12.753 | 0.17 |
| 4100.0 | 42.429 | 12.932 | 0.17 |
| 4200.0 | 43.012 | 13.11 | 0.17 |
| 4300.0 | 43.59 | 13.286 | 0.17 |
| 4400.0 | 44.163 | 13.46 | 0.17 |
| 4500.0 | 44.73 | 13.633 | 0.16 |
| 4600.0 | 45.293 | 13.805 | 0.16 |
| 4700.0 | 45.852 | 13.975 | 0.16 |
| 4800.0 | 46.405 | 14.144 | 0.16 |
| 4900.0 | 46.955 | 14.311 | 0.16 |

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| | | | |
|----------------|---------|--------|------|
| 5000.0 | 47.5 | 14.477 | 0.15 |
| 6000.0 | 52.747 | 16.077 | 0.14 |
| 8000.0 | 62.37 | 19.01 | 0.12 |
| 8800.0 | 65.974 | 20.108 | 0.11 |
| 10000.0 | 71.173 | 21.693 | 0.1 |
| 12000.0 | 79.393 | 24.198 | 0.09 |
| 14000.0 | 87.172 | 26.569 | 0.08 |
| 15800.0 | 93.872 | 28.611 | 0.08 |
| 16000.0 | 94.601 | 28.833 | 0.08 |
| 18000.0 | 101.745 | 31.01 | 0.07 |

Material Specifications

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

Mechanical Specifications

| | |
|--|---------------------------|
| Minimum Bend Radius, multiple Bends | 25.4 mm 1 in |
| Minimum Bend Radius, single Bend | 25.4 mm 1 in |
| Number of Bends, minimum | 15 |
| Number of Bends, typical | 20 |
| Tensile Strength | 68 kg 149.914 lb |
| Bending Moment | 0.7 N-m 6.196 in lb |
| Flat Plate Crush Strength | 1.8 kg/mm 100.795 lb/in |

Environmental Specifications

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

FSJ1-50A

Packaging and Weights

Cable weight

0.07 kg/m | 0.047 lb/ft

Regulatory Compliance/Certifications

Agency

Classification

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

UK-ROHS

Compliant

UL/ETL Certification

Compliant



FSJ1RK-50A

FSJ1-50A, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 1/4 in, black non-halogenated, fire retardant polyolefin jacket, B2ca s1a d0 a1 Compliant

Product Classification

| | |
|-----------------------|------------------------|
| Product Type | Coaxial wireless cable |
| Product Brand | HELIAX® SureFlex® |
| Product Series | FSJ1-50A MLOC |

General Specifications

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

Dimensions

| | |
|---------------------------------|---------------------|
| Diameter Over Dielectric | 4.826 mm 0.19 in |
| Diameter Over Jacket | 7.62 mm 0.3 in |
| Inner Conductor OD | 1.905 mm 0.075 in |
| Outer Conductor OD | 6.35 mm 0.25 in |
| Nominal Size | 1/4 in |

Electrical Specifications

| | |
|--|--------------------------------|
| Cable Impedance | 50 ohm ±1 ohm |
| Capacitance | 79.4 pF/m 24.201 pF/ft |
| dc Resistance, Inner Conductor | 9.843 ohms/km 3 ohms/kft |
| dc Resistance, Outer Conductor | 7.216 ohms/km 2.199 ohms/kft |
| dc Test Voltage | 1600 V |
| Inductance | 0.2 µH/m 0.061 µH/ft |
| Insulation Resistance | 100000 MOhms-km |
| Jacket Spark Test Voltage (rms) | 4000 V |
| Operating Frequency Band | 1 – 18000 MHz |
| Peak Power | 6.4 kW |
| Velocity | 82 % |

FSJ1RK-50A

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|-------|------------------|
| 680–960 MHz | 1.201 | 20.79 |
| 1700–2200 MHz | 1.201 | 20.79 |
| 2200–2700 MHz | 1.433 | 14.99 |

Attenuation

| Frequency (MHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) |
|-----------------|------------------------|-------------------------|--------------------|
| 1.0 | 0.577 | 0.176 | 6.4 |
| 1.5 | 0.707 | 0.215 | 6.4 |
| 2.0 | 0.816 | 0.249 | 6.4 |
| 10.0 | 1.833 | 0.559 | 3.99 |
| 20.0 | 2.6 | 0.792 | 2.81 |
| 30.0 | 3.192 | 0.973 | 2.29 |
| 50.0 | 4.136 | 1.261 | 1.77 |
| 85.0 | 5.419 | 1.652 | 1.35 |
| 88.0 | 5.516 | 1.681 | 1.33 |
| 100.0 | 5.889 | 1.795 | 1.24 |
| 108.0 | 6.125 | 1.867 | 1.19 |
| 150.0 | 7.25 | 2.21 | 1.01 |
| 174.0 | 7.825 | 2.385 | 0.93 |
| 200.0 | 8.408 | 2.563 | 0.87 |
| 204.0 | 8.495 | 2.589 | 0.86 |
| 300.0 | 10.373 | 3.162 | 0.71 |
| 400.0 | 12.051 | 3.673 | 0.61 |
| 450.0 | 12.817 | 3.906 | 0.57 |
| 460.0 | 12.965 | 3.952 | 0.56 |
| 500.0 | 13.545 | 4.128 | 0.54 |
| 512.0 | 13.715 | 4.18 | 0.53 |
| 600.0 | 14.909 | 4.544 | 0.49 |
| 700.0 | 16.175 | 4.93 | 0.45 |
| 800.0 | 17.362 | 5.292 | 0.42 |
| 824.0 | 17.637 | 5.376 | 0.41 |

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| | | | |
|---------------|--------|--------|------|
| 894.0 | 18.42 | 5.614 | 0.4 |
| 960.0 | 19.134 | 5.832 | 0.38 |
| 1000.0 | 19.556 | 5.96 | 0.37 |
| 1218.0 | 21.738 | 6.626 | 0.34 |
| 1250.0 | 22.044 | 6.719 | 0.33 |
| 1500.0 | 24.326 | 7.414 | 0.3 |
| 1700.0 | 26.038 | 7.936 | 0.28 |
| 1794.0 | 26.813 | 8.172 | 0.27 |
| 1800.0 | 26.862 | 8.187 | 0.27 |
| 2000.0 | 28.455 | 8.673 | 0.26 |
| 2100.0 | 29.227 | 8.908 | 0.25 |
| 2200.0 | 29.984 | 9.139 | 0.24 |
| 2300.0 | 30.727 | 9.365 | 0.24 |
| 2500.0 | 32.174 | 9.806 | 0.23 |
| 2700.0 | 33.576 | 10.233 | 0.22 |
| 3000.0 | 35.602 | 10.851 | 0.21 |
| 3400.0 | 38.183 | 11.638 | 0.19 |
| 3600.0 | 39.428 | 12.017 | 0.19 |
| 3700.0 | 40.041 | 12.204 | 0.18 |
| 3800.0 | 40.647 | 12.389 | 0.18 |
| 3900.0 | 41.247 | 12.571 | 0.18 |
| 4000.0 | 41.841 | 12.753 | 0.17 |
| 4100.0 | 42.429 | 12.932 | 0.17 |
| 4200.0 | 43.012 | 13.11 | 0.17 |
| 4300.0 | 43.59 | 13.286 | 0.17 |
| 4400.0 | 44.163 | 13.46 | 0.17 |
| 4500.0 | 44.73 | 13.633 | 0.16 |
| 4600.0 | 45.293 | 13.805 | 0.16 |
| 4700.0 | 45.852 | 13.975 | 0.16 |
| 4800.0 | 46.405 | 14.144 | 0.16 |
| 4900.0 | 46.955 | 14.311 | 0.16 |
| 5000.0 | 47.5 | 14.477 | 0.15 |
| 6000.0 | 52.747 | 16.077 | 0.14 |
| 8000.0 | 62.37 | 19.01 | 0.12 |
| 8800.0 | 65.974 | 20.108 | 0.11 |

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| | | | |
|----------------|---------|--------|------|
| 10000.0 | 71.173 | 21.693 | 0.1 |
| 12000.0 | 79.393 | 24.198 | 0.09 |
| 14000.0 | 87.172 | 26.569 | 0.08 |
| 15800.0 | 93.872 | 28.611 | 0.08 |
| 16000.0 | 94.601 | 28.833 | 0.08 |
| 18000.0 | 101.745 | 31.01 | 0.07 |

Material Specifications

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

Mechanical Specifications

| | |
|--|---------------------------|
| Minimum Bend Radius, multiple Bends | 25.4 mm 1 in |
| Minimum Bend Radius, single Bend | 25.4 mm 1 in |
| Number of Bends, minimum | 15 |
| Number of Bends, typical | 20 |
| Tensile Strength | 68 kg 149.914 lb |
| Bending Moment | 0.7 N-m 6.196 in lb |
| Flat Plate Crush Strength | 1.8 kg/mm 100.795 lb/in |

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) |
| 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 |

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Fire Retardancy Test Method

IEC 60332-1-2 | IEC 60332-3-24 | NFPA 130-2010 | UL 1666/CATVR /CMR | UL 1685

Smoke Index Test Method

IEC 61034

Toxicity Index Test Method

IEC 60754-1 | IEC 60754-2

Packaging and Weights

Cable weight

0.07 kg/m | 0.047 lb/ft

Regulatory Compliance/Certifications

| Agency | Classification |
|----------------------|--|
| 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 |
| UK-ROHS | Compliant |
| UL/ETL Certification | Compliant |

