

F4CR-HMDM-2M-E1



HELIAX® 1/2" Superflexible Fire retardant SureFlex® Jumper with interface types 4.3-10 Male and 7-16 DIN Male , 2m, with black non-halogenated fire retardant polyolefin jacket

Product Classification

| | |
|-----------------------|--------------------------------------|
| Product Type | Wireless transmission cable assembly |
| Product Brand | HELIAX® SureFlex® |
| Product Series | RSJ4-50 |

General Specifications

| | |
|---|---------------|
| Body Style, Connector A | Straight |
| Body Style, Connector B | Straight |
| Interface, Connector A | 4.3-10 Male |
| Interface, Connector B | 7-16 DIN Male |
| Specification Sheet Revision Level | A |

Dimensions

| | |
|---------------------|----------------|
| Length | 2 m 6.562 ft |
| Nominal Size | 1/2 in |

Electrical Specifications

| | |
|----------------------------------|----------------------|
| 3rd Order IMD Static | -116 dBm |
| 3rd Order IMD Test Method | Two +43 dBm carriers |
| DTF, Connector A | -32 dB |
| DTF, Connector B | -32 dB |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) | Insertion Loss, typical (dB) |
|----------------|-------|------------------|------------------------------|
| 698–960 MHz | 1.065 | 30.04 | 0.32 |
| 1700–2200 MHz | 1.065 | 30.04 | 0.5 |
| 2300–2700 MHz | 1.083 | 27.99 | 0.56 |
| 3400–3800 MHz | 1.222 | 20.01 | 0.65 |

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Jumper Assembly Sample Label



Environmental Specifications

| | |
|--|---|
| EN50575 CPR Cable EuroClass Fire Performance | B2ca |
| EN50575 CPR Cable EuroClass Smoke Rating | s1a |
| EN50575 CPR Cable EuroClass Droplets Rating | d1 |
| EN50575 CPR Cable EuroClass Acidity Rating | a1 |
| Immersion Test Method | Meets IEC 60529:2001, IP68 in mated condition |

Regulatory Compliance/Certifications

| Agency | Classification |
|------------|-----------------------------------|
| CHINA-ROHS | Above maximum concentration value |
| ROHS | Compliant/Exempted |
| UK-ROHS | Compliant/Exempted |



Included Products

| | | |
|----------|---|---|
| F4XDM-S2 | - | 7-16DIN Male for 1/2 in RSJ4-50LF cable, factory attached |
| F4XHM-S2 | - | 4.3-10 Male for 1/2 in RSJ4-50LF cable, factory attached |

F4CR-HMDM-2M-E1

RSJ4RK-50LF

– RSJ4-50, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 1/2 in, black non-halogenated, fire retardant polyolefin jacket B2ca-s1a,d1,a1

F4XDM-S2



7-16DIN Male for 1/2 in RSJ4-50LF cable, factory attached

Product Classification

| | |
|----------------------|----------------------------------|
| Product Type | Wireless and radiating connector |
| Product Brand | HELIAX® |

General Specifications

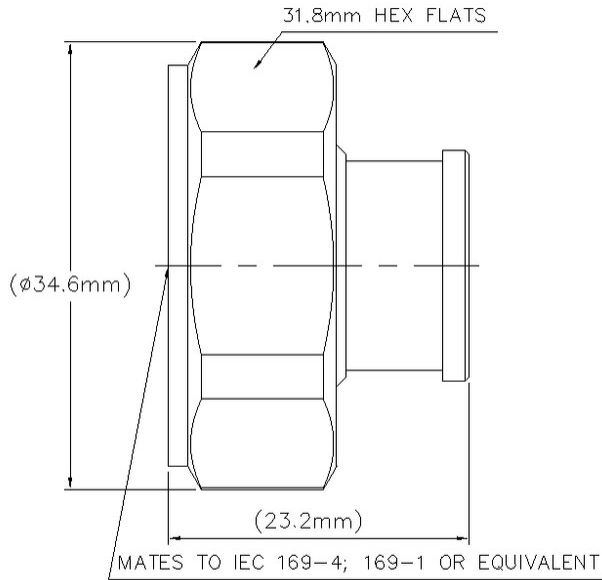
| | |
|--|---------------|
| Body Style | Straight |
| Cable Family | RSJ4-50 |
| Inner Contact Attachment Method | Captivated |
| Inner Contact Plating | Silver |
| Interface | 7-16 DIN Male |
| Outer Contact Attachment Method | Solder |
| Outer Contact Plating | Trimetal |
| Pressurizable | No |

Dimensions

| | |
|---------------------|--------------------|
| Length | 23.2 mm 0.913 in |
| Diameter | 34.54 mm 1.36 in |
| Nominal Size | 1/2 in |

Outline Drawing

F4XDM-S2



Electrical Specifications

| | |
|---|----------------------|
| 3rd Order IMD at Frequency | -116 dBm @ 910 MHz |
| 3rd Order IMD Test Method | Two +43 dBm carriers |
| Insertion Loss Coefficient, typical | 0.05 |
| Cable Impedance | 50 ohm |
| Connector Impedance | 50 ohm |
| dc Test Voltage | 2500 V |
| Inner Contact Resistance, maximum | 0.8 mOhm |
| Insulation Resistance, minimum | 5000 MOhm |
| Operating Frequency Band | 0 – 7500 MHz |
| Outer Contact Resistance, maximum | 1.5 mOhm |
| Peak Power, maximum | 15.6 kW |
| RF Operating Voltage, maximum (vrms) | 884 V |
| Shielding Effectiveness | -110 dB |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|------|------------------|
|----------------|------|------------------|

F4XDM-S2

| | | |
|----------------------|-------|-------|
| 698–960 MHz | 1.032 | 36.06 |
| 1700–2200 MHz | 1.032 | 36.06 |
| 2200–2700 MHz | 1.041 | 33.94 |
| 3400–3800 MHz | 1.106 | 25.96 |

Mechanical Specifications

| | |
|--|---|
| Connector Retention Tensile Force | 889.64 N 200 lbf |
| Connector Retention Torque | 4.07 N-m 36.023 in lb |
| Coupling Nut Proof Torque | 25 N-m 221.269 in lb |
| Coupling Nut Retention Force | 1,000.85 N 225 lbf |
| Coupling Nut Retention Force Method | MIL-C-39012C-3.25, 4.6.22 |
| Interface Durability | 500 cycles |
| Mechanical Shock Test Method | MIL-STD-202F, Method 213B, Test Condition C |

Environmental Specifications

| | |
|---|---|
| Operating Temperature | -55 °C to +85 °C (-67 °F to +185 °F) |
| Storage Temperature | -65 °C to +125 °C (-85 °F to +257 °F) |
| Attenuation, Ambient Temperature | 20 °C 68 °F |
| Average Power, Ambient Temperature | 40 °C 104 °F |
| Corrosion Test Method | MIL-STD-1344A, Method 1001.1, Test Condition A |
| Immersion Depth | 1 m |
| Immersion Test Mating | Mated |
| Immersion Test Method | IEC 60529:2001, IP68 |
| Moisture Resistance Test Method | MIL-STD-202F, Method 106F |
| Thermal Shock Test Method | MIL-STD-202F, Method 107G, Test Condition A-1, Low Temperature -55 °C |
| Vibration Test Method | MIL-STD-202F, Method 204D, Test Condition B |

Packaging and Weights

| | |
|--------------------|-------------------|
| Weight, net | 47.2 g 0.104 lb |
|--------------------|-------------------|

* Footnotes

| | |
|--|---|
| Insertion Loss Coefficient, typical | 0.05√freq (GHz) (not applicable for elliptical waveguide) |
| Immersion Depth | Immersion at specified depth for 24 hours |

F4XHM-S2



4.3-10 Male for 1/2 in RSJ4-50LF cable, factory attached

Product Classification

| | |
|----------------------|----------------------------------|
| Product Type | Wireless and radiating connector |
| Product Brand | HELIAX® |

General Specifications

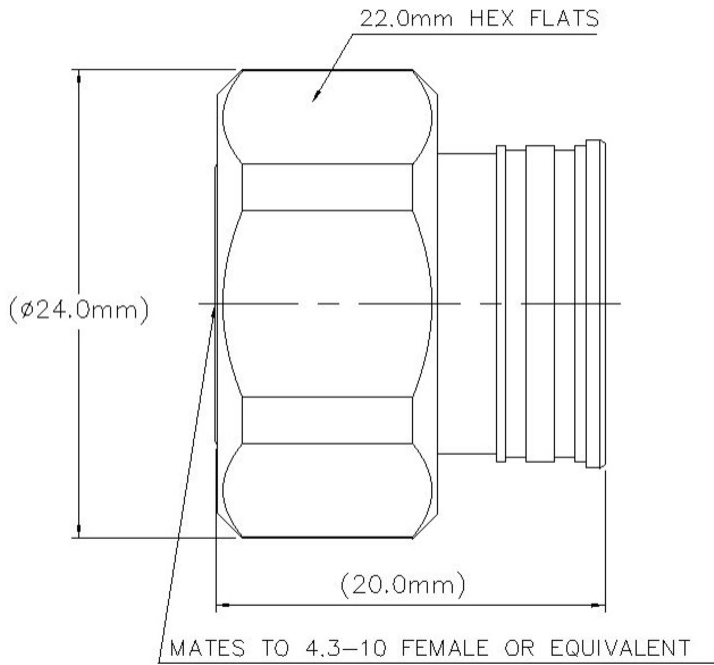
| | |
|--|-------------|
| Body Style | Straight |
| Cable Family | RSJ4-50 |
| Inner Contact Attachment Method | Captivated |
| Inner Contact Plating | Silver |
| Interface | 4.3-10 Male |
| Outer Contact Attachment Method | Solder |
| Outer Contact Plating | Trimetal |

Dimensions

| | |
|---------------------|------------------|
| Length | 20 mm 0.787 in |
| Diameter | 24 mm 0.945 in |
| Nominal Size | 1/2 in |

Outline Drawing

F4XHM-S2



Electrical Specifications

| | |
|--|----------------------|
| 3rd Order IMD at Frequency | -119 dBm @ 910 MHz |
| 3rd Order IMD Test Method | Two +43 dBm carriers |
| Insertion Loss Coefficient, typical | 0.05 |
| Cable Impedance | 50 ohm |
| Connector Impedance | 50 ohm |
| dc Test Voltage | 2500 V |
| Inner Contact Resistance, maximum | 1 mOhm |
| Insulation Resistance, minimum | 5000 MOhm |
| Operating Frequency Band | 0 – 6000 MHz |
| Outer Contact Resistance, maximum | 1 mOhm |
| Peak Power, maximum | 15 kW |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|-------|------------------|
| 698–960 MHz | 1.032 | 36.06 |

F4XHM-S2

| | | |
|----------------------|-------|-------|
| 1700–2200 MHz | 1.032 | 36.06 |
| 2200–2700 MHz | 1.041 | 33.94 |
| 3400–3800 MHz | 1.106 | 25.96 |

Mechanical Specifications

| | |
|--|------------------------|
| Connector Retention Tensile Force | 889.64 N 200 lbf |
| Connector Retention Torque | 4.1 N-m 36.288 in lb |
| Coupling Nut Proof Torque | 8 N-m 70.806 in lb |
| Coupling Nut Retention Force | 449.98 N 101.16 lbf |
| Interface Durability | 100 cycles |
| Mechanical Shock Test Method | IEC 60068-2-27 |

Environmental Specifications

| | |
|---|---------------------------------------|
| Operating Temperature | -55 °C to +85 °C (-67 °F to +185 °F) |
| Storage Temperature | -65 °C to +125 °C (-85 °F to +257 °F) |
| Attenuation, Ambient Temperature | 20 °C 68 °F |
| Average Power, Ambient Temperature | 40 °C 104 °F |
| Corrosion Test Method | IEC 60068-2-11 |
| Immersion Depth | 1 m |
| Immersion Test Mating | Mated |
| Immersion Test Method | IEC 60529:2001, IP68 |
| Moisture Resistance Test Method | IEC 60068-2-3 |
| Thermal Shock Test Method | IEC 60068-2-14 |
| Vibration Test Method | IEC 60068-2-6 |

Packaging and Weights

| | |
|--------------------|--------------------|
| Weight, net | 22.04 g 0.049 lb |
|--------------------|--------------------|

Regulatory Compliance/Certifications

| Agency | Classification |
|---------------|---|
| CHINA-ROHS | Below maximum concentration value |
| REACH-SVHC | Compliant as per SVHC revision on www.commscope.com/ProductCompliance |
| ROHS | Compliant |
| UK-ROHS | Compliant |

F4XHM-S2



* Footnotes

Insertion Loss Coefficient, typical $0.05\sqrt{\text{freq (GHz)}}$ (not applicable for elliptical waveguide)

Immersion Depth Immersion at specified depth for 24 hours

RSJ4RK-50LF



RSJ4-50, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 1/2 in, black non-halogenated, fire retardant polyolefin jacket B2ca-s1a,d1,a1

Product Classification

| | |
|-----------------------|------------------------|
| Product Type | Coaxial wireless cable |
| Product Brand | HELIAX® SureFlex® |
| Product Series | RSJ4-50 |

General Specifications

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

Dimensions

| | |
|---------------------------------|----------------------|
| Diameter Over Dielectric | 9.423 mm 0.371 in |
| Diameter Over Jacket | 13.411 mm 0.528 in |
| Inner Conductor OD | 3.594 mm 0.141 in |
| Outer Conductor OD | 11.989 mm 0.472 in |
| Nominal Size | 1/2 in |

Electrical Specifications

| | |
|--|-------------------------------|
| Cable Impedance | 50 ohm ±1 ohm |
| Capacitance | 83.9 pF/m 25.573 pF/ft |
| dc Resistance, Inner Conductor | 2.76 ohms/km 0.841 ohms/kft |
| dc Resistance, Outer Conductor | 5.73 ohms/km 1.747 ohms/kft |
| dc Test Voltage | 2500 V |
| Inductance | 0.213 µH/m 0.065 µH/ft |
| Insulation Resistance | 100000 MOhms-km |
| Jacket Spark Test Voltage (rms) | 4000 V |
| Operating Frequency Band | 1 – 10200 MHz |
| Peak Power | 15.6 kW |

RSJ4RK-50LF

Velocity

79 %

VSWR/Return Loss

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

Attenuation

| Frequency (MHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) |
|-----------------|------------------------|-------------------------|--------------------|
| 1.0 | 0.327 | 0.1 | 15.6 |
| 1.5 | 0.401 | 0.122 | 15.6 |
| 2.0 | 0.463 | 0.141 | 15.6 |
| 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 |

RSJ4RK-5OLF

| | | | |
|---------------|--------|--------|------|
| 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 |
| 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 |

RSJ4RK-50LF

| | | | |
|---------|--------|--------|------|
| 8800.0 | 44.054 | 13.427 | 0.24 |
| 10000.0 | 47.914 | 14.603 | 0.22 |

Material Specifications

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

Mechanical Specifications

| | |
|--|-------------------------|
| 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 | 12 |
| Number of Bends, typical | 15 |
| Tensile Strength | 79 kg 174.165 lb |
| Bending Moment | 2.6 N-m 23.012 in lb |
| Flat Plate Crush Strength | 2 kg/mm 111.995 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 | d1 |
| 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 60754-2 |

Packaging and Weights

RSJ4RK-5OLF

Cable weight

0.15 kg/m | 0.101 lb/ft