## F4CR-HPNMNM-8M



HELIAX® 1/2" Superflexible Fire retardant SureFlex® Jumper with interface types N Male and N Male, 8m, Black non-halogenated, fire retardant polyolefin jacket

#### **Product Classification**

**Product Type** SureFlex® Premium, static PIM

Product Brand HELIAX® | SureFlex®

Product Series RSJ4-50

General Specifications

Body Style, Connector A Straight
Body Style, Connector B Straight
Interface, Connector A N Male
Interface, Connector B N Male
Specification Sheet Revision Level A

**Dimensions** 

**Length** 8 m | 26.247 ft

Nominal Size 1/2 in

**Electrical Specifications** 

**3rd Order IMD Static Test Method** Two +43 dBm carriers

3rd Order IMD, typical-112 dBmDTF, Connector A34 dBDTF, Connector B34 dB

#### VSWR/Return Loss

Frequency Band	VSWR, typical	Return Loss, typical (dB)
698-960 MHz	1.101	26.4
1700-2200 MHz	1.101	26.4
2200-2700 MHz	1.135	24



# F4CR-HPNMNM-8M

### Jumper Assembly Sample Label



#### **Environmental Specifications**

EN50575 CPR Cable EuroClass Fire PerformanceB2caEN50575 CPR Cable EuroClass Smoke Ratings1aEN50575 CPR Cable EuroClass Droplets Ratingd1EN50575 CPR Cable EuroClass Acidity Ratinga1

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

RSJ4-50 - RSJ4-50, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 1/2 in, black PE iacket





# RSJ4-50, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 1/2 in, black PE jacket

#### **Product Classification**

Product Type Coaxial wireless cable

Product Brand HELIAX® | SureFlex®

**Product Series** RSJ4-50

Ordering Note ANDREW® standard product (Global)

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 Impedance50 ohm ±1 ohm

**Capacitance** 83.9 pF/m | 25.573 pF/ft

dc Resistance, Inner Conductor2.65 ohms/km0.808 ohms/kftdc Resistance, Outer Conductor4.56 ohms/km1.39 ohms/kft

dc Test Voltage 2500 V

 $\label{eq:local_$ 

**Insulation Resistance** 100000 MOhms-km

Jacket Spark Test Voltage (rms) 5000 V

Operating Frequency Band 1 - 10200 MHz



Peak Power15.6 kWVelocity79 %

#### 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

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       10.14         20.0       1.485       0.453       7.12         30.0       1.828       0.557       5.79         50.0       2.377       0.724       4.45         85.0       3.13       0.954       3.38         88.0       3.187       0.971       3.32         100.0       3.406       1.038       3.11         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       2.16         204.0       4.96       1.512       2.13         300.0       6.095       1.858       1.74         400.0       7.121       2.17       1.49         450.0       7.592       2.314       1.39         460.0       7.684       2.342       1.38         500.0       8.042       2.451       1.32	Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
2.00.4630.14115.610.01.0440.31810.1420.01.4850.4537.1230.01.8280.5575.7950.02.3770.7244.4585.03.130.9543.3888.03.1870.9713.32100.03.4061.0383.11108.03.5461.0812.98150.04.2141.2852.51174.04.5581.3892.32200.04.9081.4962.16204.04.961.5122.13300.06.0951.8581.74400.07.1212.171.49450.07.5922.3141.39460.07.6842.3421.38500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	1.0	0.327	0.1	15.6
10.0       1.044       0.318       10.14         20.0       1.485       0.453       7.12         30.0       1.828       0.557       5.79         50.0       2.377       0.724       4.45         85.0       3.13       0.954       3.38         88.0       3.187       0.971       3.32         100.0       3.406       1.038       3.11         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       2.16         204.0       4.96       1.512       2.13         300.0       6.095       1.858       1.74         400.0       7.121       2.17       1.49         450.0       7.592       2.314       1.39         460.0       7.684       2.342       1.38         500.0       8.042       2.451       1.32         512.0       8.148       2.483       1.3         600.0       8.891       2.71       1.19	1.5	0.401	0.122	15.6
20.01.4850.4537.1230.01.8280.5575.7950.02.3770.7244.4585.03.130.9543.3888.03.1870.9713.32100.03.4061.0383.11108.03.5461.0812.98150.04.2141.2852.51174.04.5581.3892.32200.04.9081.4962.16204.04.961.5122.13300.06.0951.8581.74400.07.1212.171.49450.07.5922.3141.39460.07.6842.3421.38500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	2.0	0.463	0.141	15.6
30.01.8280.5575.7950.02.3770.7244.4585.03.130.9543.3888.03.1870.9713.32100.03.4061.0383.11108.03.5461.0812.98150.04.2141.2852.51174.04.5581.3892.32200.04.9081.4962.16204.04.961.5122.13300.06.0951.8581.74400.07.1212.171.49450.07.5922.3141.39460.07.6842.3421.38500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	10.0	1.044	0.318	10.14
50.02.3770.7244.4585.03.130.9543.3888.03.1870.9713.32100.03.4061.0383.11108.03.5461.0812.98150.04.2141.2852.51174.04.5581.3892.32200.04.9081.4962.16204.04.961.5122.13300.06.0951.8581.74400.07.1212.171.49450.07.5922.3141.39460.07.6842.3421.38500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	20.0	1.485	0.453	7.12
85.03.130.9543.3888.03.1870.9713.32100.03.4061.0383.11108.03.5461.0812.98150.04.2141.2852.51174.04.5581.3892.32200.04.9081.4962.16204.04.961.5122.13300.06.0951.8581.74400.07.1212.171.49450.07.5922.3141.39460.07.6842.3421.38500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	30.0	1.828	0.557	5.79
88.03.1870.9713.32100.03.4061.0383.11108.03.5461.0812.98150.04.2141.2852.51174.04.5581.3892.32200.04.9081.4962.16204.04.961.5122.13300.06.0951.8581.74400.07.1212.171.49450.07.5922.3141.39460.07.6842.3421.38500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	50.0	2.377	0.724	4.45
100.03.4061.0383.11108.03.5461.0812.98150.04.2141.2852.51174.04.5581.3892.32200.04.9081.4962.16204.04.961.5122.13300.06.0951.8581.74400.07.1212.171.49450.07.5922.3141.39460.07.6842.3421.38500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	85.0	3.13	0.954	3.38
108.03.5461.0812.98150.04.2141.2852.51174.04.5581.3892.32200.04.9081.4962.16204.04.961.5122.13300.06.0951.8581.74400.07.1212.171.49450.07.5922.3141.39460.07.6842.3421.38500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	88.0	3.187	0.971	3.32
150.04.2141.2852.51174.04.5581.3892.32200.04.9081.4962.16204.04.961.5122.13300.06.0951.8581.74400.07.1212.171.49450.07.5922.3141.39460.07.6842.3421.38500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	100.0	3.406	1.038	3.11
174.04.5581.3892.32200.04.9081.4962.16204.04.961.5122.13300.06.0951.8581.74400.07.1212.171.49450.07.5922.3141.39460.07.6842.3421.38500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	108.0	3.546	1.081	2.98
200.04.9081.4962.16204.04.961.5122.13300.06.0951.8581.74400.07.1212.171.49450.07.5922.3141.39460.07.6842.3421.38500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	150.0	4.214	1.285	2.51
204.04.961.5122.13300.06.0951.8581.74400.07.1212.171.49450.07.5922.3141.39460.07.6842.3421.38500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	174.0	4.558	1.389	2.32
300.06.0951.8581.74400.07.1212.171.49450.07.5922.3141.39460.07.6842.3421.38500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	200.0	4.908	1.496	2.16
400.07.1212.171.49450.07.5922.3141.39460.07.6842.3421.38500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	204.0	4.96	1.512	2.13
450.07.5922.3141.39460.07.6842.3421.38500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	300.0	6.095	1.858	1.74
460.07.6842.3421.38500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	400.0	7.121	2.17	1.49
500.08.0422.4511.32512.08.1482.4831.3600.08.8912.711.19	450.0	7.592	2.314	1.39
512.08.1482.4831.3600.08.8912.711.19	460.0	7.684	2.342	1.38
<b>600.0</b> 8.891 2.71 1.19	500.0	8.042	2.451	1.32
	512.0	8.148	2.483	1.3
<b>700.0</b> 9.683 2.951 1.09	600.0	8.891	2.71	1.19
	700.0	9.683	2.951	1.09



0.008	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	0.92
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	0.42
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 MaterialFoam PEJacket MaterialPE

Inner Conductor Material Copper-clad aluminum wire

Outer Conductor Material Corrugated copper

Mechanical Specifications

Minimum Bend Radius, multiple Bends31.75 mm1.25 inMinimum Bend Radius, single Bend31.75 mm1.25 in

Number of Bends, minimum 15 Number of Bends, typical 20

 Tensile Strength
 79 kg | 174.165 lb

 Bending Moment
 3.1 N-m | 27.437 in lb

 Flat Plate Crush Strength
 2 kg/mm | 111.995 lb/in

#### **Environmental Specifications**

Installation temperature  $-40 \,^{\circ}\text{C}$  to  $+60 \,^{\circ}\text{C}$  ( $-40 \,^{\circ}\text{F}$  to  $+140 \,^{\circ}\text{F}$ )

Operating Temperature  $-55 \,^{\circ}\text{C}$  to  $+85 \,^{\circ}\text{C}$  ( $-67 \,^{\circ}\text{F}$  to  $+185 \,^{\circ}\text{F}$ )

Storage Temperature  $-70 \,^{\circ}\text{C}$  to  $+85 \,^{\circ}\text{C}$  ( $-94 \,^{\circ}\text{F}$  to  $+185 \,^{\circ}\text{F}$ )

Attenuation, Ambient Temperature $68 \,^{\circ}\text{F} \mid 20 \,^{\circ}\text{C}$ Average Power, Ambient Temperature $104 \,^{\circ}\text{F} \mid 40 \,^{\circ}\text{C}$ Average Power, Inner Conductor Temperature $212 \,^{\circ}\text{F} \mid 100 \,^{\circ}\text{C}$ 

**EN50575 CPR Cable EuroClass Fire Performance** Fca

Packaging and Weights

**Cable weight** 0.15 kg/m | 0.101 lb/ft

#### Regulatory Compliance/Certifications

Agency Classification

CENELEC EN 50575 compliant, Declaration of Performance (DoP) available



ISO 9001:2015

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

CENELEC

