F4CR-HPNMNF-2M

HELIAX® 1/2" Superflexible Fire retardant SureFlex® Jumper with interface types N Male and N Female, 2 m, with black non-halogenated fire retardant polyolefin jacket B2ca-S1a-d1-a1

Product Classification

Product Type	SureFlex® HP, HELIAX® performance
Product Brand	HELIAX® | SureFlex®
Product Series	RSJ4-50

General Specifications

Attachment, Connector A	Factory attached
Attachment, Connector B	Factory attached
Body Style, Connector A	Straight
Body Style, Connector B	Straight
Interface, Connector A	N Male
Interface, Connector B	N Female
Specification Sheet Revision Level	A

Dimensions

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

Electrical Specifications

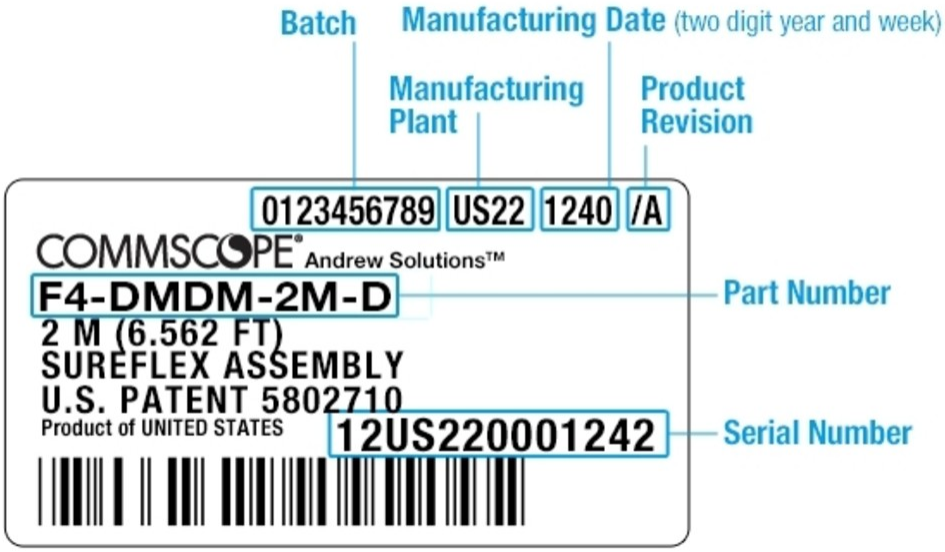
3rd Order IMD Static Test Method	Two +43 dBm carriers
3rd Order IMD, typical	-112 dBm
DTF, Connector A	-34 dB
DTF, Connector B	-34 dB

VSWR/Return Loss

Frequency Band	VSWR, typical	Return Loss, typical (dB)
698–960 MHz	1.065	30

1700–2200 MHz	1.065	30
2200–2700 MHz	1.106	26

Jumper Assembly Sample Label



Environmental Specifications

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

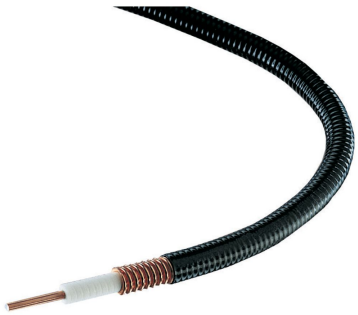
Regulatory Compliance/Certifications

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

Included Products

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

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

RSJ4RK-50LF

Jacket Spark Test Voltage (rms)	4000 V
Operating Frequency Band	1 – 10200 MHz
Peak Power	15.6 kW
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
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
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

Cable weight	0.15 kg/m | 0.101 lb/ft