

Product Specifications



FSJ1RN-50B

FSJ1-50B, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 1/4 in, gray non-halogenated, fire retardant polyolefin jacket



CHARACTERISTICS

Construction Materials

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

Dimensions

Nominal Size	1/4 in
Cable Weight	0.05 lb/ft
Diameter Over Dielectric	0.190 in 4.826 mm
Diameter Over Jacket	0.300 in 7.620 mm
Inner Conductor OD	0.080 in 2.032 mm
Outer Conductor OD	0.250 in 6.350 mm

Electrical Specifications

Cable Impedance	50 ohm $\pm$ 1 ohm
Capacitance	24 pF/ft 7940 pF/m
dc Resistance, Inner Conductor	3.000 ohms/kft
dc Resistance, Outer Conductor	2.000 ohms/kft
dc Test Voltage	3000 V
Inductance	0.061 μ H/ft 0.200 μ H/m
Insulation Resistance	100000 MOhm
Jacket Spark Test Voltage (rms)	4000 V
Operating Frequency Band	1 – 18000 MHz
Peak Power	6.4 kW
Pulse Reflection	1%
Velocity	84%

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Environmental Specifications

Installation Temperature	-25 °C to +60 °C (-13 °F to +140 °F)
Operating Temperature	-30 °C to +80 °C (-22 °F to +176 °F)
Storage Temperature	-30 °C to +80 °C (-22 °F to +176 °F)

Mechanical Specifications

Bending Moment	0.8 ft lb 1.1 N-m
Flat Plate Crush Strength	100.0 lb/in
Minimum Bend Radius, Multiple Bends	1.00 in 25.40 mm
Minimum Bend Radius, Single Bend	1.00 in 25.40 mm
Number of Bends, minimum	15
Number of Bends, typical	20
Tensile Strength	150 lb 68 kg

Standard Conditions

Attenuation, Ambient Temperature	68 °F 20 °C
Average Power, Ambient Temperature	104 °F 40 °C
Average Power, Inner Conductor Temperature	212 °F 100 °C

Attenuation

Frequency (MHz)	Attenuation (dB/100 ft)	Attenuation (dB/100 m)	Average Power (kW)
0.5	0.124	0.407	6.40
1	0.176	0.577	6.40
1.5	0.215	0.707	6.40
2	0.249	0.816	6.40
10	0.559	1.833	3.99
20	0.792	2.6	2.81
30	0.973	3.192	2.29
50	1.261	4.136	1.77
88	1.681	5.516	1.33
100	1.795	5.889	1.24
108	1.867	6.125	1.19
150	2.21	7.25	1.01
174	2.385	7.825	0.93
200	2.563	8.408	0.87
300	3.162	10.373	0.71
400	3.673	12.051	0.61
450	3.906	12.817	0.57
500	4.128	13.545	0.54
512	4.18	13.715	0.53
600	4.544	14.909	0.49
700	4.93	16.175	0.45
800	5.292	17.362	0.42
824	5.376	17.637	0.41

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894	5.614	18.42	0.40
960	5.832	19.134	0.38
1000	5.96	19.556	0.37
1250	6.719	22.044	0.33
1500	7.414	24.326	0.30
1700	7.936	26.038	0.28
1800	8.187	26.862	0.27
2000	8.673	28.455	0.26
2100	8.908	29.227	0.25
2200	9.139	29.984	0.24
2300	9.365	30.727	0.24
2500	9.806	32.174	0.23
2700	10.233	33.576	0.22
3000	10.851	35.602	0.21
3400	11.638	38.183	0.19
4000	12.753	41.841	0.17
5000	14.477	47.5	0.15
6000	16.077	52.747	0.14
8000	19.01	62.37	0.12
10000	21.693	71.173	0.10
12000	24.198	79.393	0.09
14000	26.569	87.172	0.08
16000	28.833	94.601	0.08
18000	31.01	101.745	0.07

Regulatory Compliance/Certifications

Agency

UL/ETL Certification
RoHS 2002/95/EC

Classification

CATVR
Compliant