

Product Specifications

FXL-540

FXL-540, HELIAX[®] Flexible Coaxial Cable, smoothwall aluminum, 1/2 in, black PE jacket



CHARACTERISTICS

Construction Materials

Jacket Material	PE
Outer Conductor Material	Smoothwall aluminum
Dielectric Material	Foam PE
Flexibility	Standard
Inner Conductor Material	Copper-clad aluminum wire
Jacket Color	Black

Dimensions

Nominal Size	1/2 in
Cable Weight	0.12 lb/ft 0.17 kg/m
Diameter Over Jacket	15.494 mm 0.610 in
Inner Conductor OD	0.2010 in 5.1100 mm
Outer Conductor OD	0.540 in 13.700 mm

Electrical Specifications

Cable Impedance	50 ohm $\pm$ 1 ohm
Capacitance	23.1 pF/ft 75.8 pF/m
dc Resistance, Inner Conductor	0.420 ohms/kft 1.380 ohms/km
dc Resistance, Outer Conductor	0.630 ohms/kft 2.070 ohms/km
dc Test Voltage	2500 V
Inductance	0.190 μ H/m 0.058 μ H/ft
Jacket Spark Test Voltage (rms)	5000 V
Operating Frequency Band	100 – 8800 MHz
Peak Power	41.8 kW
Velocity	88%

Environmental Specifications

Installation Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-50 °C to +70 °C (-58 °F to +158 °F)
Storage Temperature	-55 °C to +80 °C (-67 °F to +167 °F)

General Specifications

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Brand HELIAX®

Mechanical Specifications

Bending Moment	8.8 N-m 6.5 ft lb
Flat Plate Crush Strength	1.7 kg/mm 90.0 lb/in
Minimum Bend Radius, Single Bend	50.80 mm 2.00 in
Number of Bends, minimum	15
Tensile Strength	181 kg 400 lb

Standard Conditions

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

Return Loss

Frequency Band	VSWR	Return Loss (dB)
800–2500 MHz	1.1	26.40

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.151	0.046	41.80
1	0.214	0.065	35.16
1.5	0.262	0.08	28.70
2	0.303	0.092	24.84
10	0.68	0.207	11.06
20	0.965	0.294	7.80
30	1.185	0.361	6.35
50	1.535	0.468	4.90
88	2.048	0.624	3.68
100	2.186	0.666	3.44
108	2.274	0.693	3.31
150	2.691	0.82	2.80
174	2.905	0.885	2.59
200	3.121	0.951	2.41
300	3.851	1.174	1.95
400	4.474	1.364	1.68
450	4.759	1.45	1.58
500	5.029	1.533	1.50
512	5.092	1.552	1.48
600	5.536	1.687	1.36
700	6.005	1.83	1.25
800	6.446	1.965	1.17
824	6.549	1.996	1.15
894	6.839	2.084	1.10
960	7.104	2.165	1.06
1000	7.261	2.213	1.04
1250	8.185	2.495	0.92
1500	9.033	2.753	0.83

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1700	9.669	2.947	0.78
1800	9.975	3.04	0.75
2000	10.566	3.221	0.71
2100	10.853	3.308	0.69
2200	11.134	3.394	0.68
2300	11.41	3.478	0.66
2500	11.948	3.642	0.63
2700	12.468	3.8	0.60
3000	13.221	4.03	0.57
3400	14.18	4.322	0.53
3700	14.87	4.532	0.51
4000	15.539	4.736	0.48
5000	17.642	5.377	0.43
6000	19.591	5.971	0.38
8000	23.167	7.061	0.32
8800	24.506	7.469	0.31

Regulatory Compliance/Certifications

Agency

RoHS 2002/95/EC

China RoHS SJ/T 11364-2006

Classification

Compliant

Below Maximum Concentration Value (MCV)

