Product Specifications

FXL-540

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

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	0.1980 in | 5.0300 mm
Outer Conductor OD	0.540 in | 13.700 mm

Electrical Specifications

Cable Impedance	50 ohm ±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 µH/m | 0.058 µH/ft
Insulation Resistance	100000 Mohms•km
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 +176 °F)

General Specifications

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, Multiple Bends	101.60 mm | 4.00 in
Minimum Bend Radius, Single Bend	50.80 mm | 2.00 in

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Number of Bends, minimum	15
Tensile Strength	181 kg | 400 lb

Note

Performance Note	Values typical, unless otherwise stated

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/VSWR

Frequency Band	VSWR	Return Loss (dB)
680–960 MHz	1.13	24.30
1700–2000 MHz	1.13	24.30
2300–2700 MHz	1.13	24.30

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Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.149	0.045	41.80
1	0.211	0.064	35.65
1.5	0.259	0.079	29.09
2	0.299	0.091	25.18
10	0.671	0.205	11.22
20	0.952	0.29	7.91
30	1.168	0.356	6.44
50	1.514	0.461	4.97
88	2.019	0.615	3.73
100	2.155	0.657	3.49
108	2.242	0.683	3.36
150	2.653	0.809	2.84
174	2.864	0.873	2.63
200	3.077	0.938	2.45
300	3.795	1.157	1.98
400	4.408	1.344	1.71
450	4.688	1.429	1.61
500	4.955	1.51	1.52
512	5.017	1.529	1.50
600	5.453	1.662	1.38
700	5.915	1.803	1.27
800	6.349	1.935	1.19
824	6.449	1.966	1.17
894	6.735	2.053	1.12
960	6.996	2.132	1.08
1000	7.15	2.179	1.05
1250	8.058	2.456	0.93
1500	8.891	2.71	0.85
1700	9.516	2.9	0.79
1800	9.817	2.992	0.77
2000	10.398	3.169	0.72
2100	10.68	3.255	0.70
2200	10.956	3.339	0.69
2300	11.227	3.422	0.67
2500	11.754	3.583	0.64
2700	12.265	3.738	0.61
3000	13.004	3.963	0.58
3400	13.945	4.25	0.54
3700	14.622	4.456	0.51
4000	15.278	4.656	0.49
5000	17.339	5.285	0.43
6000	19.25	5.867	0.39
8000	22.751	6.934	0.33
8800	24.062	7.334	0.31

** Values typical, guaranteed within 5%*

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant
China RoHS SJ/T 11364-2006	Below Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

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