

Product Specifications

FXL-780

FXL-780, HELIAX[®] Flexible Coaxial Cable, smoothwall aluminum, 7/8 in, black PE jacket



CHARACTERISTICS

Construction Materials

Jacket Material	PE
Outer Conductor Material	Smoothwall aluminum
Dielectric Material	Foam PE
Flexibility	Flexible
Inner Conductor Material	Copper
Jacket Color	Black

Dimensions

Nominal Size	7/8 in
Cable Weight	0.25 lb/ft 0.37 kg/m
Diameter Over Jacket	1.090 in 27.700 mm
Inner Conductor OD	0.3750 in 9.5000 mm
Outer Conductor OD	1.005 in 25.500 mm

Electrical Specifications

Cable Impedance	50 ohm $\pm$ 1 ohm
Capacitance	23.0 pF/ft 75.4 pF/m
dc Resistance, Inner Conductor	1.005 ohms/kft 3.300 ohms/km
dc Resistance, Outer Conductor	0.350 ohms/kft 1.150 ohms/km
dc Test Voltage	6000 V
Inductance	0.190 μ H/m 0.058 μ H/ft
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	8000 V
Operating Frequency Band	100 – 5300 MHz
Peak Power	86.0 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

Brand	HELIAX [®]
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Mechanical Specifications

Bending Moment	26.0 ft lb 35.0 N-m
Flat Plate Crush Strength	170.0 lb/in 3.0 kg/mm
Minimum Bend Radius, Multiple Bends	203.20 mm 8.00 in
Minimum Bend Radius, Single Bend	127.00 mm 5.00 in
Number of Bends, minimum	15
Tensile Strength	550 lb 249 kg

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)
800–2500 MHz	1.10	26.40

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Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.079	0.024	86.00
1	0.112	0.034	61.21
1.5	0.137	0.042	49.94
2	0.159	0.048	43.22
10	0.357	0.109	19.22
20	0.507	0.154	13.53
30	0.623	0.19	11.01
50	0.808	0.246	8.48
88	1.08	0.329	6.34
100	1.154	0.352	5.94
108	1.201	0.366	5.71
150	1.424	0.434	4.81
174	1.538	0.469	4.46
200	1.654	0.504	4.14
300	2.047	0.624	3.35
400	2.384	0.727	2.87
450	2.538	0.774	2.70
500	2.686	0.819	2.55
512	2.72	0.829	2.52
600	2.962	0.903	2.31
700	3.219	0.981	2.13
800	3.461	1.055	1.98
824	3.517	1.072	1.95
894	3.677	1.121	1.86
960	3.823	1.165	1.79
1000	3.909	1.192	1.75
1250	4.421	1.347	1.55
1500	4.893	1.491	1.40
1700	5.248	1.6	1.31
1800	5.419	1.652	1.26
2000	5.752	1.753	1.19
2100	5.913	1.802	1.16
2200	6.071	1.85	1.13
2300	6.227	1.898	1.10
2500	6.531	1.991	1.05
2700	6.826	2.08	1.00
3000	7.254	2.211	0.94
3400	7.801	2.378	0.88
3700	8.196	2.498	0.84
4000	8.58	2.615	0.80
5000	9.794	2.985	0.70

* Values typical, guaranteed within 5%

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2002/95/EC	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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