

# Product Specifications

FXL-780

FXL-780, HELIAX<sup>®</sup> 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 $\mu$ H/m   0.058 $\mu$ H/ft
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)

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## General Specifications

Brand HELIAX®

## 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, Single Bend 5.00 in | 127.00 mm  
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

Frequency Band	VSWR	Return Loss (dB)
800–2500 MHz	1.10	26.40

## 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

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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

## Regulatory Compliance/Certifications

### Agency

RoHS 2002/95/EC

China RoHS SJ/T 11364-2006

### Classification

Compliant

Below Maximum Concentration Value (MCV)



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