

# FXL-780-NHR



FXL-780, HELIAX® Flexible Coaxial Cable, smoothwall aluminum, 7/8 in, black non-halogenated, fire retardant, low smoke, riser rated polyolefin jacket

## **OBSOLETE**

**This product was discontinued on: December 31, 2017**

### **Replaced By**

AVA5RK-50	AVA5-50, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black non-halogenated, fire retardant polyolefin jacket B2ca- s1a, d1,a1
AVA5-50	AVA5-50, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black PE jacket (Halogen free jacketing non-fire-retardant)
AVA5-50FX	AVA5-50FX, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black PE jacket (Halogen free jacketing non-fire-retardant)

## Product Classification

<b>Brand</b>	HELIAX®
<b>Product Series</b>	FXL-780
<b>Product Type</b>	Coaxial wireless cable

## Standards And Qualifications

<b>EN50575 CPR Cable EuroClass</b>	Dca   s2   d2
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## Construction Materials

<b>Jacket Material</b>	Non-halogenated, fire retardant polyolefin
<b>Outer Conductor Material</b>	Smoothwall aluminum
<b>Dielectric Material</b>	Foam PE
<b>Flexibility</b>	Flexible
<b>Inner Conductor Material</b>	Copper
<b>Jacket Color</b>	Black

## Dimensions

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

## Electrical Specifications

# FXL-780-NHR

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<b>Cable Impedance</b>	50 ohm ±1 ohm
<b>Capacitance</b>	23.0 pF/ft   75.0 pF/m
<b>dc Resistance, Inner Conductor</b>	1.005 ohms/kft   3.300 ohms/km
<b>dc Resistance, Outer Conductor</b>	0.350 ohms/kft   1.150 ohms/km
<b>dc Test Voltage</b>	6000 V
<b>Inductance</b>	0.190 µH/m   0.058 µH/ft
<b>Insulation Resistance</b>	100000 Mohms•km
<b>Jacket Spark Test Voltage (rms)</b>	8000 V
<b>Operating Frequency Band</b>	100 – 5300 MHz
<b>Peak Power</b>	86.0 kW
<b>Velocity</b>	88 %

## Environmental Specifications

<b>Installation Temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Operating Temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Storage Temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)

## General Specifications

<b>Ordering Note</b>	CommScope® non-standard product   Not available in the United States or Canada
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## Mechanical Specifications

<b>Bending Moment</b>	26.0 ft lb   35.0 N-m
<b>Fire Retardancy Test Method</b>	IEC 60332-3-24   UL 1666/CATVR/CMR
<b>Flat Plate Crush Strength</b>	170.0 lb/in   3.0 kg/mm
<b>Minimum Bend Radius, Multiple Bends</b>	203.20 mm   8.00 in
<b>Minimum Bend Radius, Single Bend</b>	127.00 mm   5.00 in
<b>Number of Bends, minimum</b>	8
<b>Smoke Index Test Method</b>	IEC 61034
<b>Tensile Strength</b>	550 lb   249 kg
<b>Toxicity Index Test Method</b>	IEC 60754-1   IEC 60754-2

## Note

<b>Performance Note</b>	Values typical, unless otherwise stated
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## Standard Conditions

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

## Return Loss/VSWR

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

# FXL-780-NHR

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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	61.28
1.5	0.137	0.042	50.00
2	0.158	0.048	43.27
10	0.356	0.109	19.24
20	0.506	0.154	13.55
30	0.622	0.189	11.03
50	0.807	0.246	8.50
85	1.059	0.323	6.47
88	1.078	0.329	6.36
100	1.152	0.351	5.95
108	1.198	0.365	5.72
150	1.42	0.433	4.83
174	1.534	0.468	4.47
200	1.65	0.503	4.15
204	1.667	0.508	4.11
300	2.041	0.622	3.36
400	2.377	0.724	2.88
450	2.53	0.771	2.71
460	2.56	0.78	2.68
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500	2.677	0.816	2.56
512	2.711	0.826	2.53
600	2.951	0.899	2.32
700	3.207	0.977	2.14
800	3.447	1.051	1.99
824	3.503	1.068	1.96
894	3.662	1.116	1.87
960	3.807	1.16	1.80
1000	3.893	1.186	1.76
1218	4.338	1.322	1.58
1250	4.401	1.341	1.56
1500	4.869	1.484	1.41
1700	5.221	1.591	1.31
1794	5.381	1.64	1.27
1800	5.391	1.643	1.27
2000	5.721	1.744	1.20
2100	5.88	1.792	1.17
2200	6.037	1.84	1.14
2300	6.192	1.887	1.11
2500	6.493	1.979	1.06
2700	6.785	2.068	1.01
3000	7.209	2.197	0.95
3400	7.75	2.362	0.88
3600	8.012	2.442	0.86

# FXL-780-NHR

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3700	8.141	2.481	0.84
3800	8.269	2.52	0.83
3900	8.395	2.559	0.82
4000	8.521	2.597	0.80
4100	8.645	2.635	0.79
4200	8.768	2.672	0.78
4300	8.89	2.71	0.77
4400	9.012	2.747	0.76
4500	9.132	2.783	0.75
4600	9.251	2.82	0.74
4700	9.37	2.856	0.73
4800	9.488	2.892	0.72
4900	9.604	2.927	0.71
5000	9.72	2.963	0.71

\* Values typical, guaranteed within 5%

## Regulatory Compliance/Certifications

Agency	Classification
UL/ETL Certification	CATVR/CMR
RoHS 2011/65/EU	Compliant
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
CENELEC	EN 50575 compliant, Declaration of Performance (DoP) available

