35409-21

EWP180-180, HELIAX® Premium Elliptical Waveguide, 17.7–19.7 GHz, black non-halogenated, fire retardant polyolefin jacket

Product Classification

Product Type	Elliptical waveguide
Product Brand	HELIAX®

General Specifications

Jacket Color	Black
Performance Note	Values typical, unless otherwise stated

Dimensions

Diameter Over Jacket (E Plane)	20.1 mm | 0.791 in
Diameter Over Jacket (H Plane)	12.4 mm | 0.488 in
Cable Volume	111 L/km | 1.195 ft³/kft

Electrical Specifications

eTE11 Mode Cutoff	11.15 GHz
Group Delay at Frequency	127 ns/100 ft @ 18.700 GHz | 416 ns/100 m @ 18.700 GHz
Operating Frequency Band	17.7 – 19.7 GHz

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
17.7–19.7 GHz	1.09	27.32

Attenuation

Frequency (GHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)	Group Velocity %
17.7	20.111	6.13	0.537	77.7
18.1	19.799	6.035	0.546	78.8
18.5	19.523	5.951	0.553	79.8

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18.9	19.278	5.876	0.56	80.7
19.3	19.06	5.81	0.567	81.6
19.7	18.865	5.75	0.573	82.4

Material Specifications

Conductor Material	Corrugated copper
Jacket Material	Non-halogenated, fire retardant polyolefin

Mechanical Specifications

Minimum Bend Radius, Multiple Bends (E Plane)	150 mm | 5.906 in
Minimum Bend Radius, Multiple Bends (H Plane)	280 mm | 11.024 in
Minimum Bend Radius, Single Bend (E Plane)	150 mm | 5.906 in
Minimum Bend Radius, Single Bend (H Plane)	380 mm | 14.961 in
Maximum Twist	6.562 °/m | 2 °/ft

Environmental Specifications

Installation temperature	-25 °C to +60 °C (-13 °F to +140 °F)
Operating Temperature	-30 °C to +80 °C (-22 °F to +176 °F)
Storage Temperature	-30 °C to +80 °C (-22 °F to +176 °F)
Average Power, Ambient Temperature	104 °F | 40 °C
Average Power, Temperature Rise	42 °C | 107.6 °F
Fire Retardancy Test Method	UL 1666/CATVR/CMR
Toxicity Index Test Method	IEC 60754-2

Packaging and Weights

Cable weight	0.22 kg/m | 0.148 lb/ft

Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
UL/ETL Certification	CATVR/CMR

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