222040-10

EW20, HELIAX® Standard Elliptical Waveguide, 2.3–2.4 GHz, unjacketed

Product Classification

Product Type	Elliptical waveguide
Product Brand	HELIAX®

General Specifications

Performance Note	Values typical, unless otherwise stated

Dimensions

Diameter Over Jacket (E Plane)	127.5 mm | 5.02 in
Diameter Over Jacket (H Plane)	71.9 mm | 2.831 in
Cable Volume	5621 L/km | 60.504 ft³/kft

Electrical Specifications

eTE11 Mode Cutoff	1.57 GHz
Group Delay at Frequency	128 ns/100 ft @ 2.600 GHz | 418 ns/100 m @ 2.600 GHz
Operating Frequency Band	2.3 – 2.4 GHz

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
2.3–2.4 GHz	1.15	23.13

Attenuation

Frequency (GHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)	Group Velocity %
2.3	1.534	0.468	31.501	73.1
2.4	1.484	0.452	32.559	75.6

Material Specifications

Conductor Material	Corrugated copper
Jacket Material	Unjacketed

Mechanical Specifications

Minimum Bend Radius, Multiple Bends (E Plane)	660 mm | 25.984 in
Minimum Bend Radius, Multiple Bends (H Plane)	1800 mm | 70.866 in

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222040-10

Minimum Bend Radius, Single Bend (E Plane)	460 mm | 18.11 in
Minimum Bend Radius, Single Bend (H Plane)	1270 mm | 50 in
Maximum Twist	0.098 °/m | 0.03 °/ft

Environmental Specifications

Installation temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-70 °C to +85 °C (-94 °F to +185 °F)
Average Power, Ambient Temperature	104 °F | 40 °C
Average Power, Temperature Rise	42 °C | 107.6 °F

Packaging and Weights

Cable weight	2.76 kg/m | 1.855 lb/ft

Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

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