EWP63S, HELIAX® Super Premium Elliptical Waveguide, 6.425–7.125 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)**
51.1 mm | 2.012 in

**Diameter Over Jacket (H Plane)**
29.5 mm | 1.161 in

**Cable Volume**
855 L/km | 9.203 ft³/kft

Electrical Specifications

**eTE11 Mode Cutoff**
4.001 GHz

**Group Delay at Frequency**
126 ns/100 ft @ 6.775 GHz | 413 ns/100 m @ 6.775 GHz

**Operating Frequency Band**
6.425 – 7.125 GHz

VSWR/Return Loss

<table>
<thead>
<tr>
<th>Frequency Band</th>
<th>VSWR</th>
<th>Return Loss (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.425–7.125 GHz</td>
<td>1.05</td>
<td>32.3</td>
</tr>
</tbody>
</table>

Attenuation

<table>
<thead>
<tr>
<th>Frequency (GHz)</th>
<th>Attenuation (dB/100 m)</th>
<th>Attenuation (dB/100 ft)</th>
<th>Average Power (kW)</th>
<th>Group Velocity %</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.425</td>
<td>4.58</td>
<td>1.396</td>
<td>4.739</td>
<td>78.2</td>
</tr>
<tr>
<td>6.63</td>
<td>4.492</td>
<td>1.369</td>
<td>4.832</td>
<td>79.7</td>
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<tr>
<td>6.83</td>
<td>4.419</td>
<td>1.347</td>
<td>4.912</td>
<td>81</td>
</tr>
<tr>
<td>7.03</td>
<td>4.357</td>
<td>1.328</td>
<td>4.982</td>
<td>82.2</td>
</tr>
</tbody>
</table>

Material Specifications

**Conductor Material**
Corrugated copper

**Jacket Material**
Unjacketed

Mechanical Specifications
Minimum Bend Radius, Multiple Bends (E Plane) | 260 mm | 10.236 in
Minimum Bend Radius, Multiple Bends (H Plane) | 740 mm | 29.134 in
Minimum Bend Radius, Single Bend (E Plane) | 180 mm | 7.087 in
Minimum Bend Radius, Single Bend (H Plane) | 510 mm | 20.079 in
Maximum Twist | 3.281 °/m | 1 °/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)
Attenuation, Ambient Temperature | 75 °F | 23.889 °C
Average Power, Ambient Temperature | 104 °F | 40 °C
Average Power, Temperature Rise | 42 °C | 107.6 °F

Packaging and Weights

Cable weight | 0.76 kg/m | 0.511 lb/ft

Regulatory Compliance/Certifications

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