WR-10 Waveguide Dual Polarized Scalar Feed Horn Antenna, 75 GHz to 110 GHz Frequency Range, 13 dBi Gain, UG-387/U-Mod Flange

Waveguide Antennas Technical Data Sheet

PEWAN1121

Features
- 75 GHz to 110 GHz Frequency Range
- Linear and Circular Polarization
- High Port Isolation
- High Cross-Polarization Rejection

Applications
- 5G Systems
- Radar Systems
- Communication Systems
- Circular and Linear Waveform Separation and Combination

Description
Pasternack's PEWAN1121 is a WR-10 dual polarized scalar feed horn antenna that operates in the frequency range of 75 GHz to 110 GHz. PEWAN1121 features an integrated orthomode transducer that provides high port isolation and cross-polarization cancellation and a broad band scalar feed horn that provides low sidelobe levels. The antenna supports either vertical or horizontal polarized waveguide forms with a typical ±30 dB cross polarization rejections, 13 dBi nominal gain at center frequency, typical ±30 dB port isolation between horizontal and vertical ports, typical half power beamwidth of 40 degrees, and -25 dB sidelobe levels. The input of this antenna is a WR-10 waveguide with UG-387/U-M threaded flange.

Configuration
Design
WR-10 Dual Polarized Scalar Feed Horn

Polarization
Linear/Circular

Electrical Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>75</td>
<td>110</td>
<td></td>
<td>GHz</td>
</tr>
<tr>
<td>Nominal Gain</td>
<td></td>
<td>13</td>
<td></td>
<td>dBi</td>
</tr>
<tr>
<td>Horizontal Half Power Beam Width</td>
<td></td>
<td>40</td>
<td></td>
<td>Degrees</td>
</tr>
<tr>
<td>Vertical Half Power Beam Width</td>
<td></td>
<td>40</td>
<td></td>
<td>Degrees</td>
</tr>
<tr>
<td>VSWR</td>
<td></td>
<td></td>
<td>1.4:1</td>
<td></td>
</tr>
</tbody>
</table>

Mechanical Specifications

Size
Length
2.7 in [68.58 mm]
Width
0.8 in [20.32 mm]
Height
0.8 in [20.32 mm]
Weight
0.236 lbs [107.05 g]

Waveguide Interface
Waveguide Size
WR-10
Flange Designation
UG-387/U-Mod
Body Material and Plating
Aluminum, Gold

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: WR-10 Waveguide Dual Polarized Scalar Feed Horn Antenna, 75 GHz to 110 GHz Frequency Range, 13 dBi Gain, UG-387/U-Mod Flange PEWAN1121
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Environmental Specifications

Temperature
Operating Range: -40 to 85 deg C

Compliance Certifications (see product page for current document)

Plotted and Other Data

Typical Performance Data

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DIMENSIONS IN [ ] ARE MILLIMETERS

FRACTIONS ± 1/32
ANGLES ± 1°

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T-Rev B

PEWAN1121 CAD Drawing

WR-10 Waveguide Dual Polarized Scalar Feed Horn Antenna 75 GHz to 110 GHz Frequency Range, 13 dBi Gain, UG-387/U-Mod Flange