OMP designs and builds a wide range of RF & Microwave Subsystems and Antennas. This product data sheet is one in a series of publications where we present general specifications of products that we developed.

These documents are intended to give you an overview of the type of work we do and they will help you in determining your requirements for a specific application.

**Application**

This antenna is one in a series of medium gain, planar antenna arrays we are offering.

This specific design is used in a small, Ka-Band radar subsystem.

The RF radar subsystem is mounted to the back of the antenna.

**Configurations**

This is a linear array with integrated feeding network.

**KEY FEATURES**

- 1 by 8 element linear array
- 12 dBi of gain
- Integrated feeding network
- Additional real estate suppresses sidelobes
- Linear polarization
- High radiation efficiency

www.orbanmicrowave.com Product Series data Sheet
Ka-Band Antenna Array
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Options

This array can be designed to cover other frequency bands like L, C, X and Ku-Band.

Custom electronics like LNA’s and filtering can be mounted to the back of this structure.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electrical</strong></td>
<td></td>
</tr>
<tr>
<td>Specifications</td>
<td></td>
</tr>
<tr>
<td>Frequency coverage</td>
<td>Ka-Band</td>
</tr>
<tr>
<td>Gain</td>
<td>12 dBi</td>
</tr>
<tr>
<td>Type</td>
<td>Linear array</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mechanical</strong></td>
<td></td>
</tr>
<tr>
<td>Specifications</td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>8 by 8 cm and 1 cm high 3” by 0.5”</td>
</tr>
<tr>
<td>Weight</td>
<td>&lt;25 gr</td>
</tr>
<tr>
<td>Mounting</td>
<td>Bonding</td>
</tr>
</tbody>
</table>
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Ka-Band Antenna Array

<table>
<thead>
<tr>
<th>Type</th>
<th>Farfield Approximation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moniter Component</td>
<td>Farfield (r=0) [0]</td>
</tr>
<tr>
<td>Output</td>
<td>Directivity</td>
</tr>
<tr>
<td>Frequency</td>
<td>24.15</td>
</tr>
<tr>
<td>Rad. eff.</td>
<td>-0.5691 dB</td>
</tr>
<tr>
<td>Int. eff.</td>
<td>-0.8647 dB</td>
</tr>
<tr>
<td>BIL dB</td>
<td>-14.19 dB</td>
</tr>
</tbody>
</table>

Farfield Directivity Abs (Phi=0)

Frequency = 24.15
Main lobe magnitude = -14.2 dB
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 12.2 deg.
Side lobe level = -19.1 dB
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Our customers have needs beyond standard products. OMP is who you come to when your application needs to go beyond the ordinary to accomplish something unique and remarkable.

Our success relies upon world-class engineering expertise, a vast library of RF building block designs, simulation tools and rapid prototyping capabilities to reduce design time lines and deliver on budget.

Our model is to design 'at cost', acting as a true partner with our customers, profiting only once we’ve entered production with the final product. And unlike traditional design companies who part ways at the critical stage of production, OMP retains responsibility for the entire product lifecycle - all the way to integration into the final system.

Since we are not a catalog manufacturer who depends on high volume production, your custom requirement is our only priority. Let Orban Microwave Products help you achieve something extraordinary.

• OMP designs and builds to customer’s specifications
• We support products through their entire product lifecycle
• An extensive library of designs is used to create custom products
• OMP uses state-of-the-art circuit and 3D electromagnetic simulations tools
• OMP uses rapid prototyping for fast turnaround
• We will work with our customers on the integration of products designed
• We work with selected partners for agency approval.

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