E-Band Waveguide to 1mm Connector Adapter

Description:

These waveguide to coax adapters operate in the frequency range from 60.0 to 90.0 GHz. They are designed and manufactured for instrumentation grade quality, but with commercial price level, allowing efficient transition between the rectangular waveguide to coax connector. These adapters deliver superior RF performance (i.e., low insertion loss and low VSWR). Two mechanical configurations, namely right angle and end launch (in-line), are offered.

Features:

- Broadband operation
- Low insertion loss and VSWR
- Instrumentation grade

Applications:

- Test labs
- Instrumentation
- Sub-assemblies

Device Specifications:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>60.0 GHz</td>
<td>N/A</td>
<td>90.0 GHz</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>N/A</td>
<td>0.8 dB</td>
<td>N/A</td>
</tr>
<tr>
<td>Return Loss</td>
<td>N/A</td>
<td>-14.0 dB</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Ports Specifications:

<table>
<thead>
<tr>
<th>Port</th>
<th>Connector</th>
<th>Absolute Maximum Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waveguide</td>
<td>WR-12 with UG387/U Flange</td>
<td>N/A</td>
</tr>
<tr>
<td>Coaxial</td>
<td>1mm Female[1] or 1mm Male[2]</td>
<td>N/A</td>
</tr>
</tbody>
</table>

(1) Applies to model SWC-121F-R1
(2) Applies to model SWC-121M-R1
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**Mechanical Outline:** (Unless otherwise specified, all dimensions are in inches)

![Mechanical Diagram](image)

**Note:**
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.
- All data are presented using a limited sample lot, actual data may vary unit to unit.
- All testing was performed under 25°C case temperature.

**Caution:**
- Any foreign objects into the waveguide will destroy the adapter.