Description: 18x18x4mm GPS/Glonass SMD Mount

PART NUMBER: W3224

Features:

- 1575/1602MHz Dualband single feed antenna
- RHCP Polarization
- Zenith Gain +3dBiC
- SMD compatible
- Tape & Reel packing
- Moisture Sensitive Level: MSL-1

Applications:

- GPS and Glonass satellite receivers
- Tracking, Navigation, Satellite Positioning
- Fleet management
- Asset tracking

All dimensions are in mm / inches

Issue: 2047
**Series:** Ceramic Patch  
**Description:** 18x18x4mm GPS/Glonass SMD Mount  
**PART NUMBER:** W3224

### ELECTRICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>1575.42±1.023/1602.5625±4 MHz</td>
</tr>
<tr>
<td>Nominal Impedance</td>
<td>50 Ω</td>
</tr>
<tr>
<td>Return Loss*</td>
<td>&lt;-10 dB</td>
</tr>
<tr>
<td>RHCP Gain (typical)*</td>
<td>2/2.5 dBiC</td>
</tr>
<tr>
<td>Zenith Axial Ratio (typical)*</td>
<td>9.5</td>
</tr>
<tr>
<td>Polarization:</td>
<td>RHCP</td>
</tr>
</tbody>
</table>

* Measured on 70 x 70 mm reference board

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Issue: 2047  
In the effort to improve our products, we reserve the right to make changes judged to be necessary.  
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Series: Ceramic Patch

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<table>
<thead>
<tr>
<th>MECHANICAL SPECIFICATIONS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>Ceramic</td>
</tr>
<tr>
<td>Metallization</td>
<td>Silver</td>
</tr>
<tr>
<td>Size</td>
<td>18 x 18 x 4 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>6.1 g</td>
</tr>
<tr>
<td>Mounting type</td>
<td>SMD</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENVIRONMENTAL SPECIFICATIONS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature</td>
<td>-40 / + 95 °C</td>
</tr>
</tbody>
</table>
Series: Ceramic Patch

Description: 18x18x4mm GPS/Glonass SMD Mount

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MECHANICAL DRAWING
Series: Ceramic Patch

Description: 18x18x4mm GPS/Glonass SMD Mount

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OTHER SPECIFICATIONS

Test Condition Ground Plane (Example for PCB 1 mm)

A. B are Solder Pads
Bottom side needs π matching circuit.
Tolerance: ± 0.2 mm

π matching circuit:

Antenna

0 ohm

NC

NC

RoHS COMPLIANT

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Recommendable Reflow Soldering

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Rising temperature</td>
<td>The normal to Preheating</td>
</tr>
<tr>
<td>B</td>
<td>Preheating</td>
<td>80°C to 200°C</td>
</tr>
<tr>
<td>C</td>
<td>Temperature</td>
<td>220°C to 260°C to 220°C</td>
</tr>
<tr>
<td>D</td>
<td>Main heating</td>
<td>if 260°C</td>
</tr>
<tr>
<td>E</td>
<td>Regular cooling</td>
<td>200°C to 100°C</td>
</tr>
</tbody>
</table>

* The thickness of Solder should be controlled to be higher than 0.1 mm.
Description: 18x18x4mm GPS/Glonass SMD Mount

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CHARTS

Return Loss

Total Radiation Efficiency
Series: Ceramic Patch

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CHARTS

Zenith RHCP Gain

GPS Radiation pattern on 70mmX70mm metal plane
**Series:** Ceramic Patch

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**CHARTS**

Glonass Radiation pattern on 70mmX70mm metal plane
Series: Ceramic Patch

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PACKAGING

Reel & Tape packing
300PCS/reel

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>±2.0</td>
<td>±4.0</td>
<td>±0.2</td>
<td>±2.0</td>
<td>±2.0</td>
<td></td>
</tr>
<tr>
<td>330</td>
<td>100</td>
<td>13.2</td>
<td>2</td>
<td>10.75</td>
<td>32.4</td>
</tr>
</tbody>
</table>