MACPES0026

E-Series 2 Way 0° Power Divider
5 - 1000 MHz

Features
- 2 Way 0 Degree
- Surface mount
- Available on tape and reel
- 260° reflow compatible
- RoHS compliant and Pb free

Description
MACPES0026 is a 2 Way 0° power divider in a low cost, surface mount package. Ideally suited for high volume cellular, wireless and CATV applications. An external 160 Ohm chip resistor is required with this part.

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACPES0026TR</td>
<td>900 piece reel</td>
</tr>
</tbody>
</table>

Electrical Specifications: Freq. = 5 - 1000 MHz, $T_A = 25^\circ$C

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test Frequency (MHz)</th>
<th>Units</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion Loss</td>
<td>5 - 40</td>
<td>dB</td>
<td>0.6</td>
<td>0.6</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>40 - 400</td>
<td></td>
<td>0.7</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td></td>
<td>400 - 500</td>
<td></td>
<td>0.8</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td></td>
<td>500 - 1000</td>
<td></td>
<td>—</td>
<td>—</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>5 - 40</td>
<td>dB</td>
<td>26</td>
<td>19</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>40 - 400</td>
<td></td>
<td>19</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td></td>
<td>400 - 500</td>
<td></td>
<td>16</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td></td>
<td>500 - 1000</td>
<td></td>
<td>10</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Amplitude &amp; Unbalance</td>
<td>5 - 40</td>
<td>dB</td>
<td>—</td>
<td>—</td>
<td>0.6</td>
</tr>
<tr>
<td></td>
<td>40 - 400</td>
<td></td>
<td>—</td>
<td>—</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>400 - 500</td>
<td></td>
<td>—</td>
<td>—</td>
<td>0.6</td>
</tr>
<tr>
<td></td>
<td>500 - 1000</td>
<td></td>
<td>—</td>
<td>—</td>
<td>0.6</td>
</tr>
<tr>
<td>Phase Unbalance</td>
<td>5 - 40</td>
<td>°</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>40 - 400</td>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>400 - 500</td>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>500 - 1000</td>
<td></td>
<td>5</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Output Return Loss</td>
<td>5 - 40</td>
<td>dB</td>
<td>20</td>
<td>14</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>40 - 870</td>
<td></td>
<td>16</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td></td>
<td>40 - 1000</td>
<td></td>
<td>16</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Input Return Loss</td>
<td>5 - 40</td>
<td>dB</td>
<td>20</td>
<td>15</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>40 - 870</td>
<td></td>
<td>17</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td></td>
<td>40 - 1000</td>
<td></td>
<td>16</td>
<td>—</td>
<td></td>
</tr>
</tbody>
</table>
Recommended Maximum Ratings\(^1,2\)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Absolute Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Power</td>
<td>1 W</td>
</tr>
<tr>
<td>Internal Load Dissipation</td>
<td>0.125 W</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-40°C to +85°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-55°C to +100°C</td>
</tr>
<tr>
<td>Soldering Temperature</td>
<td>260°C for 10 sec.</td>
</tr>
</tbody>
</table>

1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

Typical Performance Curves: \(T_A = 25°C\)

**Insertion Loss**

\[
\begin{array}{|c|c|}
\hline
\text{Frequency (MHz)} & \text{dB} \\
\hline
5.00 & -0.25 \\
204.00 & -0.20 \\
403.00 & -0.15 \\
602.00 & -0.10 \\
801.00 & -0.05 \\
1000.00 & 0.00 \\
\hline
\end{array}
\]

**Isolation**

\[
\begin{array}{|c|c|}
\hline
\text{Frequency (MHz)} & \text{dB} \\
\hline
5.00 & -0.25 \\
204.00 & -0.20 \\
403.00 & -0.15 \\
602.00 & -0.10 \\
801.00 & -0.05 \\
1000.00 & 0.00 \\
\hline
\end{array}
\]

**Amplitude Unbalance**

\[
\begin{array}{|c|c|}
\hline
\text{Frequency (MHz)} & \text{dB} \\
\hline
5.00 & -0.25 \\
204.00 & -0.20 \\
403.00 & -0.15 \\
602.00 & -0.10 \\
801.00 & -0.05 \\
1000.00 & 0.00 \\
\hline
\end{array}
\]

**Phase Unbalance**

\[
\begin{array}{|c|c|}
\hline
\text{Frequency (MHz)} & \text{Degrees} \\
\hline
5.00 & 1.20 \\
204.00 & 1.80 \\
403.00 & 2.40 \\
602.00 & 3.00 \\
801.00 & 3.60 \\
1000.00 & 4.20 \\
\hline
\end{array}
\]

Full temperature plots available on request
Outline Drawing, SM-135

1. Dimensions in inches [mm].
2. Tolerance: .xx ±0.2 mm, .xxx ±0.01 mm.
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