1:4 E-Series, RF Flux Coupled Transformer
2 - 800 MHz

Features
- Surface Mount Package
- 1:4 Impedance Ratio
- CT on Secondary
- Available on Tape & Reel
- RoHS* Compliant version of ETC4-1-2

Applications
- Wireless Networking & Communication

Description
The MABAES0061 is a RoHS compliant device that is equivalent to the ETC4-1-2 transformer. This device is a 1:4 RF flux coupled step-up transformer. This transformer is offered in a SM-22 surface mount package and is designed to be utilized in both standard reflow and high temperature soldering reflow profiles.

Irrally suited for high volume cellular and wireless applications. Typical applications include single to balanced mode conversion and impedance matching.

Electrical Specifications: Freq. = 2 - 800 MHz, $T_A = 25^\circ C$, $Z_0 = 50 \Omega$, $P_{in} = 0 \text{ dBm}$

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Conditions</th>
<th>Units</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance Ratio</td>
<td>—</td>
<td>ratio</td>
<td>—</td>
<td>1.4</td>
<td>—</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>$f_L - f_U$</td>
<td>dB</td>
<td>—</td>
<td>1.21</td>
<td>1.0</td>
</tr>
<tr>
<td>Amplitude Unbalance</td>
<td>$f_L - f_U$</td>
<td>dB</td>
<td>—</td>
<td>0.25</td>
<td>—</td>
</tr>
<tr>
<td>Phase Unbalance</td>
<td>$f_L - f_U$</td>
<td>°</td>
<td>—</td>
<td>2</td>
<td>—</td>
</tr>
</tbody>
</table>

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MABAES0061</td>
<td>2000 piece reel</td>
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</tbody>
</table>

Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Absolute Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Input Power</td>
<td>250 mW</td>
</tr>
<tr>
<td>DC Current</td>
<td>240 mA$^2$</td>
</tr>
<tr>
<td>Dielectric Withstanding Voltage</td>
<td>$&gt;2050 \text{ V}$</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-55$^\circ$C to +85$^\circ$C</td>
</tr>
</tbody>
</table>

1. Operation of this device above any one of these parameters may cause permanent damage.
2. The maximum DC current applies to the secondary center tap in applications where the secondary is balanced.

For further information and support please visit: [www.macom.com/support]
Typical Performance Curves over extended Bandwidth (30 KHz - 1 GHz)

**Insertion Loss (-3 to -13 dB) vs. Frequency (30 kHz to 1 GHz)**

**Phase Unbalance (0 to 360 deg.) vs. Frequency (30 kHz to 1 GHz)**

**Amplitude Unbalance (5 to -5 dB) vs. Frequency (30 kHz to 1 GHz)**

**Input Impedance on Smith Chart vs. Frequency (30 kHz to 1 GHz)**
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Lead-Free Outline Drawing

Dimensions in mm.
Tolerance: ±0.2 mm unless otherwise noted.
Model number and lot code are printed on the reel.
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