ETC1-1T-2TR

E-Series RF 1:1 Transformer
0.1 – 200 MHz

Features
- 1:1 Impedance Ratio
- Surface Mount
- Tape and reel packaging available

Description
M/A-COM’s ETC1-1T-2 is a 1:1 RF transformer in a low cost, surface mount package. Typical applications include single to balanced mode conversion and impedance matching. Parts are packaged in tape & reel.

Pin Configuration

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Secondary</td>
</tr>
<tr>
<td>2</td>
<td>Secondary CT</td>
</tr>
<tr>
<td>3</td>
<td>Secondary Dot</td>
</tr>
<tr>
<td>4</td>
<td>Primary Dot</td>
</tr>
<tr>
<td>5</td>
<td>Primary</td>
</tr>
</tbody>
</table>

SM-22 package

* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

Visit www.macom.com for additional data sheets and product information.

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**ETC1-1T-2TR**

**E-Series RF 1:1 Transformer**

*0.1 – 200 MHz*

**Electrical Specifications:** \( T_A = 25°C, Z_0 = 50\Omega \)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test Conditions</th>
<th>Frequency</th>
<th>Units</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Frequency</td>
<td></td>
<td>0.1 - 200</td>
<td>MHz</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td></td>
<td>0.1 - 200</td>
<td>dB</td>
<td>—</td>
<td>0.3</td>
<td>1.5</td>
</tr>
<tr>
<td>Amplitude Imbalance</td>
<td></td>
<td>0.1 - 200</td>
<td>dB</td>
<td>—</td>
<td>—</td>
<td>0.5</td>
</tr>
<tr>
<td>Phase Imbalance</td>
<td></td>
<td>0.1 - 200</td>
<td>Degrees</td>
<td>—</td>
<td>—</td>
<td>5°</td>
</tr>
</tbody>
</table>

**Absolute Maximum Ratings**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Absolute Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Power</td>
<td>250 mW</td>
</tr>
<tr>
<td>DC Current</td>
<td>30 mA</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C to +85°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-55°C to +125°C</td>
</tr>
</tbody>
</table>

1. Operation of this device above any one of these parameters may cause permanent damage.

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0.1 – 200 MHz

Typical Performance Curves

**Insertion Loss**

**Amplitude Unbalance**

**Phase Unbalance**

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**ETC1-1T-2TR**

**E-Series RF 1:1 Transformer**  
0.1 – 200 MHz  
Rev. V2

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**Tape & Reel Information**

![Diagram](image)

- Ao: 4.00mm +/−0.1mm
- Bo: 4.00mm +/−0.1mm
- Ko: 2.9mm +/−0.1mm
- W: 12.00mm +/−0.1mm
- P1: 8.00mm +/−0.3mm

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**Ordering Information**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETC1-1T-2TR</td>
<td>2000 piece reel</td>
</tr>
</tbody>
</table>

1. Reference Application Note M513 for reel size information.
2. All sample boards include 5 loose parts.

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