**Features**

- 1:1.78 step up flux coupled transformer
- Surface mount
- Separate secondary coils allowing separate bias feed into balanced amplifiers
- 260°C reflow compatible
- RoHS Compliant and Pb free
- Excellent temperature stability
- Can be used on 50Ω and 75Ω systems
- Suitable for all CATV, Broadband and FTTx applications.

**Electrical Specifications:** $Z_0 = 75\Omega$, $T_A = 25^\circ$C, $P_{in} = 0$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>Insertion Loss</td>
<td>5 - 80 MHz</td>
<td>dB</td>
<td>-</td>
<td>0.35</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>80-200 MHz</td>
<td>dB</td>
<td>-</td>
<td>0.48</td>
<td>1.0</td>
</tr>
<tr>
<td>Amplitude Balance</td>
<td>5 - 100 MHz</td>
<td>dB</td>
<td>-</td>
<td>0.02</td>
<td>± 0.2</td>
</tr>
<tr>
<td></td>
<td>100 - 200 MHz</td>
<td>dB</td>
<td>-</td>
<td>0.14</td>
<td>± 0.5</td>
</tr>
<tr>
<td>Phase Balance</td>
<td>5 - 50 MHz</td>
<td>°</td>
<td>-</td>
<td>0.50</td>
<td>± 3</td>
</tr>
<tr>
<td></td>
<td>50 - 100 MHz</td>
<td>°</td>
<td>-</td>
<td>1.95</td>
<td>± 5</td>
</tr>
<tr>
<td></td>
<td>100 - 200 MHz</td>
<td>°</td>
<td>-</td>
<td>4.15</td>
<td>± 10</td>
</tr>
<tr>
<td>Input Return Loss</td>
<td>5 - 100 MHz</td>
<td>dB</td>
<td>22</td>
<td>25.9</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>100 - 200 MHz</td>
<td>dB</td>
<td>16</td>
<td>18.4</td>
<td>-</td>
</tr>
</tbody>
</table>

**Pin Configuration**

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Primary (ground)</td>
</tr>
<tr>
<td>2</td>
<td>Secondary ground 2</td>
</tr>
<tr>
<td>3</td>
<td>Primary Dot (input)</td>
</tr>
<tr>
<td>4</td>
<td>Secondary (output 2)</td>
</tr>
<tr>
<td>5</td>
<td>Secondary ground 1</td>
</tr>
<tr>
<td>6</td>
<td>Secondary Dot (output 1)</td>
</tr>
</tbody>
</table>

**Schematic**

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Insertion Loss: (pin3 - pin6)

Insertion Loss: (pin3 - pin4)

Amplitude Balance

Phase Balance

Return Loss: Input (pin3)

Electrical Specifications: \( Z_0 = 75\, \Omega \), \( T_A = 25^\circ C \), \( P_m = 0 \text{dBm} \)
Outline Drawing

1. Dimensions in mm.
2. Tolerance: ±0.2mm unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating finish: Electreless nickel immersion Gold 3 - 5 microns nickel 0.05 - 0.15 microns gold.

Application Circuit

Recommended Footprint

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1:1.78 Step up flux coupled Transformer
5 MHz - 200 MHz

**Tape & Reel Information**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qty per reel</td>
<td>-</td>
<td>2000</td>
</tr>
<tr>
<td>Reel size</td>
<td>mm</td>
<td>330</td>
</tr>
<tr>
<td>Tape width (W)</td>
<td>mm</td>
<td>12.0</td>
</tr>
<tr>
<td>Pitch (P₁)</td>
<td>mm</td>
<td>8.0</td>
</tr>
<tr>
<td>A₀</td>
<td>mm</td>
<td>4.55</td>
</tr>
<tr>
<td>B₀</td>
<td>mm</td>
<td>4.75</td>
</tr>
<tr>
<td>K₀</td>
<td>mm</td>
<td>3.1</td>
</tr>
<tr>
<td>Orientation</td>
<td>-</td>
<td>F6</td>
</tr>
</tbody>
</table>

Reference Application note ANI-019 for orientation

**Ordering Information**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MABA-008482-CF1A40</td>
<td>Tape &amp; Reel</td>
</tr>
<tr>
<td>MABA-008482-CF1ATB</td>
<td>Customer Evaluation Board</td>
</tr>
</tbody>
</table>

**Recommended Maximum Ratings**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Power</td>
<td>mW</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>DC Current</td>
<td>mA</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>°C</td>
<td>-40</td>
<td>+85</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>°C</td>
<td>-55</td>
<td>+125</td>
</tr>
</tbody>
</table>

Temperature data available on request

**ECO History**

<table>
<thead>
<tr>
<th>Rev</th>
<th>Date</th>
<th>Description</th>
<th>ECO</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1</td>
<td>8 Nov 2006</td>
<td>New release</td>
<td>20062512</td>
</tr>
<tr>
<td>V2</td>
<td>24 Oct 2007</td>
<td>Updated format, changed start freq to 5MHz</td>
<td>20071943</td>
</tr>
<tr>
<td>V3</td>
<td>2 Nov 2010</td>
<td>Increased operating temperature to +85 deg C</td>
<td>20101799</td>
</tr>
</tbody>
</table>

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1:1.78 Step up flux coupled Transformer

5 MHz - 200 MHz

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