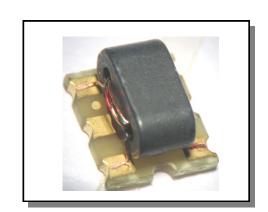


### 4:1 Step Down Transformer

#### 5 - 200 MHz Rev. V1

#### **Features**

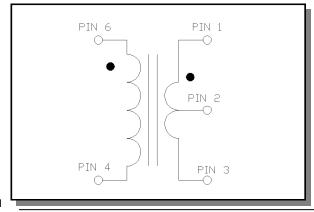
- Surface Mount
- 4:1 Step Down Transformer
- Excellent performance under DC bias current, even when current flows is imbalanced out outputs
- 260°C Reflow Compatible
- RoHS\* Compliant, lead free
- Available on Tape and Reel.



### **Electrical Specifications:** $Z_0 = 75\Omega$ , $T_A = 25$ °C, $P_{in} = 0$ dBm

| Parameter                       | Conditions   | Units                | Min                | Тур                | Max                  |
|---------------------------------|--|----------------------|--------------------|--------------------|----------------------|
| Insertion Loss 1<br>(pin6-pin1) | 5 - 50 MHz<br>50 - 150 MHz<br>150 - 200 MHz                | dB<br>dB<br>dB       | -<br>-<br>-        | 0.4<br>1.0<br>2.0  | 0.8<br>2.2<br>3.1    |
| Insertion Loss 2<br>(pin6-pin3) | 5 - 50 MHz<br>50 - 150 MHz<br>150 - 200 MHz                | dB<br>dB<br>dB       | -<br>-<br>-        | 0.4<br>1.1<br>2.4  | 0.8<br>2.5<br>3.6    |
| Amplitude Balance               | 5 - 50 MHz<br>50 - 150 MHz<br>150 - 200 MHz                | dB<br>dB<br>dB       | -<br>-<br>-        | 0.0<br>0.0<br>0.3  | ±0.4<br>±1.0<br>±1.4 |
| Phase Balance                   | 5 - 50 MHz<br>50 - 200 MHz                                 | 0                    | -                  | 0.6<br>0.8         | ±4<br>±9             |
| Input Return Loss<br>(pin6)     | 5 - 25 MHz<br>25 - 50 MHz<br>50 - 150 MHz<br>150 - 200 MHz | dB<br>dB<br>dB<br>dB | 17<br>12<br>5<br>3 | 20<br>15<br>9<br>5 | -<br>-<br>-          |

#### **Schematic**



### **Pin Configuration**

| Pin No. | Function                |  |
|---------|-------------------------|--|
| 1       | Secondary Dot (output1) |  |
| 2       | Ground (center tap)     |  |
| 3       | Secondary (output2)     |  |
| 4       | Primary (RF ground)     |  |
| 5       | Ground (not used)       |  |
| 6       | Primary dot (input)     |  |

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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• India Tel: +91.80.43537383

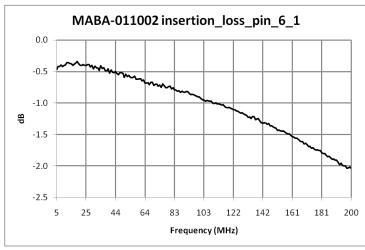
• China Tel: +86.21.2407.1588 Visit www.macomtech.com for additional data sheets and product information.

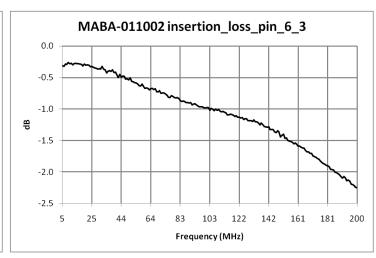


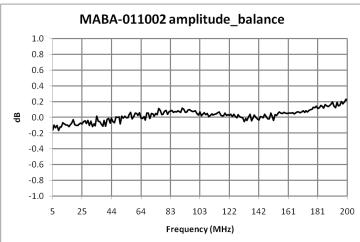
4:1 Step Down Transformer

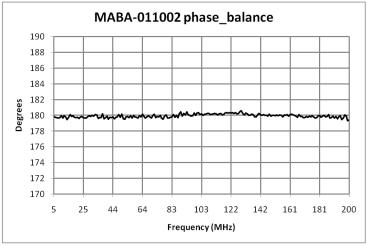
5 - 200 MHz Rev. V1

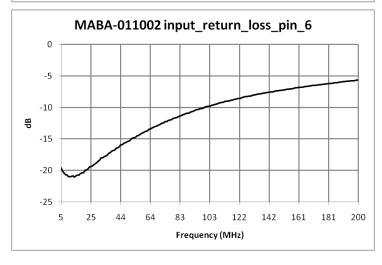
**Electrical Specifications:**  $Z_0 = 75\Omega$ ,  $T_A = 25$ °C,  $P_{in} = 0$ dBm











2

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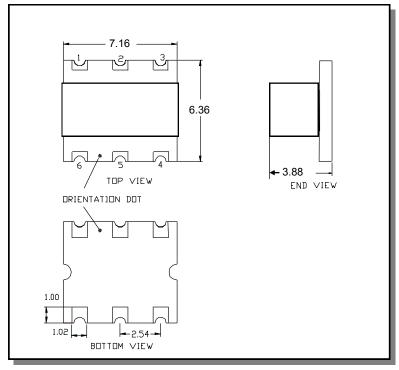
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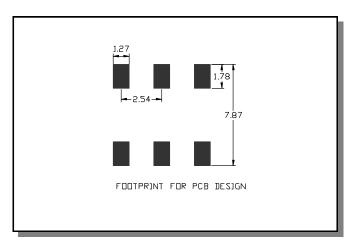
4:1 Step Down Transformer

5 - 200 MHz Rev. V1

### **Outline Drawing**

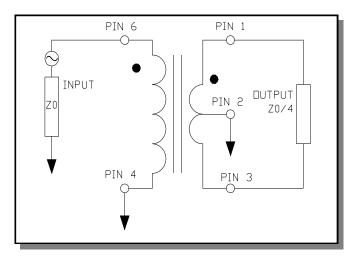


**Recommended Footprint** 



Dimensions in mm Tolerance: .xx  $\pm$  .30, .xxx  $\pm$  .030, unless otherwise stated

### **Application Circuit**



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4:1 Step Down Transformer

5 - 200 MHz Rev. V1

#### **Tape & Reel Information**

| Units | Value                     |
|-------|---------------------------|
| -     | 900                       |
| mm    | 330                       |
| mm    | 16.00                     |
| mm    | 12.00                     |
| mm    | 6.60                      |
| mm    | 7.40                      |
| mm    | 4.10                      |
| -     | F38                       |
|       | -<br>mm<br>mm<br>mm<br>mm |

Reference Application Note ANI-019 for orientation

### **Ordering Information**

| Part Number    | Description               |  |  |
|----------------|---------------------------|--|--|
| MABA-011002    | Tape & Reel               |  |  |
| MABA-011002-TB | Customer Evaluation Board |  |  |

### **Recommended Maximum Ratings**

| Parameter   | Units | Min | Max   |
|---|-------|-----|-------|
| Input Power   | W     |     | 1     |
| Internal Load Dissipation                                   | W     |     | 0.125 |
| Tested up to DC bias current, will perform above this level | mA    |     | 900   |
| Operating Temperature Range                                 | °C    | -40 | +85   |

Full temperature plots available on request