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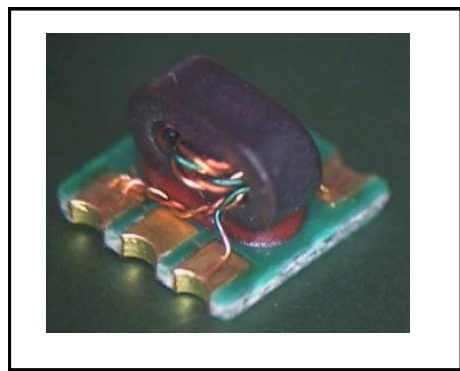


## Transformer, 1:1 Transmission Line 600 - 1700 MHz

Rev. V2

### Features

- Surface Mount
- 1:1 Impedance
- Excellent MoCA band performance
- Excellent amplitude and phase balance
- Can be used in both 50Ω and 75Ω systems
- 260°C Reflow Compatible
- RoHS\* Compliant, Pb Free
- Available on Tape and Reel.



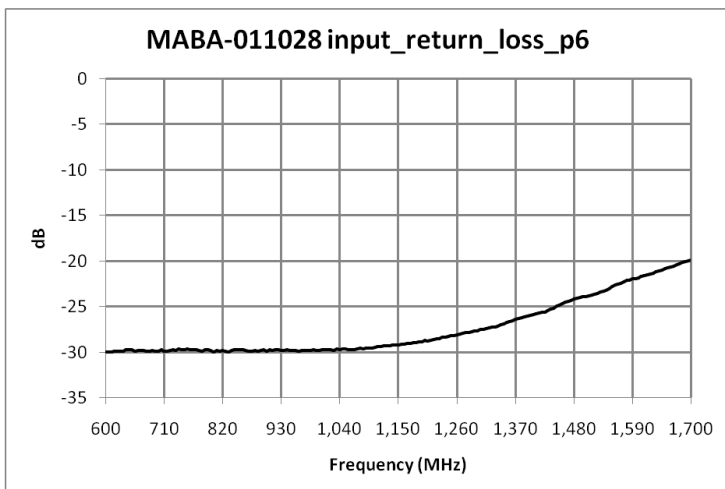
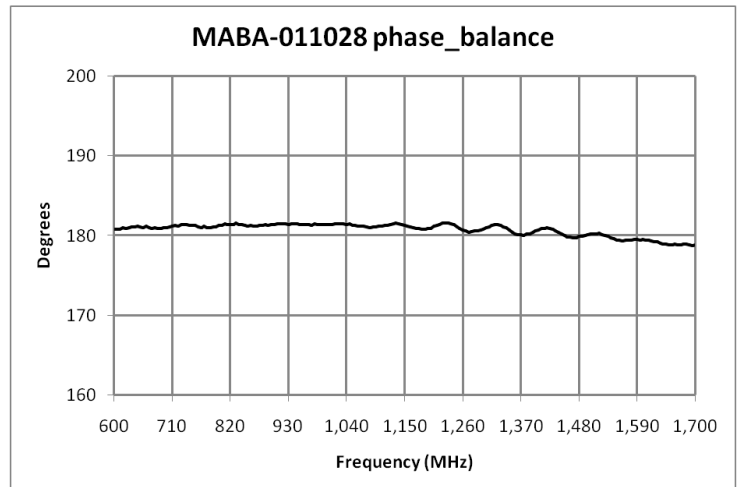
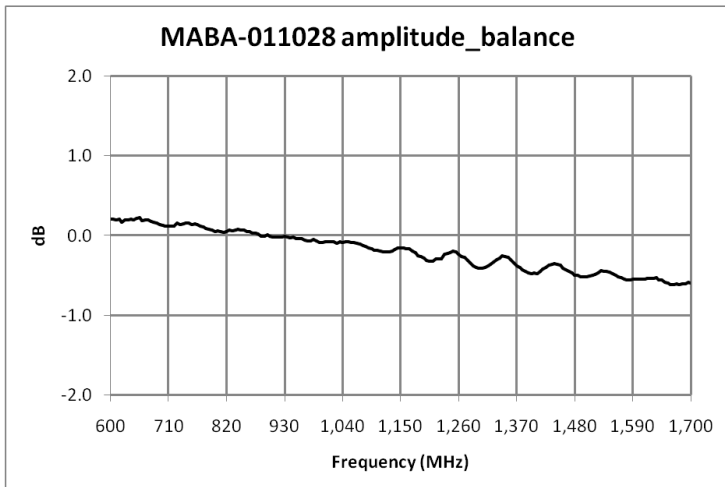
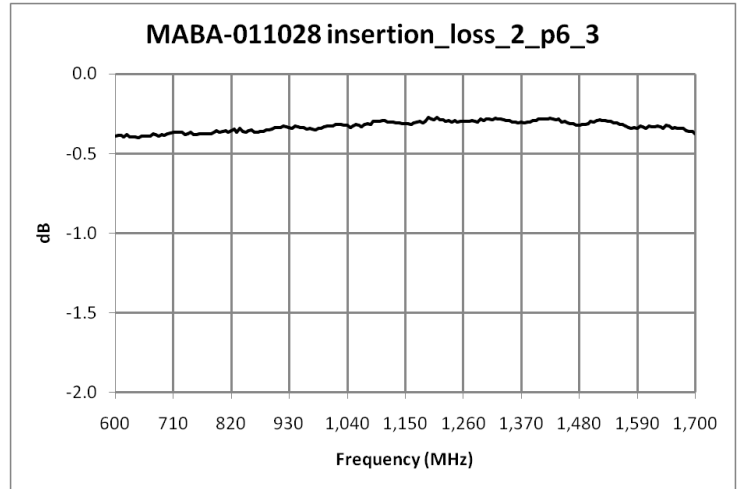
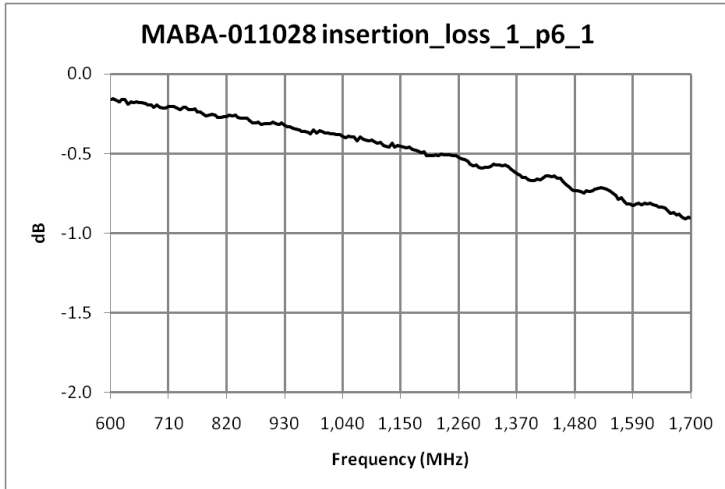
**Electrical Specifications:**  $Z_0 = 50\Omega$ ,  $T_A = 25^\circ\text{C}$ ,  $P_{in} = 0\text{dBm}$

| Parameter                       | Conditions       | Units    | Min  | Typ  | Max  |
|---------------------------------|------------------|----------|------|------|------|
| Frequency Range                 |                  | MHz      | 600  |      | 1700 |
| Impedance                       |                  | $\Omega$ |      | 50   |      |
| Impedance Ratio                 |                  |          |      | 1:1  |      |
| Insertion Loss<br>(Pin6 - Pin1) | 600 - 1,000 MHz  | dB       | -    | 0.3  | 0.60 |
|                                 | 1,000 - 1,300MHz | dB       | -    | 0.5  | 0.80 |
|                                 | 1,300 - 1,700MHz | dB       | -    | 0.8  | 1.30 |
| Insertion Loss<br>(Pin6 - Pin3) | 600 - 1,000 MHz  | dB       | -    | 0.4  | 0.60 |
|                                 | 1,000 - 1,300MHz | dB       | -    | 0.3  | 0.60 |
|                                 | 1,300 - 1,700MHz | dB       | -    | 0.3  | 1.00 |
| Amplitude Balance               | 600 - 1,000 MHz  | dB       | -0.5 | 0.1  | 0.5  |
|                                 | 1,000 - 1,300MHz | dB       | -0.9 | -0.2 | 0.9  |
|                                 | 1,300 - 1,700MHz | dB       | -1.2 | -0.5 | 1.2  |
| Phase Balance                   | 600 - 1,000 MHz  | $^\circ$ | -4   | 1.0  | 4    |
|                                 | 1,000 - 1,300MHz | $^\circ$ | -4   | 1.0  | 4    |
|                                 | 1,300 - 1,700MHz | $^\circ$ | -5   | 0.0  | 5    |
| Input Return Loss<br>(Pin6)     | 600 - 1,000 MHz  | dB       | 15   | 30   | -    |
|                                 | 1,000 - 1,300MHz | dB       | 14   | 28   | -    |
|                                 | 1,300 - 1,700MHz | dB       | 13   | 22   | -    |

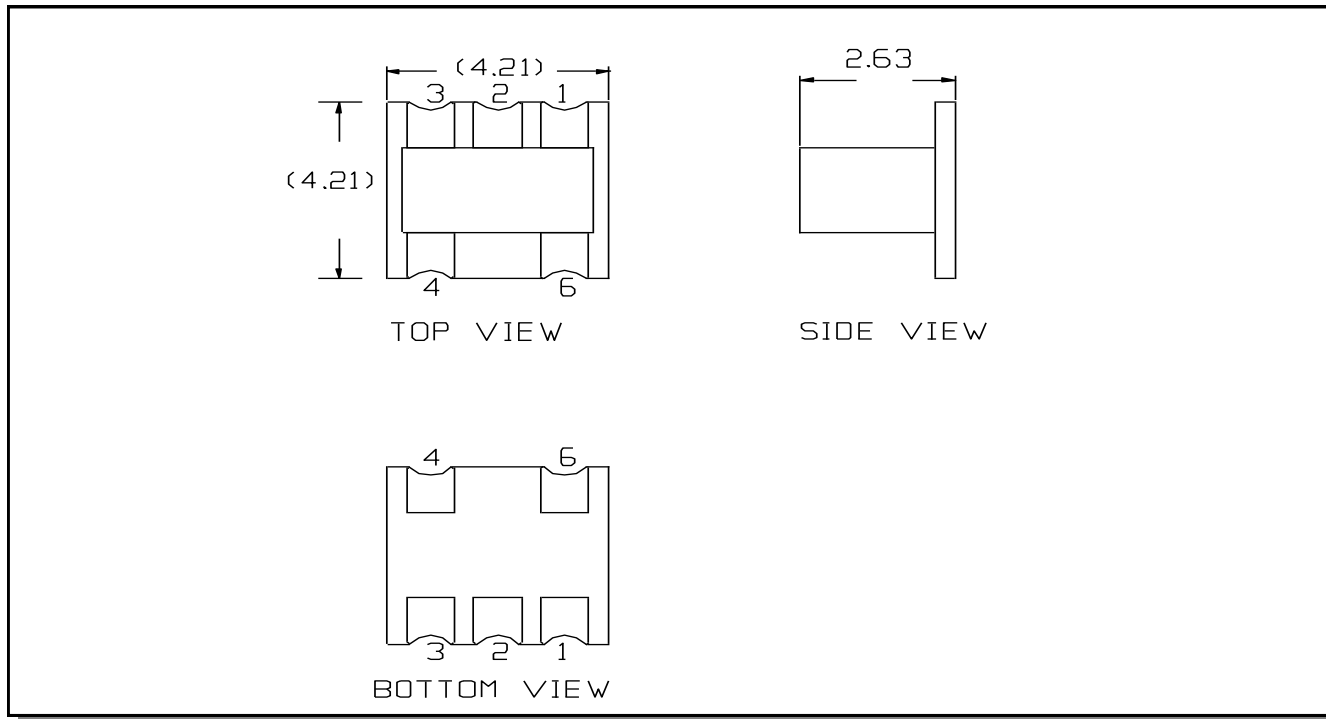
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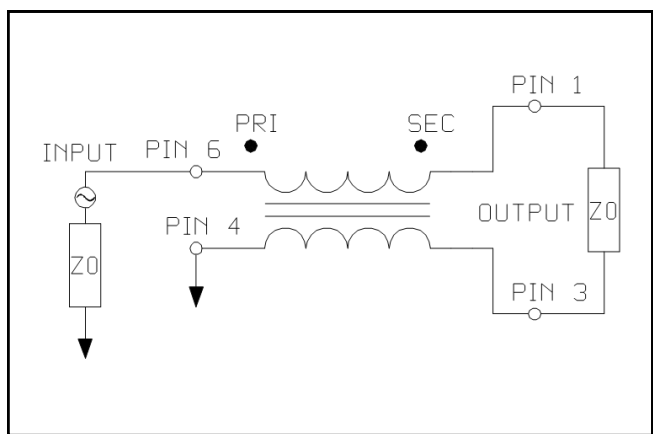


## Outline Drawing

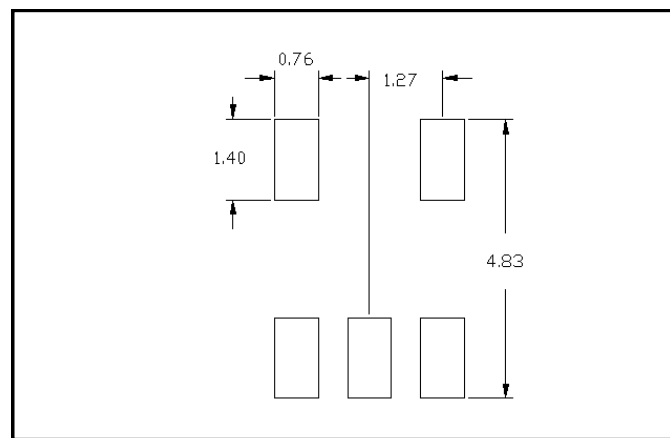


1. Dimensions in mm.
2. Tolerance:  $\pm 0.2\text{mm}$  unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating finish: ENIG on both sides

## Application Circuit



## Recommended Footprint



## Tape & Reel Information

| Parameter  | Units | Value |
|--|-------|-------|
| Qty per reel                                       | -     | 2000  |
| Reel size  | mm    | 330   |
| Tape width (W)                                     | mm    | 12.00 |
| Pitch (P <sub>1</sub> )                            | mm    | 8.00  |
| A <sub>0</sub>                                     | mm    | 4.5   |
| B <sub>0</sub>                                     | mm    | 4.5   |
| K <sub>0</sub>                                     | mm    | 2.73  |
| Orientation  | -     | F31   |
| Reference Application note ANI-019 for orientation |       |       |

## Ordering Information

| Part Number    | Description               |
|----------------|---------------------------|
| MABA-011028    | Tape & Reel               |
| MABA-011028-TB | Customer Evaluation Board |

## Recommended Maximum Ratings

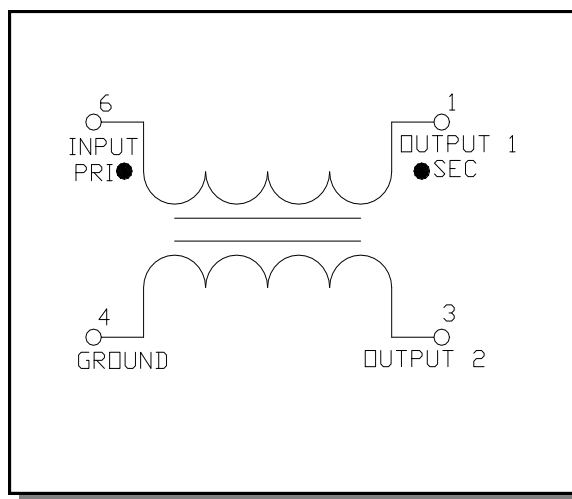
| Parameter                   | Units | Min | Max  |
|-----------------------------|-------|-----|------|
| Input Power                 | mW    |     | 250  |
| DC Current                  | mA    |     | 200  |
| Operating Temperature Range | °C    | -40 | +115 |

Temperature data available on request

## Pin Configuration

| Pin No. | Function                 |
|---------|--------------------------|
| 1       | Secondary Dot (Output 1) |
| 2       | Not Used (Ground)        |
| 3       | Secondary (Output 2)     |
| 4       | Primary (ground)         |
| 6       | Primary Dot (Input)      |

## Schematic



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