

## 1.5:1 Flux Coupled Transformer 5-350MHz

**MABA-007766-CF28A0**  
**V1P**

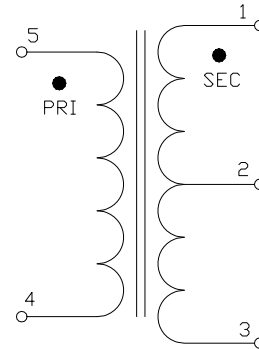
### Features

- Surface Mount
- 1.5:1 Impedance
- Excellent amplitude and phase balance
- 260°C Reflow Compatible
- RoHS\* Compliant
- RoHS version of MABAES0025.
- Available on Tape and Reel. Reel quantity 2000

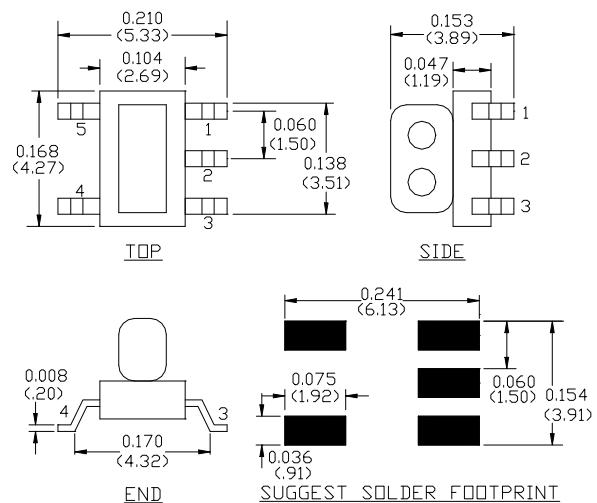
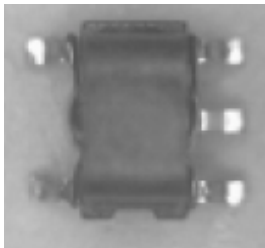
### Description

M/A-COM's MABA-007766-CF28A0 is a 1.5:1 RF transformer in a low cost, surface mount package. Ideally suited for high volume CATV/Broadband applications. Typical applications include single to balanced mode conversion and impedance matching.

### Schematic



### Case Style: SM-138



### Pin Configuration

| Pin No. | Function      |
|---------|---------------|
| 1       | Secondary Dot |
| 2       | Secondary CT  |
| 3       | Secondary     |
| 4       | Primary       |
| 5       | Primary Dot   |

Note: Reference Application Note **M513** for reel size information.

Dimensions in inches [mm] Tolerance: .xx ± .02, .xxx ± .010

### Ordering Information

| Part Number          | Package             |
|----------------------|---------------------|
| MABA-007766-CF28A0TR | 2000 piece reel     |
| MABA-007766-CF28TB   | Customer Test Board |

\* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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**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.

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• **India** Tel: +91.80.4155721 • **China** Tel: +86.21.2407.1588

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### Electrical Specifications: $T_A = 25^\circ\text{C}$ , $Z_0 = 50\Omega$

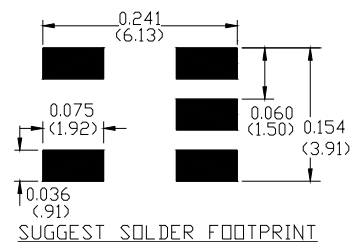
| Parameter           | Test Conditions | Units    | Min | Typ       | Max       |
|---------------------|-----------------|----------|-----|-----------|-----------|
| Insertion Loss      | 5 - 200 MHz     | dB       | -   | 0.7       | 1.0       |
|                     | 200 - 350 MHz   | dB       | -   | 1.4       | 2.0       |
| Amplitude Imbalance | 5 - 200 MHz     | dB       | -   | $\pm 0.2$ | $\pm 0.5$ |
|                     | 200 - 350 MHz   | dB       | -   | $\pm 0.4$ | $\pm 1.0$ |
| Phase Imbalance     | 5 - 200 MHz     | $^\circ$ | -   | $\pm 1.0$ | $\pm 2.0$ |
|                     | 200 - 350 MHz   | $^\circ$ | -   | $\pm 2.0$ | $\pm 3.0$ |

### Absolute Maximum Ratings <sup>1,2</sup>

| Parameter             | Absolute Maximum                           |
|-----------------------|--------------------------------------------|
| Max Input Power       | 250mW                                      |
| DC current            | 200mA                                      |
| Operating Temperature | $-40^\circ\text{C}$ to $+85^\circ\text{C}$ |
| Storage Temperature   | $-40^\circ\text{C}$ to $+85^\circ\text{C}$ |

- Exceeding any one or combination of these limits may cause permanent damage to this device.
- M/A-COM does not recommend sustained operation near these survivability limits.

### Recommended PCB Configuration

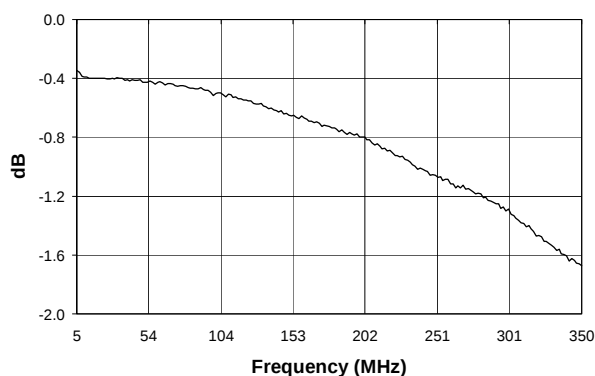


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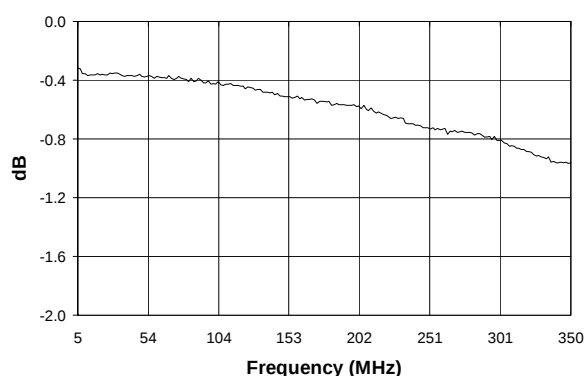
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Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 50\Omega$

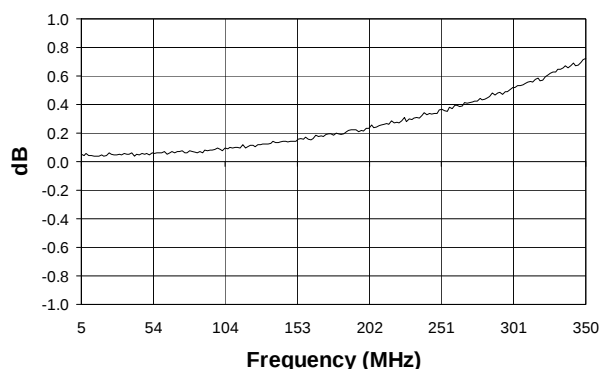
Insertion Loss 1: From pin 5 to pin 1



Insertion Loss 2: From pin 5 to pin 3



Amplitude Unbalance



Phase Balance

