

## E-SERIES RF 1:4 Flux Coupled Step-up Transformer 2.0 - 800 MHz

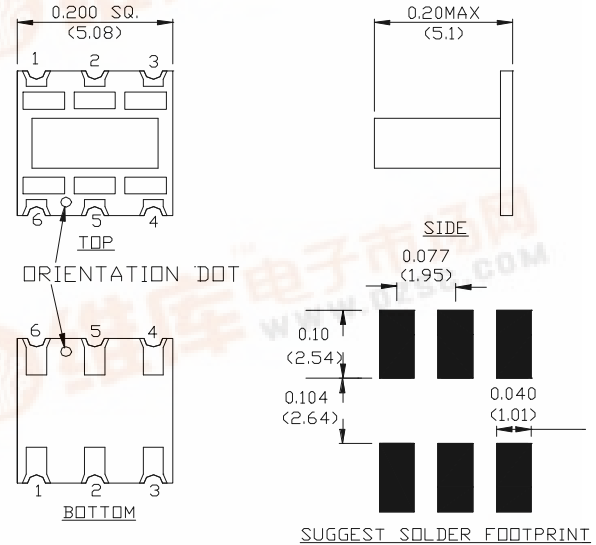
MABAES0015



### Features

- Surface Mount
- 1:4 Impedance Ratio
- CT on Secondary
- Available on Tape & Reel

### SM-52Package



### Description

M/A-COM's MABAES0015 is a 1:4 RF flux coupled step-up transformer in a low cost, surface mount package. Ideally suited for high volume cellular and wireless applications. Typical applications include single to balanced mode conversion and impedance matching.

### Schematic



### Electrical Specifications @25°C

| Parameter                         | Units   | Typical | Minimum | Maximum |
|-----------------------------------|---------|---------|---------|---------|
| Frequency Range 2.0 - 800         | MHz     | —       | —       | —       |
| Insertion Loss                    |         |         |         |         |
| 10 - 100 MHz                      | dB      | —       | —       | 1.5     |
| 100 - 500 MHz                     | dB      | —       | —       | 2.0     |
| 2 - 700MHz                        | dB      | —       | —       | 3.5     |
| 700 - 800 MHz                     | dB      | —       | —       | 4.0     |
| Amplitude Unbalance 2.0 - 800 MHz | dB      | —       |         | 1.0     |
| Phase Unbalance                   |         |         |         |         |
| 2 - 10 MHz                        | Degrees | —       | —       | 10      |
| 10 - 400 MHz                      | Degrees | —       | —       | 5       |
| 400-600MHz                        | Degrees | —       | —       | 10      |
| 600 - 800MHz                      | Degrees | —       | —       | 30      |

Note: Mean and Sigma calculated from average loss at @ 105 MHz.

Please Note that the photograph above indicates typical package only, not actual unit.

S 1590 A



### Absolute Maximum Ratings

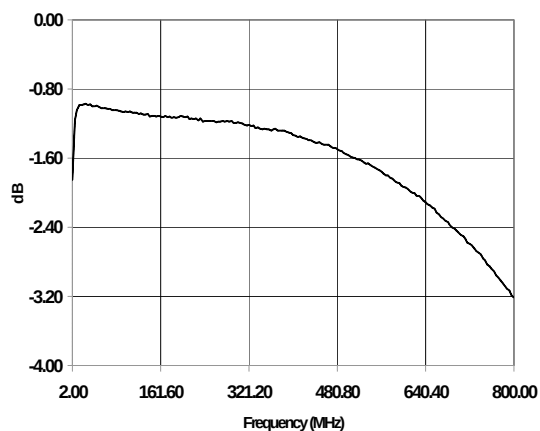
| Parameter             | Absolute Maximum |
|-----------------------|------------------|
| RF Power              | 250 mW           |
| DC Current            | 30 mA            |
| Operating Temperature | -20°C to +85°C   |
| Storage Temperature   | -20°C to +85°C   |

### Functional Configuration

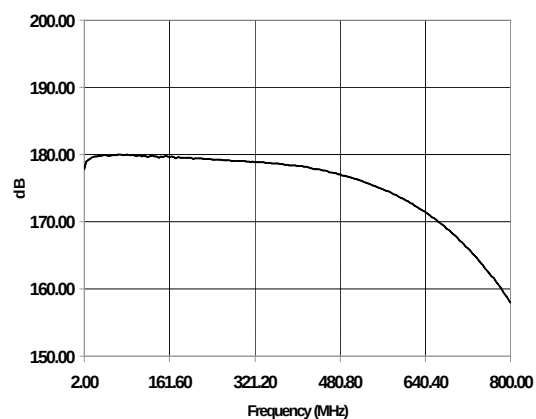
| Function      | Pin No. |
|---------------|---------|
| Secondary     | 1       |
| Secondary CT  | 2       |
| Secondary Dot | 3       |
| Primary Dot   | 4       |
| Primary       | 6       |

### Typical Performance Over Extended Bandwidth (30kHz - 1.0GHz)

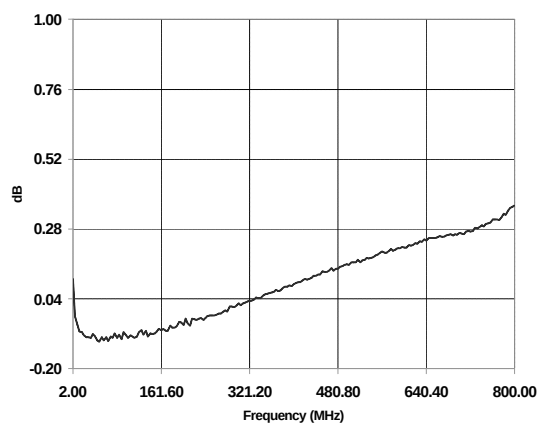
Insertion Loss



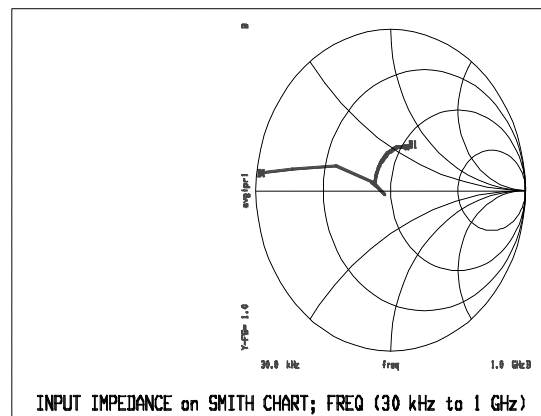
Phase Unbalance



Amplitude Unbalance



Input Impedance



Note: All measurements performed on Hewlett Packard 8753D Network Analyzer (201 sample points, linear scale) in a 50 ohm coplanar waveguide environment. Tables created using MDS software.