

E-Series RF 1:4 Flux Coupled Step-up Transformer

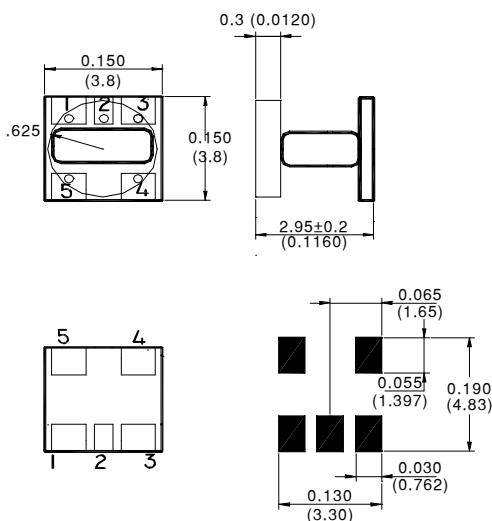


Features

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



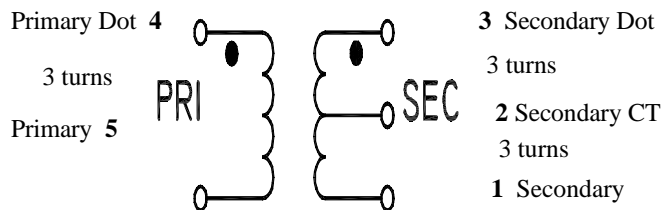
SM-119 Package



Description

M/A-COM's MABAES0010 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 | Nominal | Maximum | Mean (x) | Sigma (σ) |
|---|---------|---------|---------|----------|-----------|
| Frequency Range 2.0 - 800 | MHz | — | — | — | — |
| Insertion Loss (f _L - f _U) | | | | | |
| 10 - 100 MHz | dB | — | 2.0 | — | — |
| 5.0 - 600 MHz | dB | — | 2.2 | 1.21 | 0.032 |
| 2.0 - 800 MHz | dB | — | 3.0 | — | — |
| Amplitude Unbalance | | | | | |
| 10 - 100 MHz | dB | — | 0.25 | — | — |
| 2.0 - 800 MHz | dB | — | 1.3 | — | — |
| Phase Unbalance | | | | | |
| 10 - 500 MHz | Degrees | — | 3.0 | — | — |
| 2.0 - 800 MHz | Degrees | — | 10 | — | — |

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

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

V1.00 S 1516A



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Specifications subject to change without notice.

Absolute Maximum Ratings

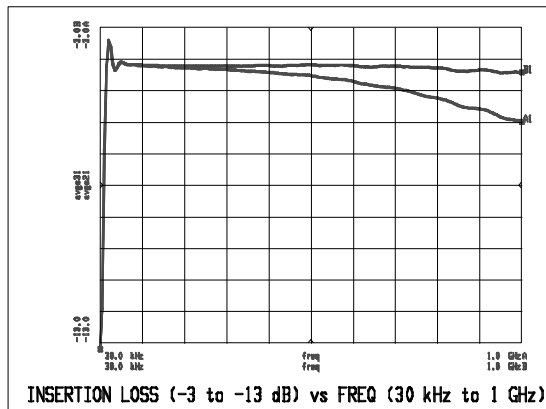
| Parameter | Absolute Maximum |
|-----------------------|------------------|
| RF Power | 250 mW |
| DC Current | 30 mA |
| Operating Temperature | -20°C to +85°C |
| Storage Temperature | -20°C to +85°C |

Functional Configuration

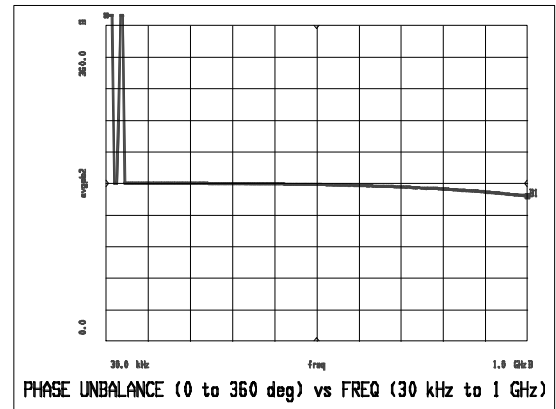
| Function | Pin No. |
|---------------|---------|
| Secondary | 1 |
| Secondary CT | 2 |
| Secondary Dot | 3 |
| Primary Dot | 4 |
| Primary | 5 |

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

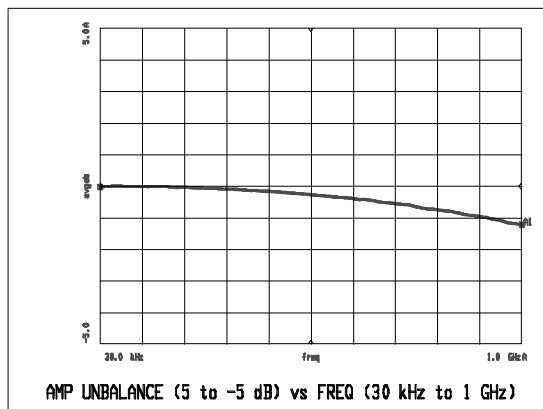
Insertion Loss



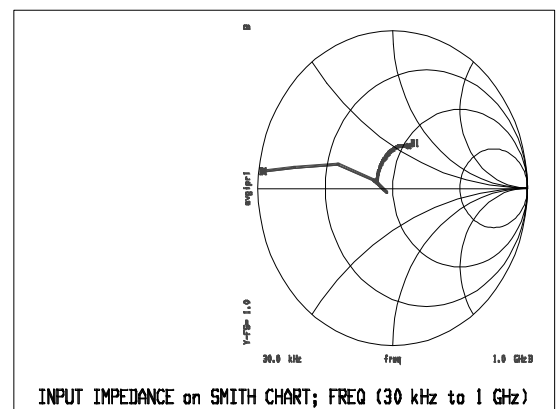
Phase Unbalance



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.