# MABA-009594-CF18A0

**Transformer, 1:1 Flux Coupled Transformer**
**5 to 200 MHz**

**Rev. V6**

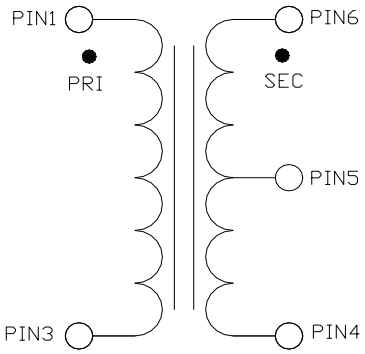
## Features

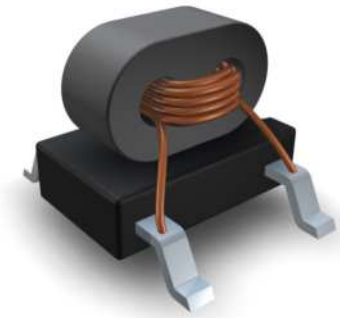
- Surface mount
- 1:1 Impedance ratio
- Centre tap on Secondary
- Suitable for DOCSIS 3.0
- 260°C reflow compatible
- RoHS* compliant
- Available on tape and reel.

## Description

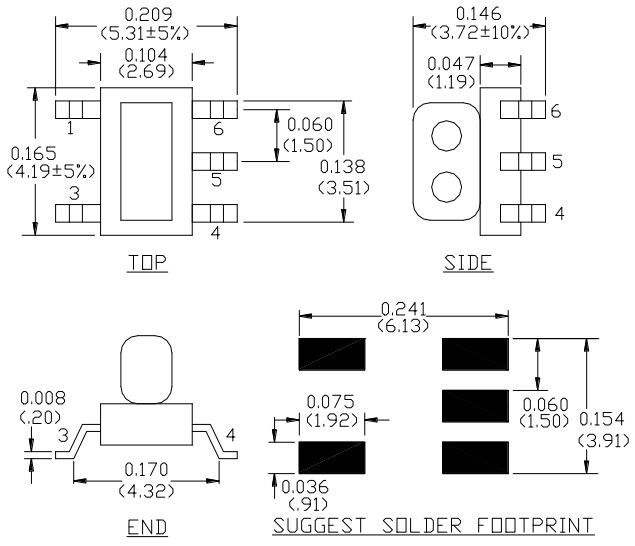
M/A-COM Technology Solutions MABA-009594-CF18A0 is a 1:1 RF Flux coupled transformer in a low cost, surface mount package. Ideally suited for broadband CATV applications.

## Schematic



## Component Dimensions




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

## Pin Configuration

| Pin No. | Function |
|---|---|
| 1 | Primary Dot |
| 3 | Primary |
| 4 | Secondary |
| 5 | Secondary Centre Tap |
| 6 | Secondary dot |

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



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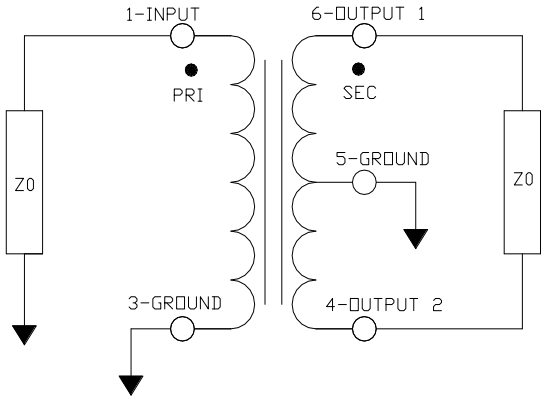
## Electrical Specifications: $T_A$ = 25°C, 0dBm, $Z_0$ = 75Ω, $P_{in}$ = 0dBm

| Parameter | Test Conditions | Units | Min | Typ | Max |
|---|---|---|---|---|---|
| Insertion Loss | 5 - 60 MHz<br>60 - 150 MHz<br>150 - 200 MHz | dB<br>dB<br>dB | -<br>-<br>- | 0.3<br>0.4<br>0.7 | 0.6<br>0.8<br>1.0 |
| Amplitude Unbalance<br>(Nominal 0dB) | 5 - 60 MHz<br>60 - 200 MHz | dB<br>dB | -<br>- | 0.0<br>0.2 | ±0.1<br>±0.4 |
| Phase Unbalance<br>(Nominal 180º) | 5 - 60 MHz<br>60 - 200 MHz | º<br>º | -<br>- | 0.1<br>0.3 | ±2.0<br>±4.0 |
| Input Return Loss | 5 - 60 MHz<br>60 - 200 MHz | dB<br>dB | 22<br>14 | 31<br>17 | -<br>- |

## Recommended Maximum Ratings

| Parameter | Value |
|---|---|
| Input power | +28dBm (631mW) |
| DC current (tested at 5V) | 600mA |
| Operating Temperature | -40°C to +100°C |
| Storage Temperature | -55°C to +100°C |

## Application Circuit



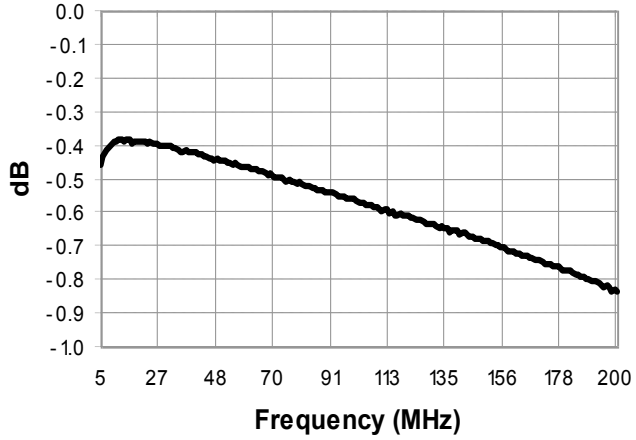



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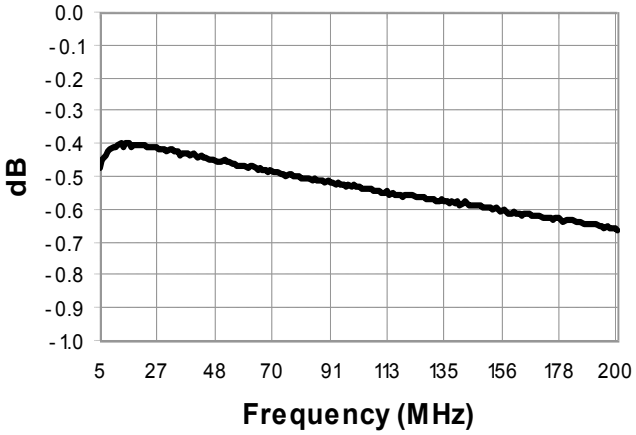
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## Typical Performance Curves: $T_A$ = 25°C, 0dBm, $Z_0$ = 75Ω, $P_{in}$ = 0dBm

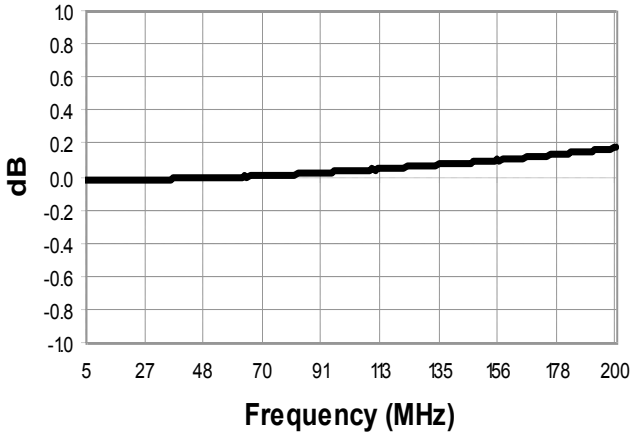
### Insertion Loss 1: (Pin 1 to 6)



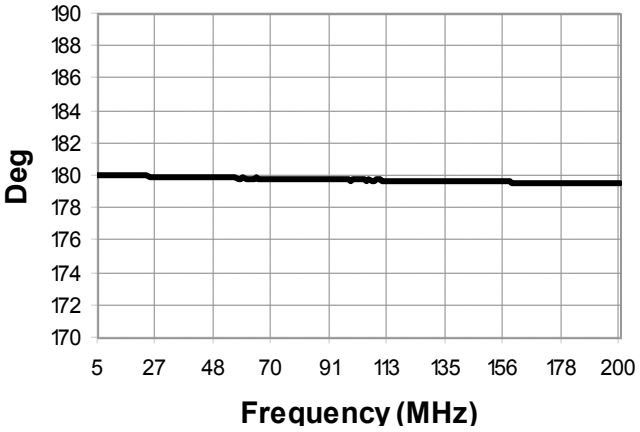

### Insertion Loss 2: (Pin 1 to 4)



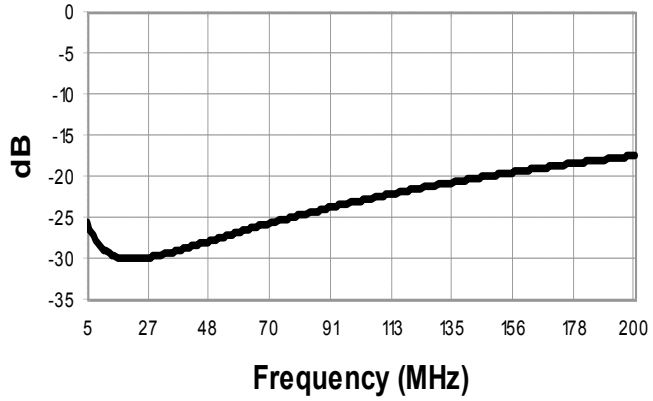

### Amplitude Balance




### Phase Balance




### Return Loss: Input

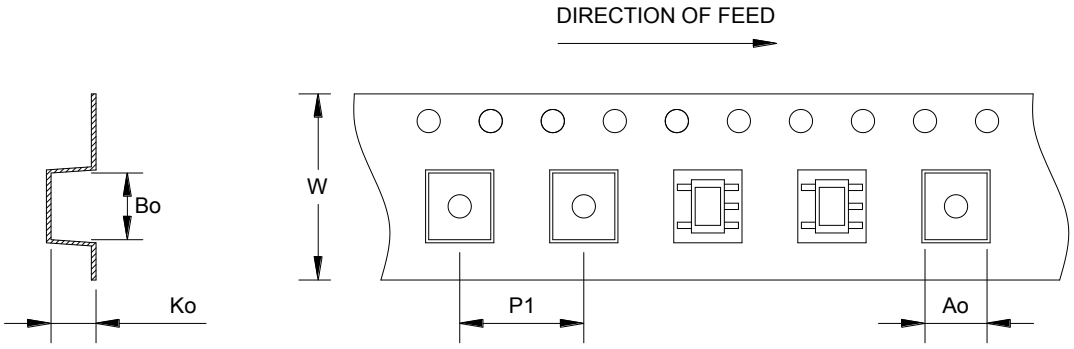





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## Tape & Reel Information




| Item | Dimension |
|---|---|
| Ao | 5.60mm +/- 0.1mm |
| Bo | 4.50mm +/- 0.1mm |
| Ko | 4.00mm +/- 0.1mm |
| W | 12.00mm +/- 0.3mm |
| P1 | 8.00mm +/- 0.1mm |

## Ordering Information

| Part number | Description |
|---|---|
| MABA-009594-CF18A0 | 2000 piece reel |
| MABA-009594-CF18TB | Customer Test Board |



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