# RoHS Compliant

1:1 Flux Coupled Transformer
0.3-200MHz

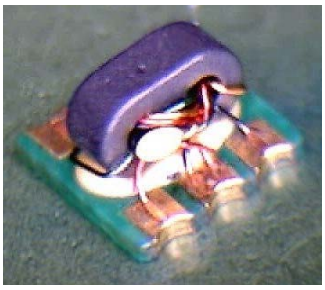
MABACT0071
V1

## Features

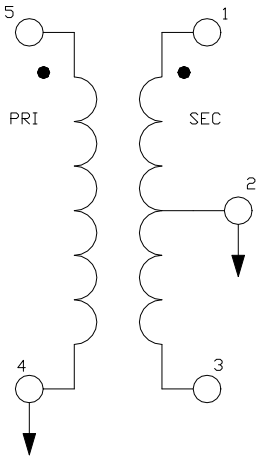
- Surface Mount
- 1:1 Impedance
- Centre tap on secondary
- 260°C Reflow Compatible
- RoHS* Compliant
- Available on Tape and Reel. Reel quantity 2000

## Description

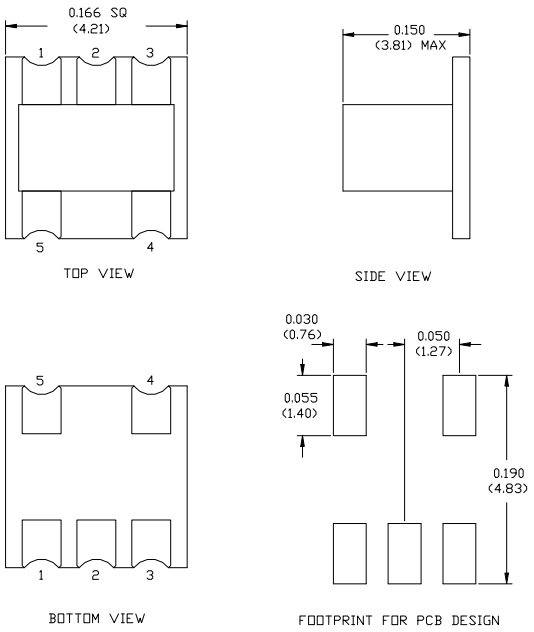
M/A-COM's MABACT0071 is a 1:1 RF flux coupled transformer in a low cost, surface mount package. Ideally suited for high volume CATV/Broadband applications.



## Schematic




## Case Style: SM-164




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

## Pin Configuration

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

## Ordering Information

| Part Number | Package |
|---|---|
| MABACT0071TR | 2000 piece reel |
| MABA-008350-CT71TB | Customer test board |

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

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





• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400
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## Electrical Specifications: $T_A$ = 25°C, $Z_0$ = 75Ω [1]

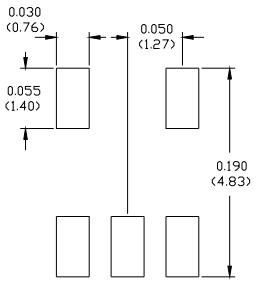
| Parameter | Frequency | Units | Min | Typ | Max |
|---|---|---|---|---|---|
| Insertion Loss 1 (Pin 1-5) | 0.3 - 5 MHz<br>5 - 200 MHz | dB<br>dB | -<br>- | 1.0<br>0.5 | 2.6<br>0.9 |
| Insertion Loss 2 (Pin 3-5) | 0.3 - 10 MHz<br>10 - 200 MHz | dB<br>dB | -<br>- | 1.0<br>0.4 | 2.6<br>0.75 |
| Amplitude Unbalance (Nominal 0dB) | 0.3 - 200 MHz | dB | - | ±0.1 | ±0.3 |
| Phase Unbalance (Nominal 180º) | 0.3 - 200 MHz | º | - | ±0.3 | ±3.0 |
| Input Return Loss | 0.3 - 5 MHz<br>5 - 120 MHz<br>120 - 200 MHz | dB<br>dB<br>dB | 5<br>19<br>15 | 13<br>27<br>21 | -<br>-<br>- |
| | | | | | |

## Absolute Maximum Ratings [1,2]

| Parameter | Absolute Maximum |
|---|---|
| Max Input Power | 250mW |
| DC current | 240mA |
| Operating Temperature | -40°C to +85°C |
| Storage Temperature | -55°C to +100°C |

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

## Recommended PCB Configuration




FOOTPRINT FOR PCB DESIGN





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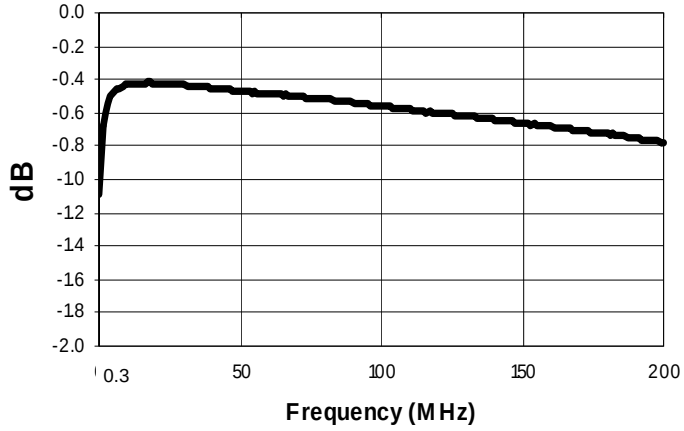
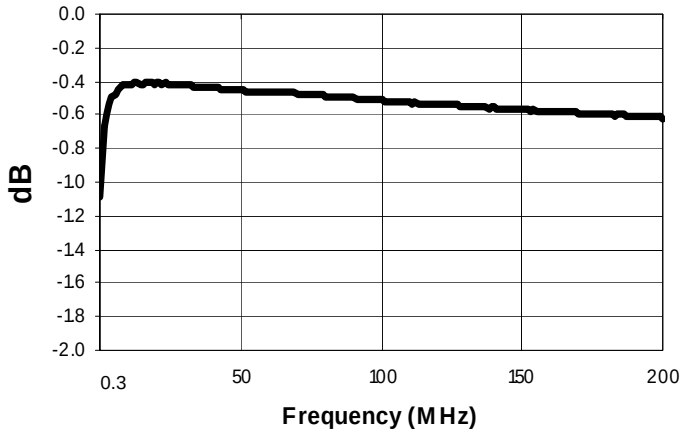
## Typical Performance Curves: $T_A$ = 25°C, $Z_0$ = 75Ω [1]

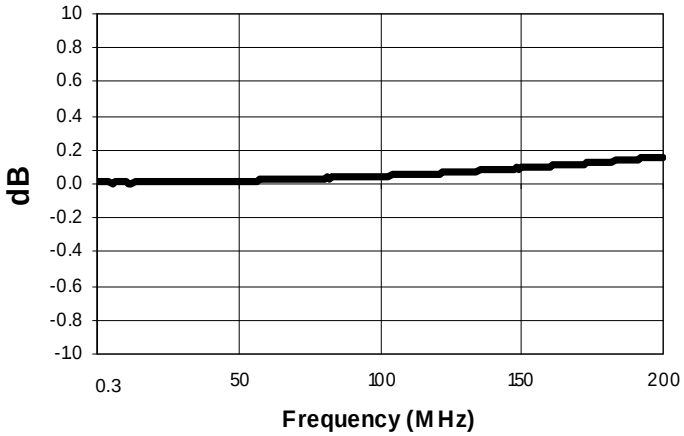
### Insertion Loss 1: (Pin 5 to 1)



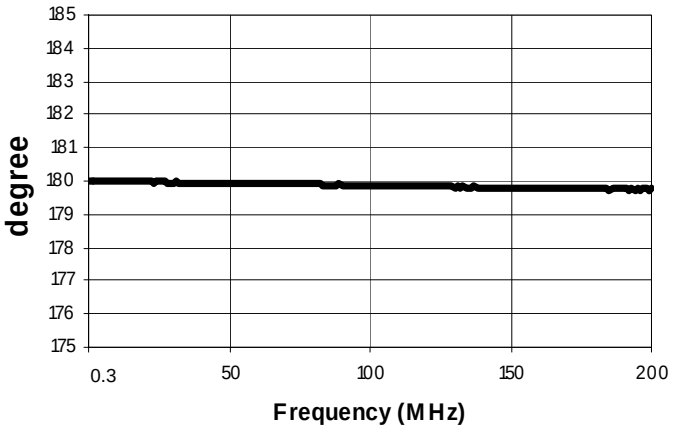

### Insertion Loss 2: (Pin 5 to 3)



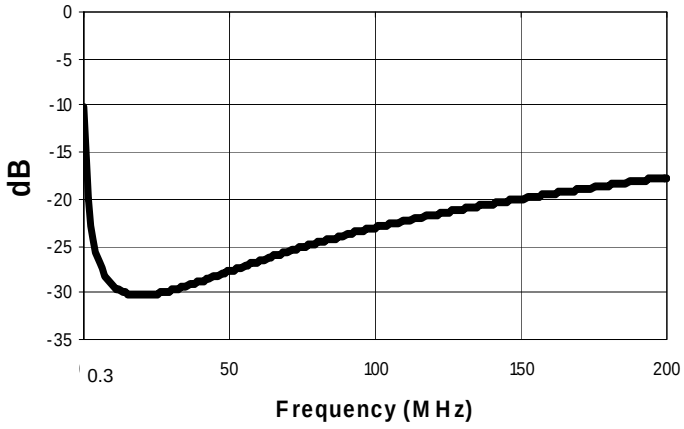

### Amplitude Unbalance




### Phase Balance




### Input Return Loss





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