

## Features

- Surface Mount
- 2:1 Impedance
- Excellent amplitude and phase balance
- Pb Free
- RoHS\* Compliant
- Tape and Reel.

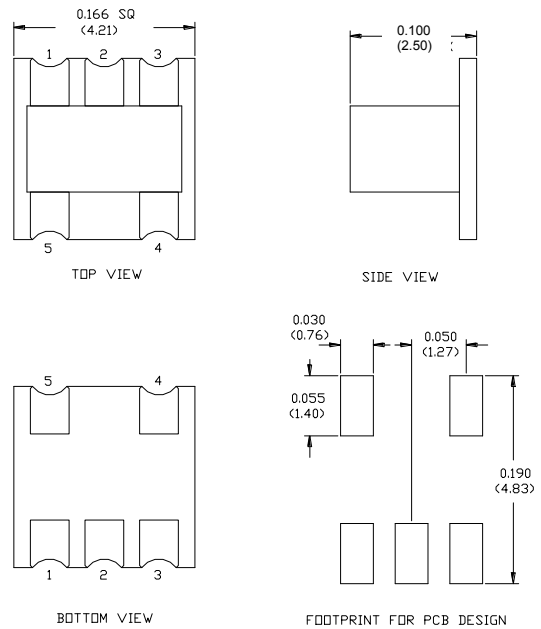
## Description

M/A-COM Technology Solutions MABACT0048 is a 2:1 RF Flux Coupled transformer in a low cost, surface mount package.

Ideally suited for high volume CATV/Broadband applications. Suitable for use in 50 and 75 Ohm systems.

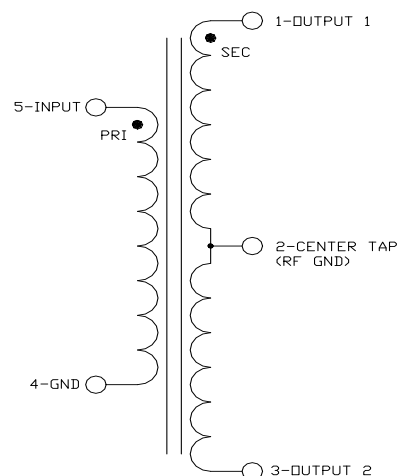


## Component Dimensions



Dimensions in inches [mm].  
 Tolerance inches: .xx ± .02, .xxx ± .010, unless otherwise stated. Drawing not to scale.

## Schematic



## Pin Configuration

Pin No.	Function
1	Secondary Dot (output 1)
2	Centre Tap (ground)
3	Secondary (output 2)
4	Primary (Ground)
5	Primary Dot (Input)

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

**Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$**

Parameter	Test Conditions	Units	Min	Typ	Max
Insertion Loss	5 - 65 MHz	dB	-	0.25	0.4
Insertion Loss	65 - 200 MHz	dB	-	0.4	0.9
Amplitude Unbalance (Nominal 0dB)	5 - 65 MHz	dB	-	$\pm 0.02$	$\pm 0.15$
Phase Unbalance (Nominal 180°)	5 - 50 MHz	°	-	$\pm 0.00$	$\pm 2.00$
Input Return Loss	5 - 10 MHz	dB	15	20	-
Input Return Loss	10 - 200 MHz	dB	18	22	-

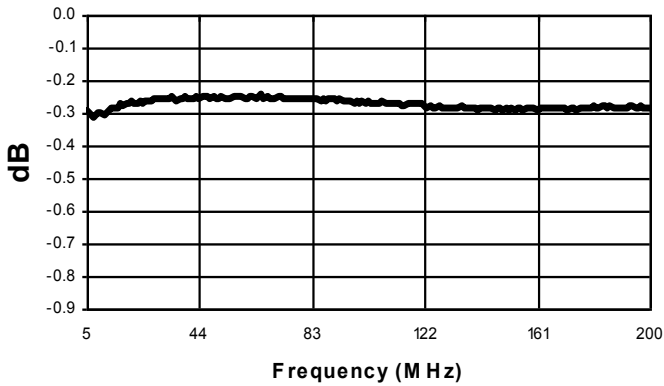
**Recommended Maximum Ratings** <sup>1,2</sup>

Parameter	Value
Max Input Power	250mW
DC current	30mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

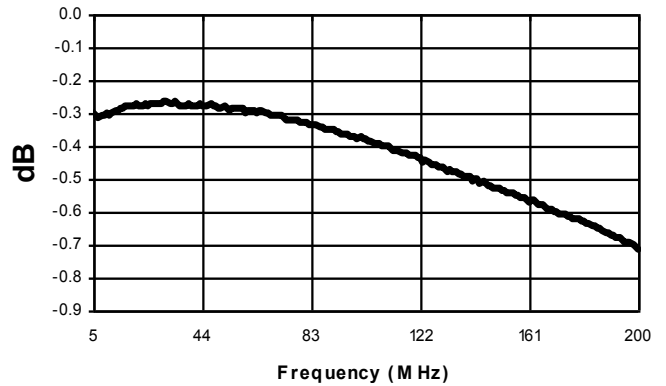
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM Technology Solutions does not recommend sustained operation near these survivability limits.

**Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$**

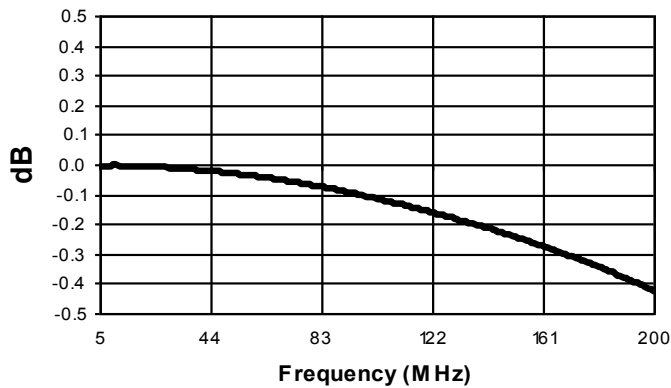
**Insertion Loss (coupled pin 5 to pin 3)**



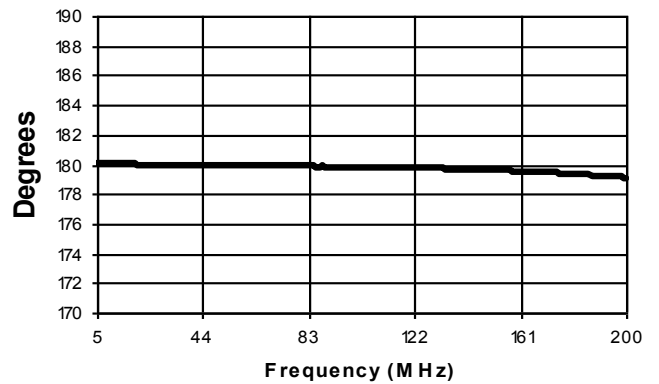
**Insertion Loss (through pin 5 to pin 1)**



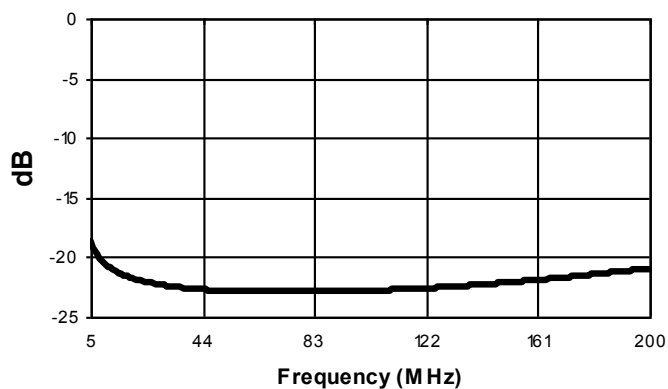
**Amplitude Unbalance**



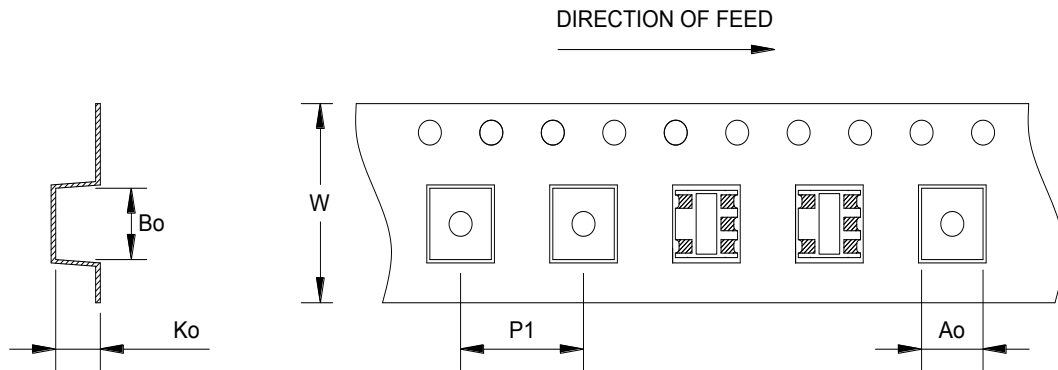
**Phase Balance**



**Input Return Loss**



## Tape & Reel Information



Item	Dimension
Ao	4.50mm +/- 0.1mm
Bo	4.50mm +/- 0.1mm
Ko	2.73mm +/- 0.1mm
W	12.00mm +/- 0.3mm
P1	8.00mm +/- 0.1mm

## Ordering Information

Part Number	Package
MABACT0048TR	2000 piece reel

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