

# MABACT0064



Transformer, 4:1 Flux coupled balun transformer  
1 to 650 MHz

M/A-COM Products  
Released, Rev. V2

## Features

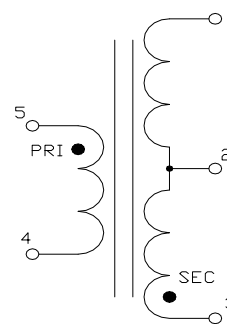
- Surface mount
- 4:1 Impedance ratio
- Excellent amplitude and phase balance
- Can be used in both 50Ω and 75Ω systems
- RoHS\* compliant and lead-free
- Available on tape and reel.

## Description

M/A Com's MABACT064 is a 4:1 RF flux coupled step up transformer in a low cost, surface mount package. Ideally suited for high volume CATV/ Broadband applications.



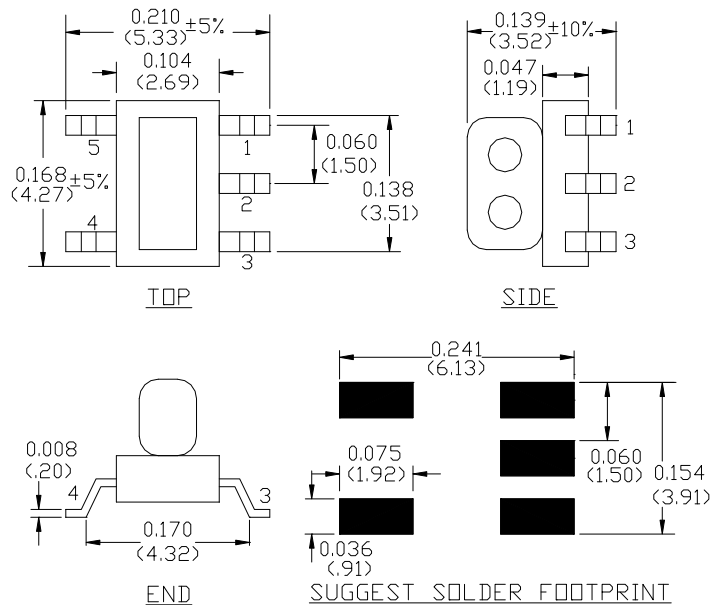
## Schematic



## Pin configuration

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

## Case style: SM-138



## Ordering information

Part number	Description
MABACT0064	2000 piece reel
MABA-007948-CT64TB	Customer Test Board

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

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

**ADVANCED:** Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.  
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### Electrical Specifications: $T_A = 25^\circ\text{C}$ , $Z_0 = 50\Omega$

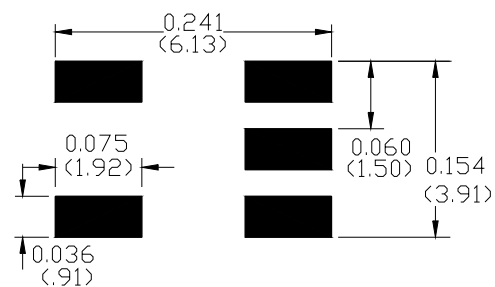
Parameter	Test Conditions	Units	Min	Typ	Max
Insertion Loss	10 - 200 MHz	dB	-	0.7	1.0
	1 - 450 MHz	dB	-	1.5	2.0
	450 - 650 MHz	dB	-	3.0	3.5
Amplitude Unbalance (Nominal 0dB)	10 - 200 MHz	dB	-	$\pm 0.1$	$\pm 0.25$
	1 - 650 MHz	dB	-	$\pm 0.6$	$\pm 1.0$
Phase Unbalance (Nominal 180°)	10 - 200 MHz	°	-	$\pm 1.0$	$\pm 2.0$
	1 - 500 MHz	°	-	$\pm 3.0$	$\pm 5.0$
	500 - 600 MHz	°	-	$\pm 7.0$	$\pm 10.0$

### Absolute maximum ratings

Parameter	Absolute maximum
Max input power	250mW
DC current	200mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

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

### Recommended PCB Configuration

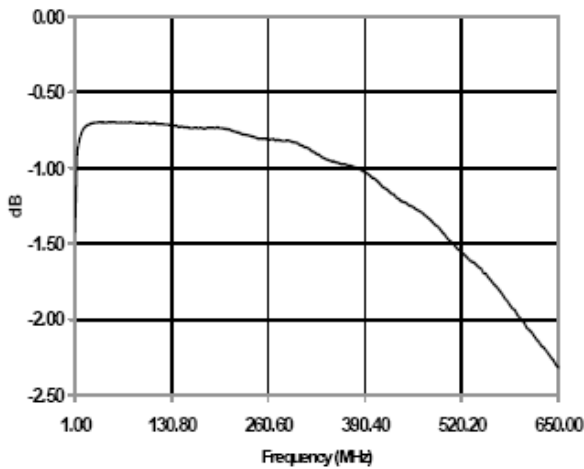


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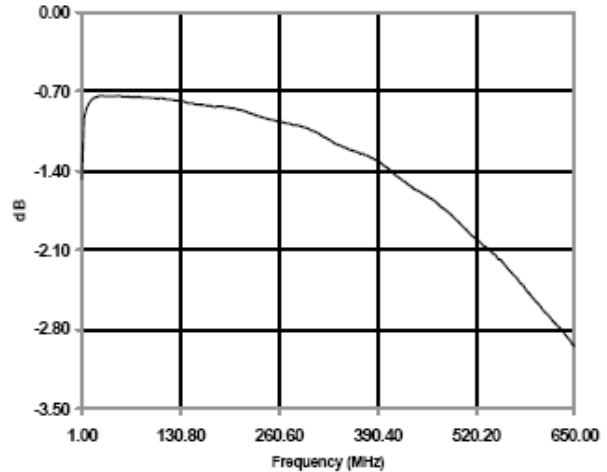
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Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 50\Omega$

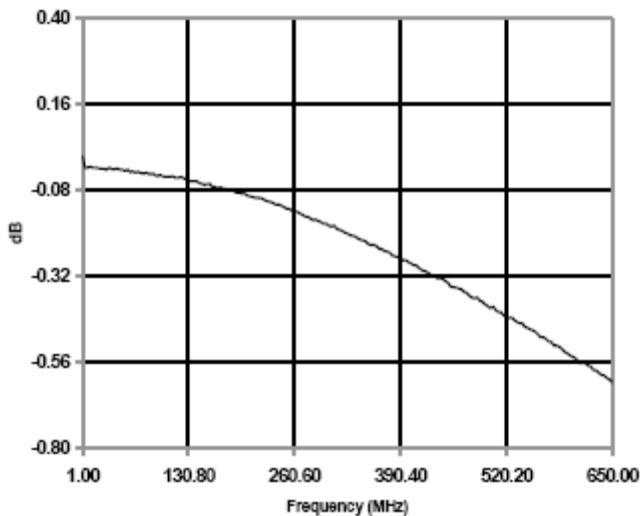
**Insertion Loss 1**  
(PRI to SEC DOT, pin 5 to pin 3)



**Insertion Loss 2**  
(PRI to SEC, pin 5 to pin 1)



**Amplitude Unbalance**



**Phase Balance**

