

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

**M/A-COM Products
Released, Rev. V2**

Features

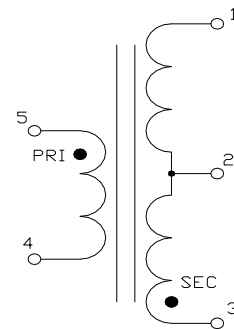
- Surface mount
- 4:1 Impedance ratio
- Excellent amplitude and phase balance
- Can be used in both 50Ω and 75Ω systems
- RoHS* compliant and lead-free
- Available on tape and reel.

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.



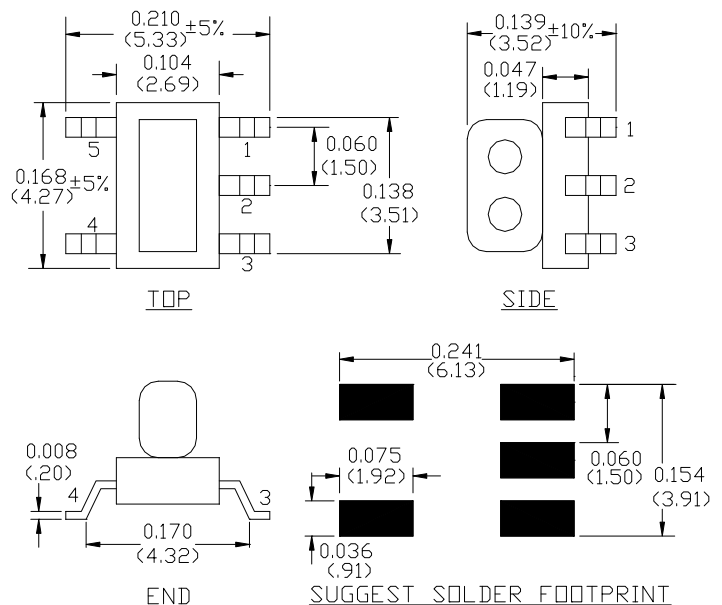
Schematic



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



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

Ordering information

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

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

1 * 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.
PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400
• **India** Tel: +91.80.4155721 • **China** Tel: +86.21.2407.1588
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Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 50\Omega$

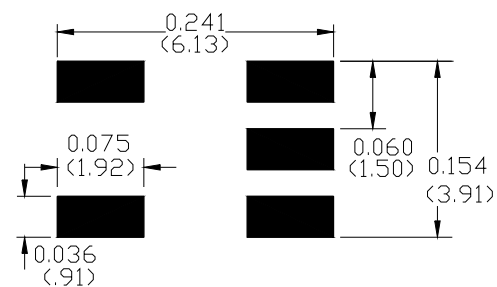
Parameter	Test Conditions	Units	Min	Typ	Max
Insertion Loss	10 - 200 MHz	dB	-	0.7	1.0
	1 - 450 MHz	dB	-	1.5	2.0
	450 - 650 MHz	dB	-	3.0	3.5
Amplitude Unbalance (Nominal 0dB)	10 - 200 MHz	dB	-	± 0.1	± 0.25
	1 - 650 MHz	dB	-	± 0.6	± 1.0
Phase Unbalance (Nominal 180°)	10 - 200 MHz	°	-	± 1.0	± 2.0
	1 - 500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

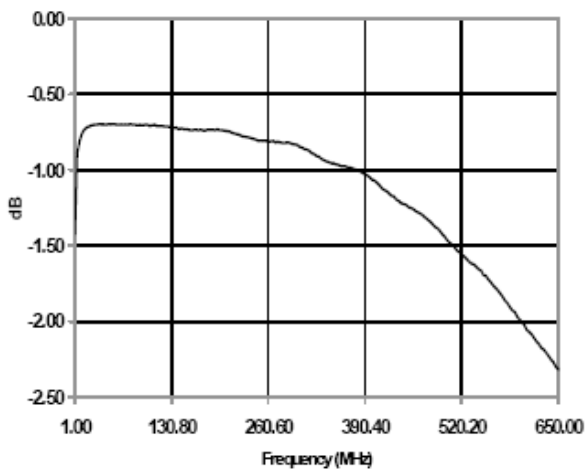


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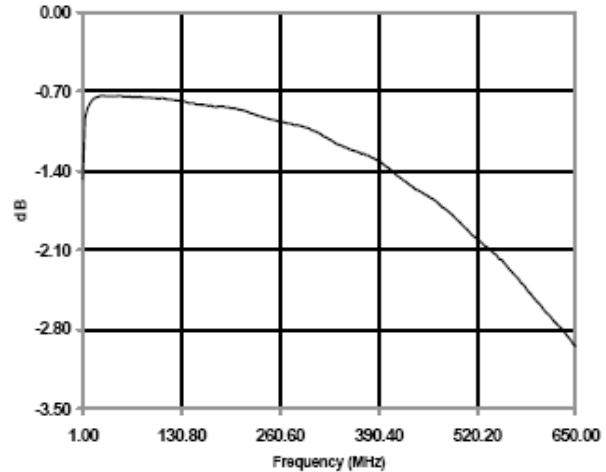
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Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 50\Omega$

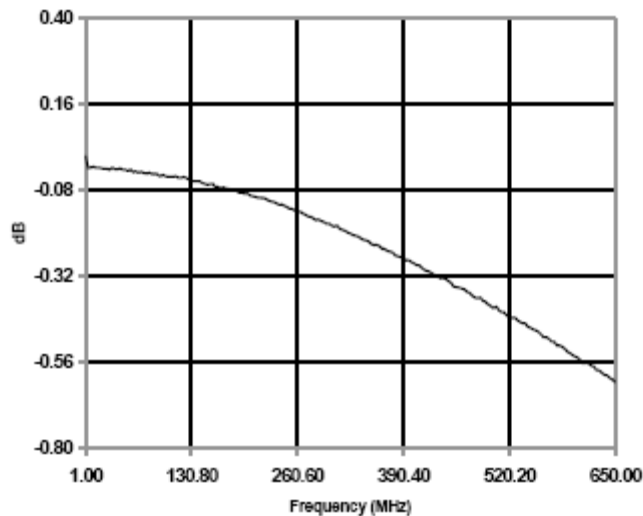
Insertion Loss 1
(PRI to SEC DOT, pin 5 to pin 3)



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



Amplitude Unbalance



Phase Balance

