

# MABA-009232-CT4A4B



Transformer, 4:1 transmission line balun  
5 to 1200 MHz

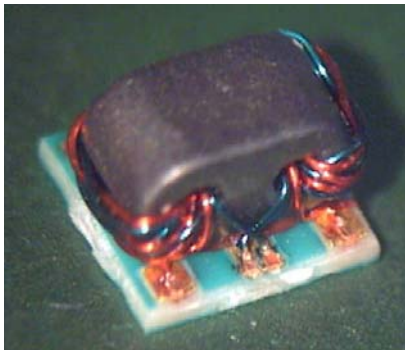
M/A-COM Products  
Released, Rev. V1

## Features

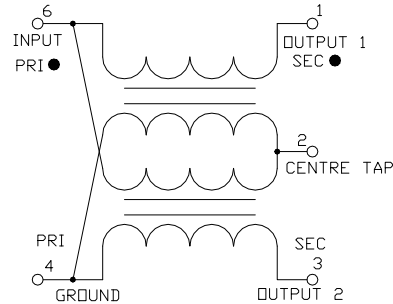
- Surface mount
- 4:1 Impedance ratio
- Can be used in both 50Ω and 75Ω systems
- 260°C reflow compatible
- RoHS\* compliant, lead free
- Available on tape and reel.

## Description

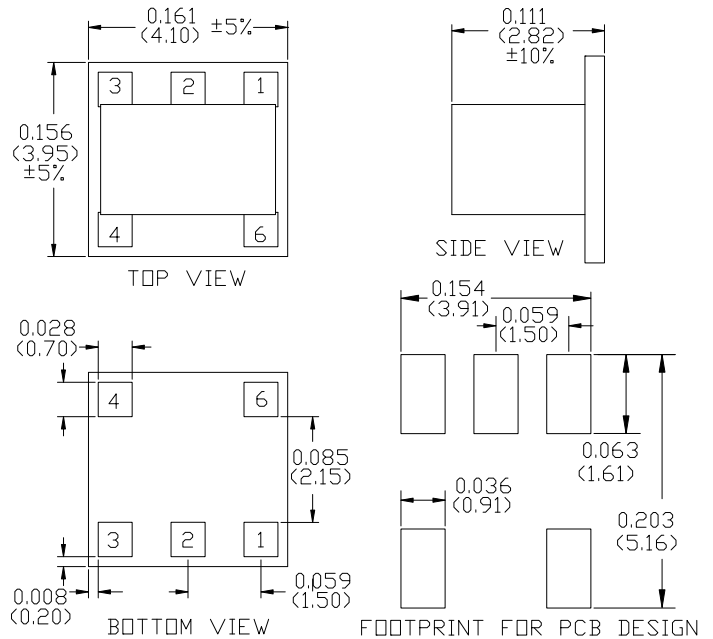
M/A Com's MABA-009232-CT4A4B is a 4:1 RF transmission line transformer in a low cost, surface mount package. Ideally suited for broadband CATV applications.



## Schematic



## Case style: SM-187



## Pin configuration

Pin no.	Function
1	Secondary dot (Output 1)
2	Centre tap (Ground)
3	Secondary (Output 2)
4	Primary (Ground)
6	Primary dot (Input)

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

## Ordering information

Part number	Description
MABA-009232-CT4A4B	2000 piece reel
MABA-009232-CT4ATB	Customer Test Board

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

1

**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  
 Visit [www.macomtech.com](http://www.macomtech.com) for additional data sheets and product information.

M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.

Transformer, 4:1 transmission line balun  
5 to 1200 MHz

M/A-COM Products  
Released, Rev. V1

## Electrical Specifications: $T_A = 25^\circ\text{C}$ , $Z_0 = 50\Omega$

Parameter	Test Conditions	Units	Min	Typ	Max
Insertion Loss 1 (Pin 6 to 1)	5 - 450 MHz	dB	-	0.8	1.2
	450 - 1200 MHz	dB	-	1.3	2.6
Insertion Loss 2 (Pin 6 to 3)	5 - 450 MHz	dB	-	0.8	1.2
	450 - 870 MHz	dB	-	1.3	2.5
	870 - 1200 MHz	dB	-	2.2	3.8
Amplitude Unbalance (Nominal 0dB)	5 - 750 MHz	dB	-	0.05	$\pm 1.0$
	750 - 1200 MHz	dB	-	0.6	$\pm 2.6$
Phase Unbalance (Nominal 180°)	5 - 50 MHz	°	-	0.4	$\pm 2$
	50 - 870 MHz	°	-	3.8	$\pm 15$
	870 - 1200 MHz	°	-	5.4	$\pm 18$
Input Return Loss	5 - 50 MHz	dB	15	23	-
	50 - 650 MHz	dB	10	17	-
	650 - 1200 MHz	dB	7	11	-

## Absolute maximum ratings

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

# MABA-009232-CT4A4B

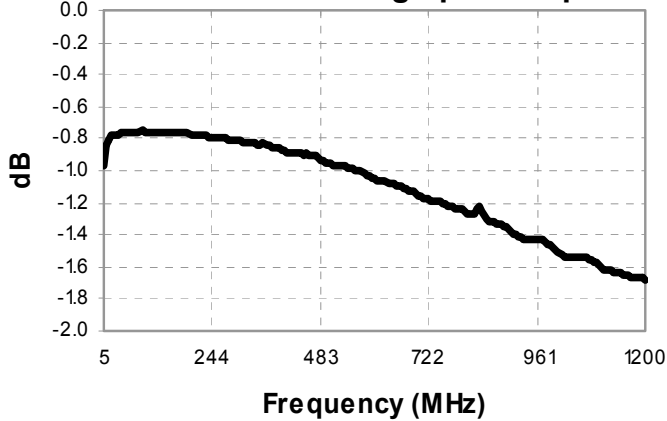


Transformer, 4:1 transmission line balun  
5 to 1200 MHz

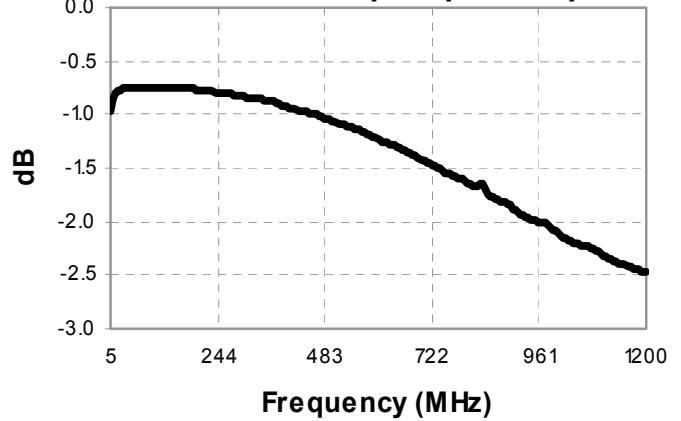
M/A-COM Products  
Released, Rev. V1

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

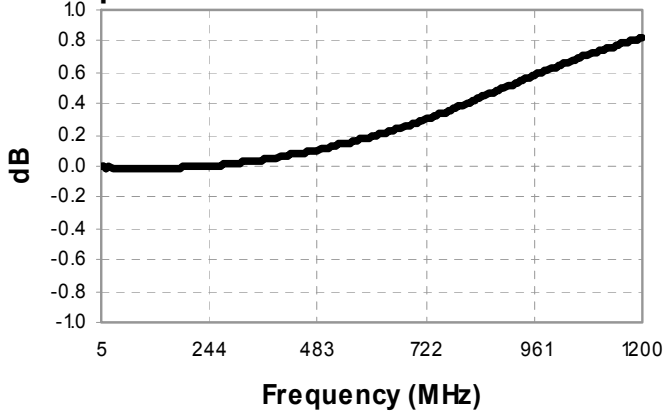
Insertion Loss 1: through pin 6 to pin 1



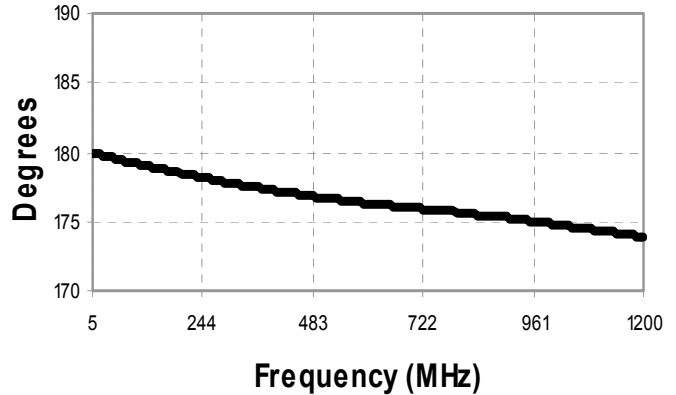
Insertion Loss 2: coupled pin 6 to pin 3



Amplitude Balance



Phase Balance



Return Loss: Input

