

MABA-009231-CT1A4B



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

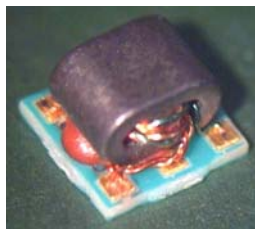
M/A-COM Products
Released, Rev. V1

Features

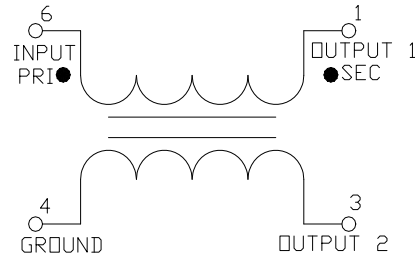
- Surface mount
- 1:1 Impedance ratio
- Can be used in both 50Ω and 75Ω systems
- 260°C reflow compatible
- RoHS* compliant, lead free
- Available on tape and reel.

Description

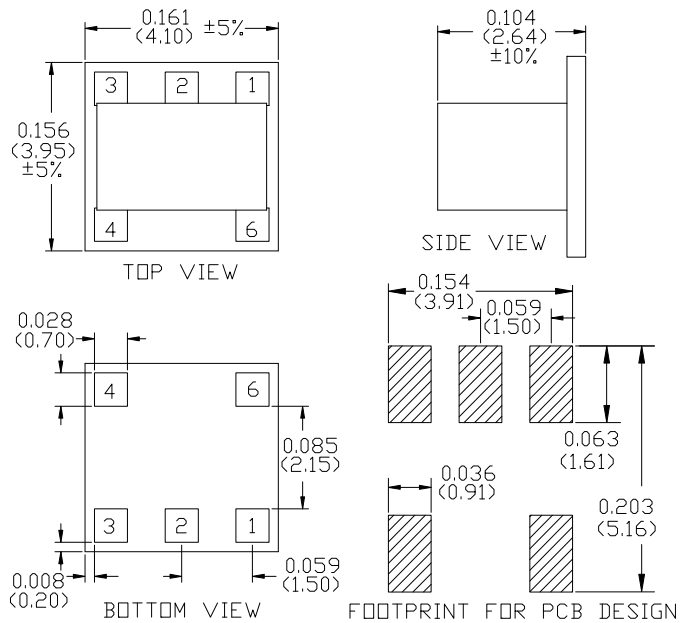
M/A Com's MABA-009231-CT1A4B is a 1:1 RF transmission line transformer in a low cost, surface mount package. Ideally suited for broadband CATV applications.



Schematic



Case style: SM-187



Pin configuration

Pin no.	Function
1	Secondary dot (Output 1)
2	Not used (Ground)
3	Secondary (Output 2)
4	Primary (Ground)
6	Primary dot (Input)

Ordering information

Part number	Description
MABA-009231-CT1A4B	2000 piece reel
MABA-009231-CT1ATB	Customer Test Board

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

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

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

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 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, 1:1 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 (pin6 - pin1)	5 - 50 MHz	dB	-	0.23	0.0
	50 - 400 MHz	dB	-	0.01	0.5
	400 - 870 MHz	dB	-	0.74	1.5
	870 - 1200 MHz	dB	-	1.28	2.4
Insertion loss 2 (pin6 - pin3)	5 - 50 MHz	dB	-	0.21	0.5
	50 - 450 MHz	dB	-	0.29	0.6
	450 - 1000 MHz	dB	-	0.51	1.0
	1000 - 1200 MHz	dB	-	0.67	1.8
Input return loss	5 - 50 MHz	dB	20	30.6	-
	50 - 1000 MHz	dB	8	12.4	-
	1000 - 1200 MHz	dB	7	12.9	-
Amplitude unbalance (nominal 0dB)	5 - 50 MHz	dB	-	0.44	± 0.9
	50 - 700 MHz	dB	-	0.14	± 0.8
	700 - 1200 MHz	dB	-	0.67	± 1.5
Phase unbalance (nominal 180°)	5 - 50 MHz	°	-	2.3	± 20
	50 - 1050 MHz	°	-	1.9	± 8
	1050 - 1200 MHz	°	-	3.4	± 20

Absolute maximum ratings

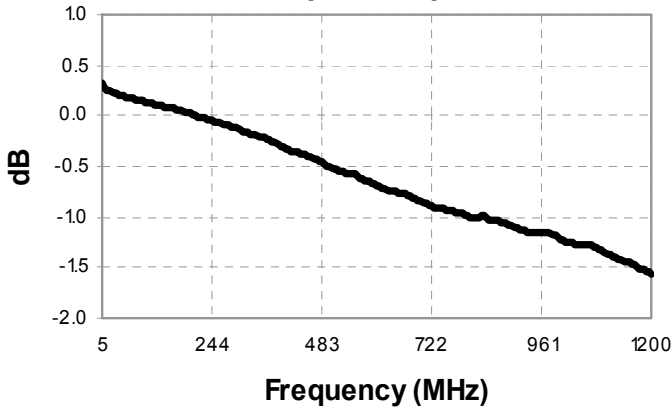
Parameter	Absolute maximum
Max input power	250mW
DC current	200mA
Operating temperature	-40°C to +85°C
Storage temperature	-40°C to +85°C

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

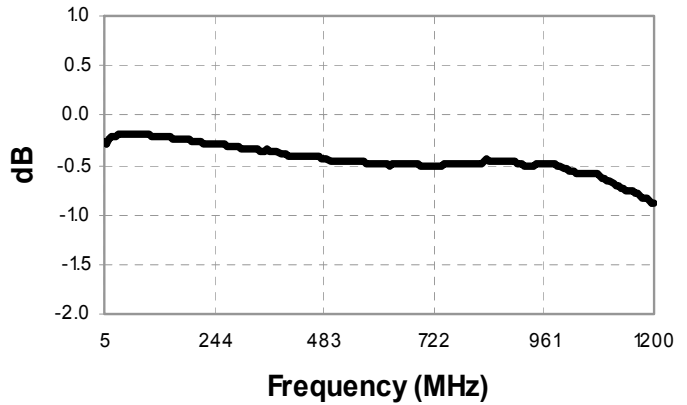
M/A-COM Products
Released, Rev. V1

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

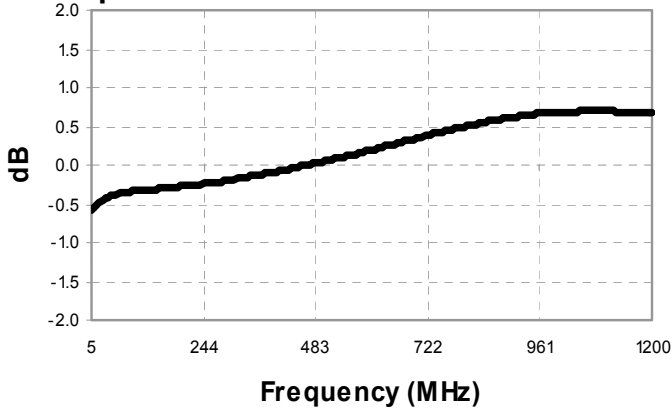
Insertion loss 1: pin 6 to pin 1



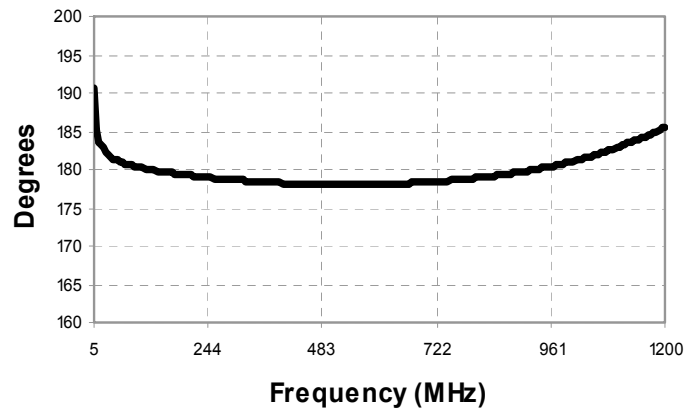
Insertion loss 2: pin 6 to pin 3



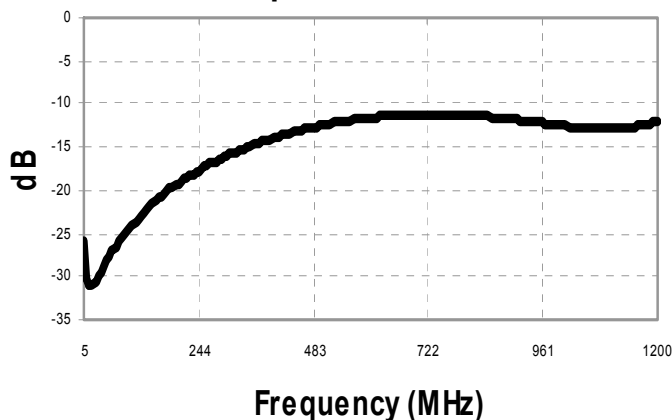
Amplitude balance



Phase balance



Return loss: Input



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 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.