

Features

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

Description

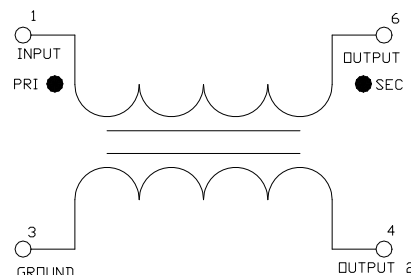
M/A-COM's MABACT0043 is a 1:1 Transmission Line Transformer in a low cost, surface mount package. Ideally suited for broadband CATV applications.



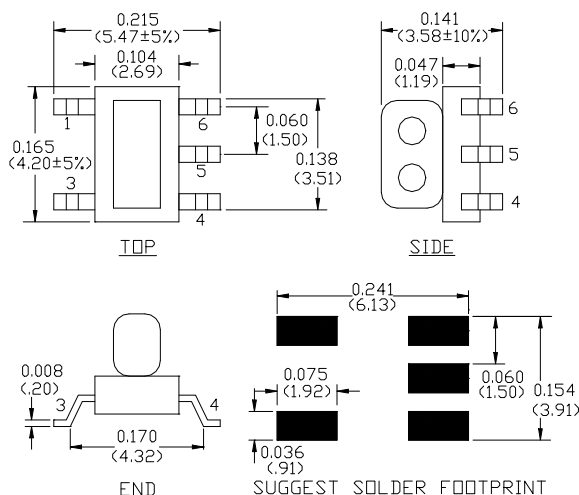
Pin configuration

Pin no.	Function
1	Primary Dot (input)
3	Primary (ground)
4	Secondary (output 2)
5	Not used (ground)
6	Secondary Dot (output 1)

Schematic



Case style: SM-138



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

Ordering information

Part number	Description
MABACT0043	2000 piece reel
MABA-008800-CT18TB	Customer Test Board

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

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

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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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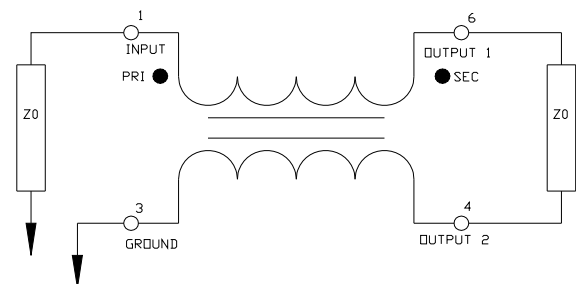
Electrical Specifications: $T_A = 25^\circ\text{C}$, 0dBm, $Z_0 = 75\Omega$ $P_{in} = 0\text{dBm}$

Parameter	Test Conditions	Units	Min	Typ	Max
Insertion Loss	5 - 700 MHz	dB	-	0.56	0.70
	700 - 870 MHz	dB	-	0.51	1.10
	870 - 1000 MHz	dB	-	0.55	1.50
	1000 - 1200 MHz	dB	-	0.79	2.40
Amplitude Unbalance	5 - 870 MHz	dB	-	± 0.33	± 1.0
	870 - 1200 MHz	dB	-	± 0.47	± 1.3
Phase Unbalance	5 - 450 MHz	$^\circ$	-	1.6	± 5
	450 - 1200 MHz	$^\circ$	-	4.2	± 7
Input Return Loss	5 - 90 MHz	dB	30	38	-
	90 - 550 MHz	dB	15	22	-
	550 - 1200 MHz	dB	5	11	-

Recommended Maximum Ratings

Parameter	Value
Max Input power	+24dBm (250mW)
DC current	40mA
Operating Temperature	-40°C to $+85^\circ\text{C}$
Storage Temperature	-40°C to $+85^\circ\text{C}$

Application Circuit

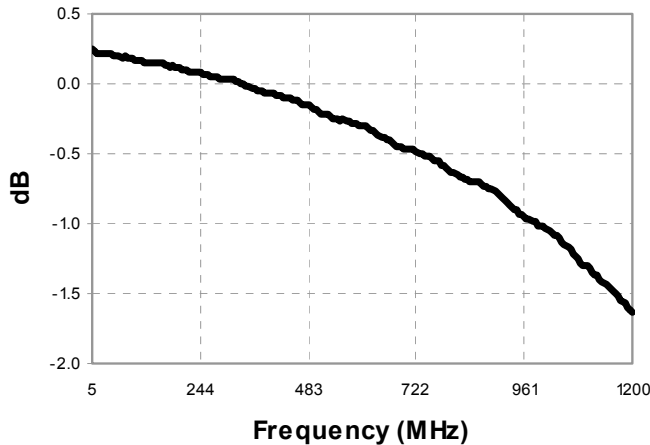


1:1 Transmission Line Transformer
5 to 1200 MHz

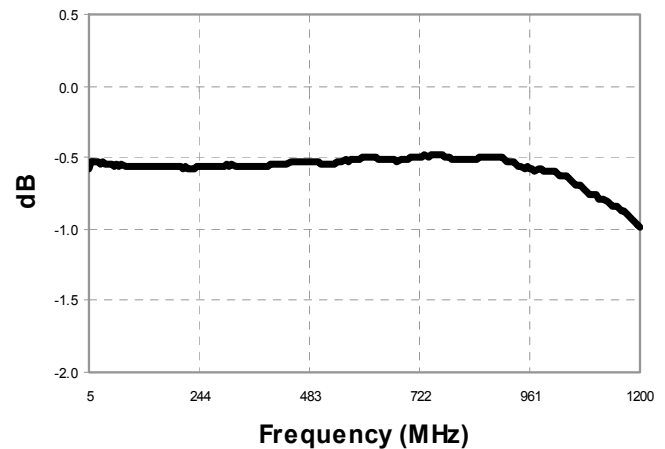
M/A-COM Products
Released, Rev. V2

Typical Performance Curves: $T_A = 25^\circ\text{C}$, 0dBm , $Z_0 = 75\Omega$ $P_{in} = 0\text{dBm}$

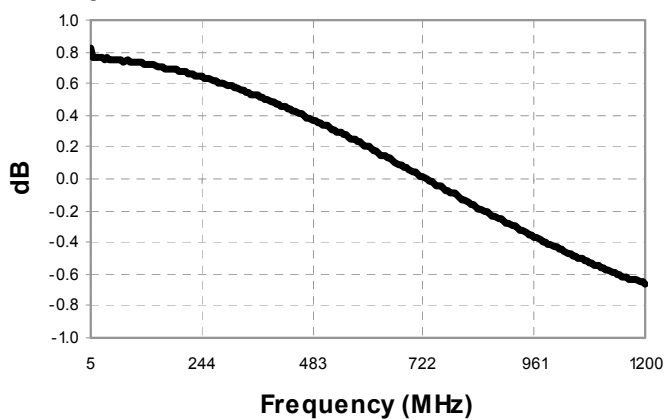
Insertion Loss 1: (Pin 1 to 6)



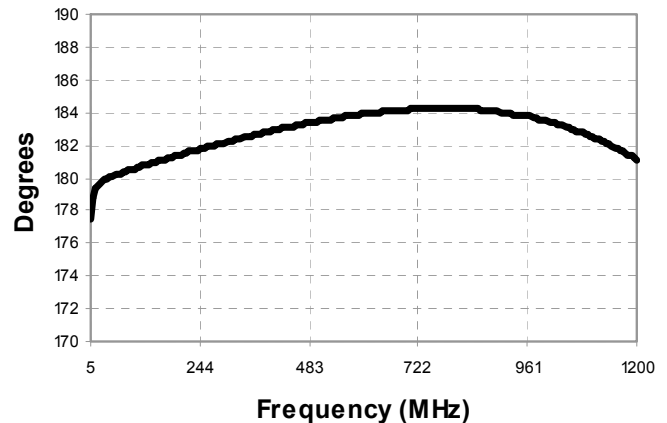
Insertion Loss 2: (Pin 1 to 4)



Amplitude Balance



Phase Balance



Return Loss: Input

