

**1:1 Transmission Line Transformer
5-1200MHz**

MABACT0043

V1

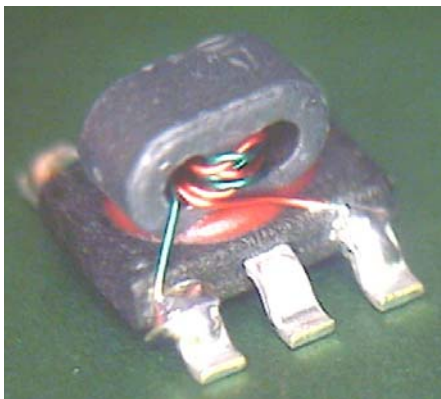
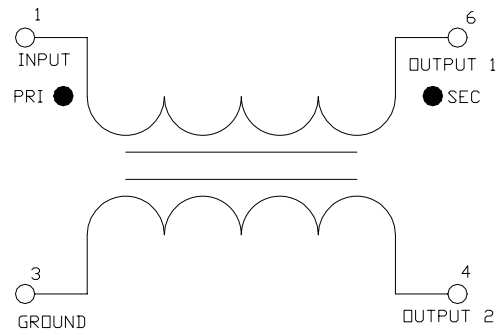
Features

- Surface Mount
- 1:1 Impedance
- 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. Reel quantity 2000

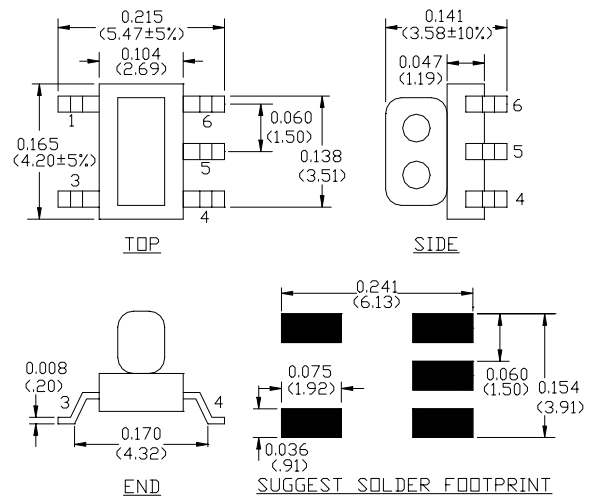
Description

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

Schematic



Case Style: SM-138



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

Pin Configuration

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

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

Ordering Information

Part Number	Package
MABACT0043	2000 piece reel
MABA-008800-CT18TB	Customer Test Board

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

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Visit www.macom.com for additional data sheets and product information.

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

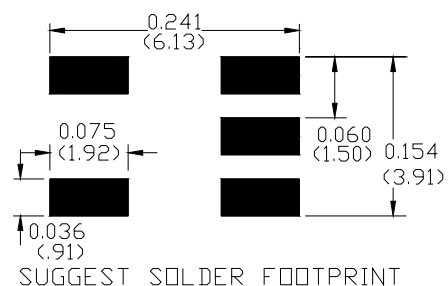
Parameter	Test Conditions	Units	Min	Typ	Max
Insertion Loss	5 - 700 MHz	dB	-	0.56	0.70
	700 - 870 MHz	dB	-	0.51	1.10
	870 - 1000 MHz	dB	-	0.55	1.50
	1000 - 1200 MHz	dB	-	0.79	2.40
Amplitude Balance	5 - 870 MHz	dB	-	± 0.33	± 1.0
	870 - 1200 MHz	dB	-	± 0.47	± 1.3
Phase Balance	5 - 450 MHz	$^\circ$	-	± 1.6	± 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	-

Absolute Maximum Ratings ^{1,2}

Parameter	Absolute Maximum
Max Input Power	250mW
DC current	40mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

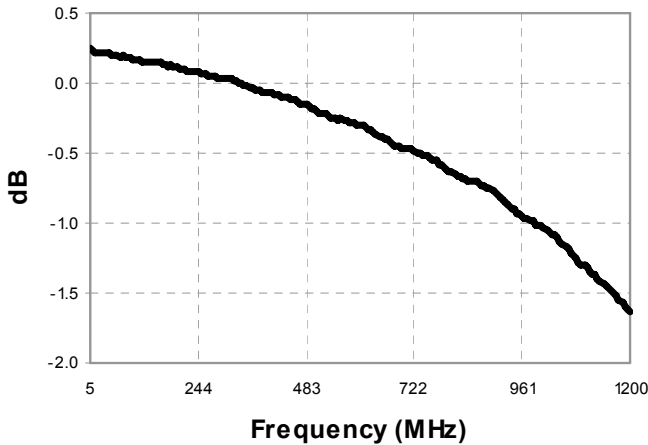
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

Recommended PCB Configuration

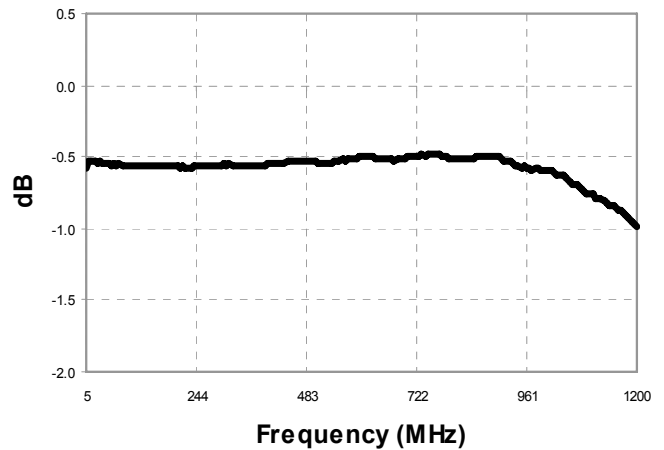


Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 75\Omega$

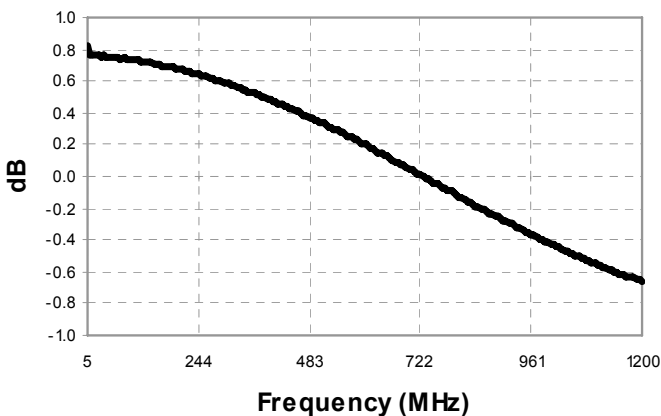
Insertion Loss 1: through pin 1 to pin 6



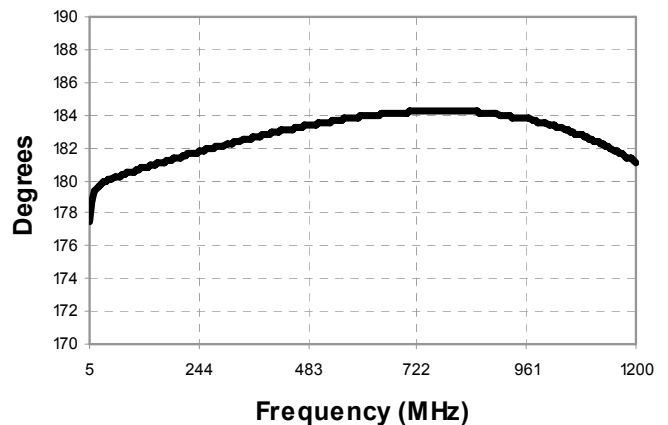
Insertion Loss 2: coupled pin 1 to pin 4



Amplitude Balance



Phase Balance



Return Loss: Input

