MABACT0043

1:1 Transmission Line Transformer
5 to 1200 MHz

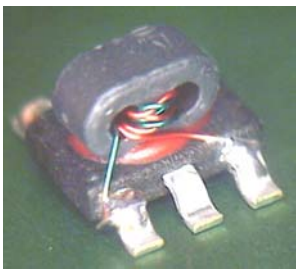
M/A-COM Products
Released, Rev. V2

Features

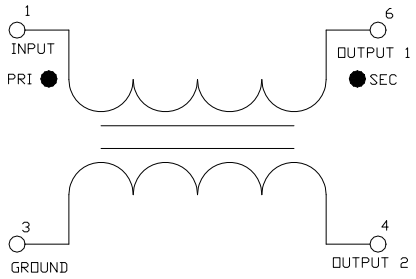
- Surface mount
- 1:1 Impedance ratio
- Excellent amplitude and phase balance
- Can be used in both 50Ω and 75Ω systems
- 260°C reflow compatible
- RoHS* compliant
- Available on tape and reel.

Description

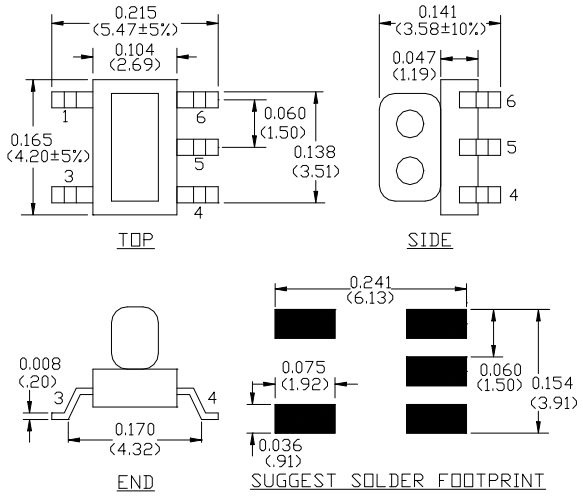
M/A-COM's MABACT0043 is a 1:1 Transmission Line Transformer in a low cost, surface mount package. Ideally suited for broadband CATV applications.



Schematic



Case style: SM-138



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

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)

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.

• **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.

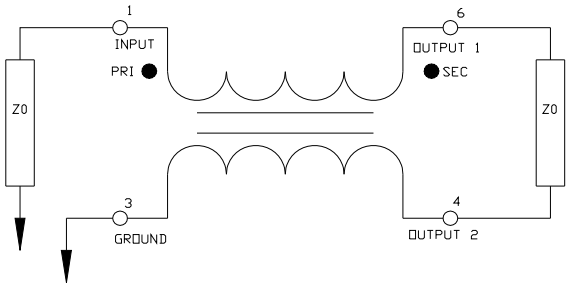
Electrical Specifications: T_A = 25°C, 0dBm, Z_0 = 75Ω P_{in} = 0dBm

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

Recommended Maximum Ratings

Parameter	Value
Max Input power	+24dBm (250mW)
DC current	40mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

Application Circuit



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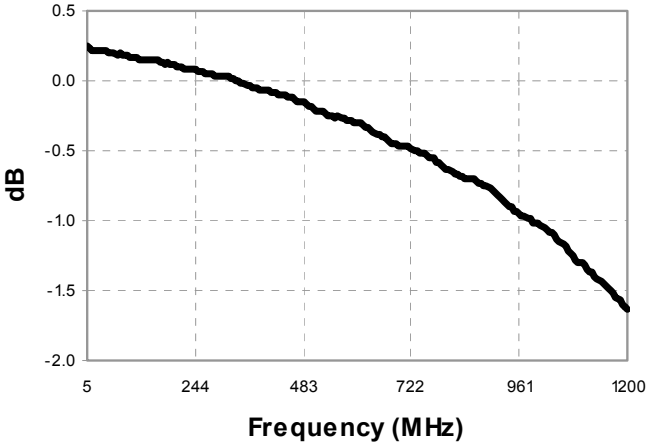
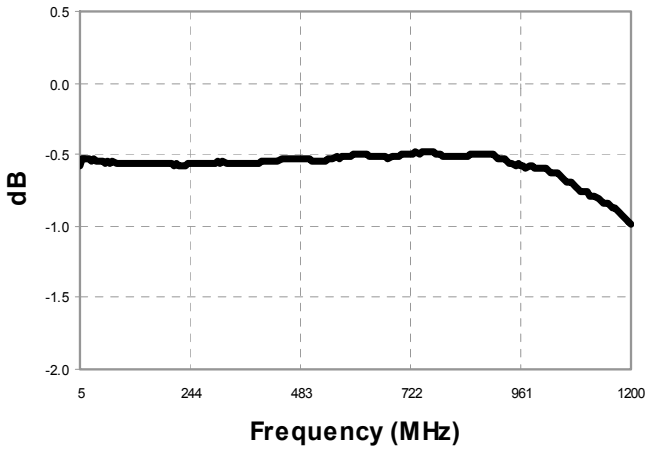
Typical Performance Curves: T_A = 25°C, 0dBm, Z_0 = 75Ω P_{in} = 0dBm

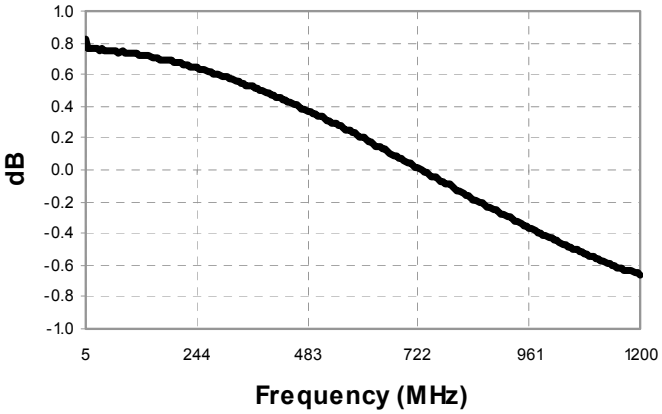
Insertion Loss 1: (Pin 1 to 6)



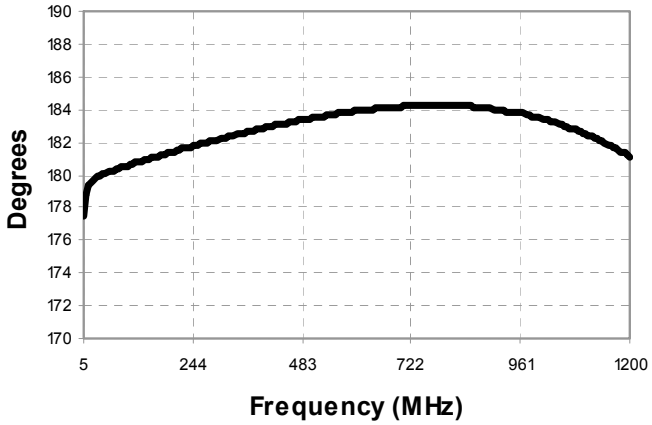
Insertion Loss 2: (Pin 1 to 4)



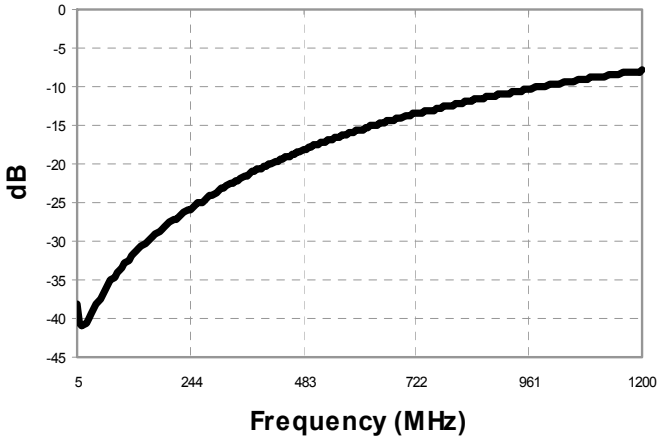
Amplitude Balance



Phase Balance



Return Loss: Input



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