

1:1 Transmission Line Transformer with tertiary winding
50-1200MHz

Rev. V3

Features

- Surface Mount
- 1:1 Impedance
- Excellent amplitude and phase balance
- 260°C Reflow Compatible
- RoHS* Compliant
- Available on Tape and Reel.

Description

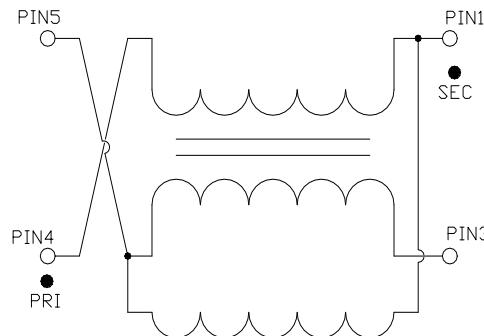
M/A-COM's MABACT0069 is a 1:1 RF transmission line transformer with tap in a low cost, surface mount package. Ideally suited for high volume CATV applications.



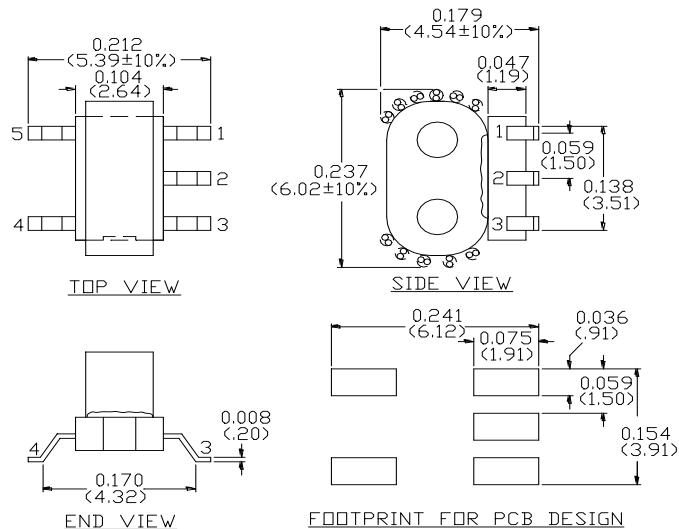
Pin Configuration

Pin No.	Function
1	Output 1: Through (Secondary dot)
2	Ground, not used
3	Output 2: Coupled (Secondary)
4	Input (Primary dot)
5	Ground (Primary)

Schematic



Case Style: SM-158



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

Ordering Information

Part Number	Description
MABACT0069	1500 piece reel
MABA-008509-CT69TB	Customer test board

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

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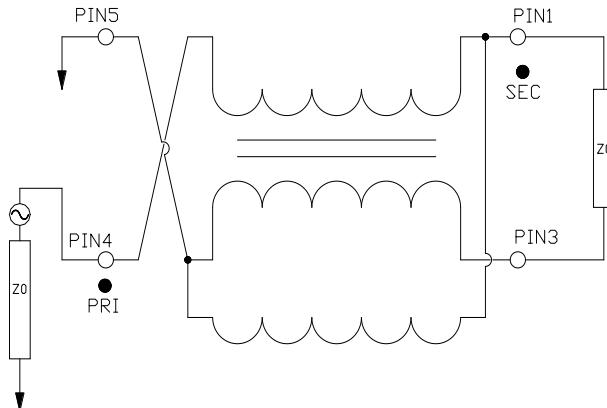
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Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75\Omega$, $P_{\text{in}} = 0\text{dBm}$

Parameter	Test Conditions	Units	Min	Typ	Max
Insertion Loss 1: Pin 4-1 (Through)	50 - 600 MHz 600-1000 MHz 1000-1200 MHz	dB	-	0.4 0.8 1.2	0.8 1.1 1.5
Insertion Loss 2: Pin 4-3 (Coupled)	50 - 600 MHz 600-1200 MHz	dB	-	0.5 0.5	0.7 1.0
Amplitude Unbalance (Nominal 0dB)	50 - 600 MHz 600-1200 MHz	dB	-	± 0.1 ± 0.4	± 0.3 ± 0.9
Phase Unbalance (Nominal 180°)	50 - 870 MHz 870-1000 MHz 1000-1200 MHz	°	-	± 1.0 ± 1.5 ± 4.5	± 3.0 ± 5.0 ± 10.0
Input Return Loss	5 - 1200 MHz	dB	12	16	-

Recommended Maximum Ratings

Parameter	Value
Max Input Power	250mW
DC current	30mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

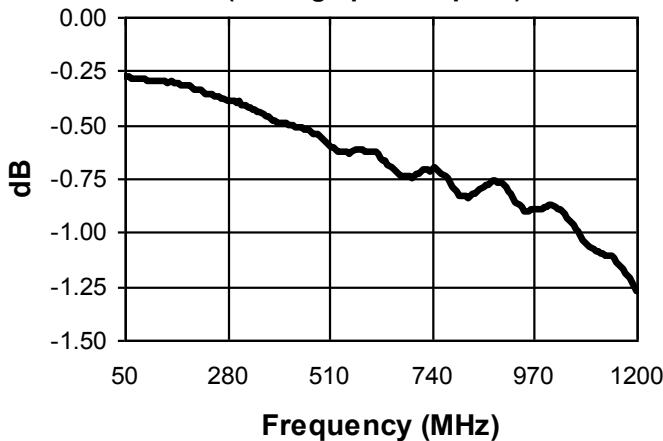
Application Circuit

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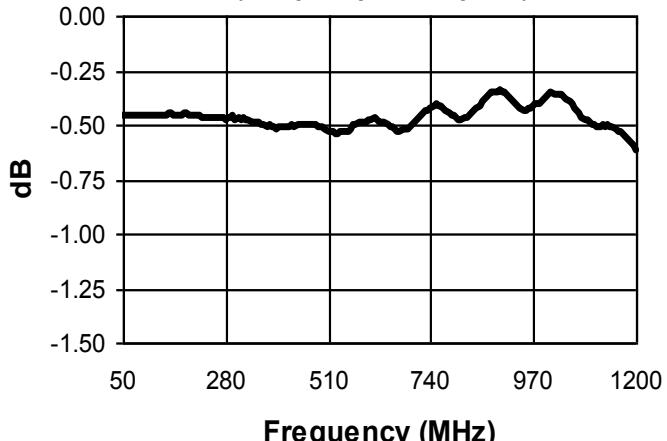
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Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 75\Omega$, $P_{\text{in}} = 0\text{dBm}$

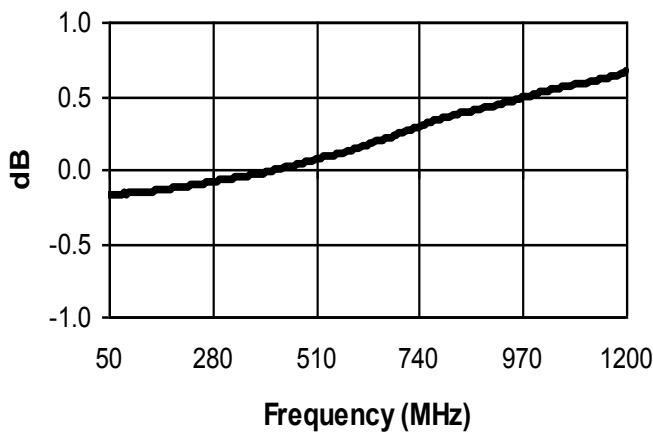
Insertion Loss 1 (Through pin 4 to pin 1)



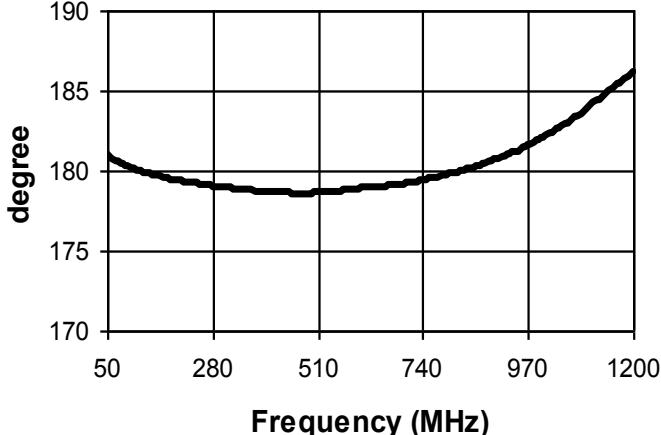
Insertion Loss 2 (Coupled pin 4 to pin 3)



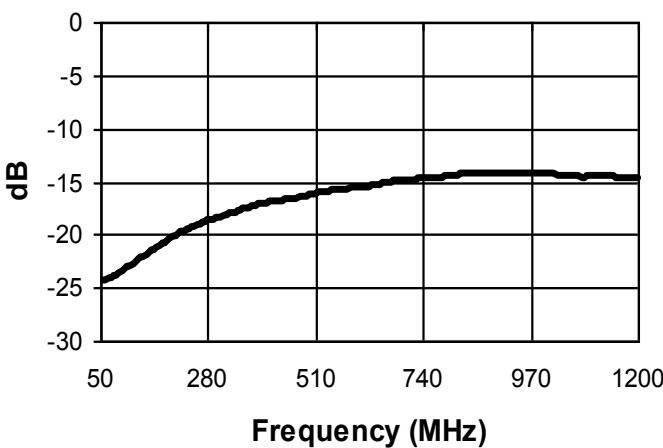
Amplitude Unbalance



Phase Balance



Input Return Loss



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