MABACT0069

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

Rev. V3

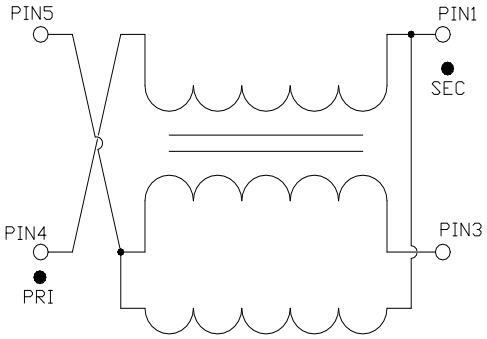
Features

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

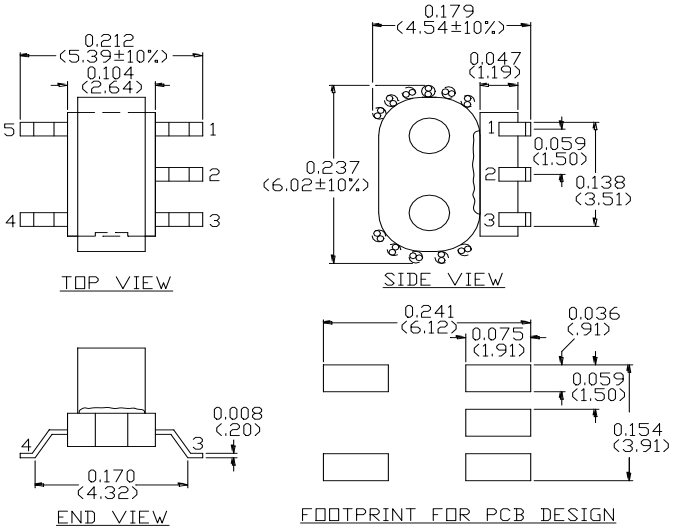
Description

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.

Schematic



Case Style: SM-158



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

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)

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.

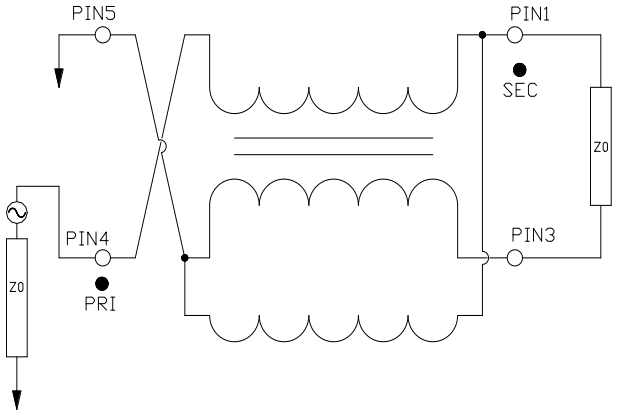
Electrical Specifications: T_A = 25°C, Z_0 = 75Ω, P_{in} = 0dBm

Parameter	Test Conditions	Units	Min	Typ	Max
Insertion Loss 1: Pin 4-1 (Through)	50 - 600 MHz 600-1000 MHz 1000-1200 MHz	dB dB 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 dB	- -	0.5 0.5	0.7 1.0
Amplitude Unbalance (Nominal 0dB)	50 - 600 MHz 600-1200 MHz	dB 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

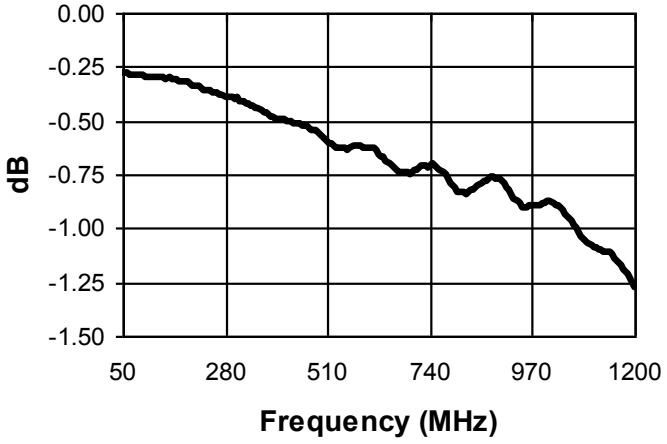
Parameter	Value
Max Input Power	250mW
DC current	30mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

Application Circuit

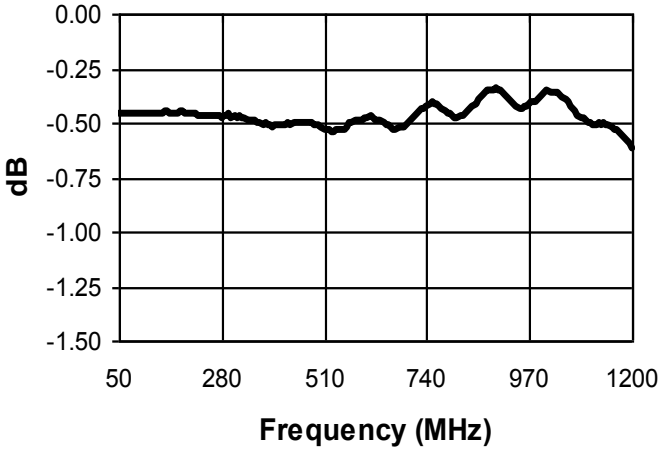


Typical Performance Curves: T_A = 25°C, Z_0 = 75Ω, P_{in} = 0dBm

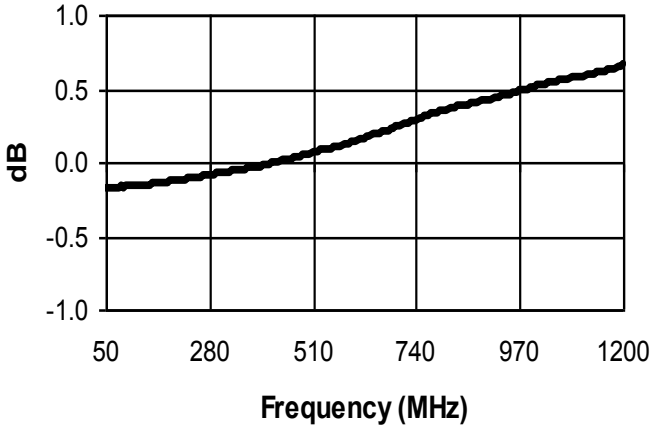
Insertion Loss 1 (Through pin 4 to pin 1)



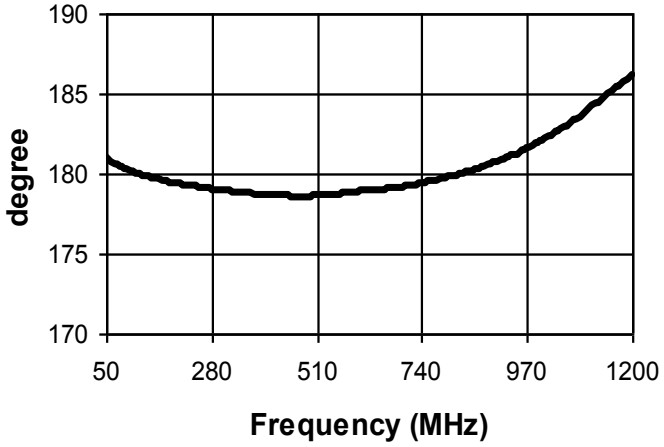
Insertion Loss 2 (Coupled pin 4 to pin 3)



Amplitude Unbalance



Phase Balance



Input Return Loss