

RoHS Compliant



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

MABACT0069 V1P

Features

- Surface Mount
- 1:1 Impedance
- Excellent amplitude and phase balance
- 260°C Reflow Compatible
- RoHS* Compliant
- Available on Tape and Reel. Reel quantity 1500

Description

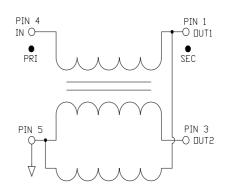
M/A-COM's MABACT0069 is a 1:1 RF transmission line transformer with tap in a low cost, surface mount package. Ideally suited for high volume CATV applications



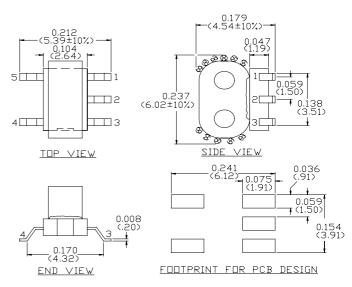
Pin Configuration

Function		
Output 1: Through (Secondary dot)		
Ground, not used		
Output 2: Coupled (Secondary)		
Input (Primary dot)		
Ground (Primary)		

Schematic



Case Style: SM-158



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

Ordering Information

Part Number	Package
MABACT0069TR	1500 piece reel

Note: Reference Application Note M513 for reel size information.

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

M/A-COM Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. M/A-COM makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does M/A-COM assume any liability whatsoever arising out of the use or application of any product(s) or information.

- North America Tel: 800.366.2266 / Fax: 978.366.2266
- **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- Asia/Pacific Tel: 81.44.844.8296 / Fax: 81.44.844.8298

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



RoHS Compliant



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

MABACT0069 V₁P

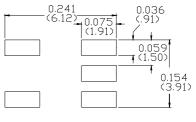
Electrical Specifications: $T_A = 25$ °C, $Z_0 = 75\Omega$

Parameter	Test Conditions	Units	Min	Тур	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 180º)	50 - 870 MHz 870-1000 MHz 1000-1200 MHz	0 0 0	-	±1.0 ±1.5 ±4.5	±3.0 ±5.0 ±10.0
Input Return Loss	5 - 1200 MHz	dB	-12	-16	-

Absolute Maximum Ratings ^{1,2}

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

Recommended PCB Configuration



FOOTPRINT FOR PCB DESIGN

- 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.

[•] North America Tel: 800.366.2266 / Fax: 978.366.2266

Europe Tel: 44.1908.574.200 / Fax: 44.1908.574.300

Asia/Pacific Tel: 81.44.844.8296 / Fax: 81.44.844.8298



RoHS Compliant



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

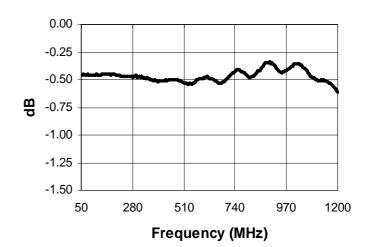
MABACT0069 V₁P

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

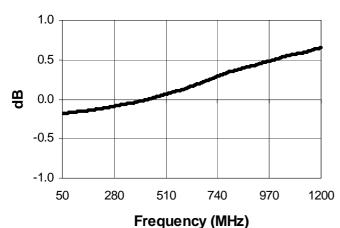
Insertion Loss 1 (Through pin 4 to pin 1)

0.00 -0.25 -0.50 **9** -0.75 -1.00 -1.25 -1.50 50 280 1200 510 740 970 Frequency (MHz)

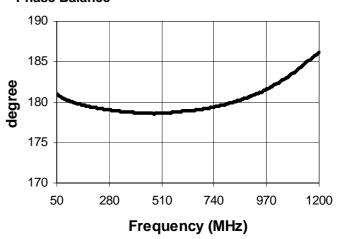
Insertion Loss 2 (Coupled pin 4 to pin 3)



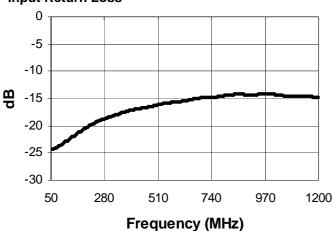
Amplitude Unbalance



Phase Balance



Input Return Loss



no warranty, representation or guarantee regarding the suitability of its

whatsoever arising out of the use or application of any product(s) or

M/A-COM Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. M/A-COM makes products for any particular purpose, nor does M/A-COM assume any liability

- North America Tel: 800.366.2266 / Fax: 978.366.2266
- **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- Asia/Pacific Tel: 81.44.844.8296 / Fax: 81.44.844.8298

information.