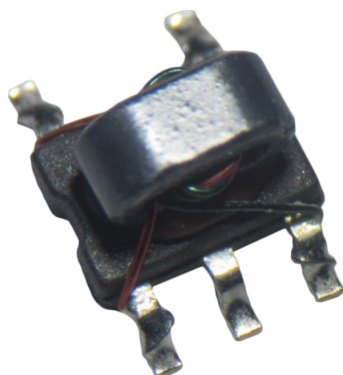


Features

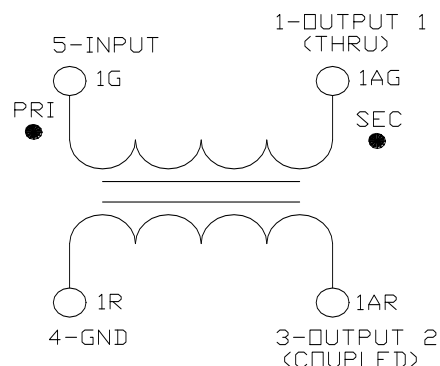
- Surface Mount
- 1:1 Impedance
- 260°C Reflow Compatible
- RoHS Compliant

Description

MABACT0039 is a low cost SMT 1:1 Transmission Line Transformer in a low cost, surface mount package. Ideally suited for high volume CATV/Broadband applications. Suitable for use in 50 Ohm and 75 Ohm systems.



Functional Schematic



Pin Configuration³

Pin No.	Function
1	Secondary Dot (Output 1)
2	Not Used
3	Secondary (Output 2)
4	Primary (Ground)
5	Primary Dot (Input)

Ordering Information

Part Number	Package
MABACT0039	2000 piece reel

1:1 Transmission Line Transformer 5-3000MHz

Rev. V3

Electrical Specifications: Freq. = ____ MHz, $T_A = +25^{\circ}\text{C}$, $V_{CC} = \text{____ V}$, $Z_0 = 50 \Omega$

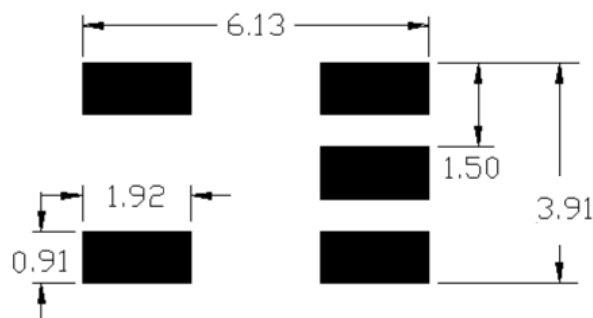
Parameter	Frequency	Units	Min.	Typ.	Max.
Insertion Loss	50 - 2150 MHz	dB	-	1.0	2.0
	5 - 3000 MHz	dB	-	1.5	3.5
Amplitude Balance	50 - 2150 MHz	dB	-	1.0	± 2.2
Phase Balance	50 - 2150 MHz	$^{\circ}$	-	5.0	± 13.0
Input Return Loss	5 - 550 MHz	dB	20	30	-
	550 - 2100 MHz	dB	8	15	-

Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Power	250 mW
DC current	30mA
Operating Temperature	-40°C to $+85^{\circ}\text{C}$
Storage Temperature	-40°C to $+85^{\circ}\text{C}$

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



SUGGEST SOLDER FOOTPRINT

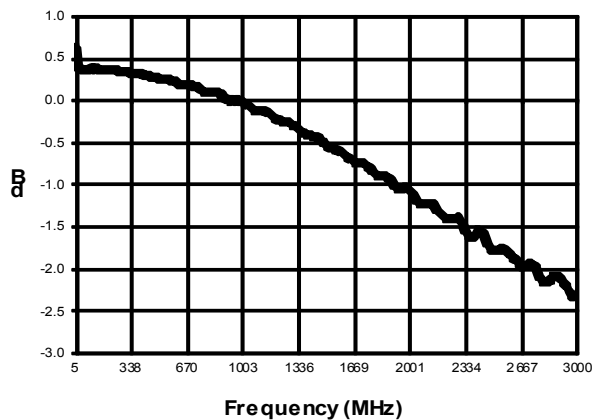
Dimensions in mm

1:1 Transmission Line Transformer 5-3000MHz

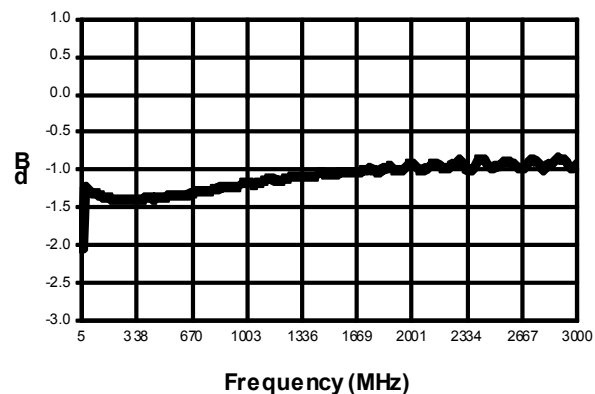
Rev. V3

Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 75\Omega$ ¹

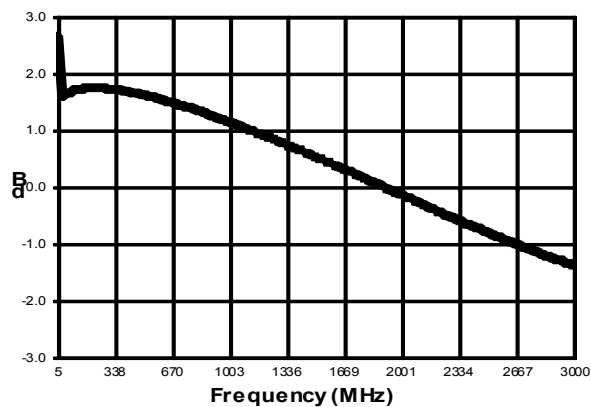
Insertion Loss 1 Pin5-Pin1 (through)



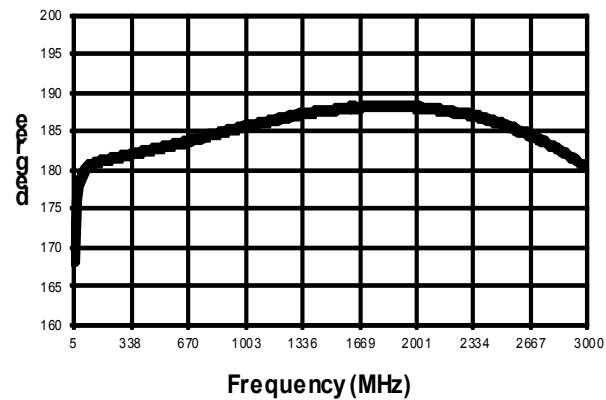
Insertion Loss 2 Pin5-Pin3 (coupled)



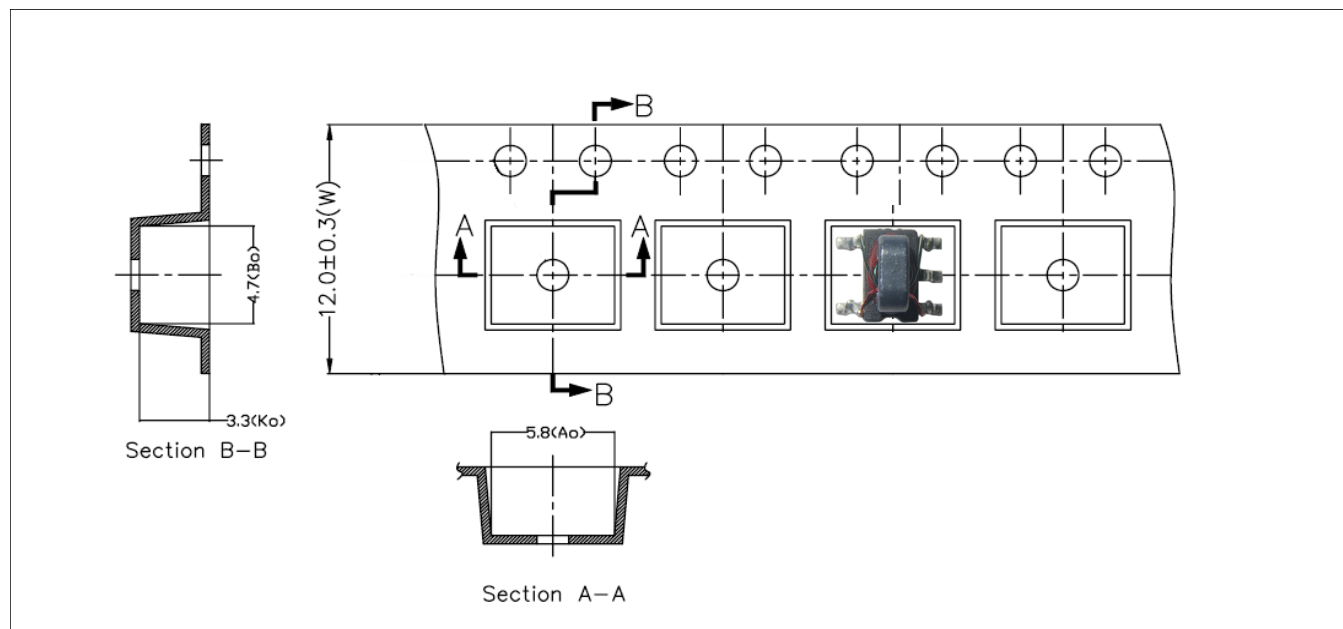
Amplitude Balance



Phase Balance



Part Orientation, F26.



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