

**Broadband CATV 1:1 Transmission Line Transformer  
 50-1200MHz**

MABACT0051

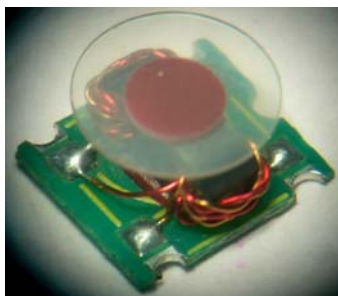
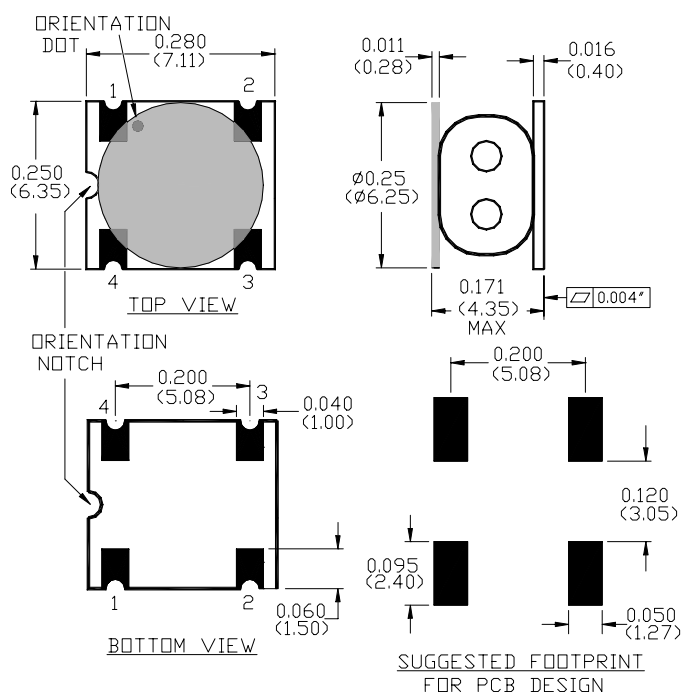
V1

**Features**

- SMT unit
- 1:1 impedance
- Available on tape & reel, reel qty. 900
- Excellent temperature stability
- All wires soldered to substrate using HMP solder

**Description**

M/A-COM's MABACT0051 is a low cost SMT 1:1 Transmission line transformer designed for high volume CATV Broadband applications. Suitable for use in 50 Ohm and 75 Ohm systems


**SM-118A Case Style**


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

**Electrical Specifications @ 25°C, 75 Ohm**

\* Monitored during production tune/test

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Frequency Range: 50-1200 MHz					
Insertion Loss 1 (Through) Pin 3 to pin 1	50 - 870 MHz	dB	-	0.4	0.9
Test fixture loss -10.67dB	870 - 1002 MHz	dB	-	0.7	1.0
	1002 - 1200 MHz	dB	-	1.1	1.5
Insertion Loss 2 (Coupled) Pin 2 to pin 1	50 - 870 MHz	dB	-	0.4	0.7
Test fixture loss -10.67dB	870 - 1002 MHz	dB	-	0.3	0.8
	1002 - 1200 MHz	dB	-	0.4	0.9
Amplitude Balance	50 - 1002 MHz	dB	-	± 0.2	± 0.7
	1002 - 1200 MHz	dB	-	± 0.3	± 0.8
Phase Balance *	50 - 1002 MHz	°	-	± 1.0	± 4.0
	1002 - 1200 MHz	°	-	± 4.0	± 8.0
Input Return Loss *	50 - 500 MHz	dB	18	24	-
	500 - 1002 MHz	dB	17.5	24	-
	1002 - 1200 MHz	dB	11	15	-

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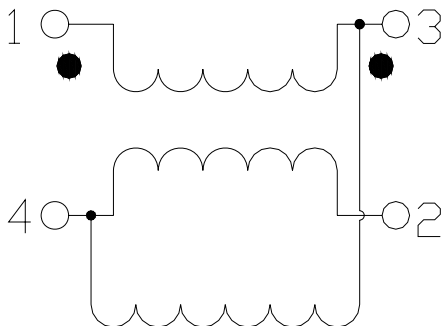
**Pin Configuration**

Function	Pin Number
Primary Dot (input)	1
Primary (ground)	4
Secondary Dot (o/p coupled)	2
Secondary (o/p through)	3

**Absolute Maximum Ratings<sup>1</sup>**

	Absolute Maximum
RF Power	250 mW
DC Current	30 mA
Operating/Storage Temperature	-40° C to +85° C

**Schematic**



<sup>1</sup> Exceeding one or a combination of these settings may cause permanent damage to the unit

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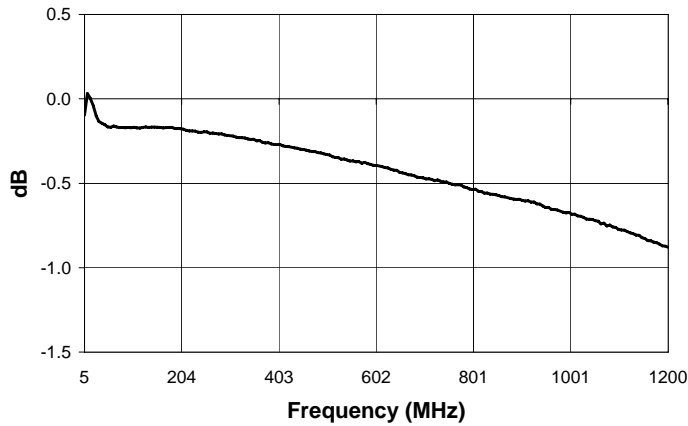
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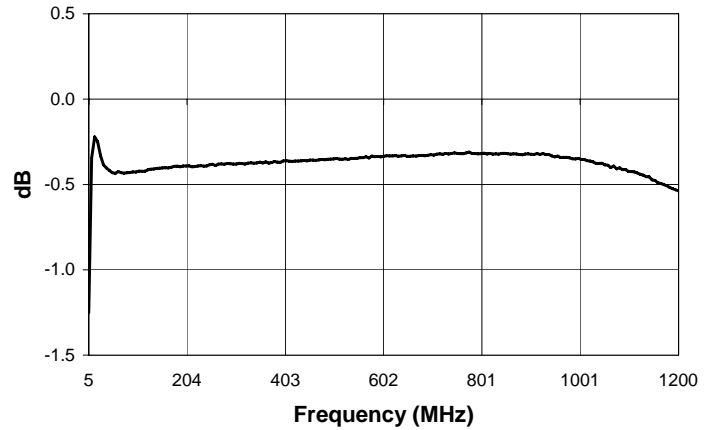
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**Typical Performance Curves @ +25°C, 75 Ohm**

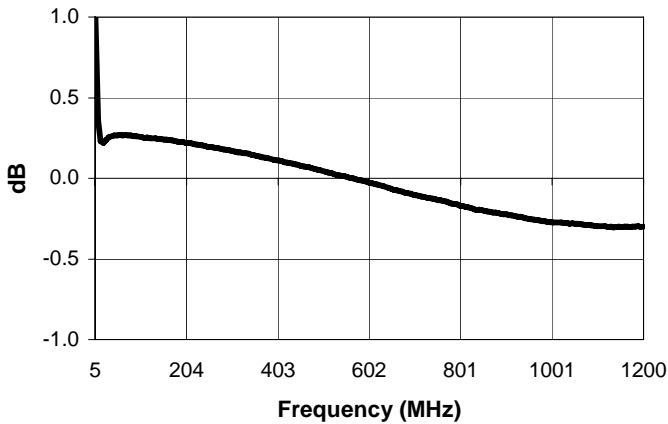
**Insertion Loss 1 (through): pin 3-1**



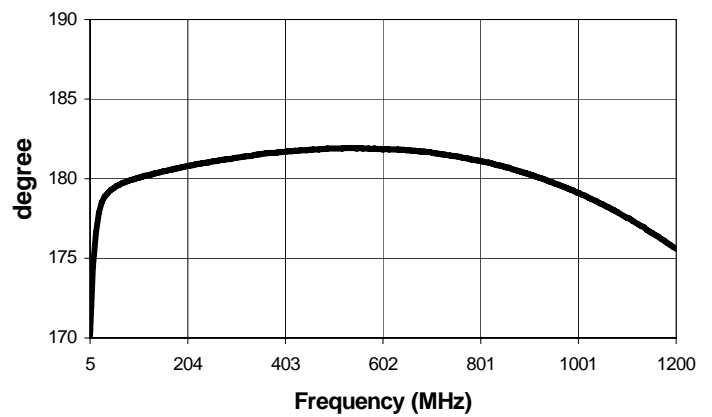
**Insertion Loss 2 (coupled): pin 2-1**



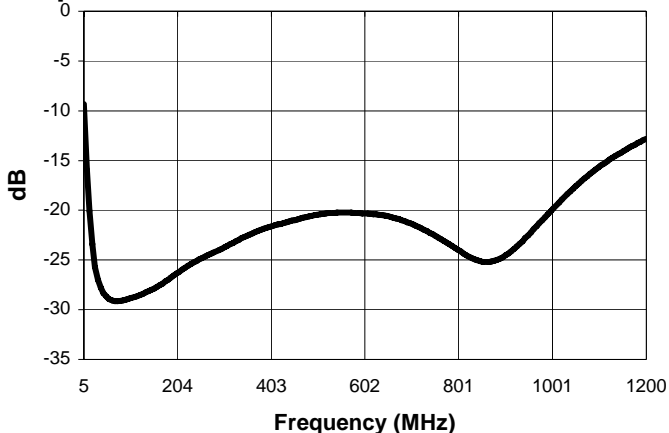
**Amplitude Balance**



**Phase Balance**



**Input Return Loss**



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