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# MABAES0029



Transformer, 1:1 Transmission Line with Tap Transformer  
50 - 1200 MHz

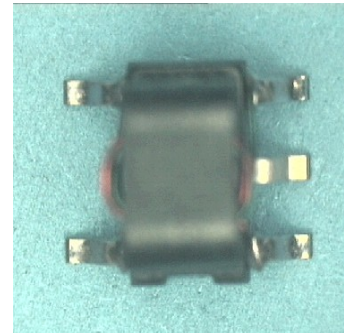
Rev. V5

## Features

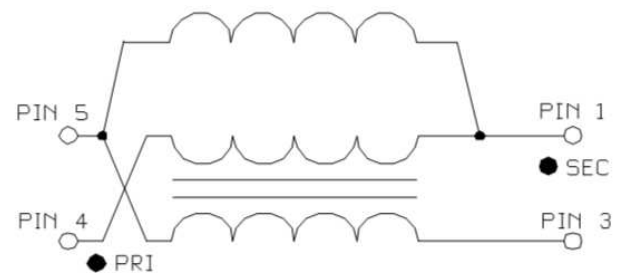
- Surface mount
- 1:1 Impedance ratio
- Available on tape and reel
- RoHS\* Compliant and 260°C Reflow Compatible

## Description

The MABAES0029 is a 1:1 transmission line transformer with tap in a low cost surface mount package. Ideally suited for CATV Broadband applications.



## Functional Schematic



## Ordering Information

Part Number	Description
MABAES0029	2000 piece reel

## Pin Configuration

Pin No.	Function
1	Output Thru Leg
2	No Connection
3	Output Coupled Leg
4	Input
5	Ground

\* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

**Transformer, 1:1 Transmission Line with Tap Transformer  
50 - 1200 MHz**

Rev. V5

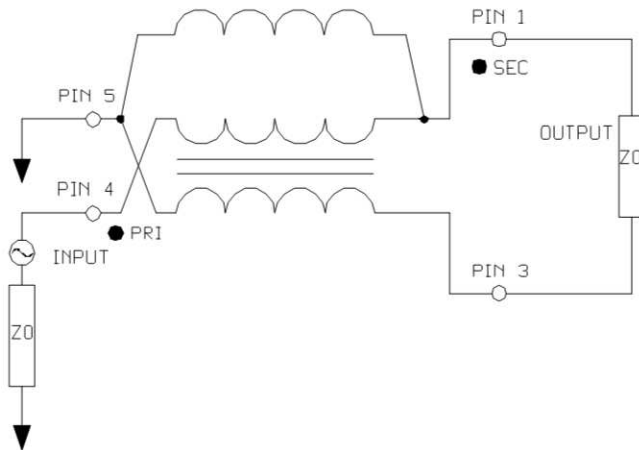
**Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75 \Omega$ ,  $P_{in} = 0 \text{ dBm}$**

Parameter	Conditions	Units	Min.	Typ.	Max.
Frequency Range	—	MHz	50	—	1200
Impedance	—	$\Omega$	—	75	—
Impedance Ratio	—	ratio	—	1:1	—
Insertion Loss (Pin4 - Pin3)	50 - 600 MHz	dB	—	0.8	1.0
	600 - 1200 MHz			1.2	
Insertion Loss (Pin4 - Pin1)	50 - 600 MHz	dB	—	0.8	1.0
	600 - 1200 MHz			1.2	
Amplitude Balance	50 - 600 MHz	dB	—	0.1	0.2
	600 - 1200 MHz			0.4	
Phase Balance	50 - 600 MHz	deg.	—	1.0	3.0
	600 - 1200 MHz			4.0	

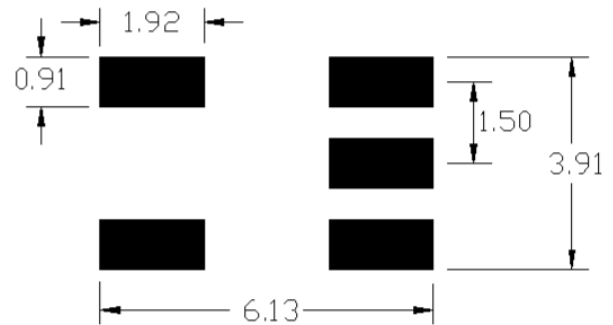
## Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	0.5 W
DC Current	500 mA
Operating Temperature	-40°C to +85°C

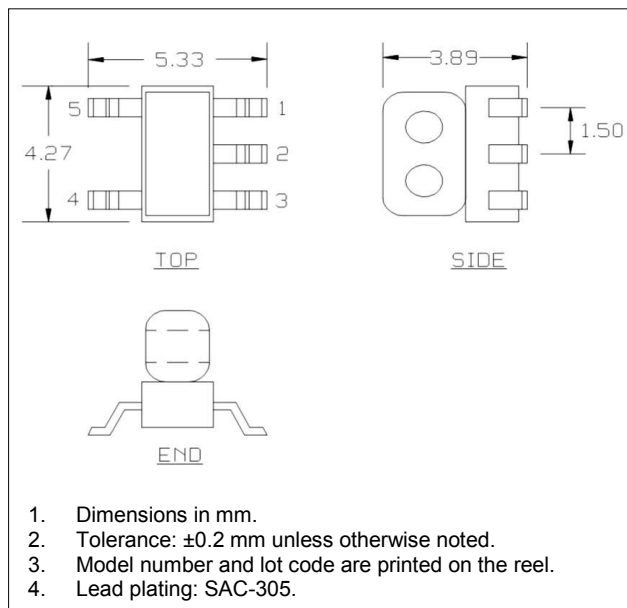
## Application Circuit



## PCB Layout



## Lead-Free Outline Drawing

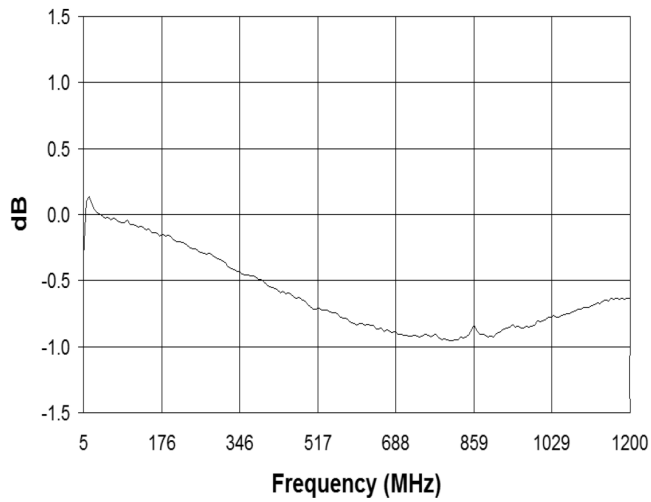


## Tape & Reel Information

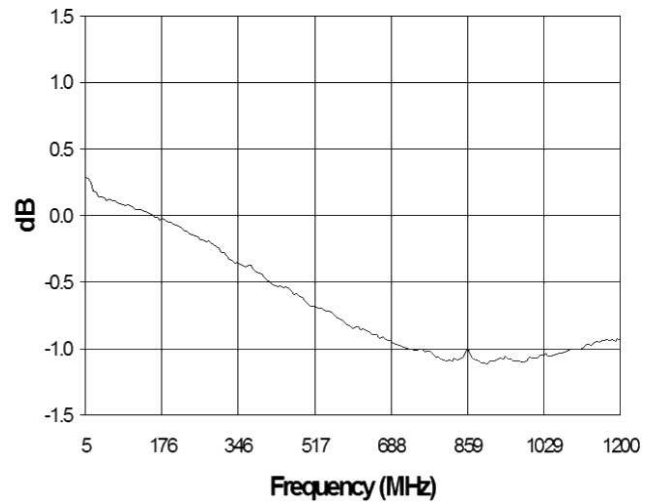
Parameter	Units	Value
Qty per reel	-	2000
Reel size	mm	330
Tape width (W)	mm	16.00
Pitch (P <sub>1</sub> )	mm	8.00
A <sub>0</sub>	mm	5.8
B <sub>0</sub>	mm	7.0
K <sub>0</sub>	mm	5.0
Orientation	-	F26
Reference Application note ANI-019 for orientation		

## Typical Performance Curves

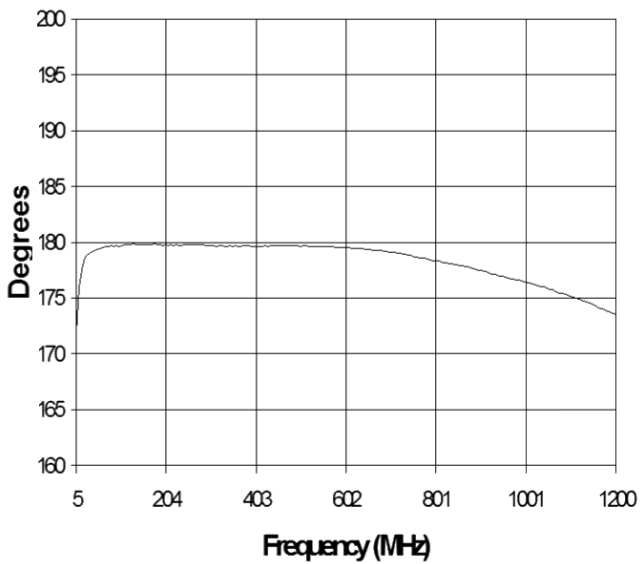
**Insertion Loss (Pin 4-1)**



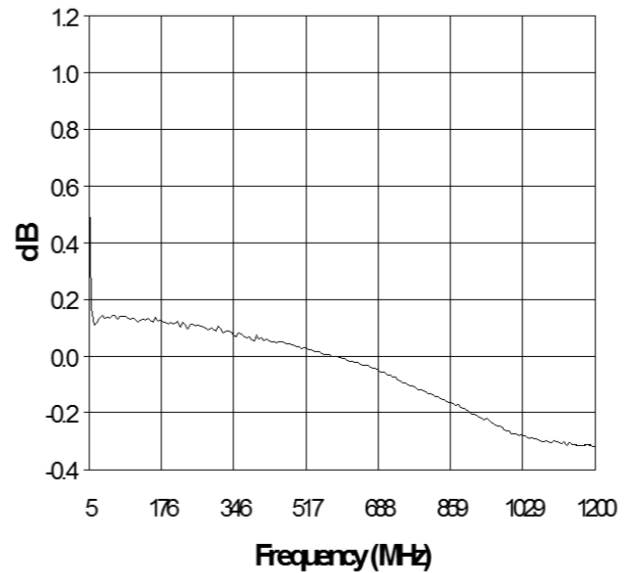
**Insertion Loss (Pin 4-3)**



**Phase Balance**



**Amplitude Balance**



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

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