

MABAES0029



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

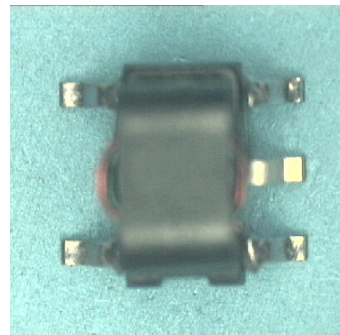
Rev. V5

Features

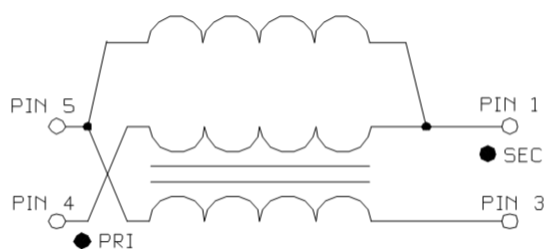
- Surface mount
- 1:1 Impedance ratio
- RoHS compliant and Pb free
- Available on tape and reel

Description

MACOM's 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	Package
MABAES0029	Tape & Reel

Pin Configuration

Pin No.	Function
1	Output Thru Leg
2	Not Connected
3	Output Coupled Leg
4	Input
5	Ground

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		Ω		75	
Impedance Ratio				1:1	
Insertion Loss (Pin4 - Pin3)	50 - 600 MHz	dB	-	0.8	1.0
	600 - 1200 MHz	dB	-	1.2	1.5
Insertion Loss (Pin4 - Pin1)	50 - 600 MHz	dB	-	0.8	1.0
	600 - 1200 MHz	dB	-	1.2	1.5
Amplitude Balance	50 - 600 MHz	dB	-	0.1	0.2
	600 - 1200 MHz	dB	-	0.4	0.8
Phase Balance	50 - 600 MHz	$^\circ$	-	1.0	3.0
	600 - 1200 MHz	$^\circ$	-	4.0	10.0

Recommended Maximum Ratings

Parameter	Units	Min	Max
Input RF Power	W		0.5
DC Current	mA		500
Operating Temperature Range	$^\circ\text{C}$	-40	+85

Full temperature plots available on request

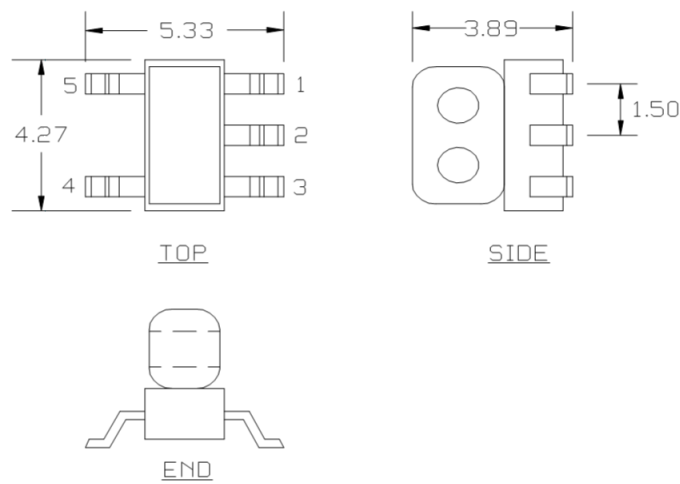
MABAES0029



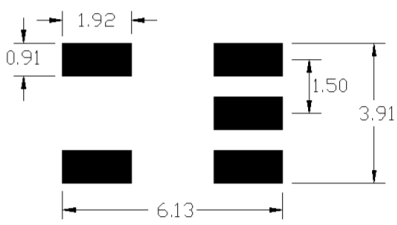
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Outline Drawing

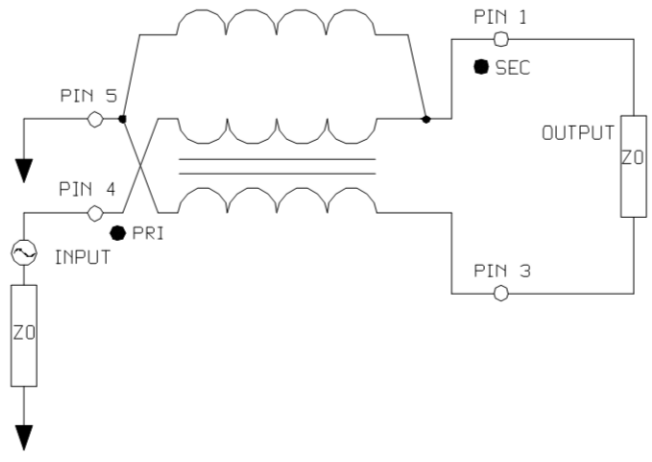


PCB Layout



1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Lead finish SAC-305

Application Circuit

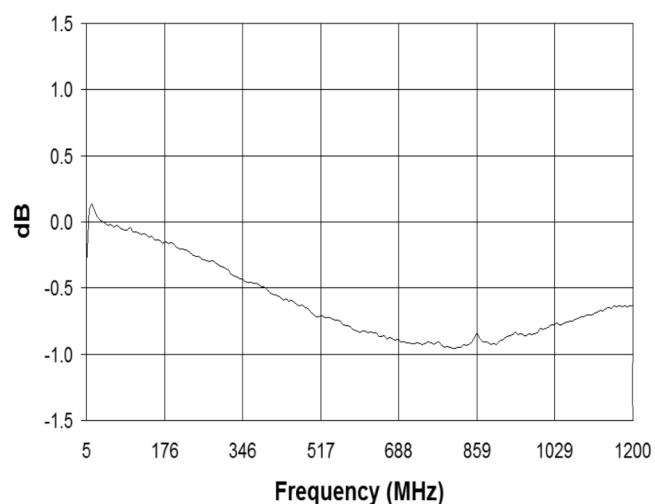


Tape & Reel Information

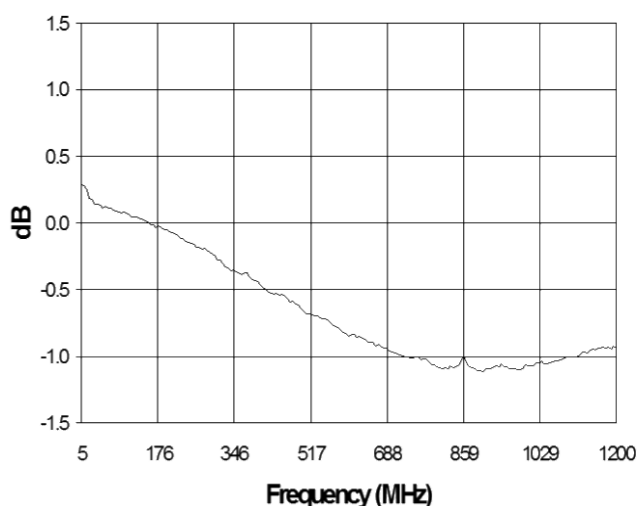
Parameter	Units	Value
Qty per reel	-	2000
Reel size	mm	330
Tape width (W)	mm	16.00
Pitch (P_1)	mm	8.00
A_0	mm	5.8
B_0	mm	7.0
K_0	mm	5.0
Orientation	-	F26
Reference Application note ANI-019 for orientation		

Typical Performance Curves

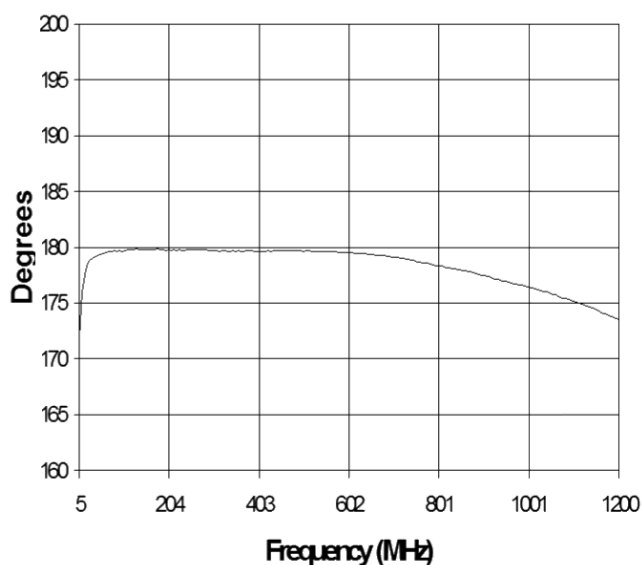
Insertion Loss (Pin 4-1)



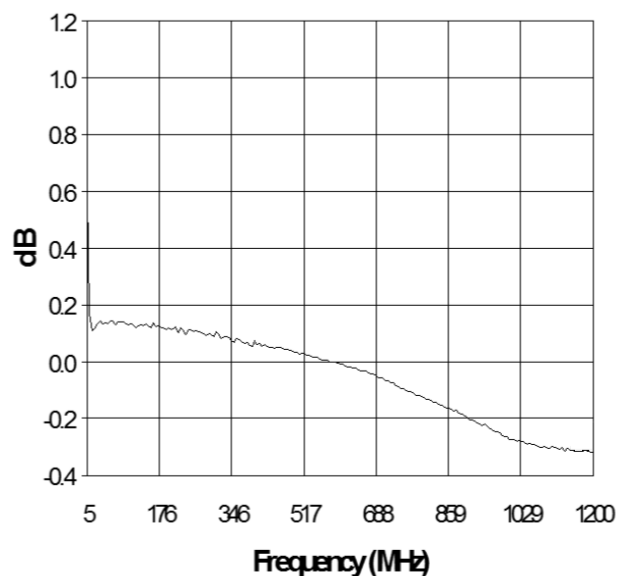
Insertion Loss (Pin 4-3)



Phase balance



Amplitude balance



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