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

MABAES0029
Rev. V7

Features

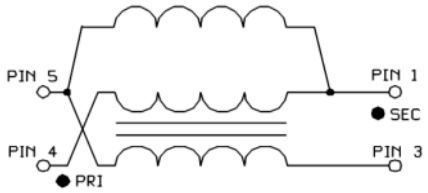
- Surface Mount
- 1:1 Impedance Ratio
- Available on Tape & Reel
- RoHS* Compliant
- 260ºC Reflow Compatible

Description

The MABAES0029 is a 1:1 transmission line transformer with tap in a surface mount package.

Ideally suited for CATV Broadband applications.

Functional Schematic



Pin Configuration

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

Electrical Specifications: Freq. = 50 - 1200 MHz, T_A = 25°C, Z_0 = 75 Ω, P_{IN} = 0 dBm

Parameter	Conditions	Units	Min.	Typ.	Max.
Impedance Ratio	—	ratio	—	1:1	—
Insertion Loss (Pin4 - Pin3)	50 - 600 MHz 600 - 1200 MHz	dB	—	0.8 1.2	1.0 1.5
Insertion Loss (Pin4 - Pin1)	50 - 600 MHz 600 - 1200 MHz	dB	—	0.8 1.2	1.0 1.5
Amplitude Balance	50 - 600 MHz 600 - 1200 MHz	dB	—	0.1 0.4	0.2 0.8
Phase Balance	50 - 600 MHz 600 - 1200 MHz	deg.	—	1.0 4.0	3.0 10.0

Ordering Information

Part Number	Description
MABAES0029	1500 piece reel

Absolute Maximum Ratings

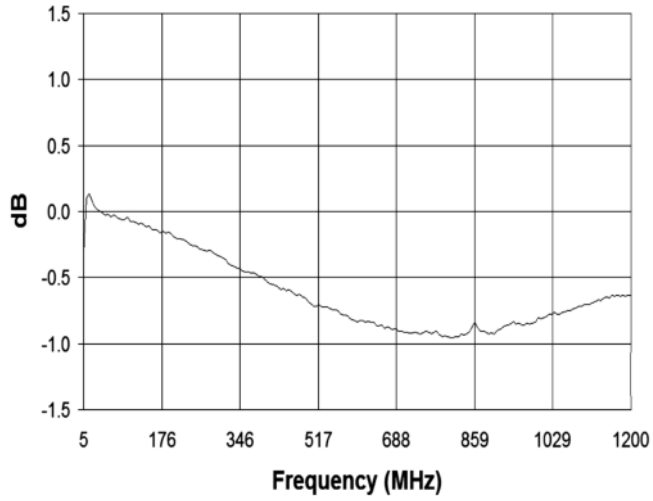
Parameter	Absolute Maximum
RF Input Power	0.5 W
DC Current	500 mA
Operating Temperature	-40°C to +85°C

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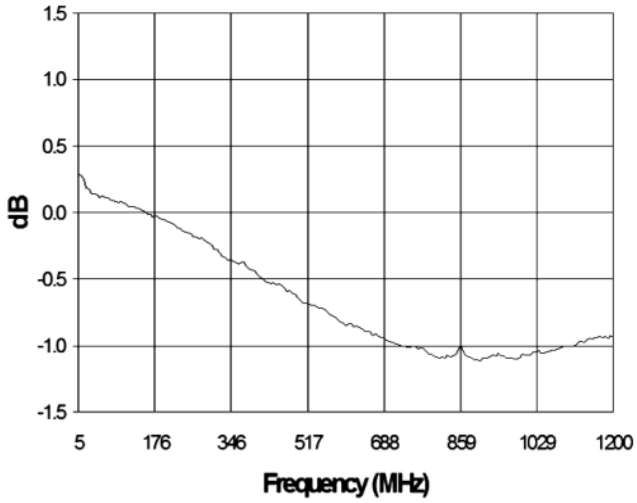
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Typical Performance Curves

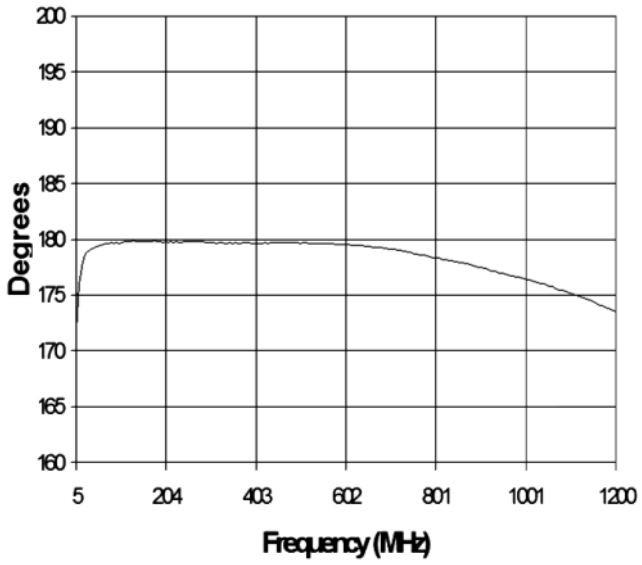
Insertion Loss (Pin 4-1)



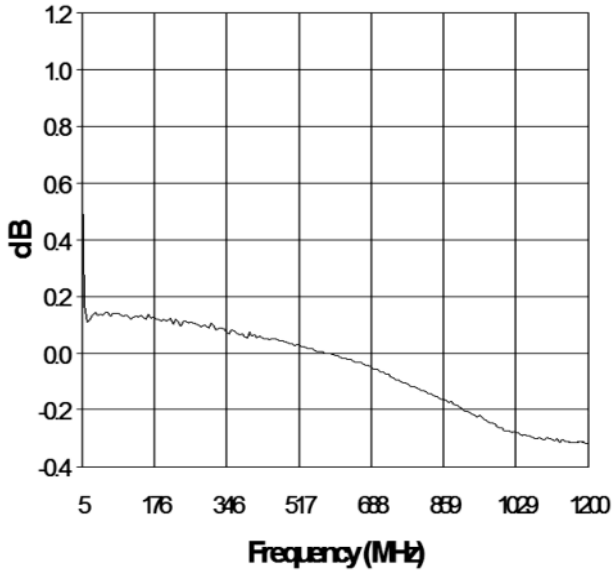
Insertion Loss (Pin 4-3)



Phase Balance



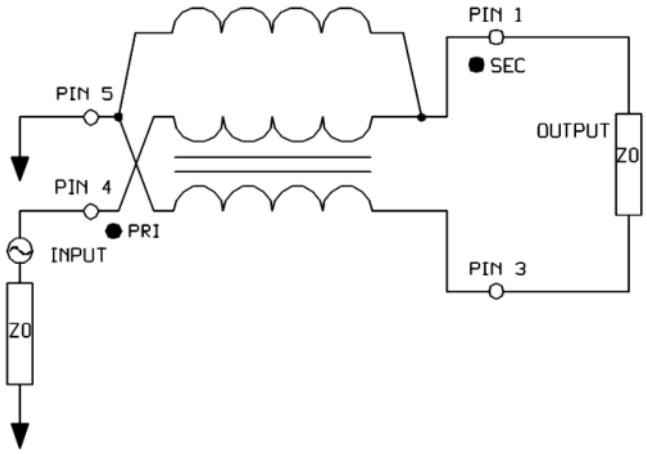
Amplitude Balance



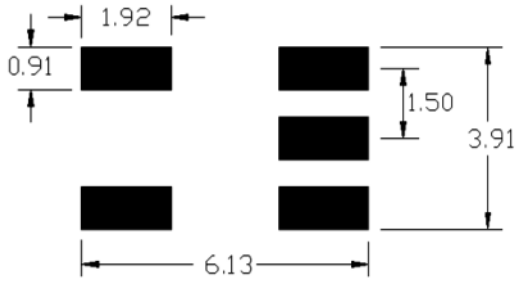
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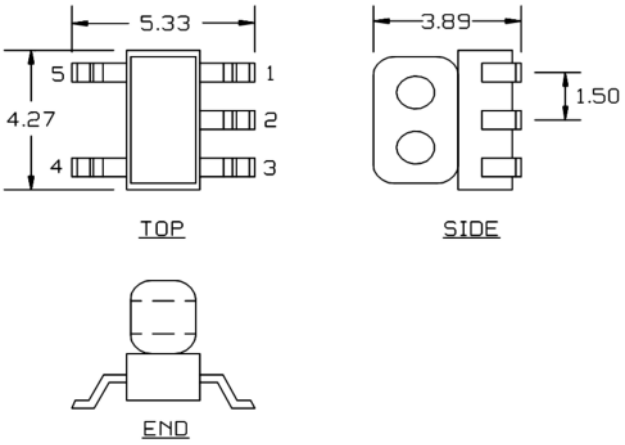
Application Circuit



PCB Layout



Lead-Free Outline Drawing



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

Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	1500
Reel size	mm	330
Tape width (W)	mm	16.00
Pitch (P_1)	mm	8.00
Orientation	-	F28
Reference Application note ANI-019 for orientation		

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