

MABAES0029



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

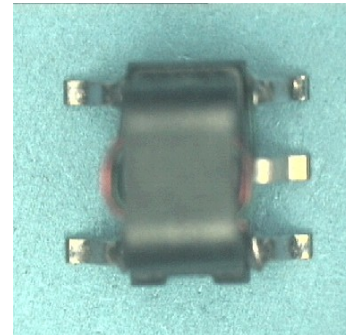
Rev. V5

Features

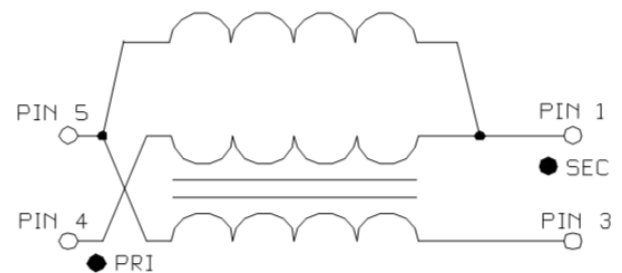
- Surface mount
- 1:1 Impedance ratio
- Available on tape and reel
- RoHS* Compliant and 260°C Reflow Compatible

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.

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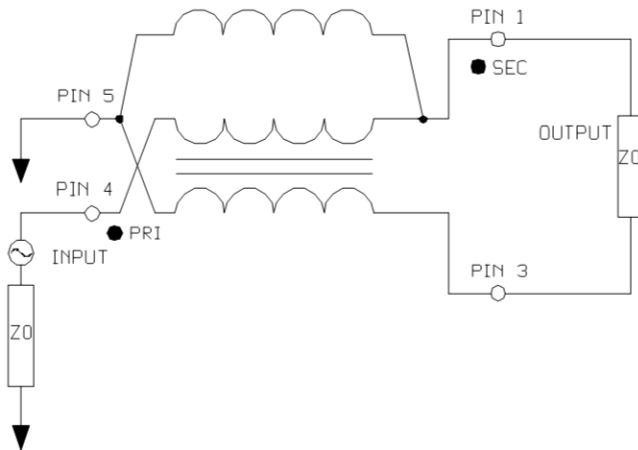
Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{in} = 0 \text{ dBm}$

Parameter	Conditions	Units	Min.	Typ.	Max.
Frequency Range	—	MHz	50	—	1200
Impedance	—	Ω	—	75	—
Impedance Ratio	—	ratio	—	1:1	—
Insertion Loss (Pin4 - Pin3)	50 - 600 MHz	dB	—	0.8	1.0
	600 - 1200 MHz			1.2	1.5
Insertion Loss (Pin4 - Pin1)	50 - 600 MHz	dB	—	0.8	1.0
	600 - 1200 MHz			1.2	1.5
Amplitude Balance	50 - 600 MHz	dB	—	0.1	0.2
	600 - 1200 MHz			0.4	0.8
Phase Balance	50 - 600 MHz	deg.	—	1.0	3.0
	600 - 1200 MHz			4.0	10.0

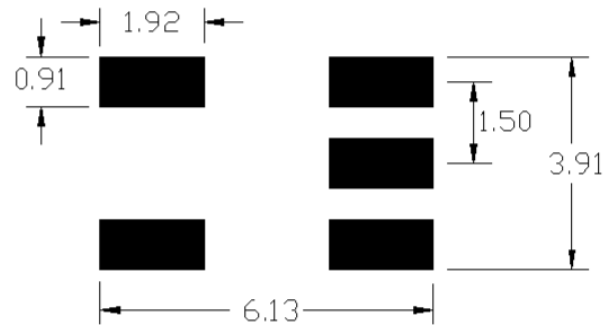
Absolute Maximum Ratings

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

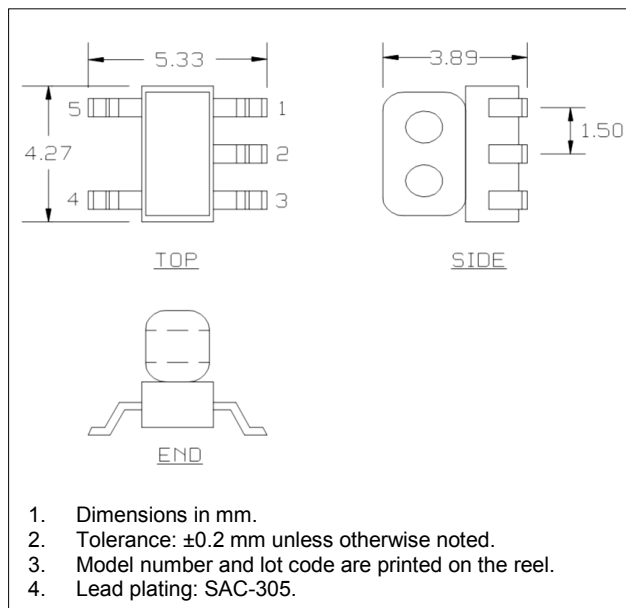
Application Circuit



PCB Layout



Lead-Free Outline Drawing

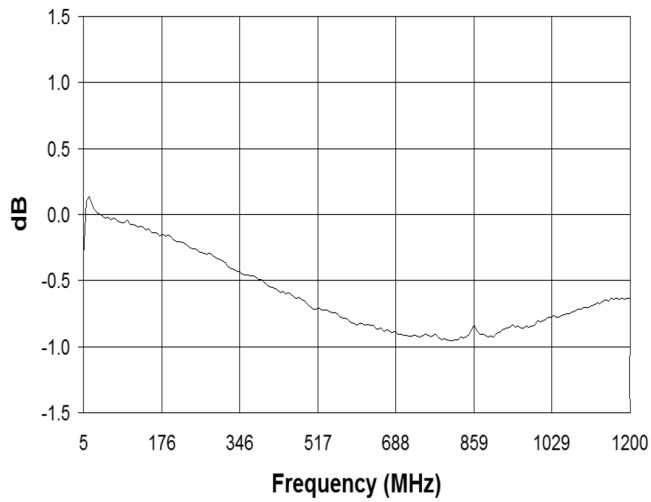


Tape & Reel Information

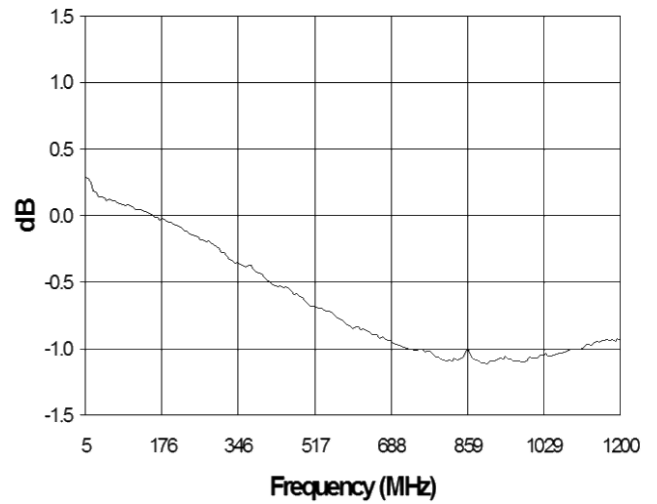
Parameter	Units	Value
Qty per reel	-	2000
Reel size	mm	330
Tape width (W)	mm	16.00
Pitch (P ₁)	mm	8.00
A ₀	mm	5.8
B ₀	mm	7.0
K ₀	mm	5.0
Orientation	-	F26
Reference Application note ANI-019 for orientation		

Typical Performance Curves

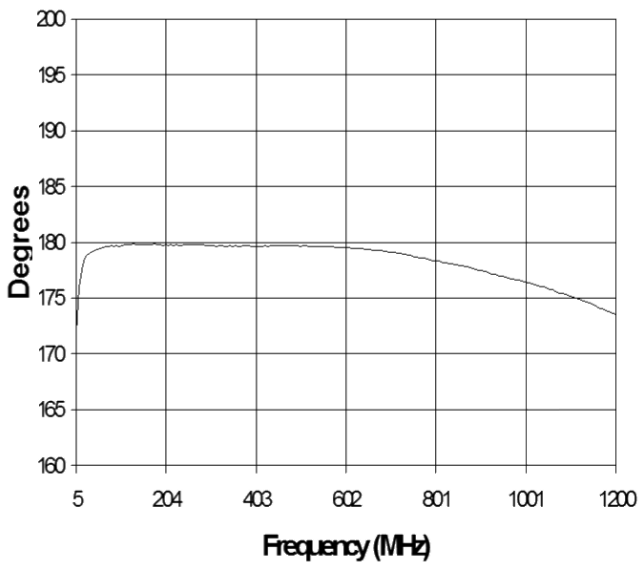
Insertion Loss (Pin 4-1)



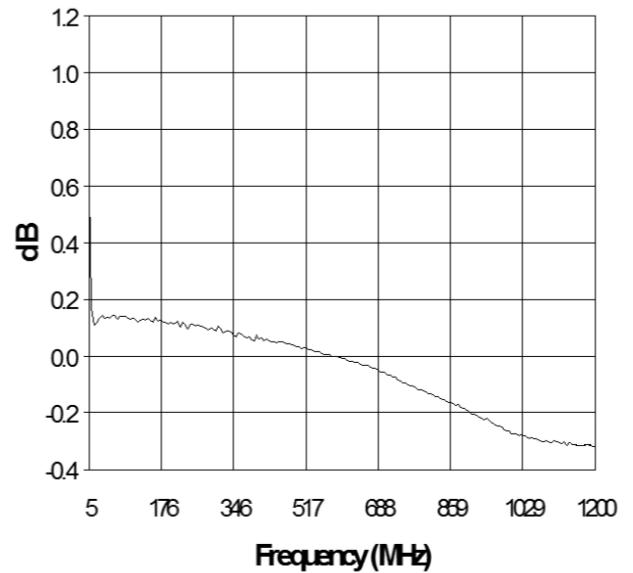
Insertion Loss (Pin 4-3)



Phase Balance



Amplitude Balance



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

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