

1:2 Transmission Line Transformer 5 - 1000 MHz

Rev. V2

Features

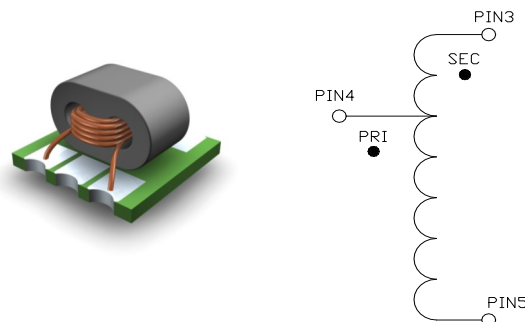
- 1:2 Impedance Ratio
- Surface Mount Package
- Excellent Temperature Stability
- Can Be Used on 50 Ω & 75 Ω Systems
- Suitable for all CATV, Broadband and FTTx Applications
- RoHS Compliant & Lead Free
- 260°C Reflow Compatible
- Available on Tape & Reel

Description

The MABA-010449-CA2A40 is a 1:2 transmission line transformer in a surface mount package.

Ideally suited for all CATV Broadband and FTTx applications.

Functional Schematic



Pin Configuration

Pin #	Function
1,2	No Connection (Ground)
3	Secondary Dot
4	Primary Dot
5	Primary & Secondary

Electrical Specifications: Freq. = 5 - 1000 MHz, $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{IN} = 0 \text{ dBm}$

Parameter	Frequency (MHz)	Units	Min.	Typ.	Max.
Impedance Ratio	—	dB	—	1:2	—
Insertion Loss (pin 4 - 3)	5 - 600	dB	—	0.6	0.8
	600 - 1000			1.1	1.3
Input Return Loss (pin 4)	5 - 200	dB	20	23	—
	200 - 500		12	14	
	500 - 1000		8	11	

Ordering Information

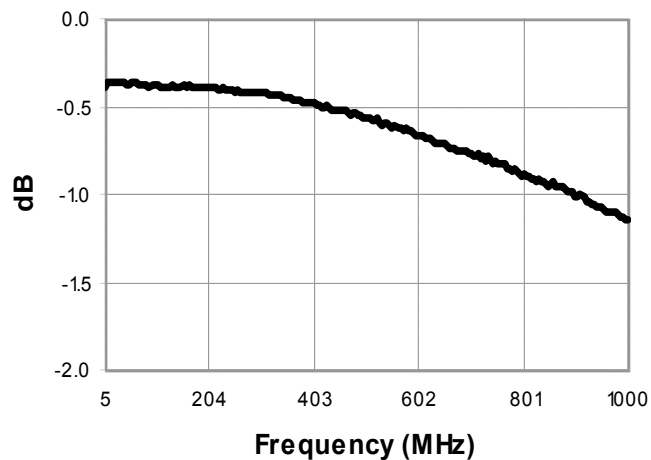
Part #	Description
MABA-010449-CA2A40	2000 piece reel
MABA-010449-CA2ATB	customer evaluation board

Recommended Maximum Ratings

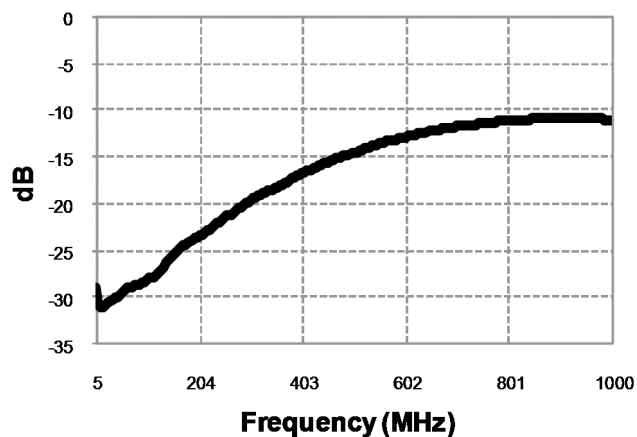
Parameter	Value
Input Power	250 mW
DC Current	200 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +125°C

Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{IN} = 0 \text{ dBm}$

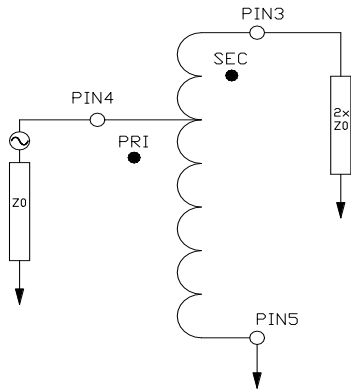
Insertion Loss: (Pin 4 to 3)



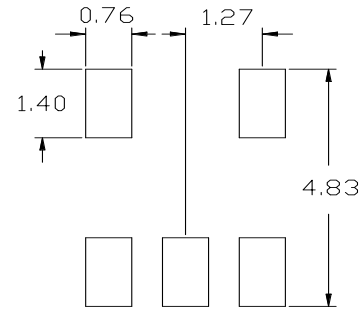
Return Loss: (pin 4)



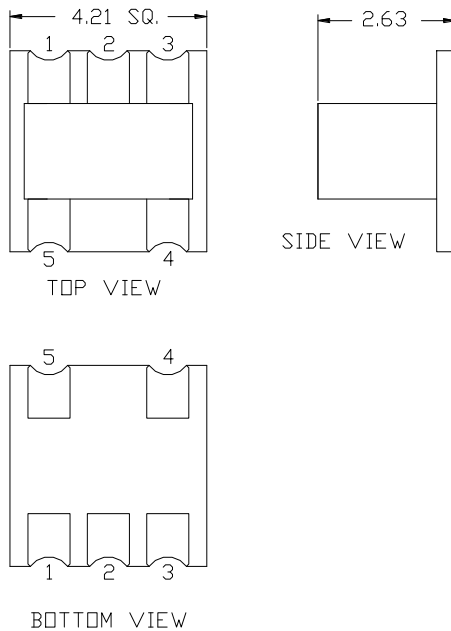
Application Circuit



PCB Layout



Outline Drawing



Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel Size	mm	330
Tape Width	mm	12.0
Pitch	mm	8.0
Ao	mm	4.5
Bo	mm	4.5
Ko	mm	2.73
Orientation	-	F31
Reference Application Note ANI-019 for orientation		

1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating finish: ENIG on both sides, 0.05 to 0.1 μm gold over 3 to 6 μm nickel

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