

Features

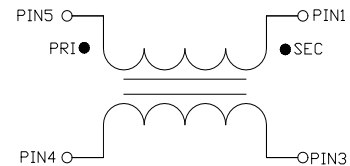
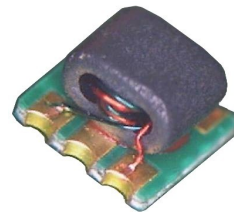
- 1:1 Impedance Ratio
- Surface Mount Package
- Available on Tape and Reel
- RoHS Compliant and Lead Free
- 260°C Reflow Compatible
- Excellent Temperature Stability
- Excellent Amplitude and Phase Balance
- Can be used in both 50 Ω & 75 Ω systems

Description

The MABA-007327-CT1A40 is a 1:1 RF transmission line transformer in a surface mount package.

Ideally suited for broadband CATV applications.

Functional Schematic



Pin Configuration

Pin #	Function
1	Secondary Dot
2	Not connected
3	Secondary
4	Primary
5	Primary Dot

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

Parameter	Frequency	Units	Min.	Typ.	Max.
Insertion Loss 1	4.5 - 1000 MHz	dB	—	0.8	1.0
	1000 - 2000 MHz			1.6	2.0
	2000 - 3000 MHz			2.5	3.5
Amplitude Balance	Nominal 0 dB, 4.5 - 3000 MHz	dB	—	±0.50	±1.0
Phase Balance	Nominal 180°, 4.5 - 3000 MHz	°	—	±10.0	±20.0

Ordering Information

Part number	Description
MABA-007327-CT1A40	2000 piece reel
MABA-007327-CT1ATB	Customer Test Board

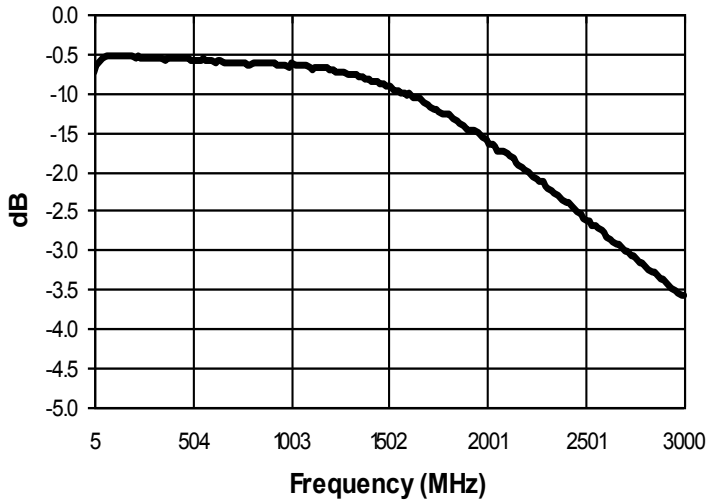
Recommended Maximum Ratings^{1,2}

Parameter	Value
Input power	250 mW
DC current	30 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

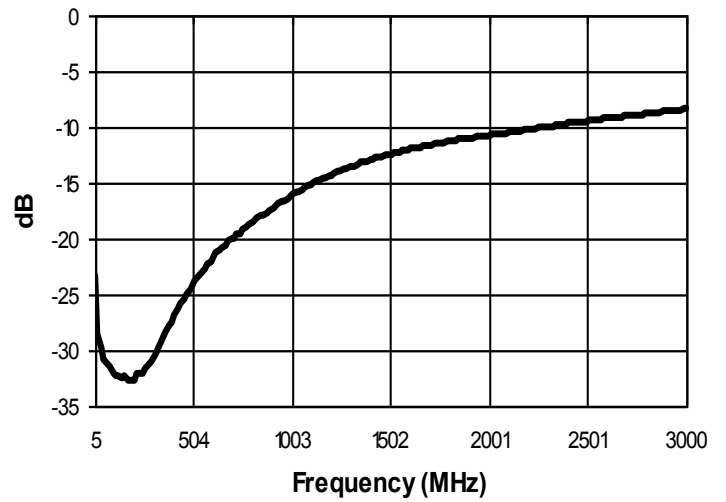
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

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

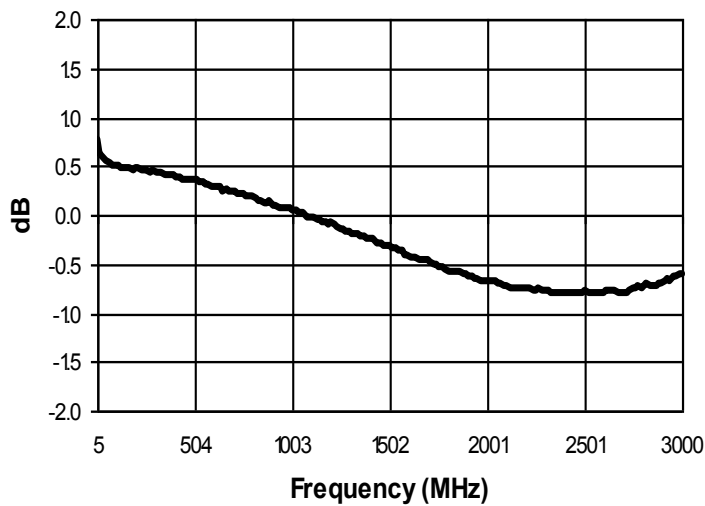
Insertion Loss



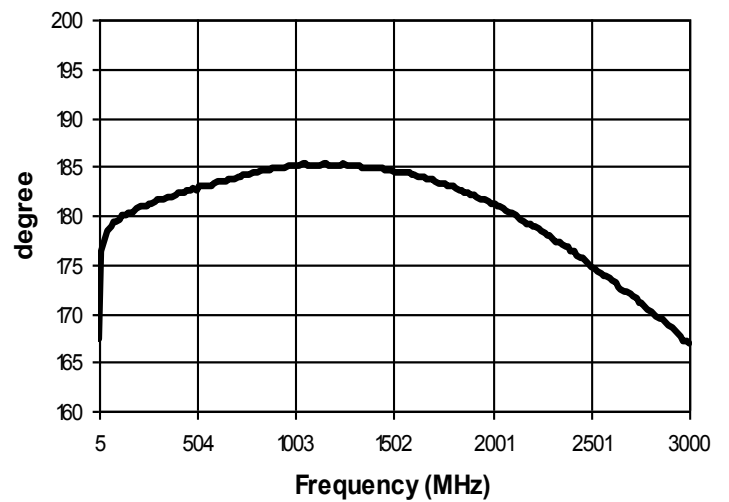
Return Loss: Input



Amplitude Balance



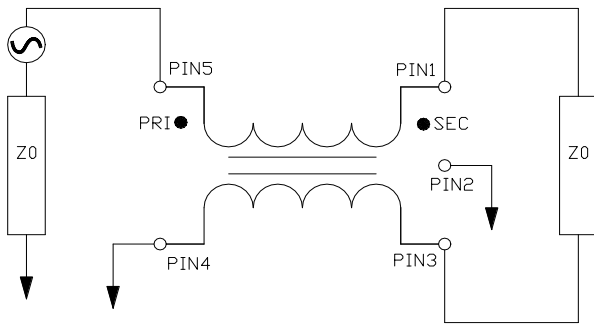
Phase Balance



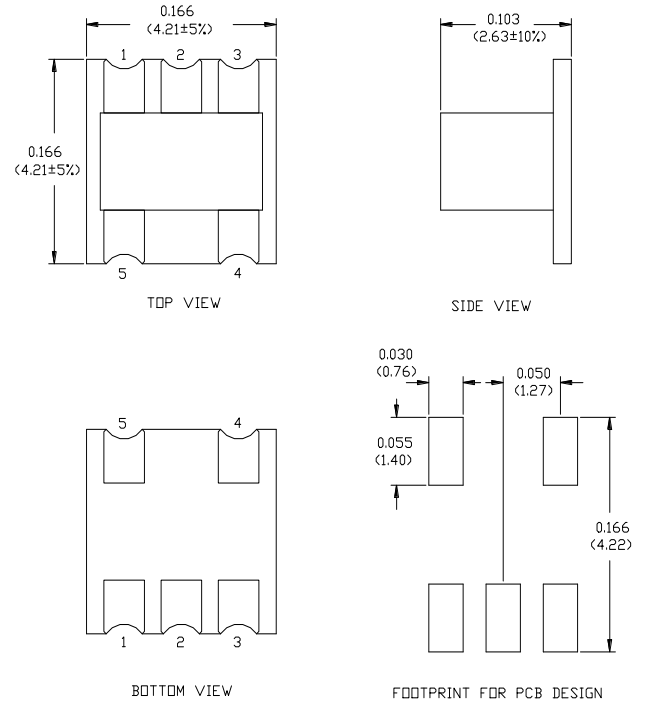
1:1 Transmission Line Transformer 4.5 - 3000 MHz

Rev. V3

Application Circuit

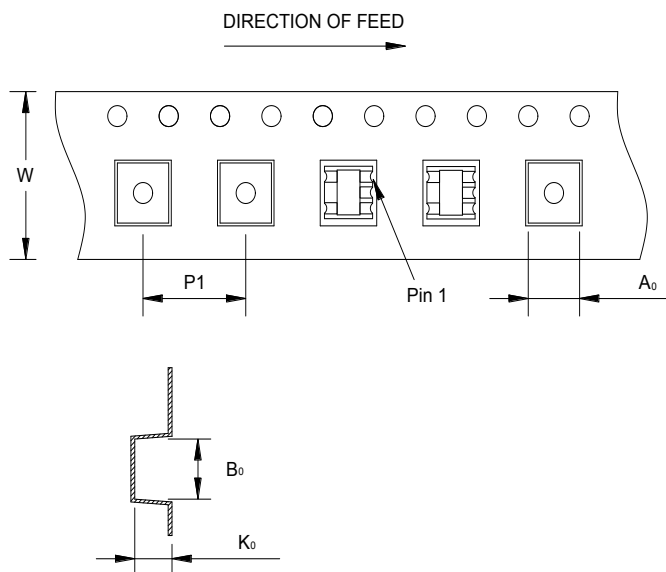


Outline Drawing



Dimensions in inches [mm] Tolerance: .xx ± .02, .xxx ± .010, unless otherwise stated

Reel Orientation



Tape & Reel Information

Item	Dimension
A ₀	4.50 mm +/- 0.1 mm
B ₀	4.50 mm +/- 0.1 mm
K ₀	2.73 mm +/- 0.1 mm
W	12.0 mm +/- 0.3 mm
P1	8.0 mm +/- 0.1 mm