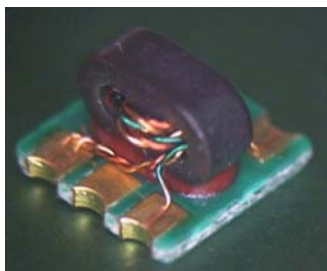


## Features

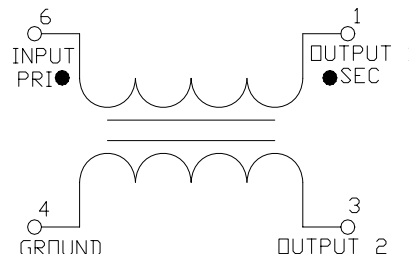
- Surface Mount
- 1:1 Impedance
- Excellent **MoCA** band performance
- Excellent amplitude and phase balance
- Can be used in both 50Ω and 75Ω systems
- 260°C Reflow Compatible
- RoHS\* Compliant, Pb Free
- Available on Tape and Reel.

## Description

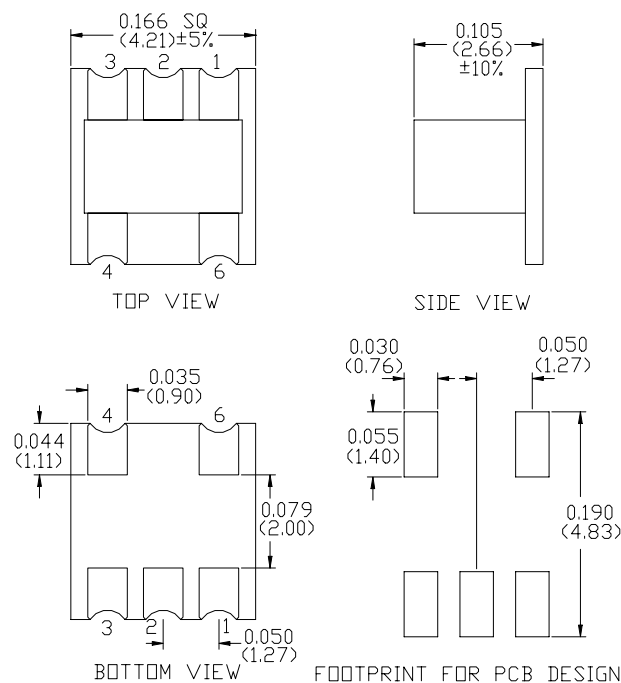
M/A-COM Technology Solutions MABA-007871-CT1A40 is a 1:1 RF Transmission Line step up transformer in a low cost, surface mount package. Ideally suited for MoCA band applications.



## Schematic



## Case Style:



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

## Pin Configuration

Pin No.	Function
1	Secondary Dot (Output 1)
2	Not used (Ground)
3	Secondary (Output 2)
4	Primary (Ground)
6	Primary Dot (Input)

**Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 50\Omega$** 

Parameter	Test Conditions	Units	Min	Typ	Max
Insertion Loss	5 - 50 MHz	dB	-	0.35	2.50
	50 - 975 MHz	dB	-	0.4	0.60
	975 - 1525 MHz	dB	-	0.3	1.00
	1525 - 2150 MHz	dB	-	0.65	2.30
	2150 - 3000 MHz	dB	-	2.5	6.00
Input Return Loss	5 - 50 MHz	dB	12	28	-
	50 - 975 MHz	dB	15	23	-
	975 - 1525 MHz	dB	13	21	-
	1525 - 2150 MHz	dB	6	12	-
	2150 - 3000 MHz	dB	3	6	-
Amplitude Unbalance (Nominal 0dB)	5 - 50 MHz	dB	-	0.45	$\pm 3.8$
	50 - 975 MHz	dB	-	0.15	$\pm 0.7$
	975 - 1525 MHz	dB	-	0.15	$\pm 0.7$
	1525 - 2150 MHz	dB	-	0.38	$\pm 0.9$
	2150 - 3000 MHz	dB	-	0.05	1.6
Phase Unbalance (Nominal 180°)	5 - 50 MHz	°	-	6.5	$\pm 50$
	50 - 975 MHz	°	-	0.1	$\pm 5$
	975 - 1525 MHz	°	-	0.1	$\pm 4$
	1525 - 2150 MHz	°	-	3	$\pm 12$
	2150 - 3000 MHz	°	-	13	35

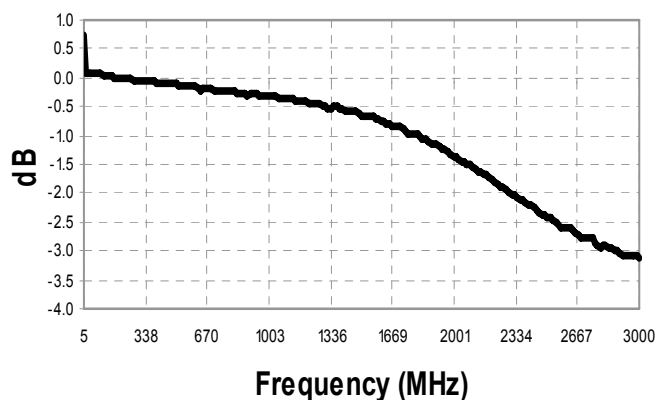
**Absolute Maximum Ratings<sup>1,2</sup>**

Parameter	Absolute Maximum
Max Input Power	250mW
DC current	200mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

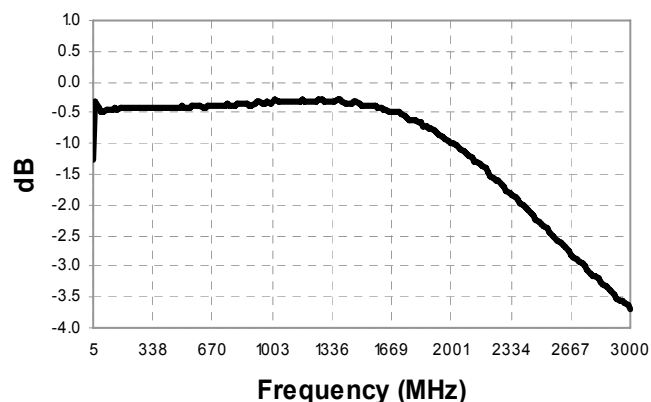
- Exceeding any one or combination of these limits may cause permanent damage to this device.
- M/A-COM does not recommend sustained operation near these survivability limits.

Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 50\Omega$

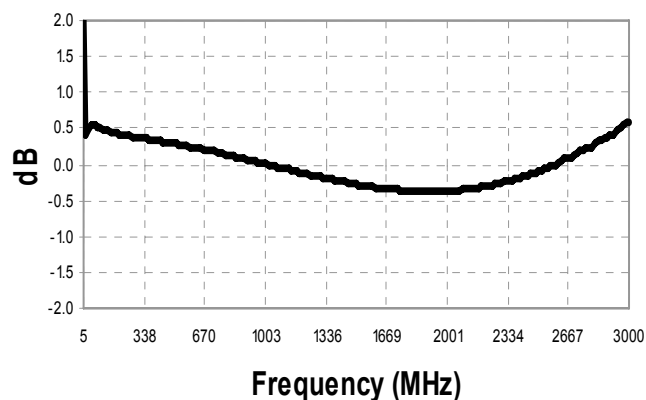
Insertion Loss 1: through pin 6 to pin 1



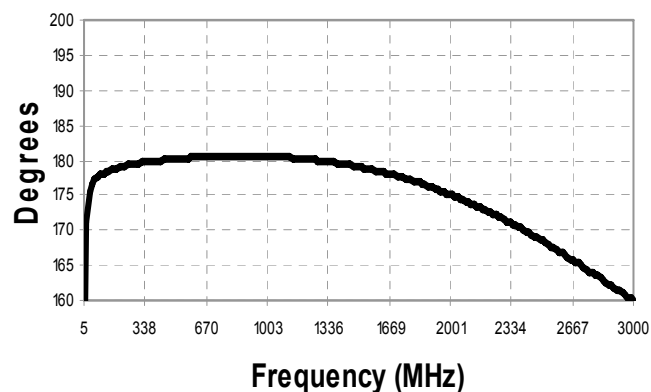
Insertion Loss 2: coupled pin 6 to pin 3



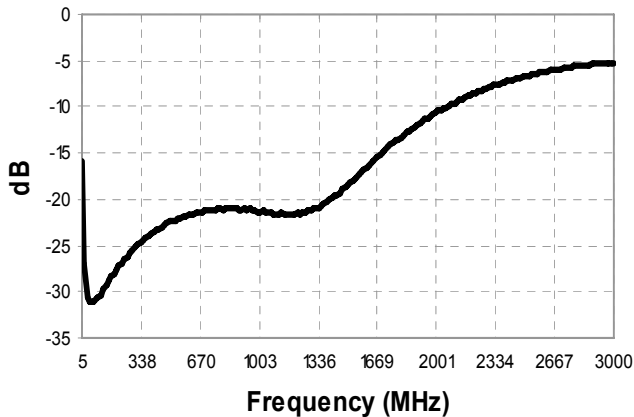
Amplitude Balance



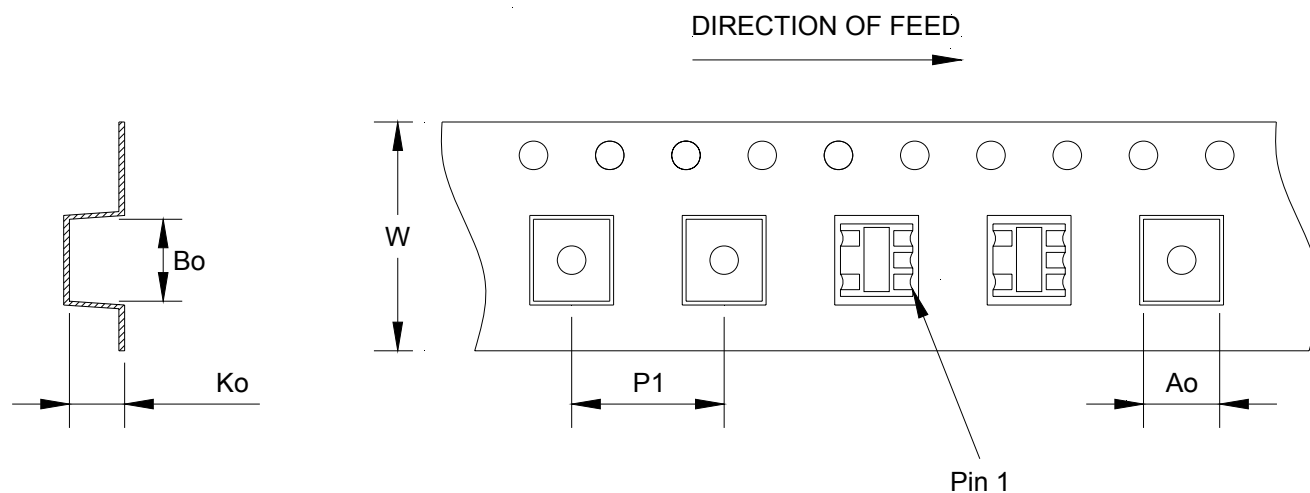
Phase Balance



Input Return Loss



## Tape & Reel Information



Item	Dimension
Ao	4.50mm +/- 0.1mm
Bo	4.50mm +/- 0.1mm
Ko	2.73mm +/- 0.1mm
W	12.00mm +/- 0.3mm
P1	8.00mm +/- 0.1mm

## Ordering Information

Part Number	Description
MABA-007871-CT1A40	2000 piece reel
MABA-007871-CT1ATB	Customer Test Board

# AMEYA360

Components Supply Platform

Authorized Distribution Brand :



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