



**THE DATASHEET OF  
MABA-011026**



## Features

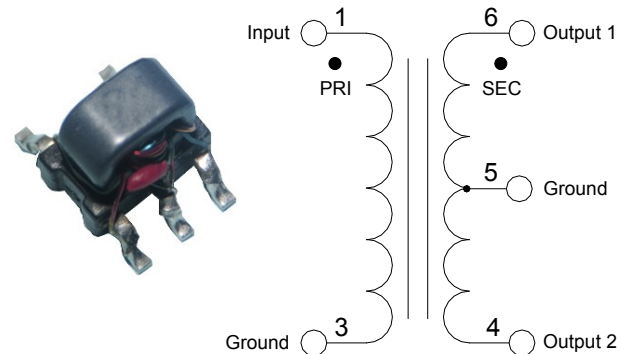
- Surface Mount Package
- 1:1 Impedance Ratio
- Centre Tap on Secondary
- 75  $\Omega$  Single Ended to 75  $\Omega$  Balanced
- Suitable for DOCSIS 3.0
- RoHS Compliant
- 260°C Reflow Compatible
- Available on Tape & Reel

## Description

The MABA-011026 is a 1:1 flux coupled transformer in a surface mount package.

Ideally suited for CATV Broadband applications.

## Functional Schematic



## Pin Configuration

Pin #	Function
1	Primary Dot
3	Primary
4	Secondary
5	Secondary Centre Tap
6	Secondary Dot

## Electrical Specifications: Freq. 5 - 200 MHz, $T_A = +25^\circ\text{C}$ , $Z_0 = 75 \Omega$ , $P_{IN} = 0 \text{ dBm}$

Parameter	Frequency Test Conditions (MHz)	Units	Min.	Typ.	Max.
Impedance Ratio	—	Ratio	—	1:1	—
Insertion Loss (Pin 1 - Pin 6)	5 - 60	dB	—	0.36	0.5
	60 - 150			0.50	0.7
	150 - 200			0.67	1.0
Amplitude Balance	5 - 60	dB	—	0.01	$\pm 0.1$
	60 - 200			0.09	$\pm 0.5$
Phase Balance	5 - 60	°	—	0.1	$\pm 1.0$
	60 - 200			0.5	$\pm 3.0$
Input Return Loss (Pin 1)	5 - 60	dB	20	29	—
	60 - 200		12	19	

## Ordering Information

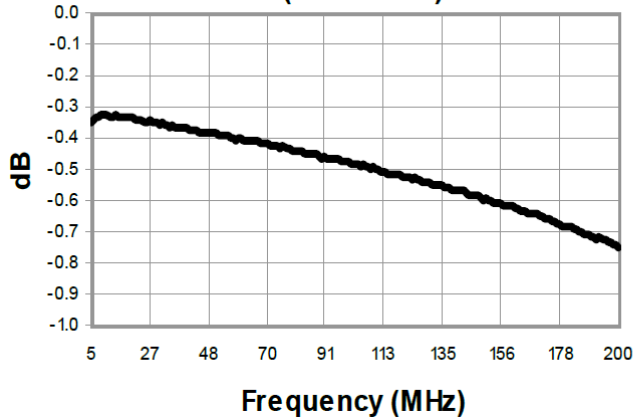
Part Number	Package
MABA-011026	2000 piece reel
MABA-011026-TB	Customer Test Board

## Recommended Maximum Ratings

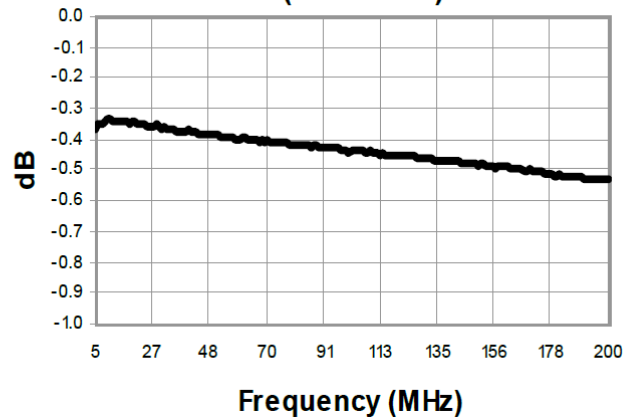
Parameter	Value
Input RF Power (28 dBm)	631 mW
DC Current (@ 5 V)	600 mA
Operating Temperature	-40°C to +100°C

## Typical Performance Curves

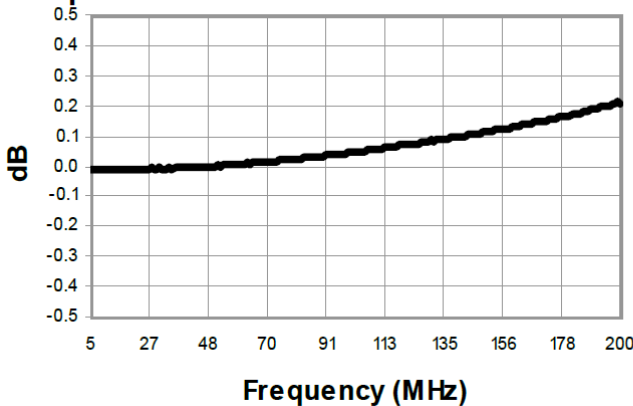
### Insertion Loss 1: (Pin 1 to 6)



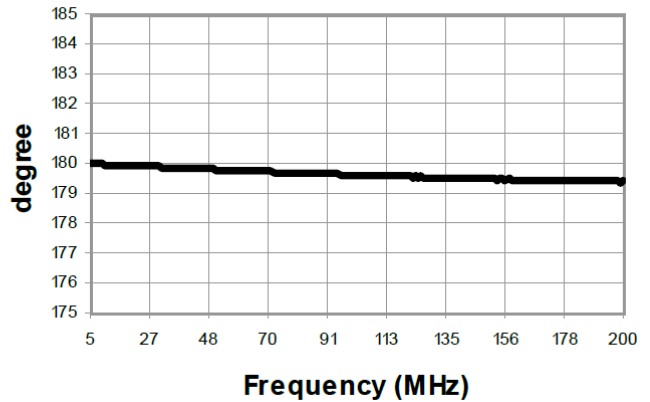
### Insertion Loss 2: (Pin 1 to 4)



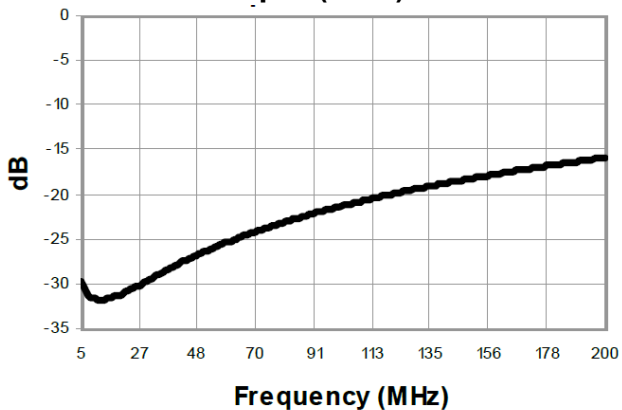
### Amplitude Balance



### Phase Balance

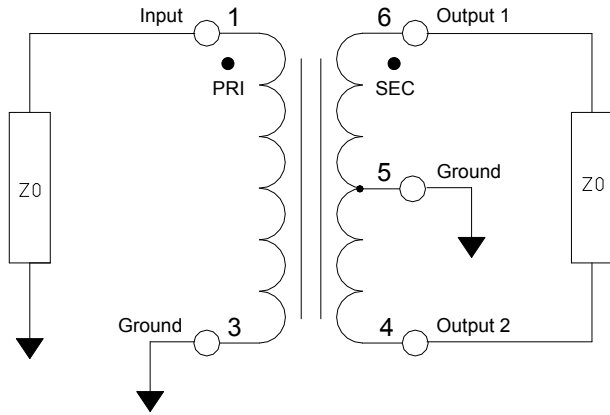


### Return Loss: Input (Pin1)

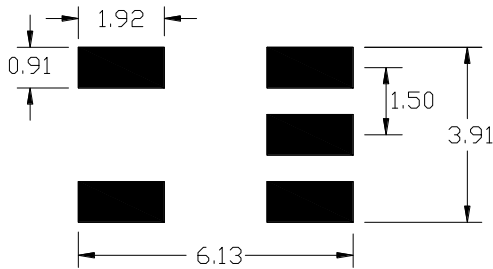


Full temperature plots available on request

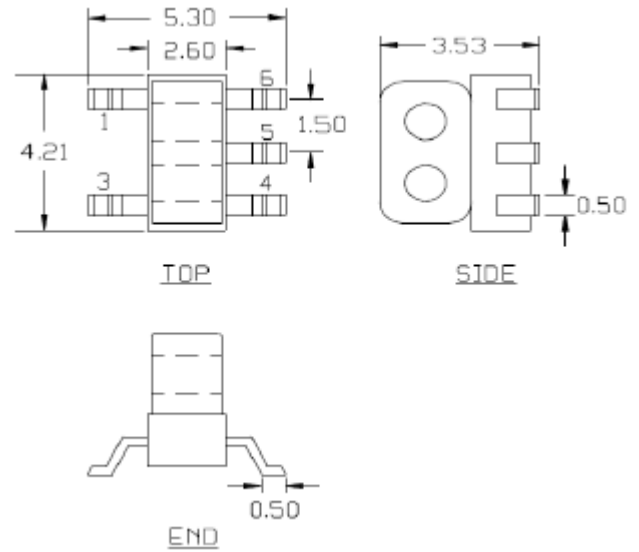
## Application Circuit



## PCB Layout



## Outline Drawing



1. Dimensions in mm.
2. Tolerance:  $\pm 0.2$  mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Plating finish: CuSn6

## Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel size	mm	330
Tape width (W)	mm	12.00
Pitch (P <sub>1</sub> )	mm	8.00
A <sub>0</sub>	mm	5.6
B <sub>0</sub>	mm	4.5
K <sub>0</sub>	mm	4.0
Orientation	-	F26
Reference Application note ANI-019 for orientation		

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