

1:1 Flux Coupled Transformer 5 - 200 MHz

Rev. V3

Features

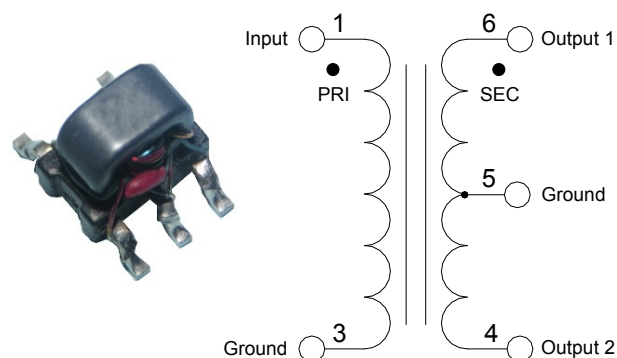
- Surface Mount Package
- 1:1 Impedance Ratio
- Centre Tap on Secondary
- 75 Ω Single Ended to 75 Ω Balanced
- Suitable for DOCSIS 3.0
- RoHS Compliant
- 260°C Reflow Compatible
- Available on Tape & Reel

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 60 - 150 150 - 200	dB	—	0.36 0.50 0.67	0.5 0.7 1.0
Amplitude Balance	5 - 60 60 - 200	dB	—	0.01 0.09	± 0.1 ± 0.5
Phase Balance	5 - 60 60 - 200	°	—	0.1 0.5	± 1.0 ± 3.0
Input Return Loss (Pin 1)	5 - 60 60 - 200	dB	20 12	29 19	—

Ordering Information

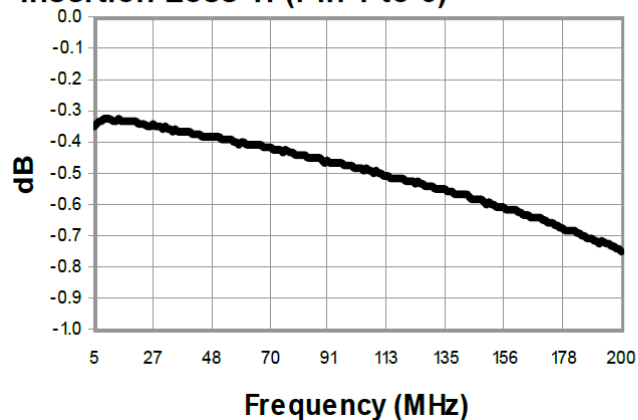
Part Number	Package
MABA-011026	2000 piece reel
MABA-011026-TB	Customer Test Board

Recommended Maximum Ratings

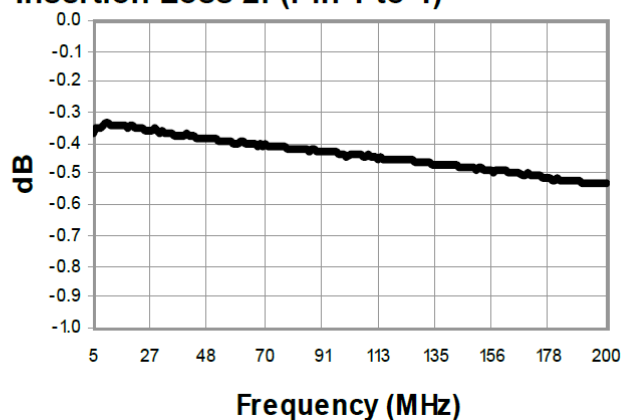
Parameter	Value
Input RF Power (28 dBm)	631 mW
DC Current (@ 5 V)	600 mA
Operating Temperature	-40°C to +100°C

Typical Performance Curves

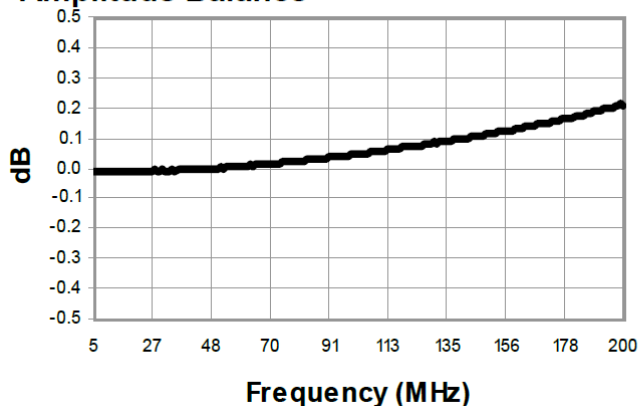
Insertion Loss 1: (Pin 1 to 6)



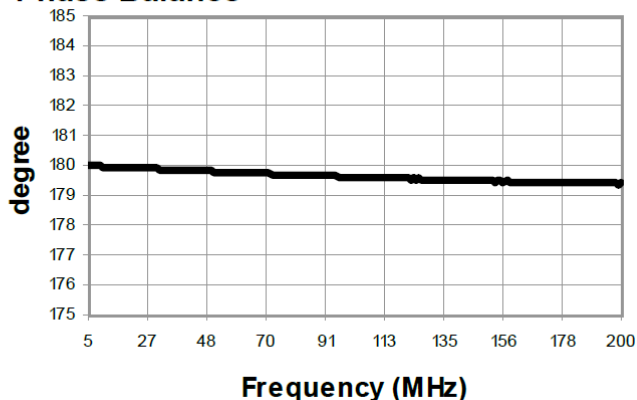
Insertion Loss 2: (Pin 1 to 4)



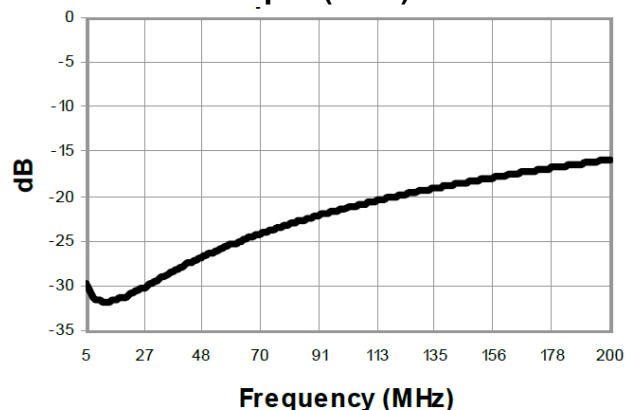
Amplitude Balance



Phase Balance



Return Loss: Input (Pin1)

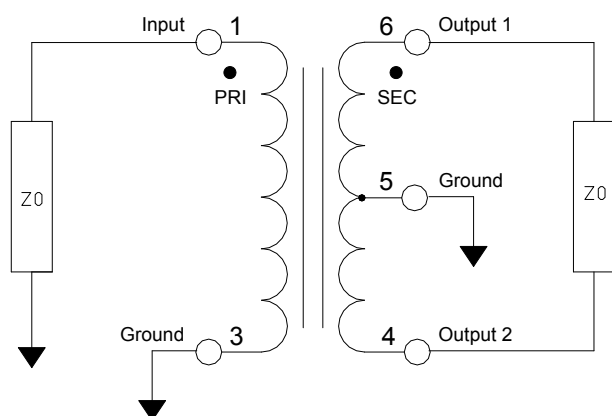


Full temperature plots available on request

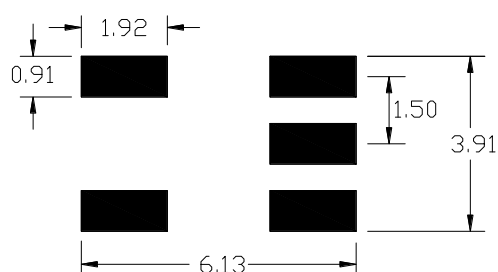
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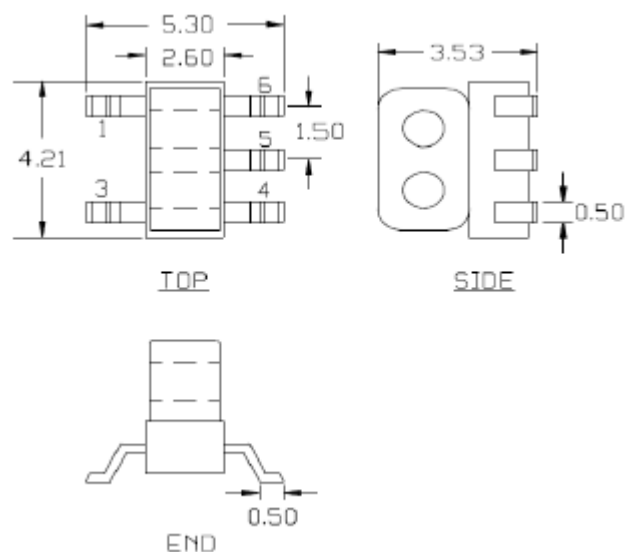
Application Circuit



PCB Layout



Outline Drawing



1. Dimensions in mm.
2. Tolerance: ± 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 ₁)	mm	8.00
A ₀	mm	5.6
B ₀	mm	4.5
K ₀	mm	4.0
Orientation	-	F26
Reference Application note ANI-019 for orientation		

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