

1:9 Flux Coupled Transformer 5 - 90 MHz

Rev. V3

Features

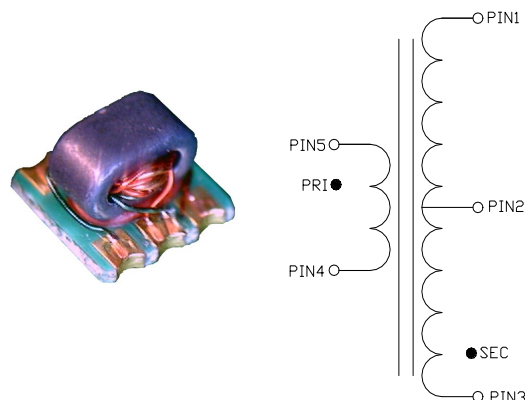
- 1:9 Impedance Ratio
- Surface Mount Package
- Excellent Temperature Stability
- Excellent Amplitude & Phase Balance
- Can Be Used In Both 50 Ω & 75 Ω Systems
- 260°C Reflow Compatible
- RoHS* Compliant & Lead Free
- Available on Tape & Reel

Description

The MABA-010181-CT9A40 is a 1:9 RF flux coupled transformer in a surface mount package.

Ideally suited for broadband CATV applications.

Schematic



Pin Configuration

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

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

Parameter	Frequency (MHz)	Units	Min.	Typ.	Max.
Insertion Loss	5 - 90	dB	—	1.3	1.8
Amplitude Unbalance (Nominal 0 dB)	5 - 90	dB	—	0.1	± 0.3
Phase Unbalance (Nominal 180°)	5 - 90	°	—	0.2	± 2.0
Input Return Loss	5 - 90 50 - 90	dB	13 10	16 13	—

Ordering Information

Part #	Description
MABA-010181-CF9A40	2000 piece reel
MABA-010181-CF9ATB	customer test board

Recommended Maximum Ratings

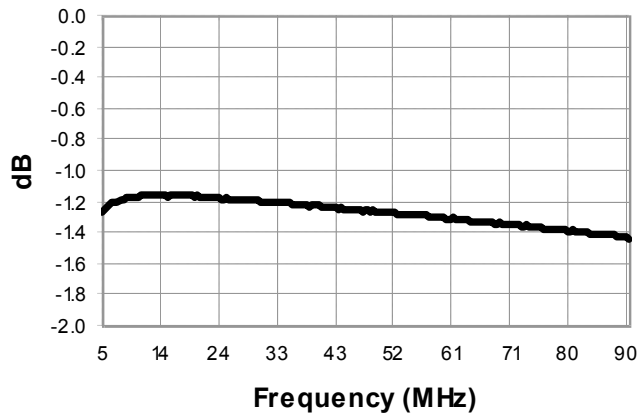
Parameter	Value
Input Power	>28 dBm (631 mW)
DC Current, (tested @ 5 V)	>600 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

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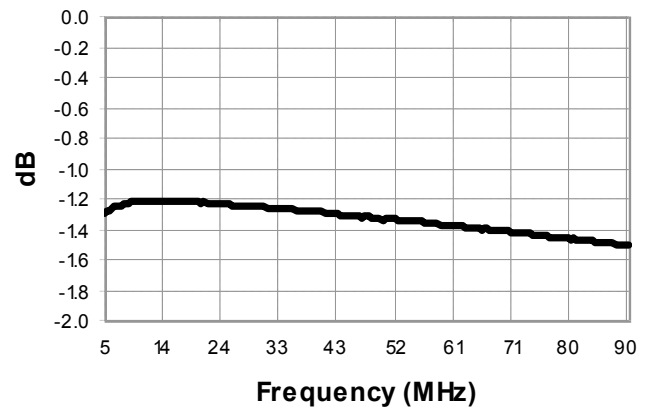
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Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 75\ \Omega$, $P_{IN} = 0\ \text{dBm}$

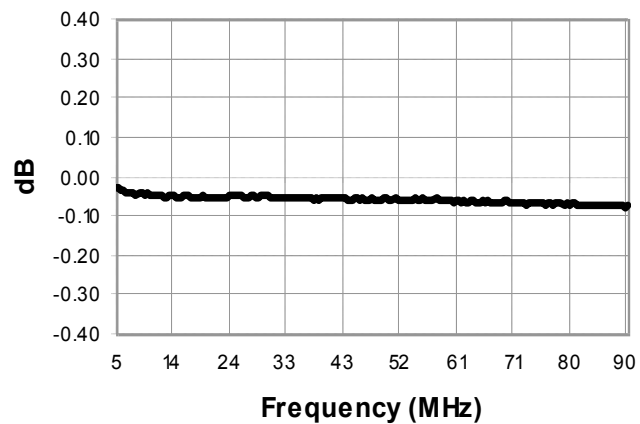
Insertion Loss 1: (Pin 5 to 3)



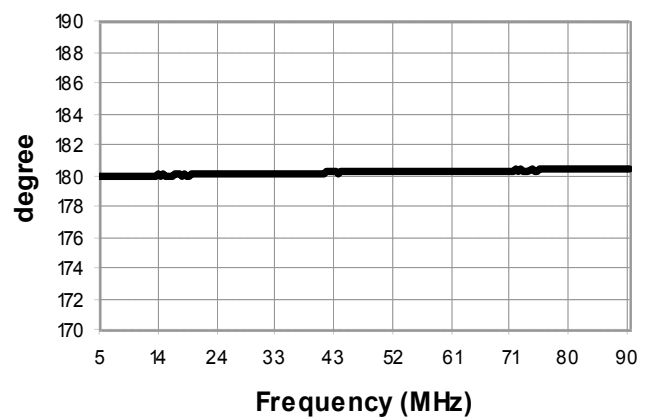
Insertion Loss 2: (Pin 5 to 1)



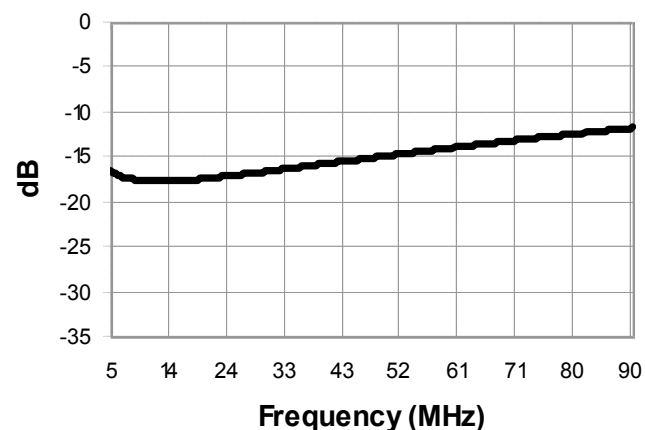
Amplitude Balance



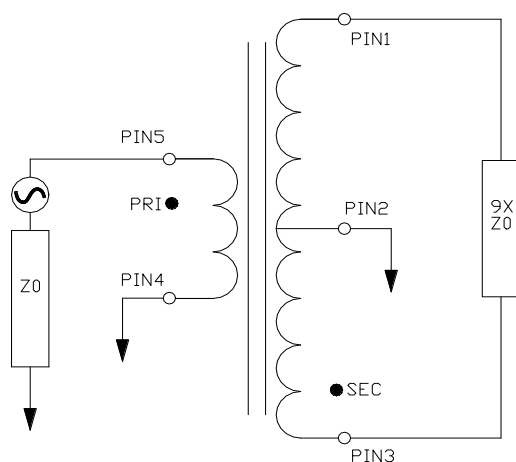
Phase Balance



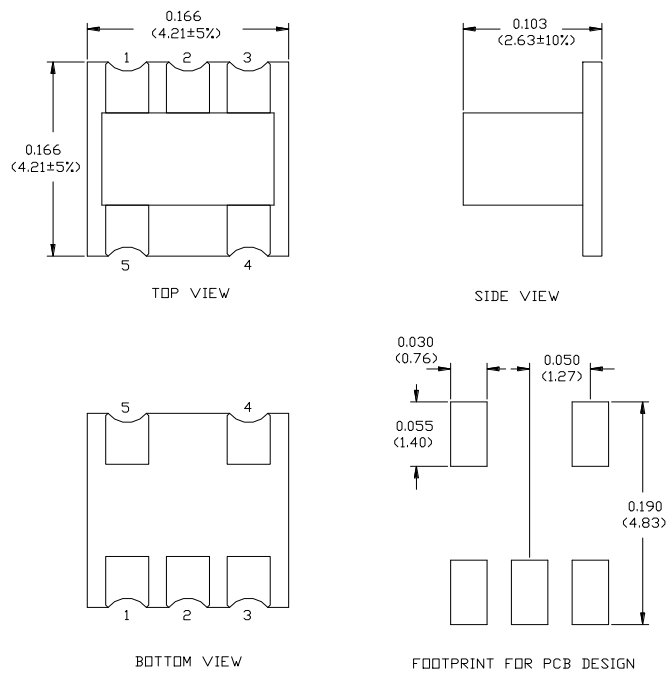
Return Loss: Input (Pin 5)



Application Circuit

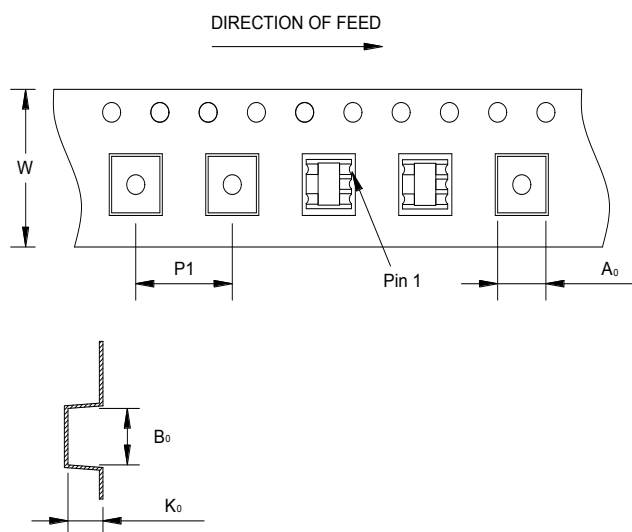


Outline Drawing



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

Reel Orientation



Tape & Reel Information

Item	Dimension
Ao	4.50 mm, +/-0.1 mm
Bo	4.50 mm, +/-0.1 mm
Ko	2.73 mm, +/-0.1 mm
W	12.0 mm, +/-0.3 mm
P1	8.0 mm, +/-0.1 mm

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