

# MABA-010181-CF9A40



Transformer, 1:9 Flux coupled Transformer  
5 to 90 MHz

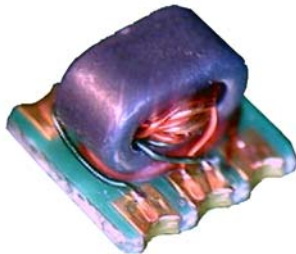
M/A-COM Products  
Rev. V2

## Features

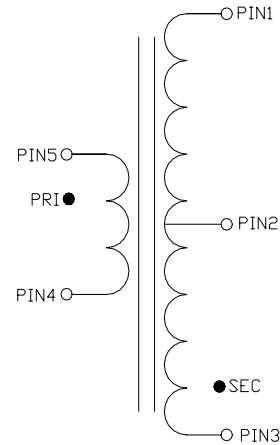
- 1:9 Impedance ratio
- Surface mount
- Available on tape and reel
- 260°C reflow compatible
- RoHS\* compliant and lead free
- Excellent temperature stability
- Excellent amplitude and phase balance
- Can be used in both 50Ω and 75Ω systems

## Description

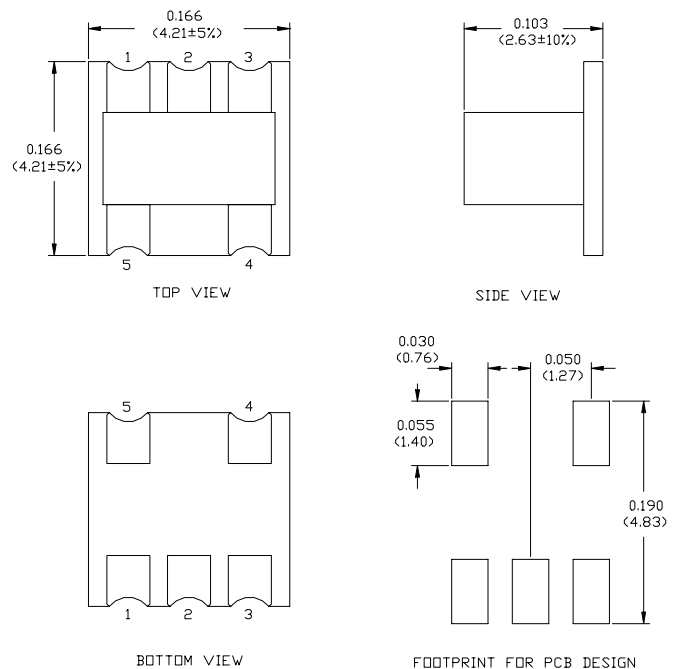
M/A-COM Technology Solutions MABA-010181-CT9A40 is a 1:9 RF flux coupled transformer in a low cost, surface mount package. Ideally suited for broadband CATV applications.



## Schematic



## Component Dimensions



## Pin Configuration

Pin no.	Function
1	Secondary
2	Secondary Centre Tap
3	Secondary Dot
4	Primary
5	Primary Dot

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

\* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400  
 • **India** Tel: +91.80.43537383 • **China** Tel: +86.21.2407.1588  
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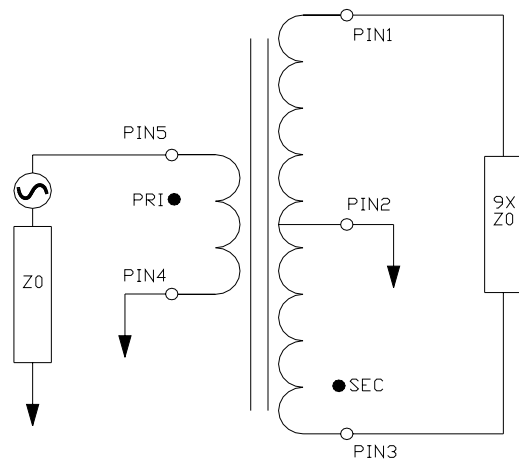
**Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $0\text{dBm}$ ,  $Z_0 = 75\Omega$ ,  $P_{in} = 0\text{dBm}$**

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

## Recommended Maximum Ratings

Parameter	Value
Input power	At least +28dBm (631mW)
DC current (tested at 5V)	At least 600mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

## Application Circuit



# MABA-010181-CF9A40

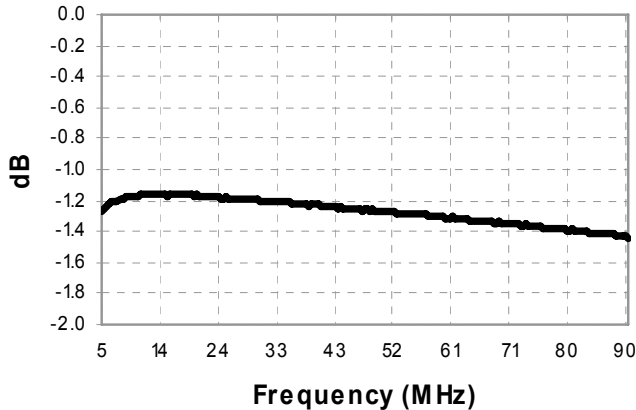


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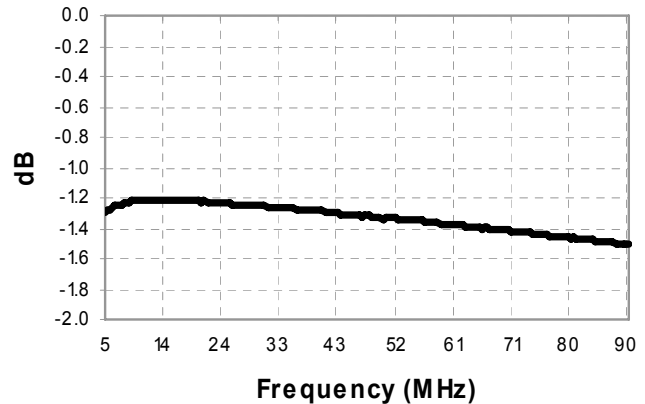
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Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $0\text{dBm}$ ,  $Z_0 = 75\Omega$ ,  $P_{in} = 0\text{dBm}$

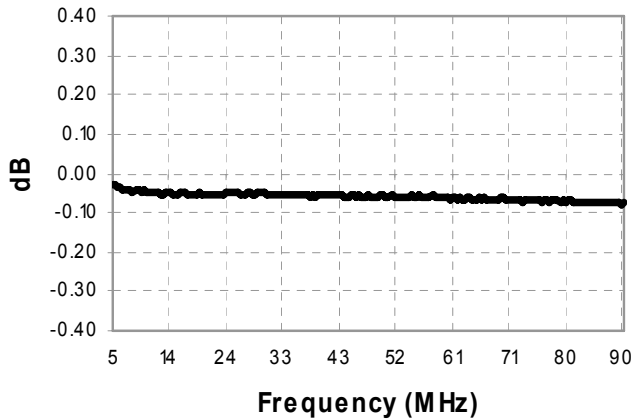
### Insertion Loss 1: (Pin 5 to 3)



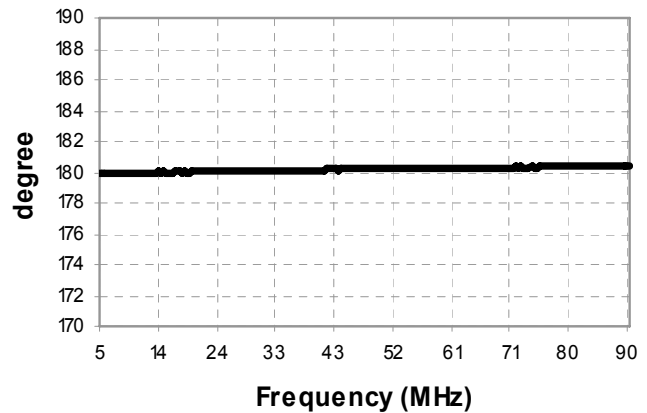
### Insertion Loss 2: (Pin 5 to 1)



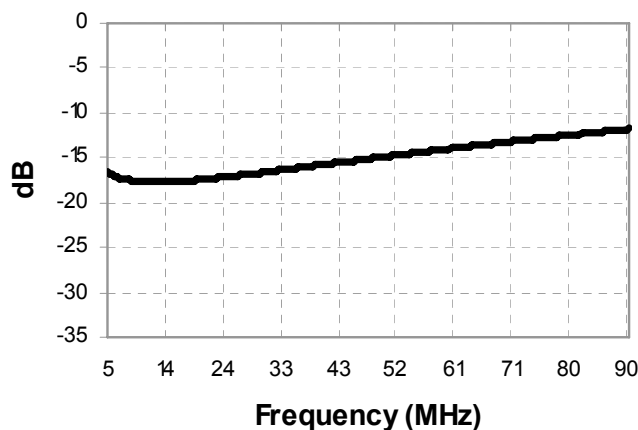
### Amplitude Balance



### Phase Balance



### Return Loss: Input (Pin 5)

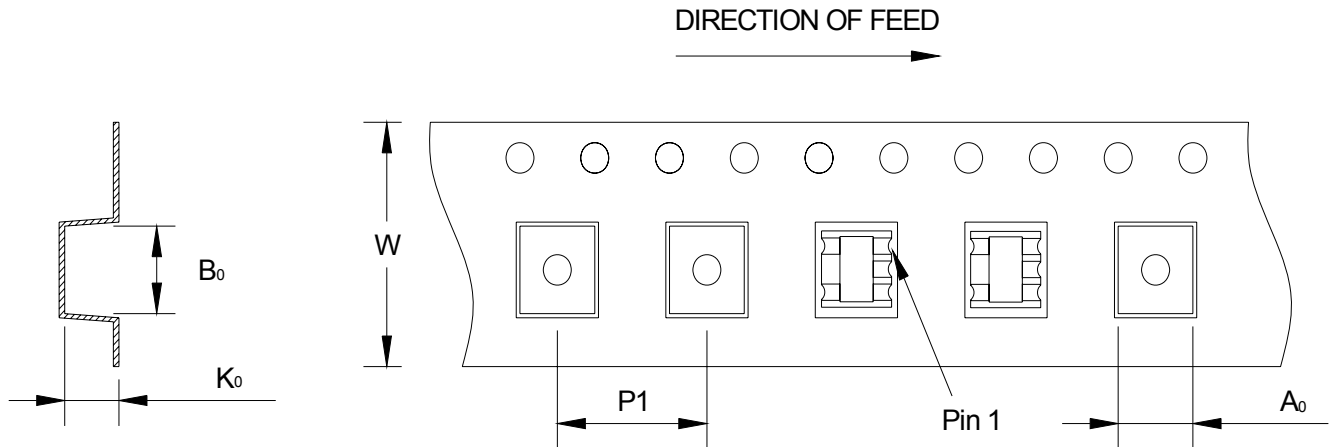


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## Tape & Reel Information



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

## Ordering Information

Part number	Description
MABA-010181-CF9A40	2000 piece reel
MABA-010181-CF9ATB	Customer Test Board