

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

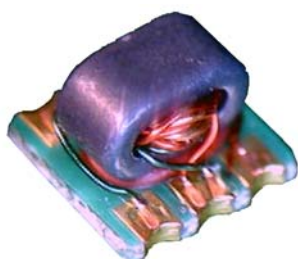
M/A-COM Products
Rev. V2

Features

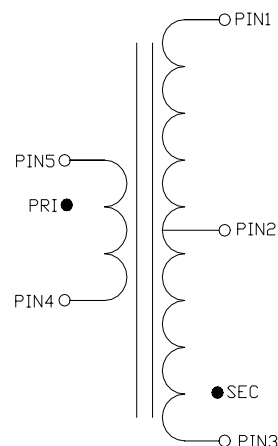
- 1:9 Impedance ratio
- Surface mount
- Available on tape and reel
- 260°C reflow compatible
- RoHS* compliant and lead free
- Excellent temperature stability
- Excellent amplitude and phase balance
- Can be used in both 50Ω and 75Ω systems

Description

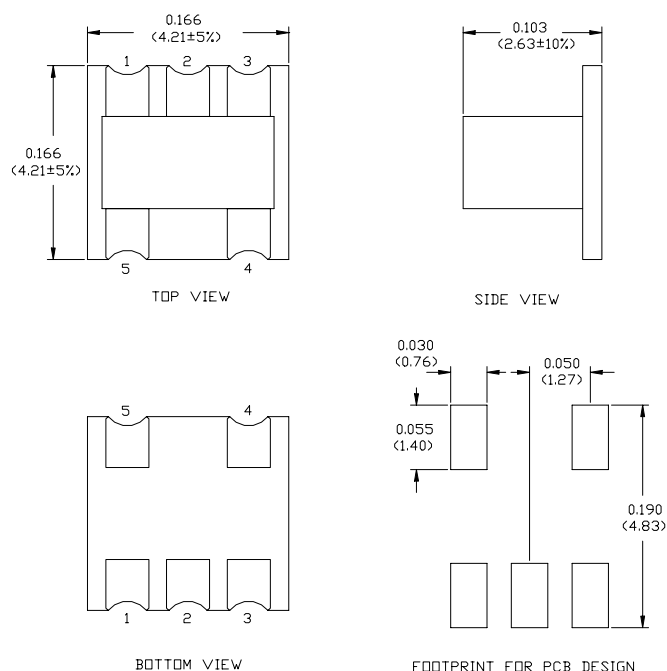
M/A-COM Technology Solutions MABA-010181-CT9A40 is a 1:9 RF flux coupled transformer in a low cost, surface mount package. Ideally suited for broadband CATV applications.



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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ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.
PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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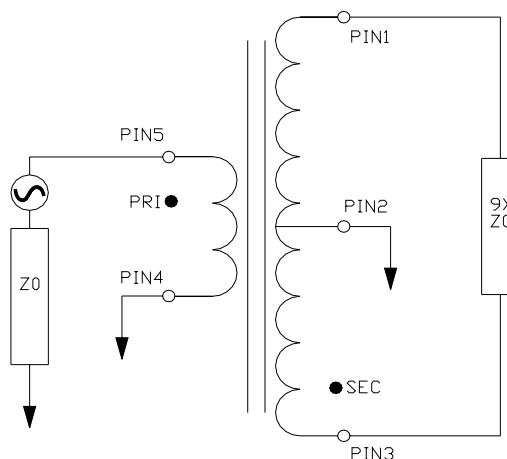
Electrical Specifications: $T_A = 25^\circ\text{C}$, 0dBm, $Z_0 = 75\Omega$, $P_{in} = 0\text{dBm}$

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	± 0.3
Phase Unbalance (Nominal 180°)	5 - 90 MHz	°	-	0.2	± 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

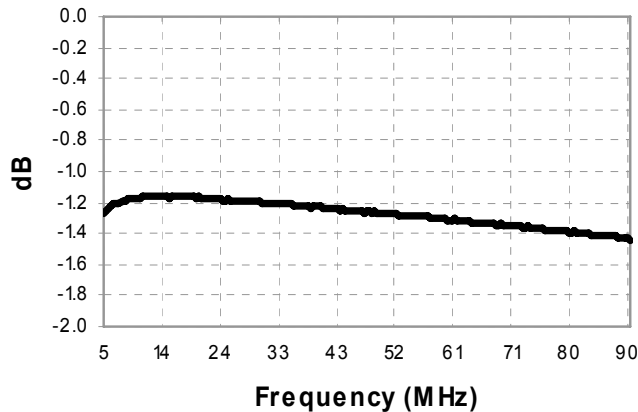


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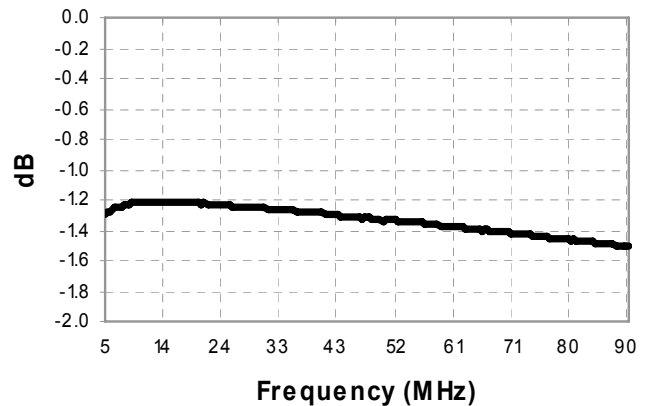
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Typical Performance Curves: $T_A = 25^\circ\text{C}$, 0dBm, $Z_0 = 75\Omega$, $P_{in} = 0\text{dBm}$

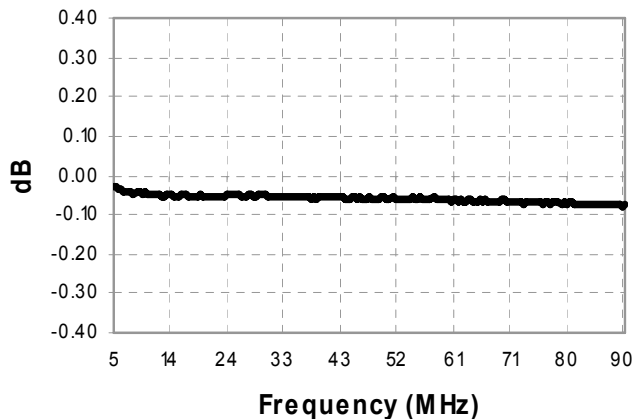
Insertion Loss 1: (Pin 5 to 3)



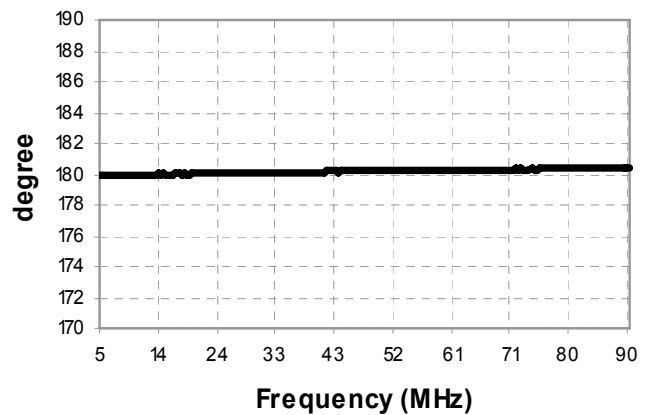
Insertion Loss 2: (Pin 5 to 1)



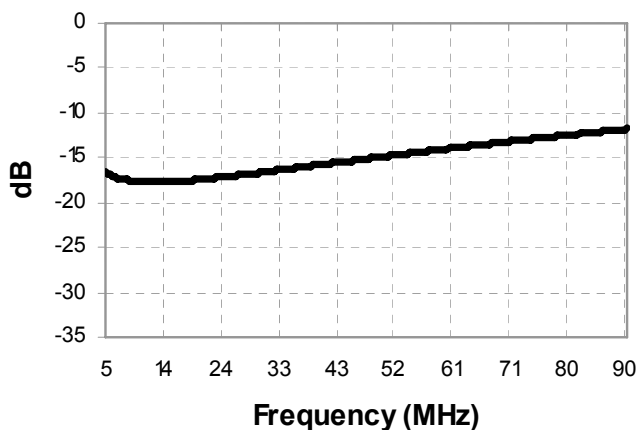
Amplitude Balance



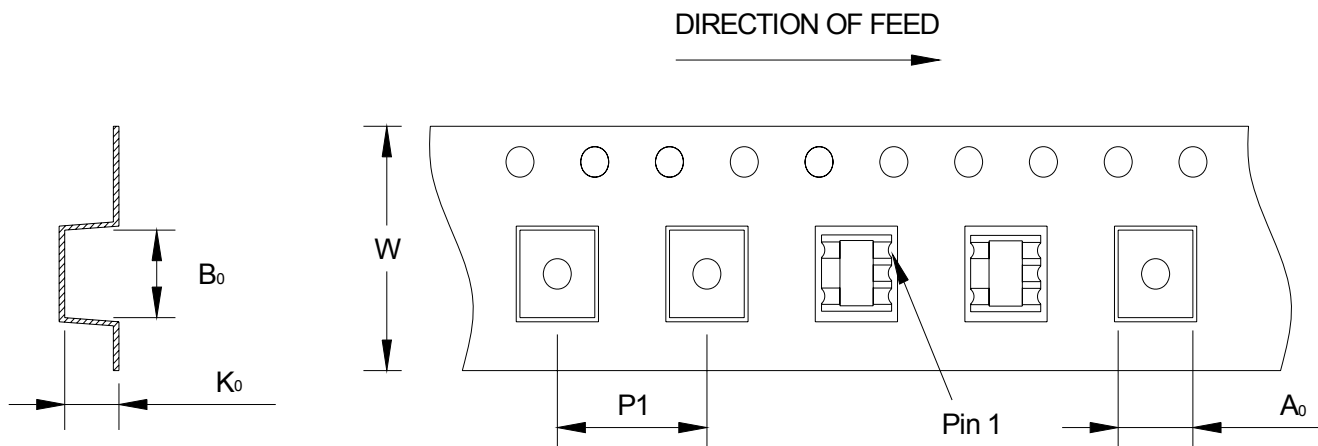
Phase Balance



Return Loss: Input (Pin 5)



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