

MABA-010441-CT38A0

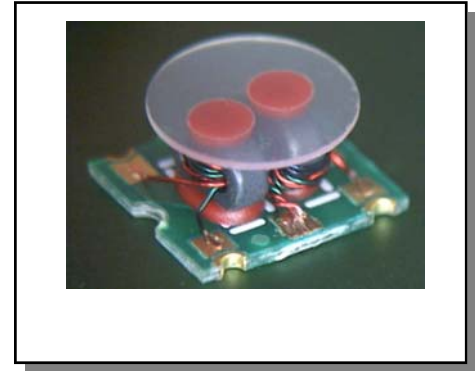


Transformer, 1:3
5 MHz - 1200MHz

Rev. V1

Features

- ◆ 1:3 impedance ratio
- ◆ Surface mount
- ◆ Available on tape and reel
- ◆ 260°C reflow compatible
- ◆ RoHS Compliant and Pb free
- ◆ Excellent temperature stability
- ◆ Can be used on 50Ω and 75Ω systems



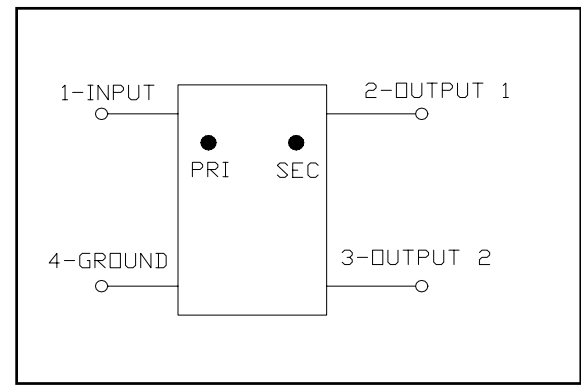
Electrical Specifications: $Z_0 = 75\Omega$, $T_A = 25^\circ\text{C}$, $P_{in} = 0\text{dBm}$

Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	5		1200
Impedance		Ω		75	
Impedance Ratio				1:3	
Insertion Loss1 Pin1 to Pin2	5 - 50 MHz	dB	-	0.75	1.20
	50 - 1000 MHz	dB	-	1.10	1.90
	1000 - 1200 MHz	dB	-	1.75	2.25
Insertion Loss2 Pin1 to Pin3	5 - 50 MHz	dB	-	0.70	1.30
	50 - 1000 MHz	dB	-	1.10	2.20
	1000 - 1200 MHz	dB	-	1.90	2.50
Amplitude Unbalance	5 - 50 MHz	dB	-	0.02	± 0.70
	50 - 1000 MHz	dB	-	0.05	± 0.70
	1000 - 1200 MHz	dB	-	0.15	± 0.80
Phase Balance	5 - 50 MHz	dB	-	0.6	± 5.0
	50 - 1200 MHz	dB	-	6.6	± 10.0
Input Return Loss	5 - 50 MHz	dB	19	21	-
	50 - 1000 MHz	dB	15	21	-
	1000 - 1200 MHz	dB	15	24	-

Pin Configuration

Pin No.	Function
1	Input (PRI dot)
2	Output 1 (SEC dot)
3	Output 2 (SEC)
4	Ground (PRI)

Schematic



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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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• **India** Tel: +91.80.43537383

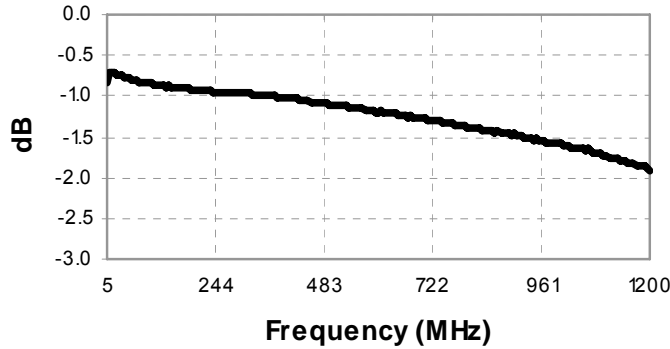
• **China** Tel: +86.21.2407.1588

Visit www.macomtech.com for additional data sheets and product information.

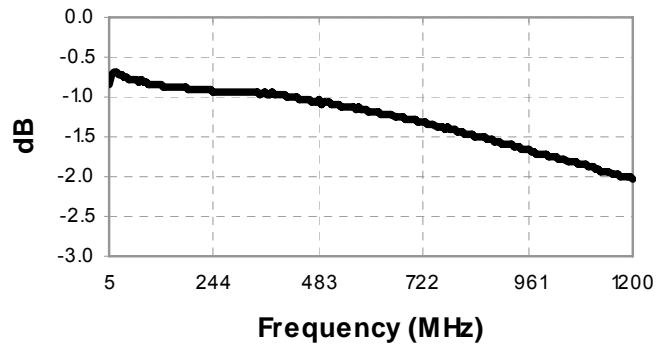
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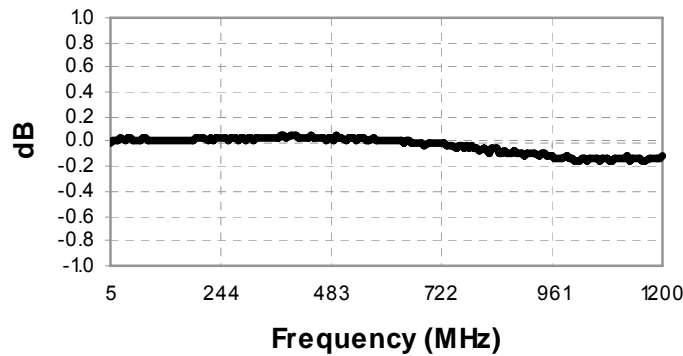
Insertion Loss: Pin1—Pin2



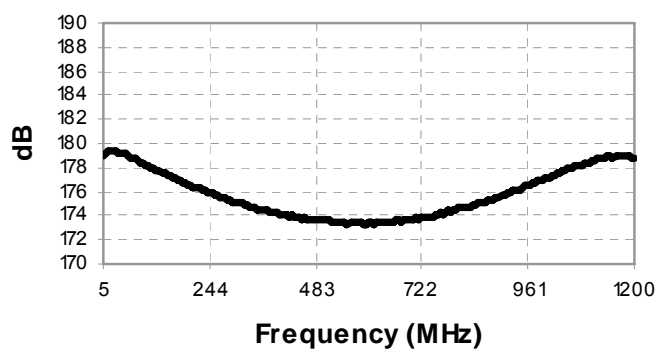
Insertion Loss: Pin1—Pin3



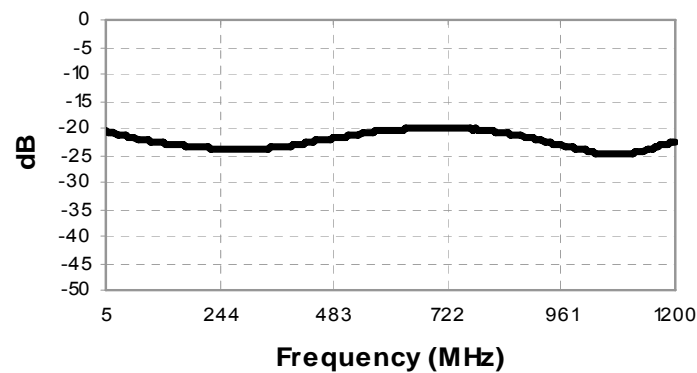
Amplitude Balance



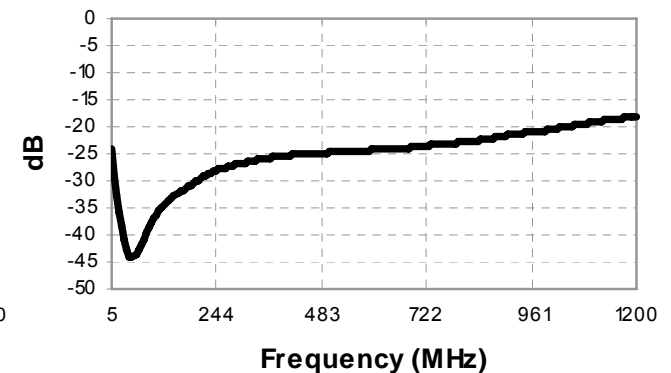
Phase Balance



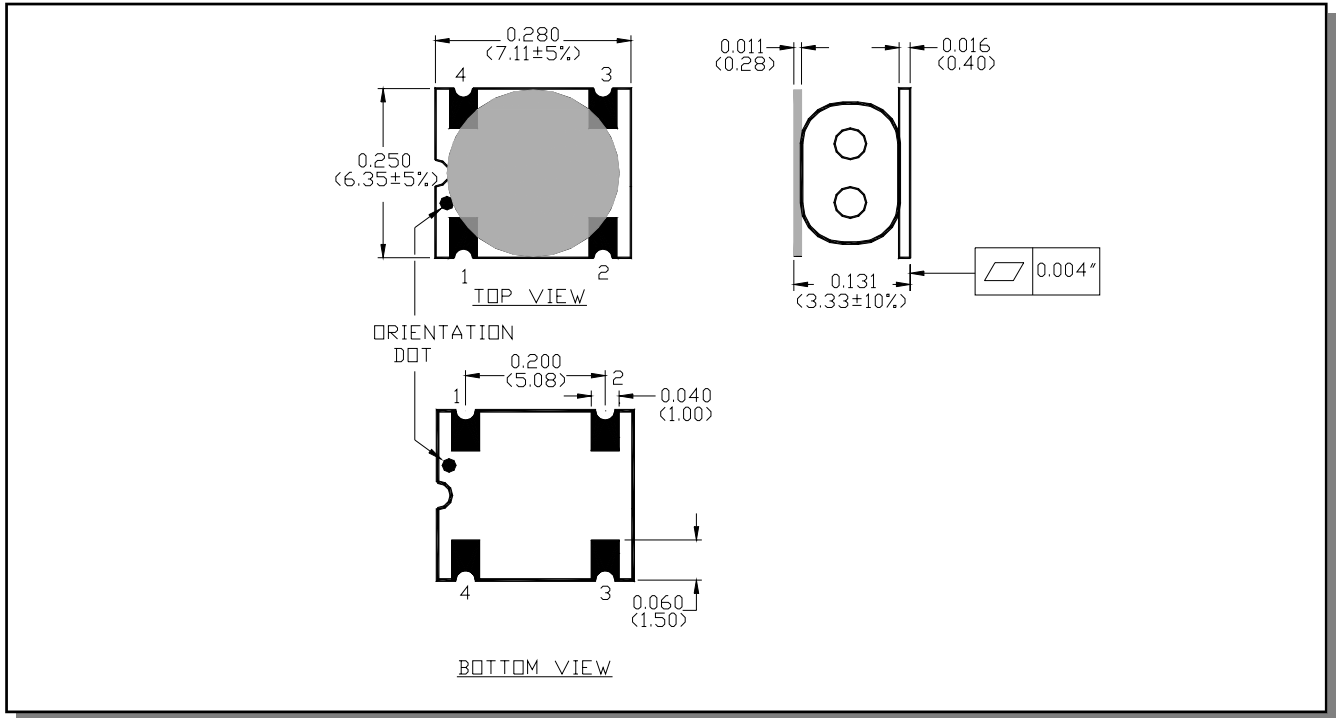
Return Loss: Input



Return Loss: Output

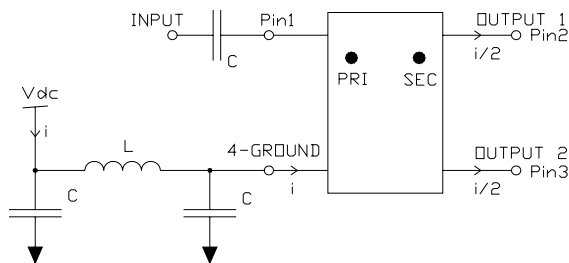


Outline Drawing



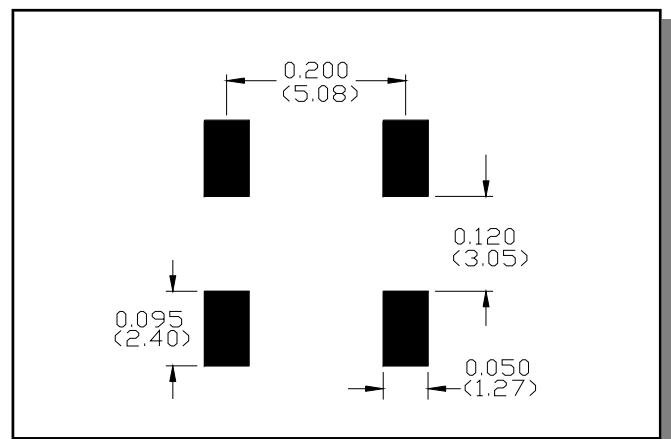
1. Dimensions in mm.
2. Tolerance: $\pm 0.2\text{mm}$ unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Finish: ENIG

Recommended DC bias circuit



Cap/Ind	5-50MHz	50-1200MHz
C	100nF	10nF
L	10 μ H	1 μ H

Recommended Footprint



Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	900
Reel size	mm	330
Tape width	mm	16.00
Pitch	mm	12.00
A ₀	mm	6.70
B ₀	mm	7.50
K ₀	mm	3.60
Orientation	-	F27

Ordering Information

Part Number	Description
MABA-010441-CT38A0	Tape & Reel
MABA-010441-CT38TB	Customer Evaluation Board

Recommended Maximum Ratings

Parameter	Units	Min	Max
Input Power	mW		250
DC Current	mA		200
Operating Temperature Range	°C	-40	+85
Storage Temperature Range	°C	-55	+125

Temperature data available on request

ECO History

Rev	Date	Description	ECN No.
V1	20 August 2010	Created datasheet	20101164