

MABA-009005-CF1A40

1:1 Flux Coupled Balun Transformer
5 - 120 MHz

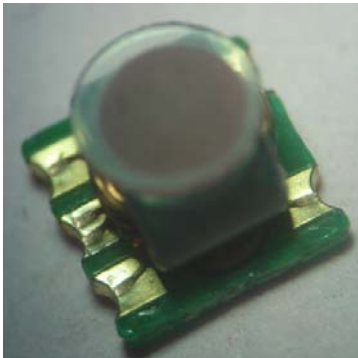
M/A-COM Products
Part Status: Released Rev V1

Features

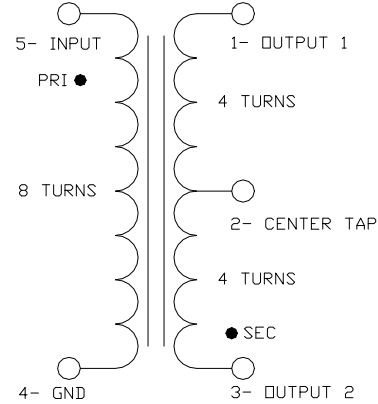
- Surface Mount
- 1:1 Impedance
- 75 Ohm
- RoHS Compliant and lead free

Description

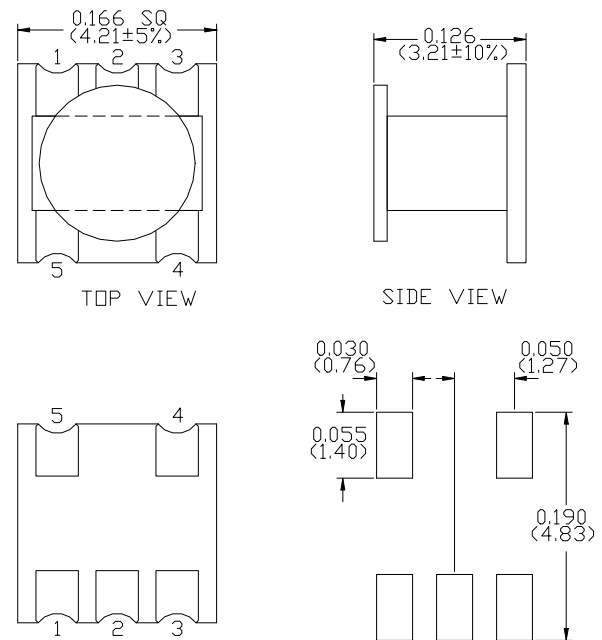
M/A-COM's MABA-009005-CF1A40 is a 1:1 RF flux coupled Transformer in a low cost surface mount package. Ideally suited for high volume CATV application.



Schematic



Case Style SM-164A



Pin Configuration

Function	Pin Number
Secondary (Output 1)	1
Secondary Centre Tap	2
Secondary Dot (Output 2)	3
Primary (Ground)	4
Primary Dot (Input)	5

Ordering Information

Part Number	Package
MABA-009005-CF1A40	2000 pieces per reel
MABA-009005-CF1ATB	Customer test board

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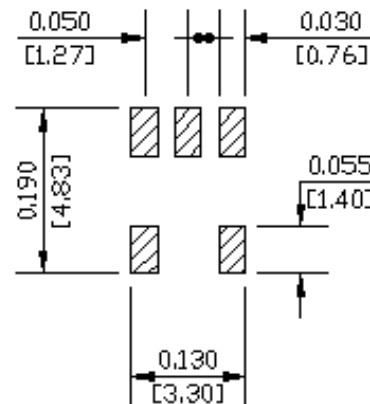
Electrical Specifications: $T_A = 25^\circ\text{C}$, 0dBm, $Z_0 = 75\Omega$

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Frequency Range	5 – 120 MHz				
Insertion Loss 1 (Pin 5 to Pin 1)	5 – 80 MHz	dB	–	0.1	0.4
	80 – 120 MHz	dB	–	0.3	0.5
Insertion Loss 2 (Pin 5 to Pin 3)	5 – 80 MHz	dB	–	0.2	0.4
	80 – 120 MHz	dB	–	0.4	0.6
Amplitude Un-Balance	5 – 80 MHz	dB	–	± 0.06	± 0.2
	80 – 120 MHz	dB	–	± 0.18	± 0.3
Phase Un-Balance	5 – 65 MHz	$^\circ$	–	± 0.05	± 1.5
	65 – 120 MHz	$^\circ$	–	± 0.10	± 3.0
Input Return Loss (Pin 5)	5 – 70 MHz	dB	19	25	–
	70 – 120 MHz	dB	14	19	–

Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Power	250mW
DC Current	30mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

Recommended PCB Configuration



MABA-009005-CF1A40

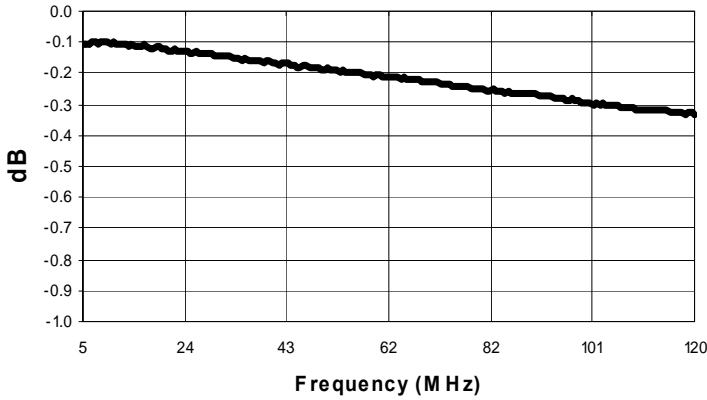


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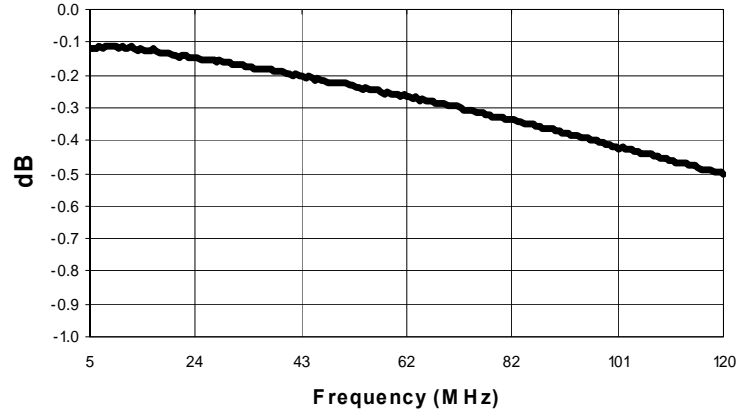
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Typical Performance: $T_A = 25^\circ\text{C}$, 0dBm, $Z_0 = 75\Omega$

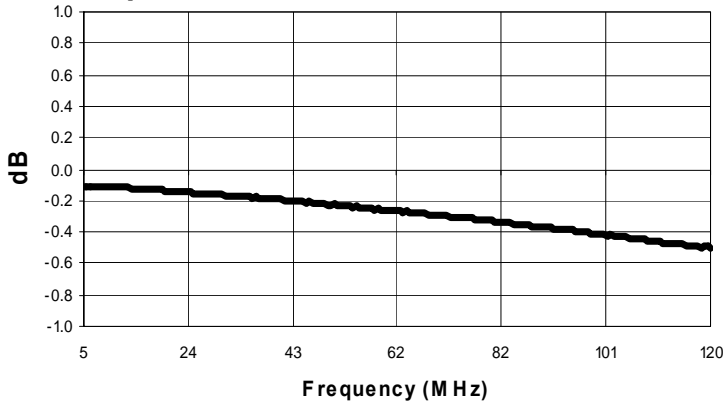
Insertion Loss 1 (Pin 5 - Pin 1)



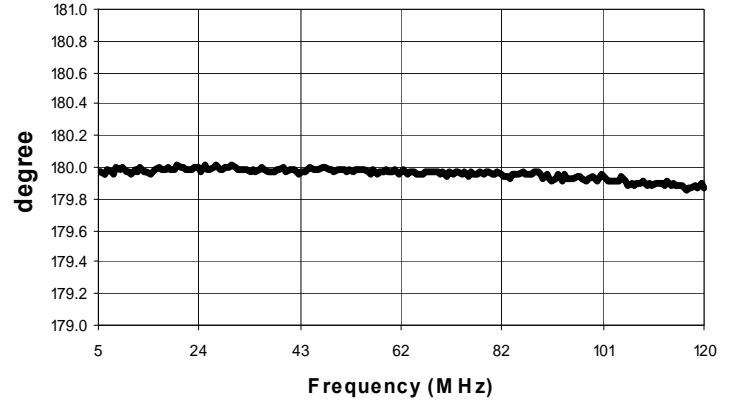
Insertion Loss 2 (Pin 5 - Pin 3)



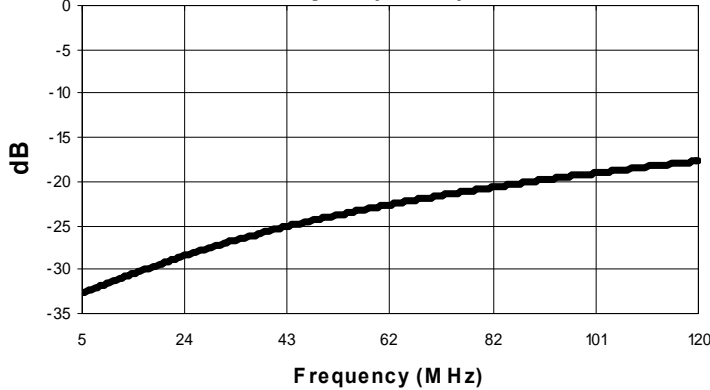
Amplitude Balance



Phase Balance



Return Loss: Input (Pin 5)



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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.

• North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400
• India Tel: +91.80.4155721 • China Tel: +86.21.2407.1588
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