

# 1:1 Broadband CATV, Flux Coupled Transformer 5-120MHz

MABACT0047  
V1

## Features

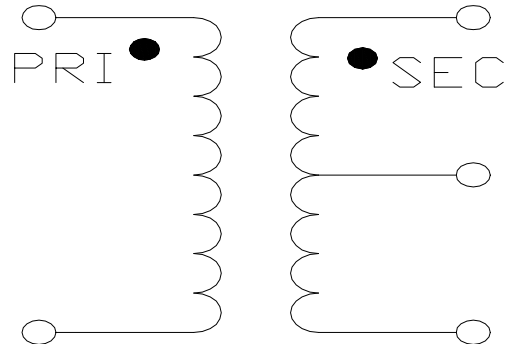
- Surface Mount
- 1:1 Flux Coupled
- 260°C Reflow Compatible
- Excellent temperature stability
- Available on Tape and Reel. Reel quantity 2000

## Description

M/A-COM's MABACT0047 is a low cost 1:1 Flux Coupled Transformer designed for high volume CATV Broadband applications. Suitable for use in 50 Ohm and 75 Ohm systems



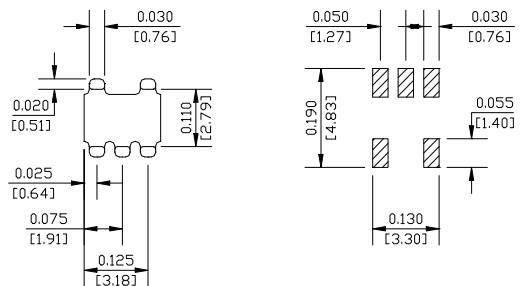
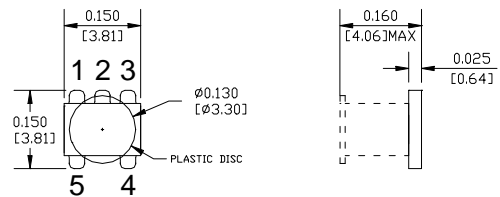
## Schematic



## Pin Configuration

Pin No.	Function
1	Secondary Dot (output 1)
2	Centre Tap
3	Secondary (output 2)
4	Primary (ground)
5	Primary Dot (input)

## Case Style: SM-22A



PCB FOOTPRINT

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

## Ordering Information

Part Number	Package
MABACT0047	Reel Quantity 2000

Note: Reference Application Note **M513** for reel size information.

**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

Visit [www.macomtech.com](http://www.macomtech.com) for additional data sheets and product information.

M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.

# 1:1 Broadband CATV, Flux Coupled Transformer 5-120MHz

MABACT0047  
V1

Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$ <sup>1</sup>

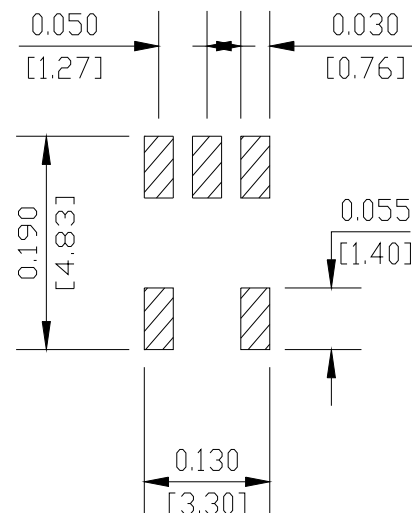
Parameter	Frequency	Units	Min	Typ	Max
Frequency Range:	5 - 120 MHz				
Insertion Loss	5 - 120 MHz	dB	-	0.4	0.6
Amplitude Balance	5 - 120 MHz	dB	-	$\pm 0.1$	$\pm 0.3$
Phase Balance	5 - 120 MHz	$^\circ$	-	$\pm 0.5$	$\pm 2.0$
Input Return Loss	5 - 65 MHz	dB	22	28	-
	65 - 120 MHz	dB	17	23	-

## Absolute Maximum Ratings<sup>1,2</sup>

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

- Exceeding any one or combination of these limits may cause permanent damage to this device.
- M/A-COM does not recommend sustained operation near these survivability limits.

## Recommended PCB Configuration



2

**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

Visit [www.macomtech.com](http://www.macomtech.com) for additional data sheets and product information.

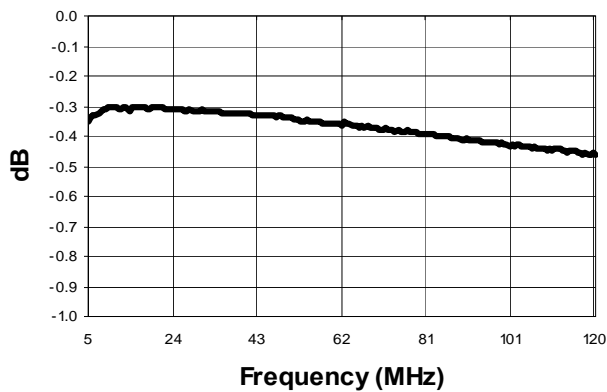
M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.

1:1 Broadband CATV, Flux Coupled Transformer  
5-120MHz

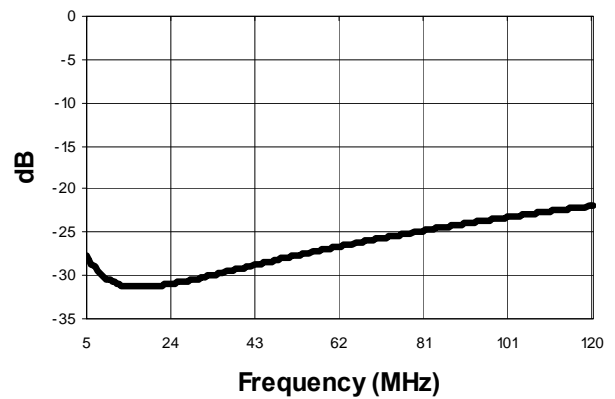
MABACT0047  
V1

Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$  <sup>1</sup>

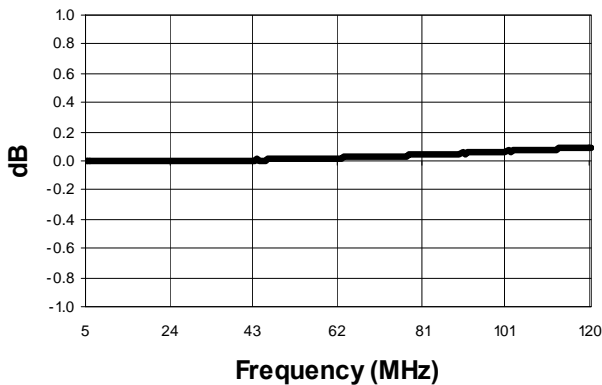
Insertion Loss



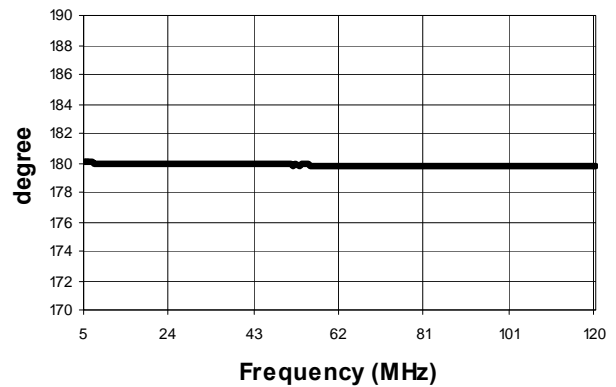
Return Loss: Input



Amplitude Balance



Phase Balance



**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

Visit [www.macomtech.com](http://www.macomtech.com) for additional data sheets and product information.

M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.