

# MABA-011057 Datasheet



DiGi Electronics Part Number	MABA-011057-DG
Manufacturer	<a href="#">MACOM Technology Solutions</a>
Manufacturer Product Number	MABA-011057
Description	TRANSFORMER 1:1
Detailed Description	RF Balun 200kHz ~ 100MHz 1:1 6-SMD Module, No Lead

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## Purchase and inquiry

Manufacturer Product Number:

MABA-011057

Series:

-

Frequency Range:

200kHz ~ 100MHz

Phase Difference:

-

Return Loss (Min):

-15dB

Mounting Type:

Surface Mount

Manufacturer:

MACOM Technology Solutions

Product Status:

Obsolete

Impedance - Unbalanced/Balanced:

1:1

Insertion Loss (Max):

-0.1dB

Package / Case:

6-SMD Module, No Lead

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

HTSUS:

8504.31.2000

ECCN:

EAR99

# MABA-011057



**Transformer, 10/100/1000 BASE-T Gigabit Ethernet Transformer**  
**0.2 - 100 MHz**

Rev. V1

## Features

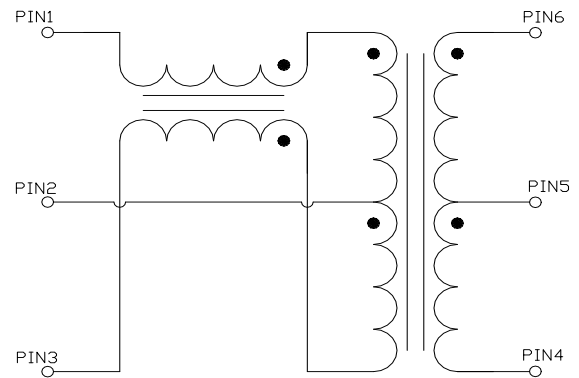
- Surface mount
- 100 Ohm bal-bal, 1:1 Impedance ratio
- Product suited for both RX and TX channel
- 260°C reflow compatible
- RoHS\* compliant and lead free
- Available on tape and reel

## Description

The MABA-011057 is a 10/1000 BASE-T Ethernet Transformer in a low cost, surface mount package.



## Functional Schematic



## Ordering Information

Part Number	Package
MABA-011057	Tape & Reel
MABA-011057-TB	Customer Test Board

## Pin Configuration

Pin no.	Function
1	Primary Dot
2	Ground
3	Primary
4	Secondary
5	Ground
6	Secondary Dot

\* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

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## Transformer, 10/100/1000 BASE-T Gigabit Ethernet Transformer 0.2 - 100 MHz

Rev. V1

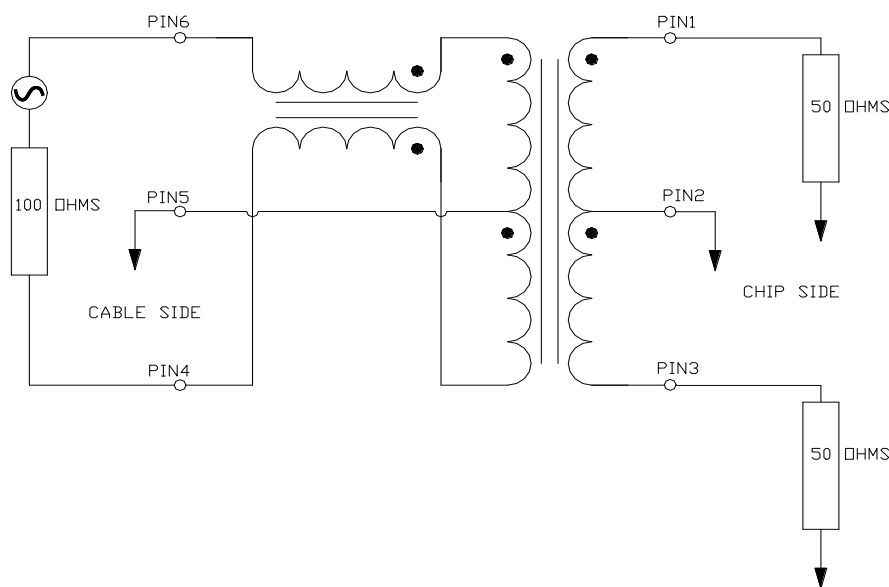
**Electrical Specifications:  $T_A = 25^\circ\text{C}$ , 0 dBm,  $Z_0 = 50 \Omega$ ,  $P_{in} = 0 \text{ dBm}$** 

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Insertion Loss (Sdd21)	0.2 - 1 MHz	dB	-0.25	-0.10	—
	1 - 3 MHz		-0.25	-0.20	
	3 - 10 MHz		-0.5	-0.20	
	10 - 65 MHz		-0.5	-0.30	
	65 - 100 MHz		-0.6	-0.43	
Return Loss (Sdd11 and Sdd22)	1 - 100 MHz	dB	—	-15	-12
Differential to Common Mode Rejection (Scd21)	1 - 100 MHz	dB	—	-32	-29
DC Resistance Balance	N/A	%	—	1.5	—

### Absolute Maximum Ratings

Parameter	Value
Input power	250 mW
DC current	600 mA
Hi Pot	1500 Vrms
Operating Temperature	$-40^\circ\text{C}$ to $+110^\circ\text{C}$
Storage Temperature	$-55^\circ\text{C}$ to $+100^\circ\text{C}$

### Application Circuit

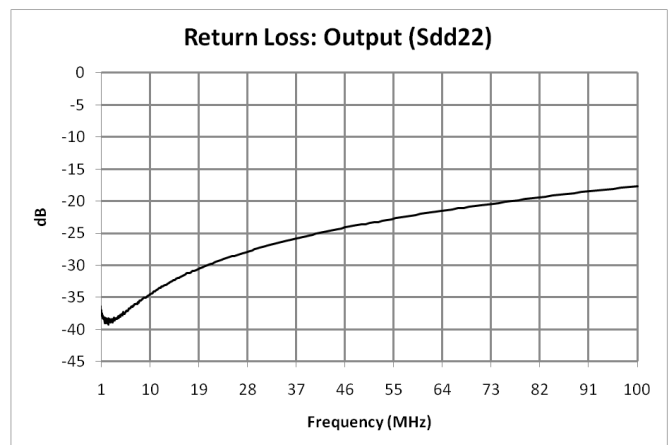
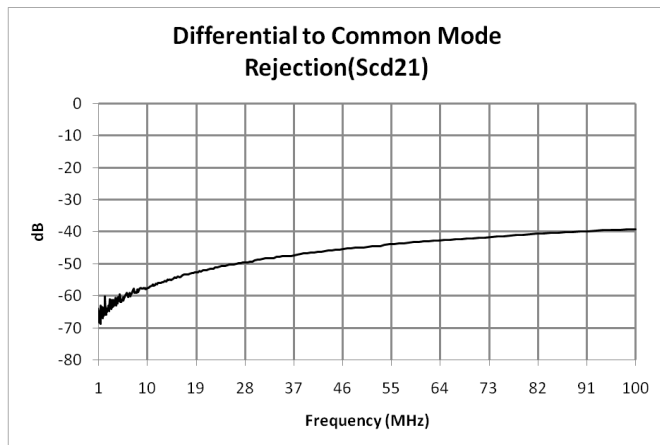
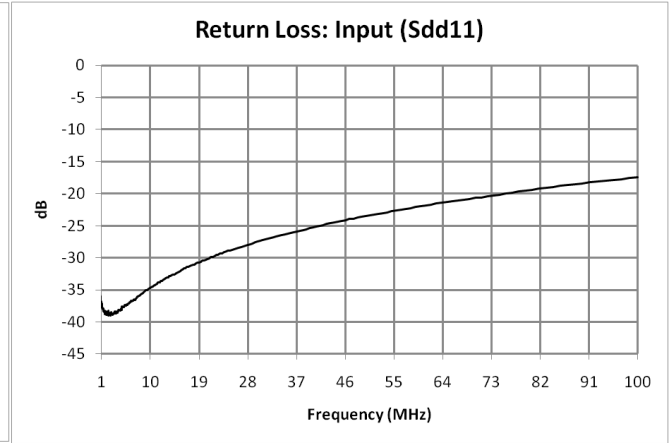
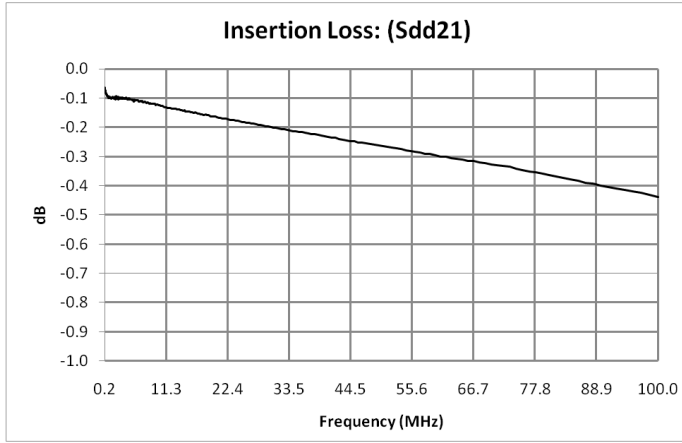


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## Transformer, 10/100/1000 BASE-T Gigabit Ethernet Transformer 0.2 - 100 MHz

Rev. V1



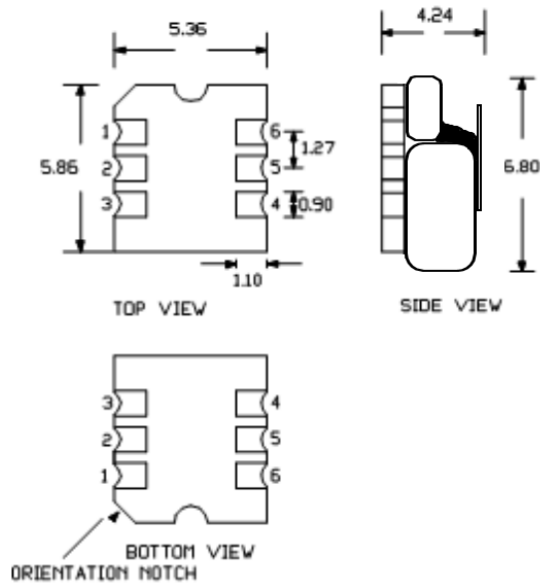
# MABA-011057



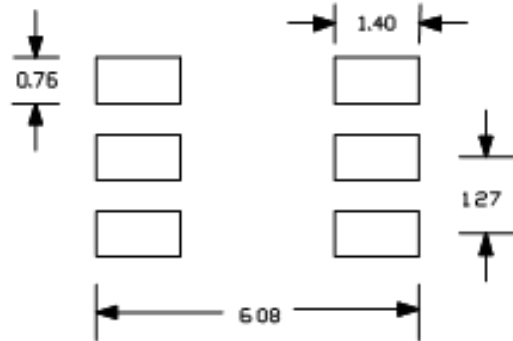
**Transformer, 10/100/1000 BASE-T Gigabit Ethernet Transformer**  
**0.2 - 100 MHz**

Rev. V1

## Outline Drawing

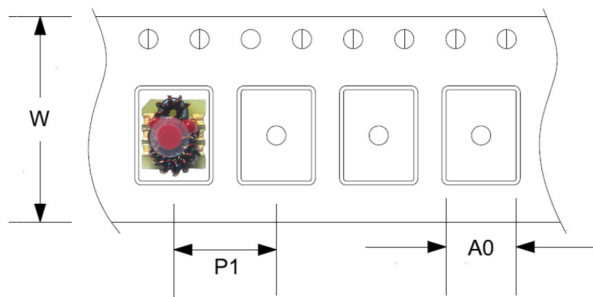


## PCB Layout



1. Dimensions in mm.
2. Tolerance:  $\pm 0.2$  mm unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating finish: ENIG on both sides, 0.05 to 0.1  $\mu$ m gold over 3 to 6  $\mu$ m nickel

## Carrier Tape Orientation



## Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	900
Reel Size	mm	330
Tape Width	mm	16.00
Pitch	mm	8.00
Orientation	-	F46
Reference Application Note ANI-019 for orientation		

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**Transformer, 10/100/1000 BASE-T Gigabit Ethernet Transformer  
0.2 - 100 MHz**

Rev. V1

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