

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

Rev. V1

Features

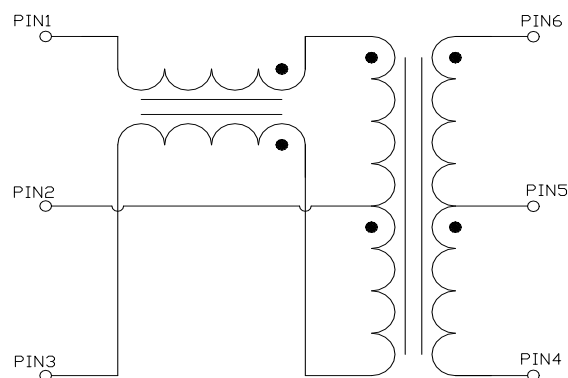
- Surface mount
- 100 Ohm bal-bal, 1:1 Impedance ratio
- Product suited for both RX and TX channel
- 260°C reflow compatible
- RoHS* compliant and lead free
- Available on tape and reel

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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0.2 - 100 MHz

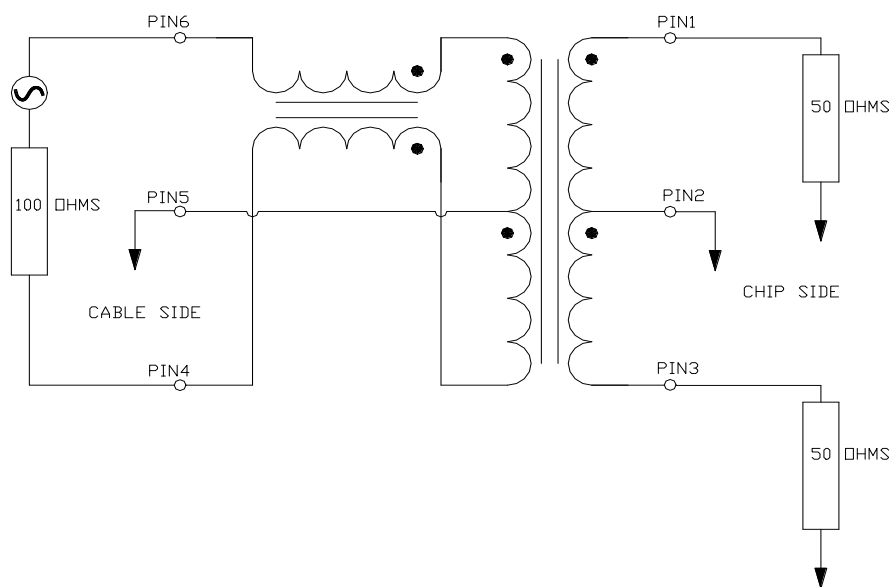
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Electrical Specifications: $T_A = 25^\circ\text{C}$, 0 dBm, $Z_0 = 50\ \Omega$, $P_{in} = 0\ \text{dBm}$

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Insertion Loss (Sdd21)	0.2 - 1 MHz 1 - 3 MHz 3 - 10 MHz 10 - 65 MHz 65 - 100 MHz	dB	-0.25 -0.25 -0.5 -0.5 -0.6	-0.10 -0.20 -0.20 -0.30 -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	—

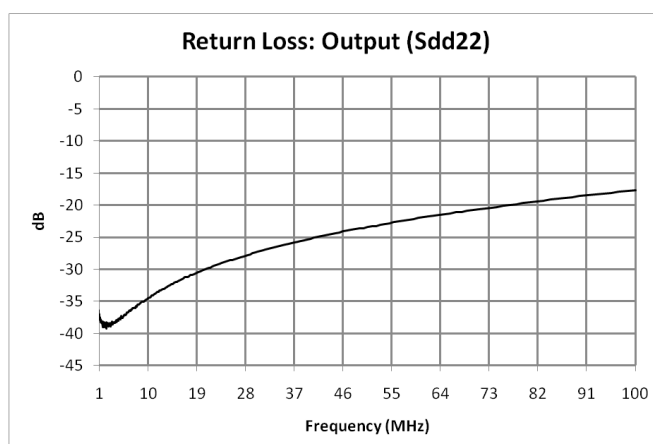
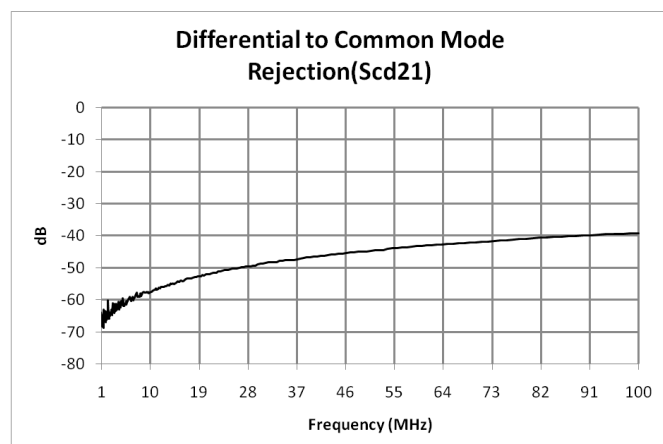
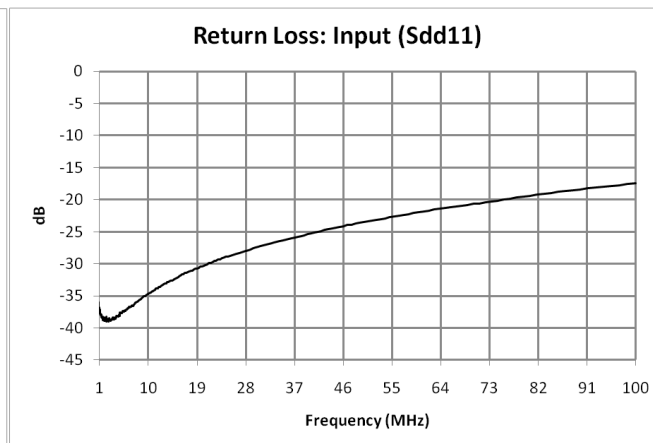
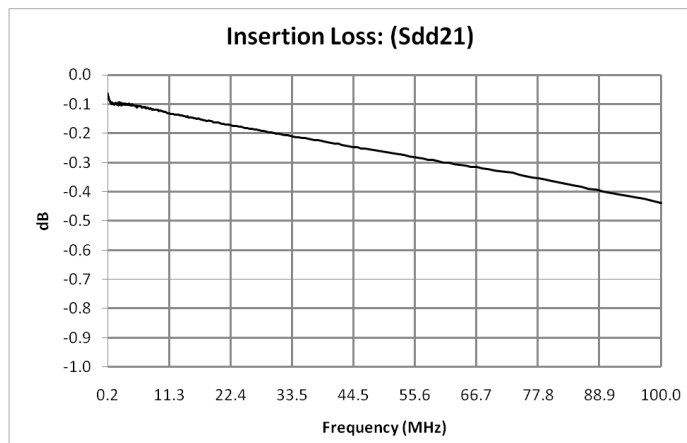
Absolute Maximum Ratings

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

Application Circuit


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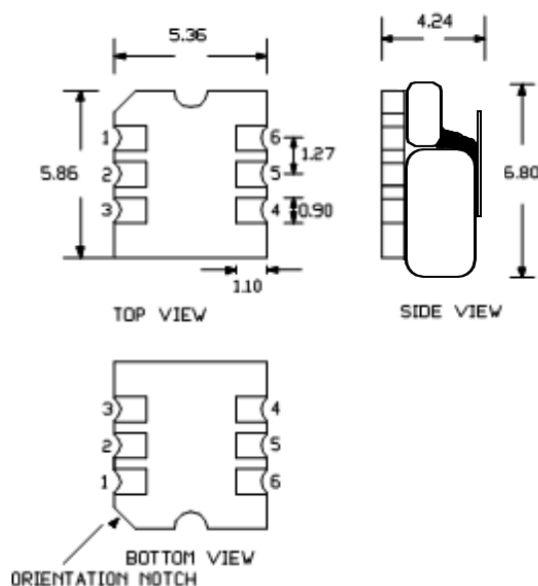
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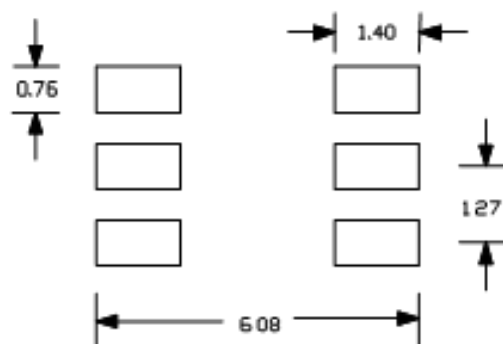
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Outline Drawing

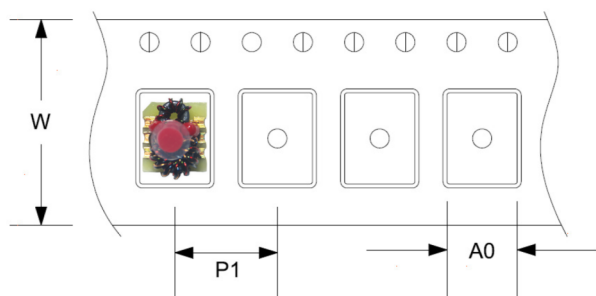


1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating finish: ENIG on both sides, 0.05 to 0.1 μ m gold over 3 to 6 μ m nickel

PCB Layout



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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