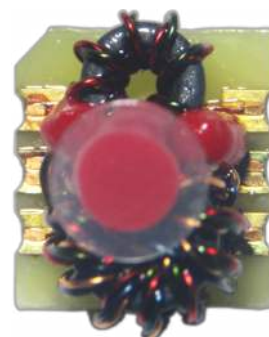


Features

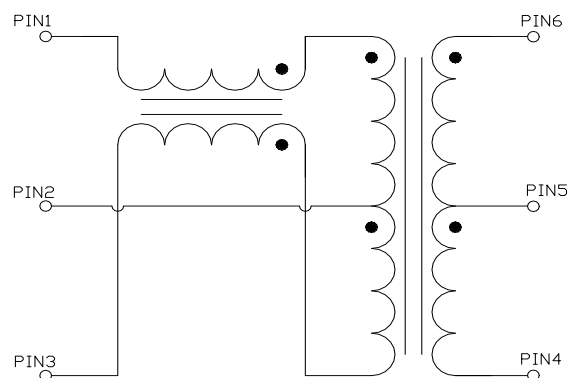
- Surface mount
- 100 Ohm bal-bal, 1:1 Impedance ratio
- Product suited for both RX and TX channel
- 260°C reflow compatible
- RoHS* compliant and lead free
- Available on tape and reel

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.

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

Rev. V1

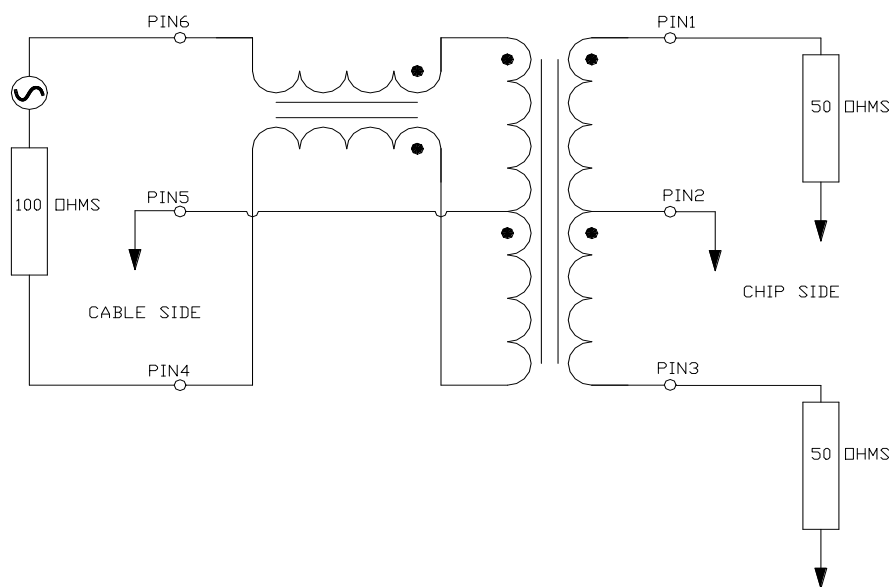
Electrical Specifications: $T_A = 25^\circ\text{C}$, 0 dBm, $Z_0 = 50 \Omega$, $P_{in} = 0 \text{ dBm}$

| 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

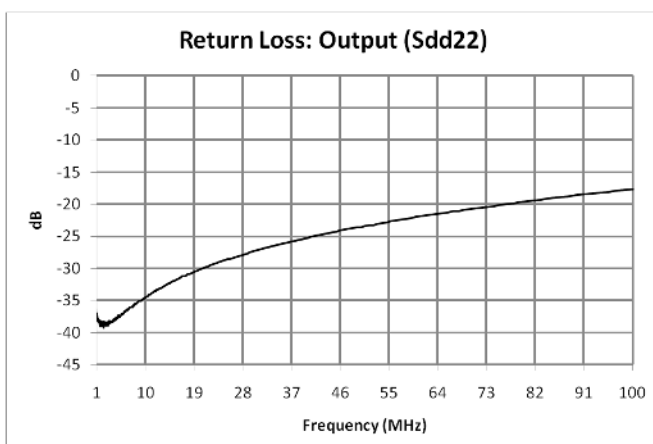
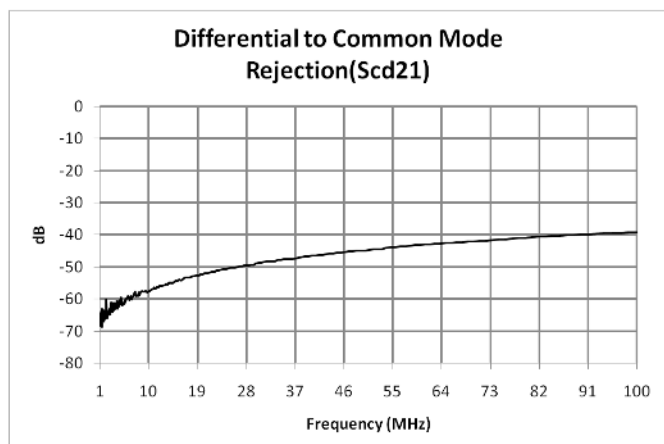
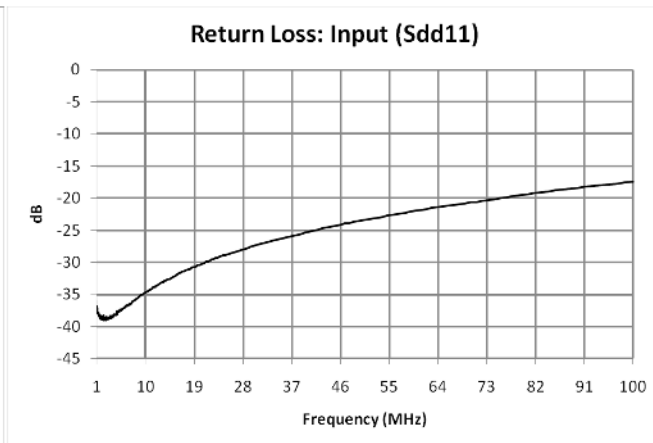
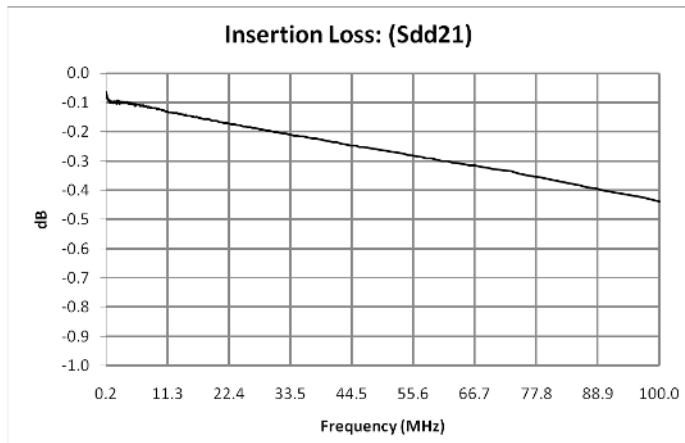
| Parameter | Value |
|-----------------------|-----------------|
| Input power | 250 mW |
| DC current | 600 mA |
| Hi Pot | 1500 Vrms |
| Operating Temperature | -40°C to +110°C |
| Storage Temperature | -55°C to +100°C |

Application Circuit

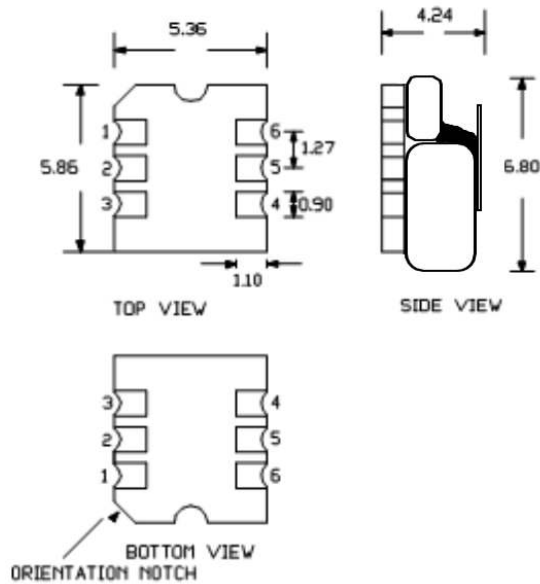


Transformer, 10/100/1000 BASE-T Gigabit Ethernet Transformer 0.2 - 100 MHz

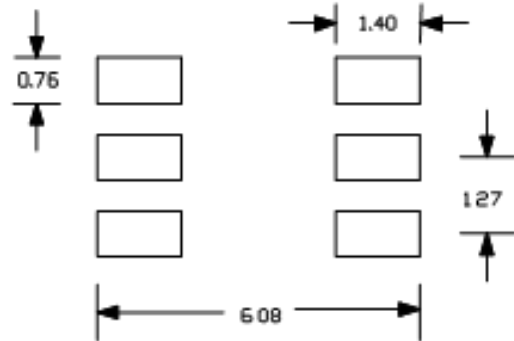
Rev. V1



Outline Drawing

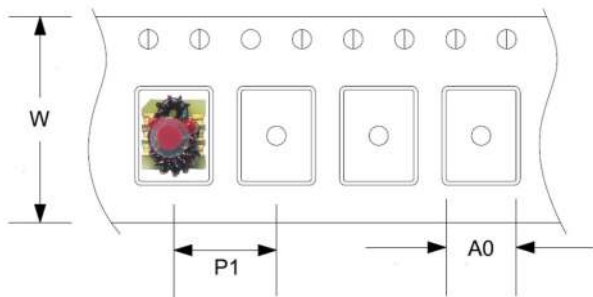


PCB Layout



1. Dimensions in mm.
2. Tolerance: ± 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

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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