MABA-010655-CF1A40

1:1 10/10Base-T Ethernet Transformer
1 - 100 MHz

V4

Features

- Surface Mount
- 1:1 Impedance
- Suited for both R_X & T_X Channel
- Available on Tape and Reel
- RoHS Compliant and Pb Free
- 260°C Reflow Compatible

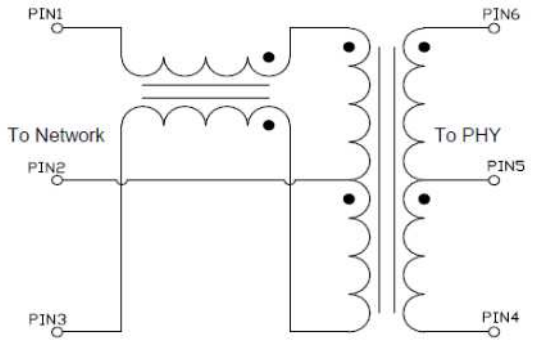
Description

The MABA-010655-CF1A40 is a 10/100BASE-T Ethernet Transformersurface mount package.

Ideally suited for CATV Broadband applications.



Functional Schematic



Pin Configuration

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

Electrical Specifications: Freq. = 50 - 1200 MHz, T_A = 25°C, Z_0 = 50 Ω, P_{in} = 0 dBm

Parameter	Conditions	Units	Min.	Typ.	Max.
Impedance Ratio	—	ratio	—	1:1	—
Insertion Loss	1 - 3 MHz 3 - 10 MHz 10 - 65 MHz 65 - 100 MHz	dB	-0.25 -0.50 -0.50 -0.60	-0.20 -0.20 -0.30 -0.43	—
Return Loss	1 - 100 MHz	dB	—	-30	-20
Differential to Common Mode Rejection	1 - 100 MHz	dB	—	-37	-35
DC Resistance Balance	—	%	—	1.5	3.5

Ordering Information

Part Number	Description
MABA-010655-CF1A40	900 piece reel
MABA-010655-CF1ATB	sample board

Absolute Maximum Ratings

Parameter	Absolute Maximum
Input RF Power	250 mW
DC Current	600 mA
Operating Temperature	-40°C to +110°C
Storage Temperature	-55°C to +100°C

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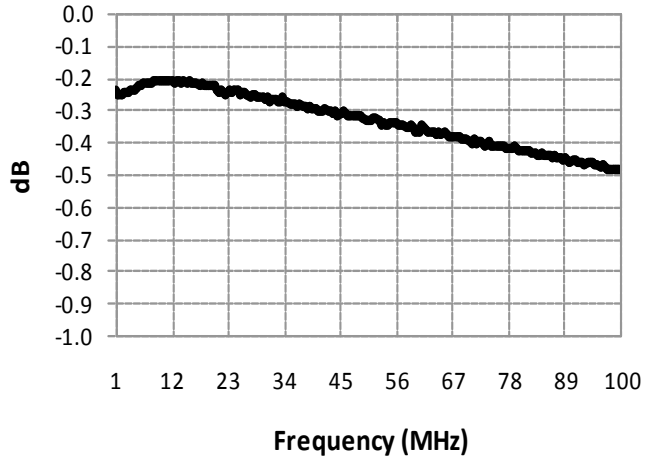
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1 - 100 MHz

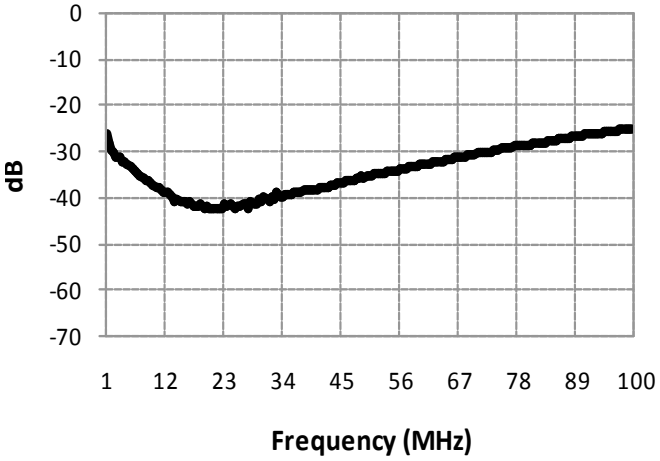
V4

Typical Performance Curves: T_A = 25°C, Z_0 = 50 Ω, P_{IN} = 0 dBm

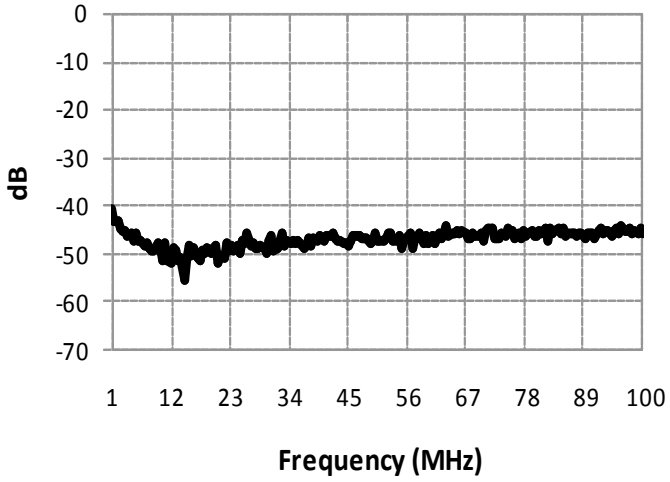
Insertion Loss



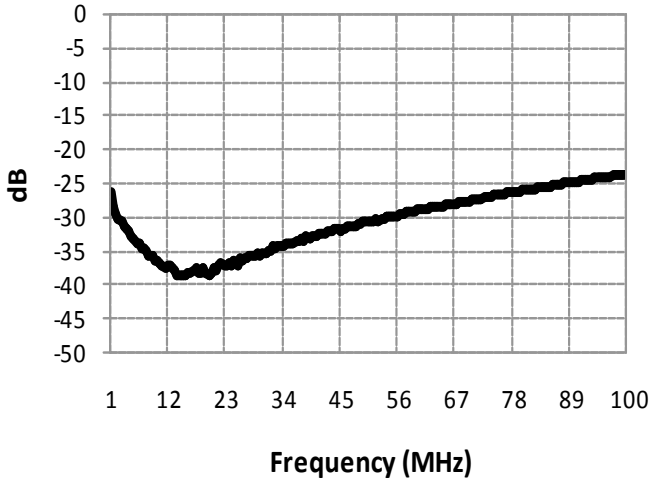
Input Return Loss



Differential to Common Mode Rejection



Output Return Loss

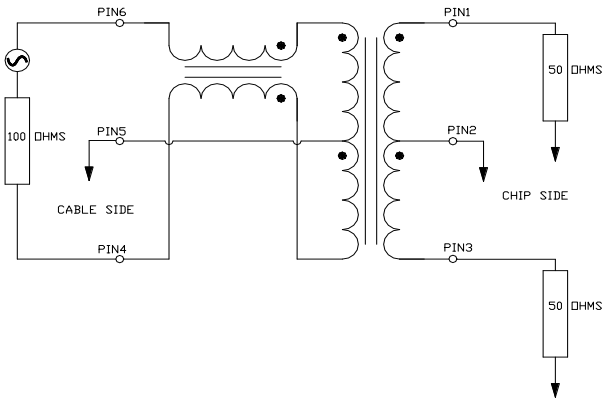


Full temperature plots available on request

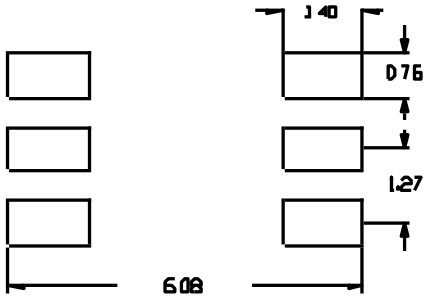
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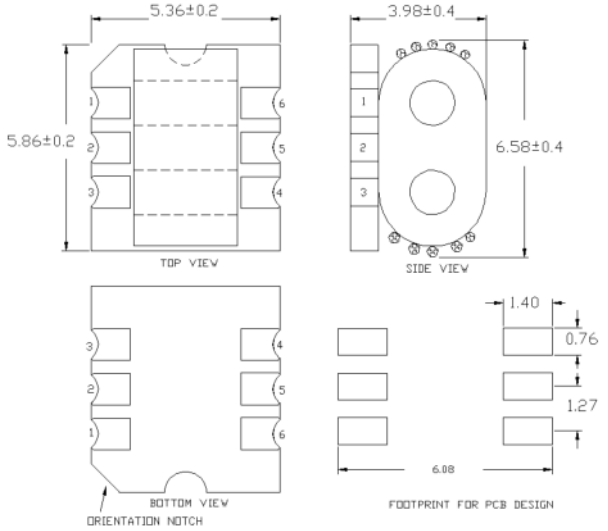
Application Circuit



Recommended Board Layout



Outline Drawing



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

Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	900
Reel Size	mm	330
Tape Width	mm	16.00
Pitch	mm	8.00
Ao	mm	5.70
Bo	mm	7.00
Ko	mm	4.20
Orientation	-	F46
Reference Application Note ANI-019 for orientation		

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