

MABA-010655-CF1A40



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

V4

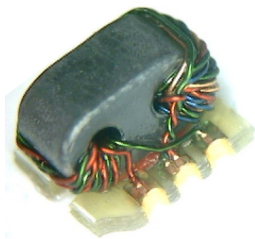
Features

- 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

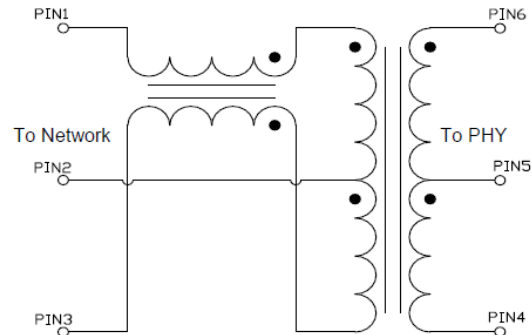
Description

The MABA-010655-CF1A40 is a 10/100BASE-T Ethernet Transformer surface 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, Z₀ = 50 Ω, P_{in} = 0 dBm

Parameter	Conditions	Units	Min.	Typ.	Max.
Impedance Ratio	—	ratio	—	1:1	—
Insertion Loss	1 - 3 MHz	dB	-0.25	-0.20	—
	3 - 10 MHz		-0.50	-0.20	
	10 - 65 MHz		-0.50	-0.30	
	65 - 100 MHz		-0.60	-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

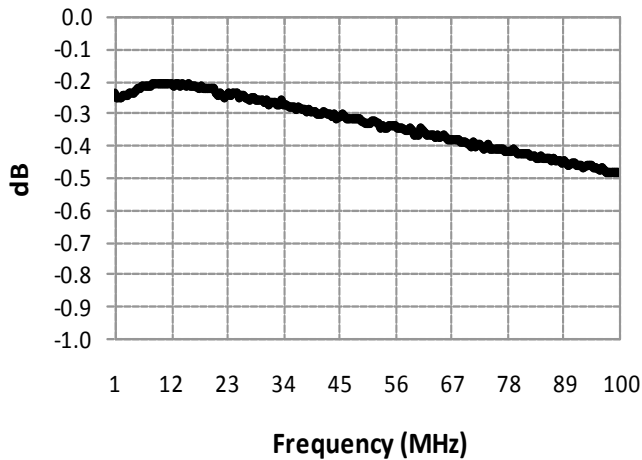
Part Number	Description
MABA-010655-CF1A40	900 piece reel
MABA-010655-CF1ATB	sample board

Absolute Maximum Ratings

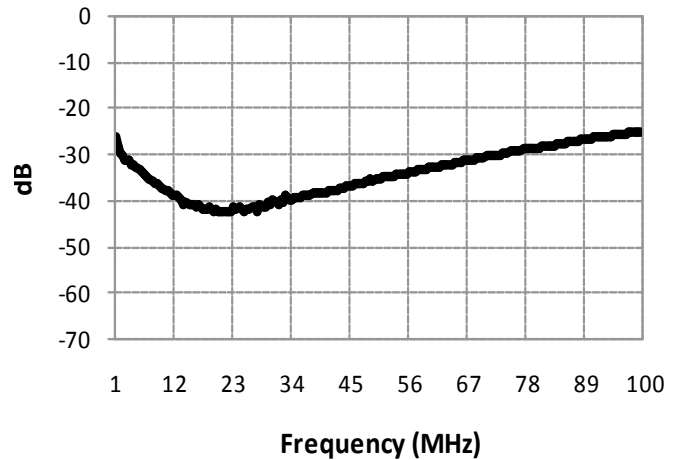
Parameter	Absolute Maximum
Input RF Power	250 mW
DC Current	600 mA
Operating Temperature	-40°C to +110°C
Storage Temperature	-55°C to +100°C

Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 50 \Omega$, $P_{IN} = 0 \text{ dBm}$

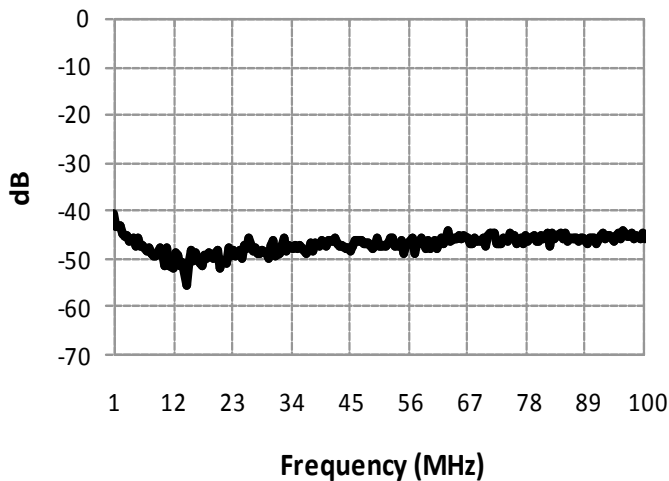
Insertion Loss



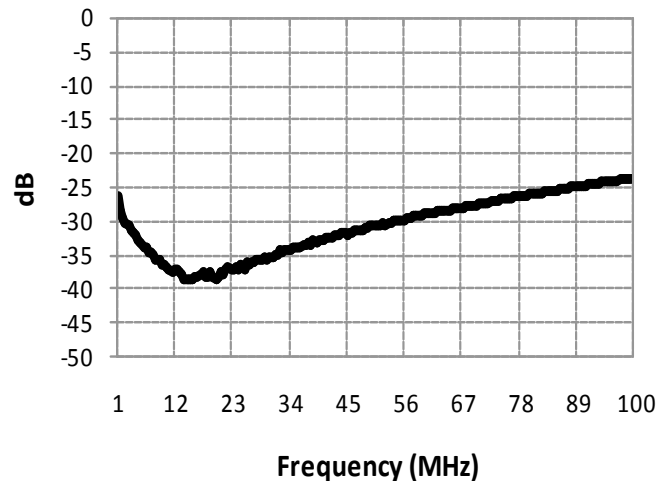
Input Return Loss



Differential to Common Mode Rejection

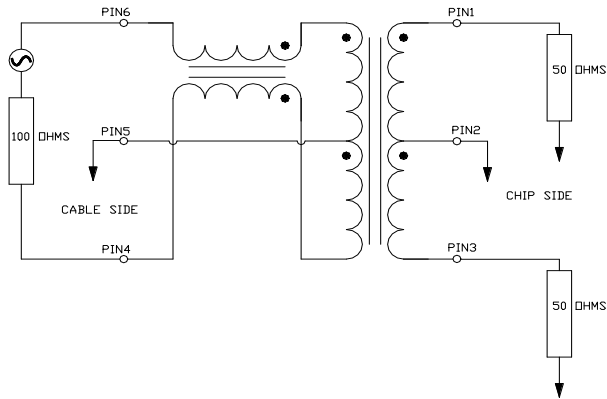


Output Return Loss

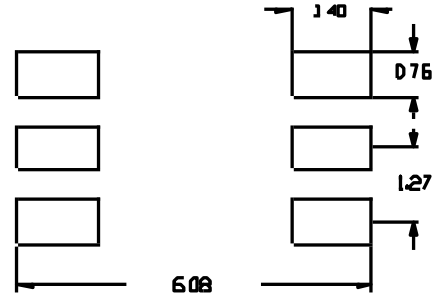


Full temperature plots available on request

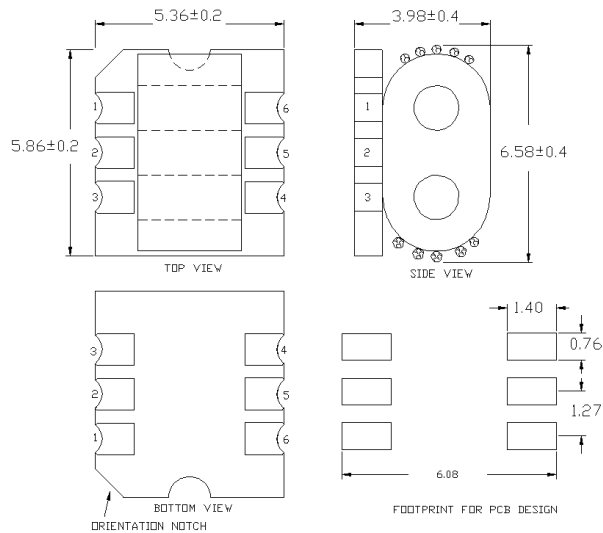
Application Circuit



Recommended Board Layout



Outline Drawing



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		

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

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