

1:1 Transformer, Transmission Line with Tertiary Winding 45 - 1200 MHz

Rev. V2

Features

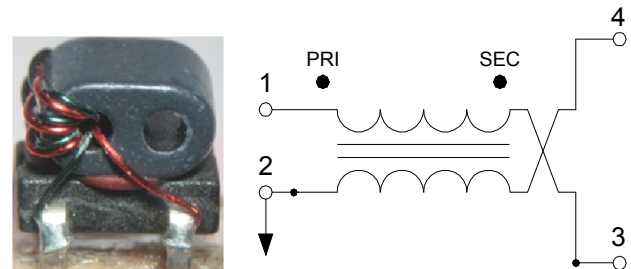
- 1:1 Impedance Ratio
- Surface Mount Package
- Excellent Temperature Stability
- Can be Used on both 50 Ω & 75 Ω Systems
- RoHS Compliant and Pb Free
- 260°C Reflow Compatible
- Available on Tape and Reel
- Suitable for all CATV, Broadband and FTTx Applications

Description

The MABA-010726 is a 1:1 transformer with tertiary winding in a surface mount package.

Ideally suited for CATV Broadband applications.

Functional Schematic



Pin Configuration

Pin #	Function
1	Primary Dot
2	Primary
3	Secondary Dot
4	Secondary

Electrical Specifications: Freq. = 45 - 1200 MHz, $T_A = +25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{IN} = 0 \text{ dBm}$

Parameter	Frequency Test Conditions (MHz)	Units	Min.	Typ.	Max.
Impedance Ratio	—	ratio	—	1:1	—
Insertion Loss (pin 1 - pin 4)	45 - 100 100 - 600 600 - 1200	dB	—	0.50 0.55 0.60	0.6 0.8 1.1
Insertion Loss (pin 1 - pin 3)	45 - 100 100 - 600 600 - 1200	dB	—	-0.10 0.20 0.70	0.0 0.7 1.3
Amplitude Balance	45 - 600 600 - 1200	dB	—	0.5 0.2	± 0.8 ± 0.8
Phase Balance	45 - 600 600 - 1200	$^\circ$	—	3 4	± 6 ± 8
Input Return Loss (pin 1)	45 - 150 150 - 600 600 - 1200	dB	20 17 12	33 23 15	—

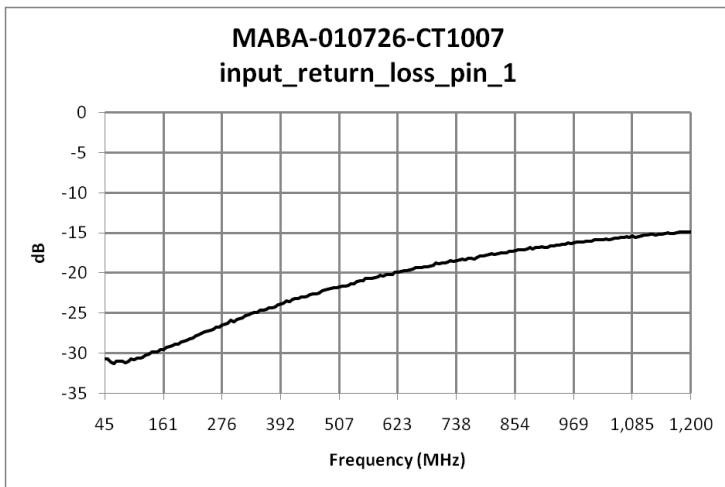
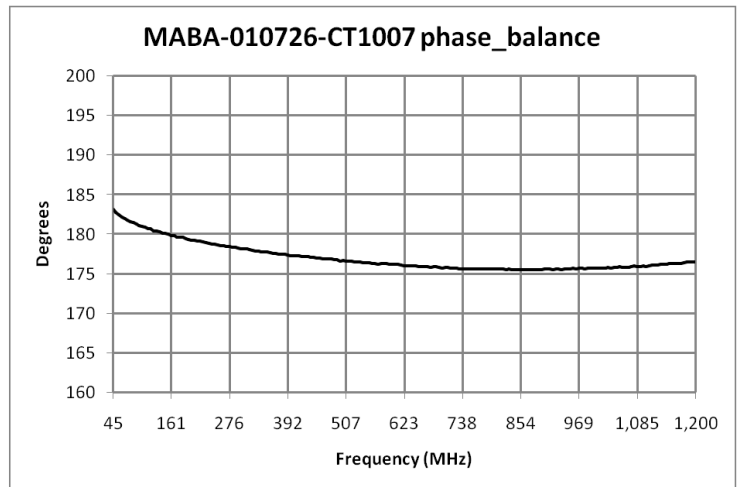
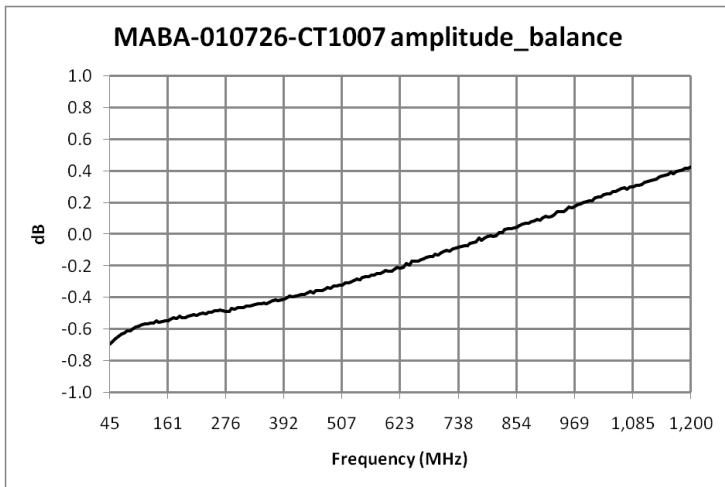
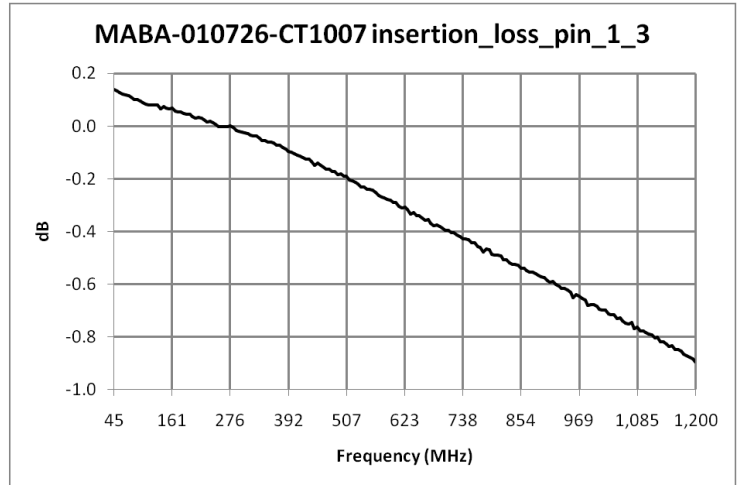
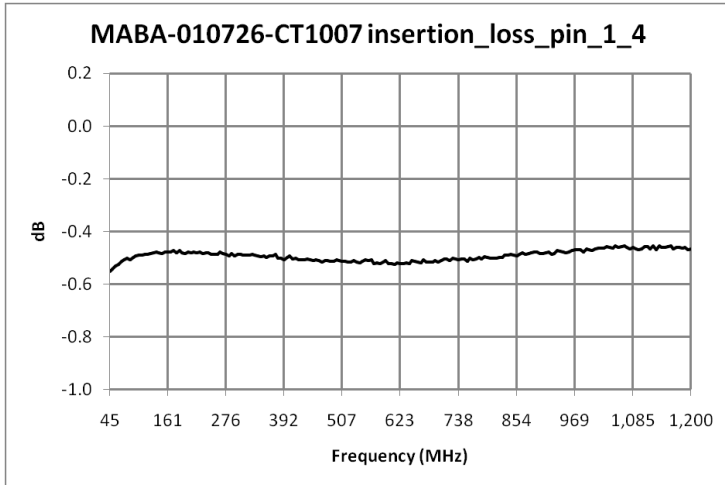
Ordering Information

Part Number	Package
MABA-010726-CT1007	2000 piece reel
MABA-010726-CT10TB	Customer Test Board

Recommended Maximum Ratings

Parameter	Value
Input RF Power	250 mW
DC Current	200 mA
Operating Temperature	-40°C to +85°C

Typical Performance Curves

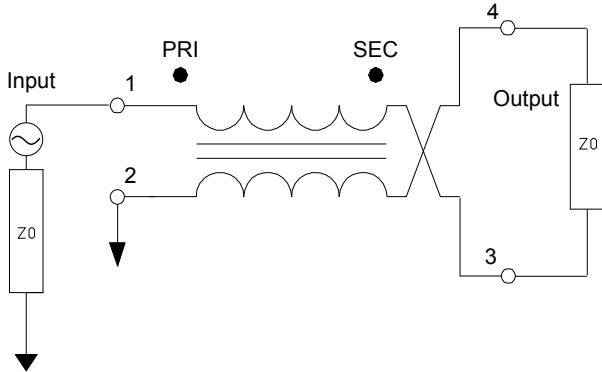


Full temperature plots available on request

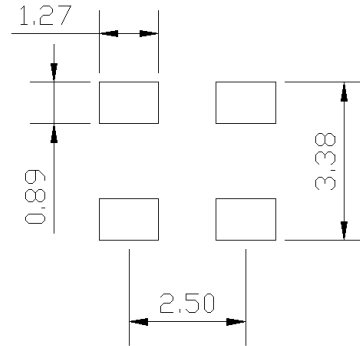
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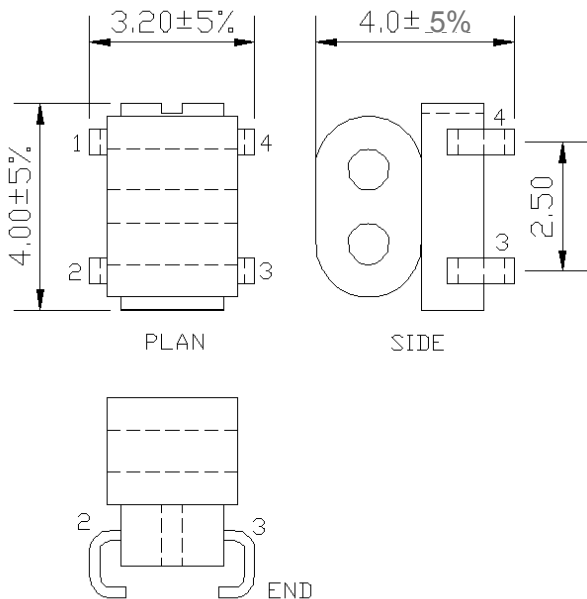
Application Circuit



Recommended Footprint



Outline Drawing



Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel size	mm	330
Tape width (W)	mm	12.00
Pitch (P1)	mm	8.00
A ₀	mm	3.5
B ₀	mm	4.3
K ₀	mm	4.2
Orientation	-	F48
Reference Application note ANI-019 for orientation		

1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Plating finish: CuSn6

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