

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

Rev. V2

Features

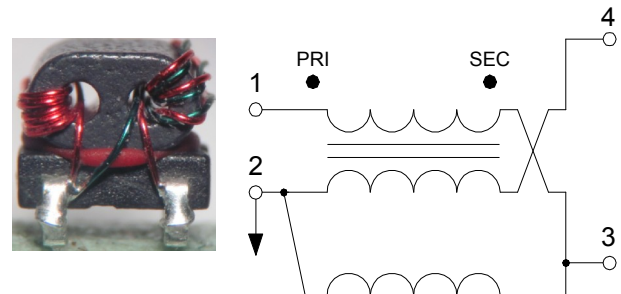
- 1:1 Impedance Ratio
- Surface Mount Package
- Excellent Temperature Stability
- Can be Used on both 50 Ω & 75 Ω Systems
- RoHS Compliant and Pb Free
- 260°C Reflow Compatible
- Available on Tape and Reel
- Suitable for all CATV, Broadband and FTTx Applications

Description

The MABA-010725 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
4	Secondary Dot

Electrical Specifications: Freq. = 45 - 1200 MHz, T_A = +25°C, Z₀ = 75 Ω, P_{IN} = 0 dBm

Parameter	Frequency Test Conditions (MHz)	Units	Min.	Typ.	Max.
Impedance Ratio	—	ratio	—	1:1	—
Insertion Loss (pin 1 - pin 4)	45 - 100	dB	—	0.6	0.7
	100 - 600			0.5	0.7
	600 - 1200			0.4	0.8
Insertion Loss (pin 1 - pin 3)	45 - 100	dB	—	0.2	0.4
	100 - 600			0.4	0.9
	600 - 1200			0.9	1.4
Amplitude Balance	45 - 600	dB	—	0.2	±0.5
	600 - 1200			0.3	±1.1
Phase Balance	45 - 600	°	—	2	±4
	600 - 1200			3	±6
Input Return Loss (pin 1)	45 - 150	dB	20	27	—
	150 - 600		20	25	
	600 - 1200		14	19	

Ordering Information

Part Number	Package
MABA-010725-CT1006	2000 piece reel
MABA-010725-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

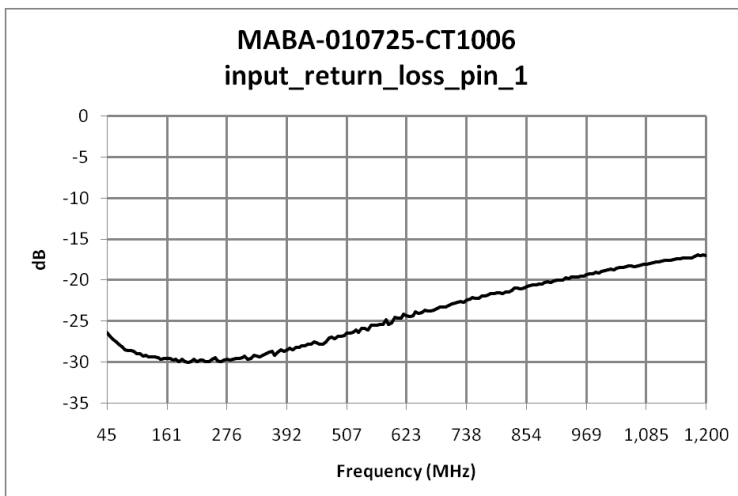
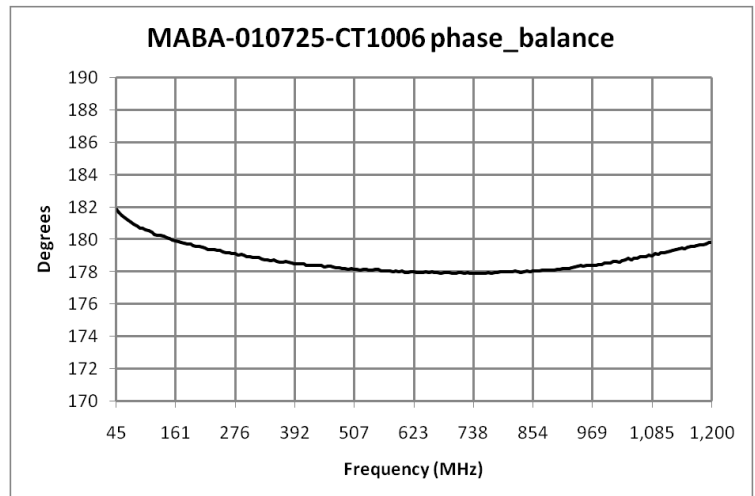
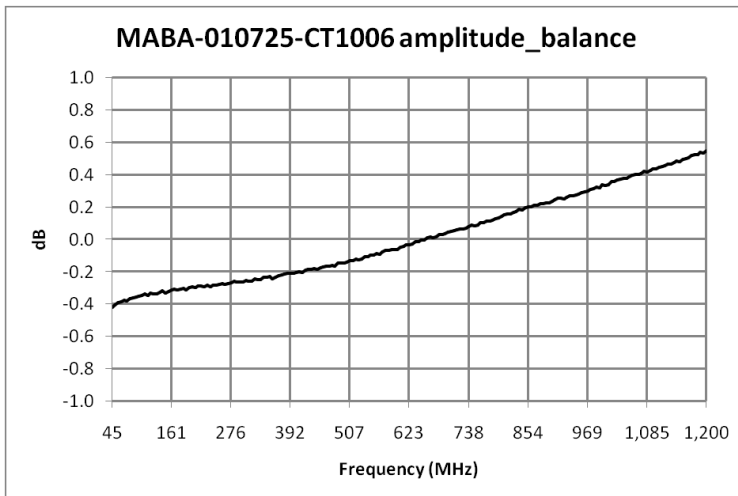
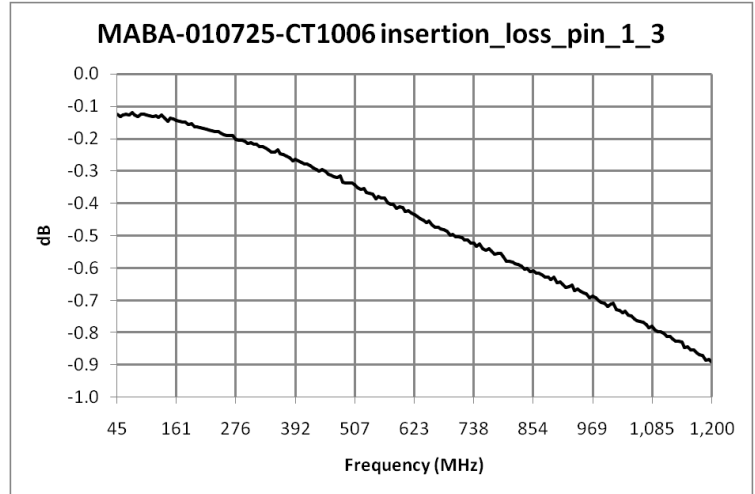
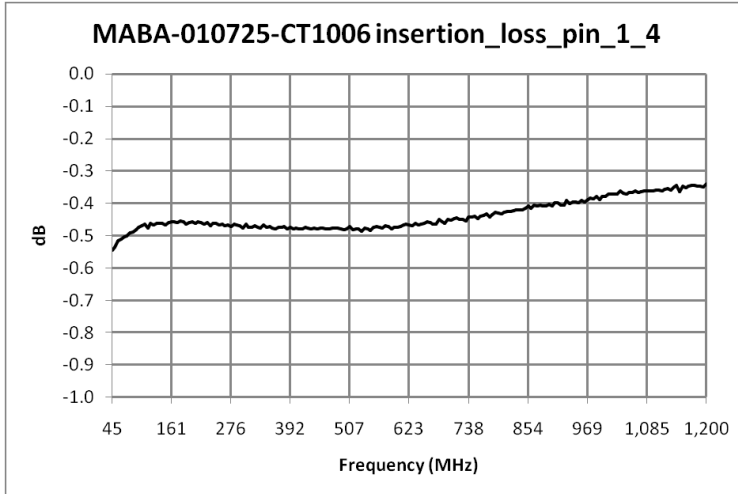
MABA-010725-CT1006



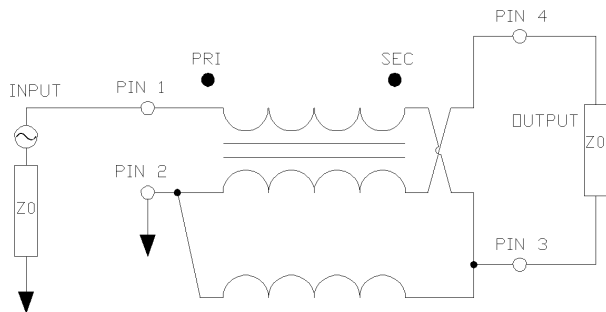
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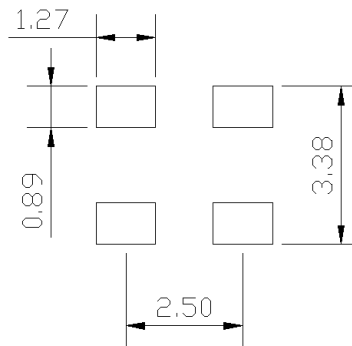
Typical Performance Curves



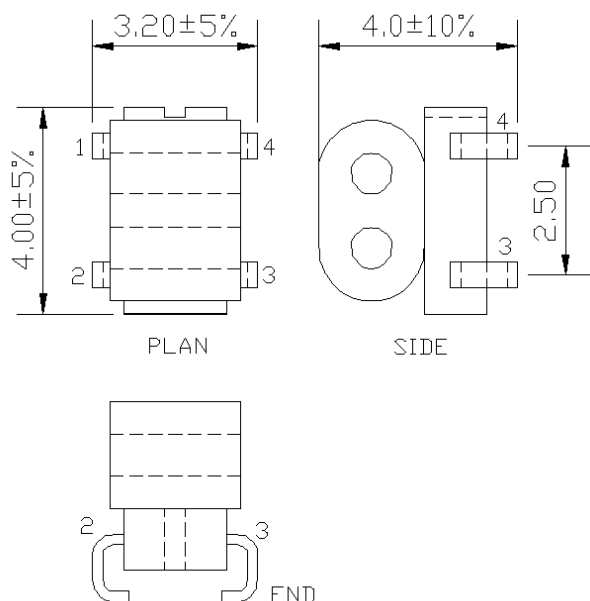
Application Circuit



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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