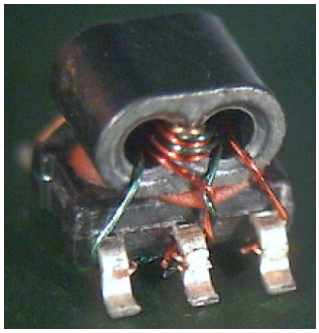
MABA-009298-CT48A0

Transformer, 4:1 Flux Coupled Balun Transformer 1 to 650 MHz

Rev. V2

Features

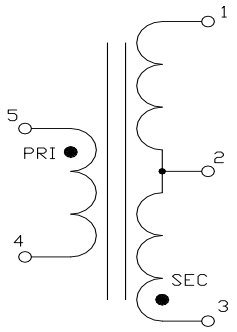
- Surface mount
- 4:1 Impedance ratio
- Can be used in both 50Ω and 75Ω systems
- RoHS* compliant and lead-free
- RoHS version of the MABAES0031
- Available on tape and reel.



Description

MABA-009298-CT48A0 is a 4:1 RF flux coupled step up transformer in a low cost, surface mount package. Ideally suited for high volume CATV/ Broadband applications.

Schematic



Ordering information

Part number	Description
MABA-009298-CT48A0	2000 piece reel
MABA-009298-CT48TB	Customer Test Board

Note: Reference Application Note **M513** for reel size information.

Pin configuration

Pin No.	Function
1	Secondary (output 2)
2	Centre Tap (ground)
3	Secondary Dot (output 1)
4	Primary (Input)
5	Primary Dot (Ground)

* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

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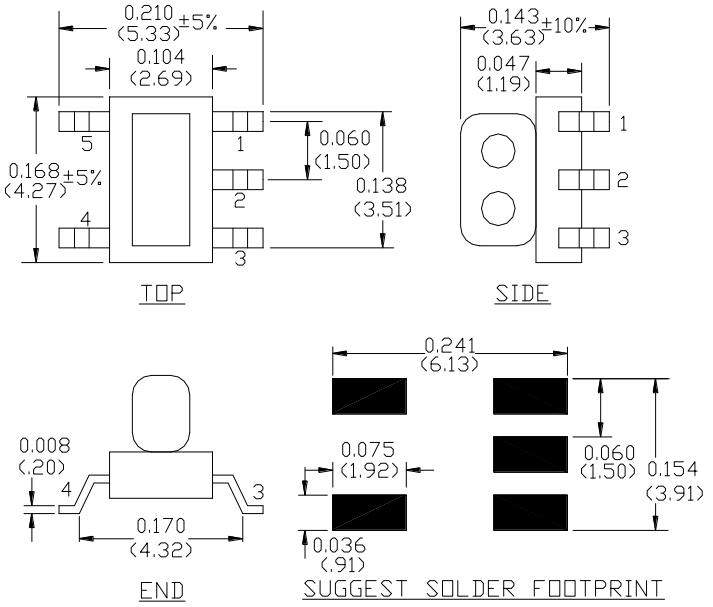
Electrical Specifications: T_A = 25°C, Z_0 = 50Ω

Parameter	Test Conditions	Units	Min	Typ	Max
Insertion Loss 1 (pin4 - pin3)	1 - 10 MHz 10 - 250 MHz 250 - 520 MHz 520 - 650 MHz	dB	—	1.43 1.12 1.49 2.23	3.6 1.6 2.5 3.9
Insertion Loss 2 (pin4 - pin1)	1 - 10 MHz 10 - 250 MHz 250 - 450 MHz 450 - 650 MHz	dB	—	1.44 1.14 1.55 2.43	3.6 1.6 2.5 3.9
Input Return Loss	1 - 10 MHz 10 - 170 MHz 170 - 320 MHz 320 - 650 MHz	dB	5 14 10 4	14.6 18.8 14.1 8.4	—
Amplitude Unbalance (Nominal 0dB)	1 - 300 MHz 300 - 650 MHz	dB	—	0.03 0.24	±0.2 ±0.8
Phase Unbalance (Nominal 180°)	1 - 100 MHz 100 - 400 MHz 400 - 600 MHz 600 - 650 MHz	°	—	0.34 1.25 0.79 2.91	±2 ±5 ±15 ±20

Absolute maximum ratings

Parameter	Absolute maximum
Max input power	250 mW
DC current	200 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

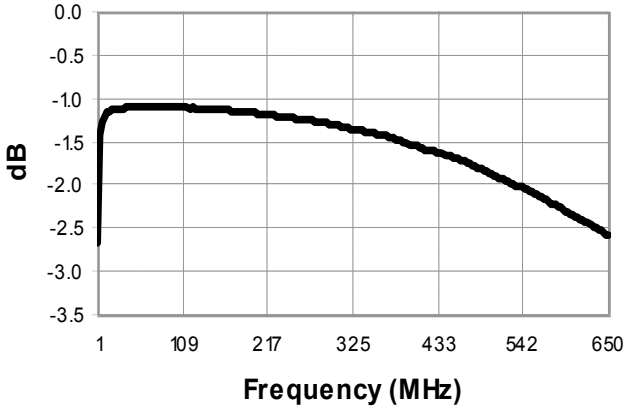
Case style: SM-138



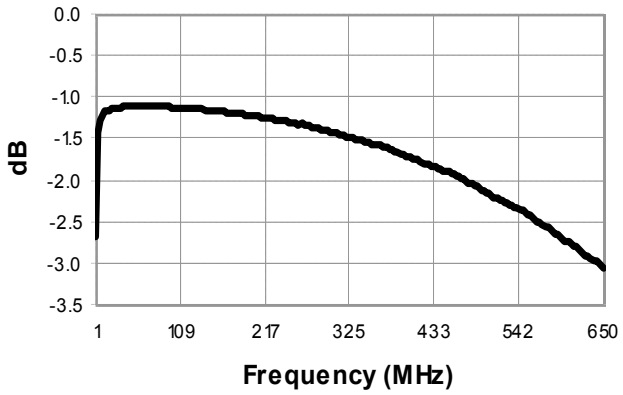
Dimensions in inches [mm] Tolerance: .xx ± .02, .xxx ± .010, Unless otherwise stated

Typical Performance Curves: T_A = 25°C, Z_0 = 50Ω

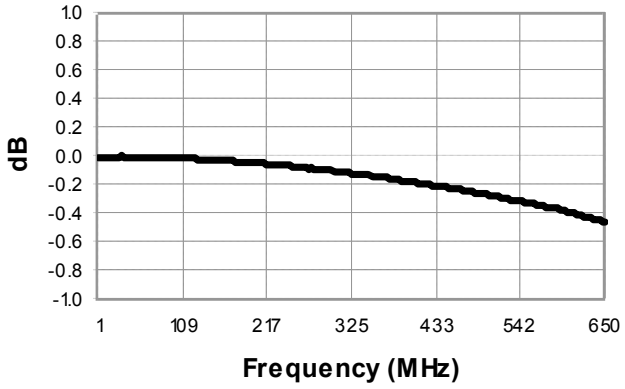
Insertion Loss 1: through pin 4 to pin 3



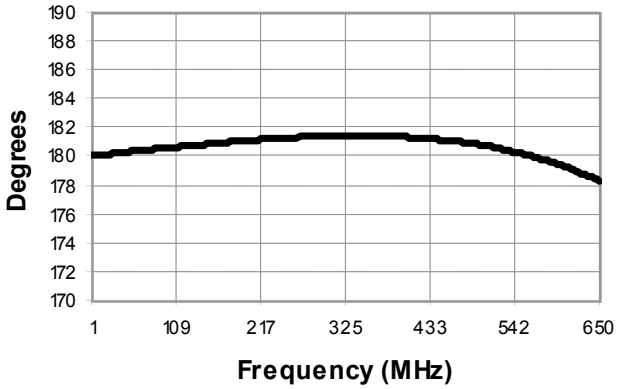
Insertion Loss 2: coupled pin 4 to pin 1



Amplitude Balance



Phase Balance



Input Return Loss