

RoHS Compliant



4:1 Transmission Line Transformer 500-3000MHz

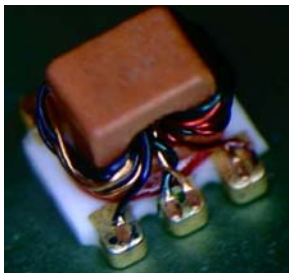
MABACT0065
V1

Features

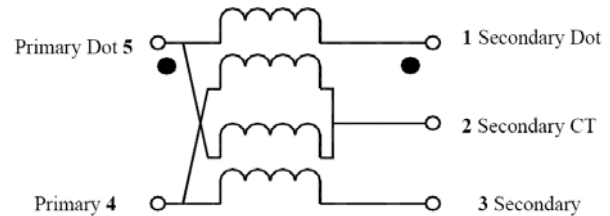
- Surface Mount
- 4:1 Impedance, unbalanced to unbalanced
- Centre tap on secondary
- 260°C Reflow Compatible
- RoHS* Compliant
- RoHS version of ETC1.6-4-2-3
- Available on Tape and Reel. Reel quantity 2000

Description

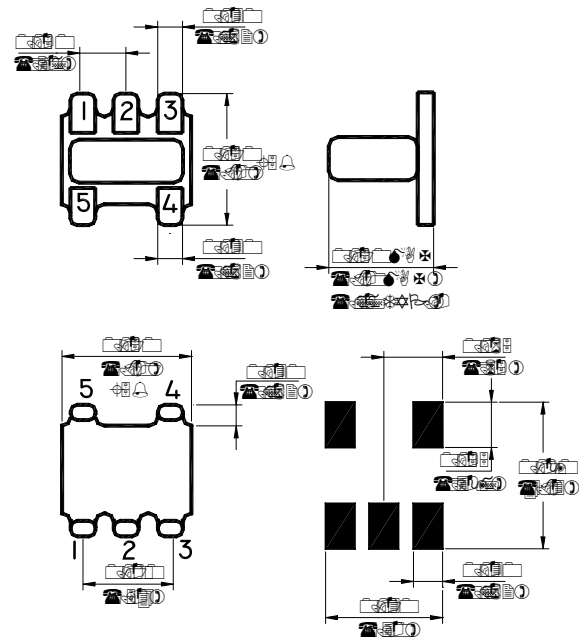
M/A-COM's MABACT0065 is a 4:1 RF transmission line step-up transformer in a low cost, surface mount package. Ideally suited for high volume cellular and wireless applications. Typical applications include single to balanced mode conversion and impedance matching.



Schematic



Case Style: SM-22



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

Pin Configuration

Pin No.	Function
1	Secondary Dot (output 1)
2	Secondary centre tap (ground)
3	Secondary (output 2)
4	Primary (ground)
5	Primary Dot (input)

Ordering Information

Part Number	Package
MABACT0065TR	2000 piece reel
MABA-007949-CT65TB	Customer test board

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

* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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4:1 Transmission Line Transformer 500-3000MHz

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V1

Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 50\Omega$ ¹

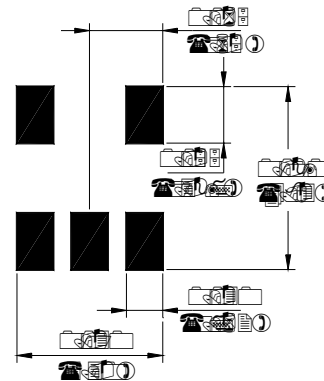
Parameter	Units	Nominal	Maximum	Mean (x)	Sigma (σ)
Frequency Range 500 - 3000	MHz	—	—	—	—
Insertion Loss ($f_L - f_U$)					
500 - 750 MHz	dB	—	3.0	—	—
750 - 1200 MHz	dB	—	1.0	0.22	0.159
1200 - 3000 MHz	dB	—	3.0	—	—

Absolute Maximum Ratings^{1,2}

Parameter	Absolute Maximum
Max Input Power	250mW
DC current	30mA
Operating Temperature	-30°C to +85°C
Storage Temperature	-30°C to +85°C

- Exceeding any one or combination of these limits may cause permanent damage to this device.
- M/A-COM does not recommend sustained operation near these survivability limits.

Recommended PCB Configuration



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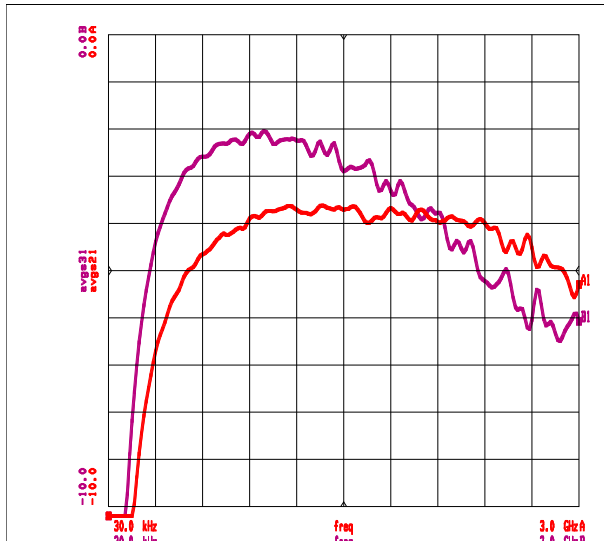


4:1 Transmission Line Transformer
500-3000MHz

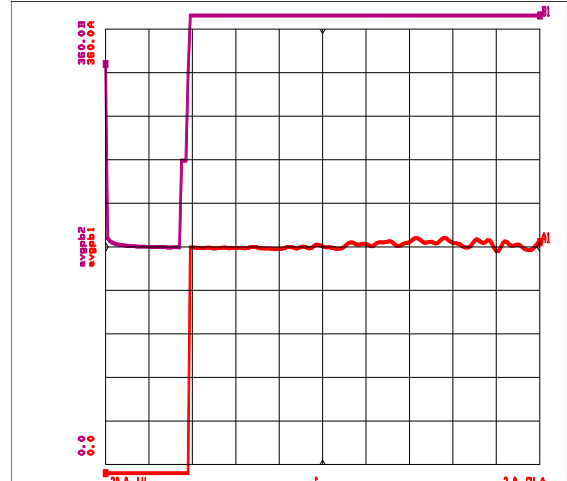
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Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 50\Omega$ ¹

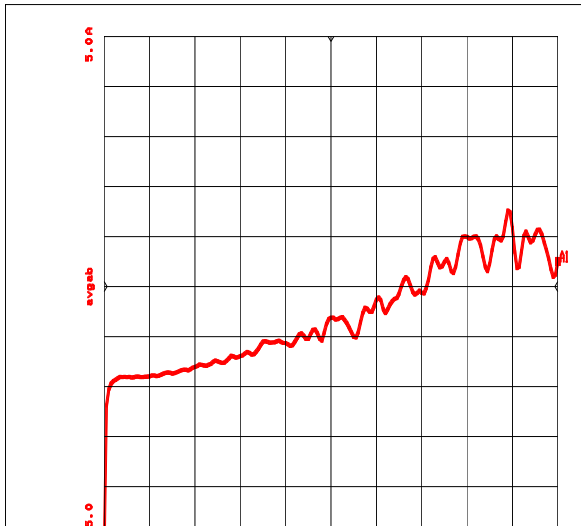
Insertion Loss



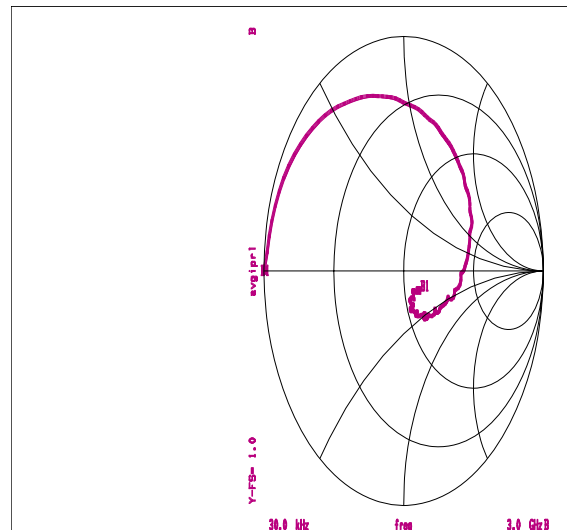
Phase Unbalance



Amplitude Unbalance



Input Impedance



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