

# MABACT0065



**4:1 Transmission Line Transformer**  
**500 - 3000 MHz**

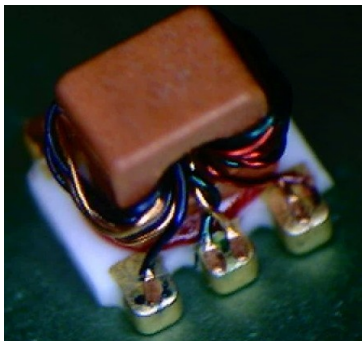
Rev. V3

## Features

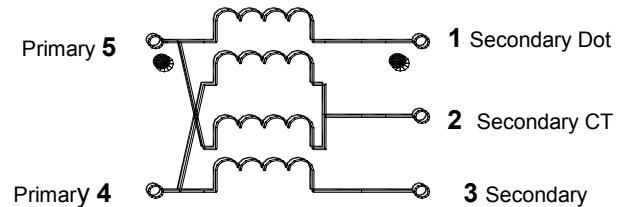
- Surface mount
- Wide frequency range
- 4:1 Impedance Ratio, unbalanced to unbalanced
- CT on Secondary
- Pb Free
- RoHS\* version of ETC1.6-4-2-3
- 260°C reflow compatible.

## Description

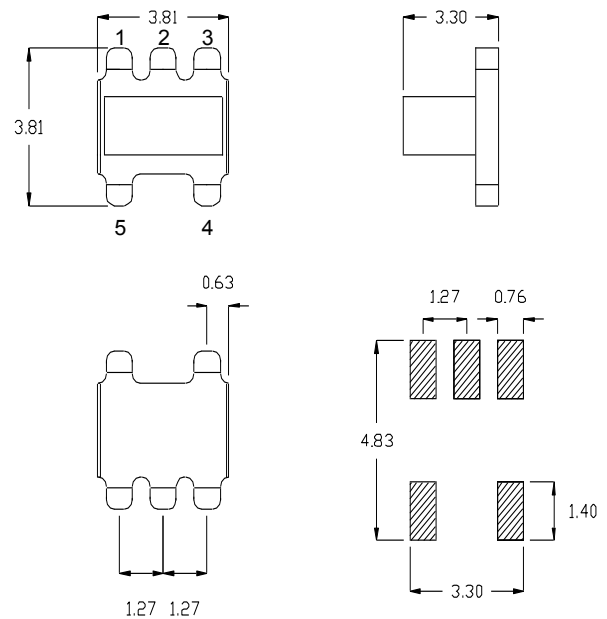
M/A-COM Technology Solutions MABACT0065 is a 4:1 RF transmission line step-up transformer in a low cost, surface mount package. Ideally suited for high volume cellular and wireless applications. Typical applications include single to balanced mode conversion and impedance matching.



## Schematic



## Component Dimensions



## Pin Configuration

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

1

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## 4:1 Transmission Line Transformer 500 - 3000 MHz

Rev. V3

### Electrical Specifications: $T_A = 25^\circ\text{C}$ , $Z_0 = 50\Omega$ <sup>1</sup>

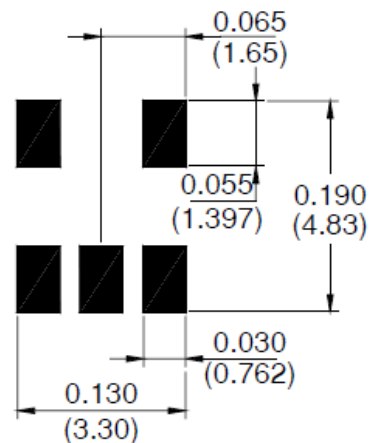
Parameter	Frequency	Units	Min	Typ	Max	Mean(x)	Sigma
RF Frequency	500 - 3000	MHz	—	—	—	—	—
Insertion Loss	500 - 750	dB	—	—	3.0	—	—
	750 - 1200	dB	—	—	1.0	0.22	0.159
	1200 - 3000	dB	—	—	3.0	—	—

### Recommended Maximum Ratings <sup>1,2</sup>

Parameter	Value
DC Power	250 mW
DC Current	30 mA
Operating Temperature	-30°C to +85°C
Storage Temperature	-30°C to +85°C

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

### Recommended PCB Configuration



2

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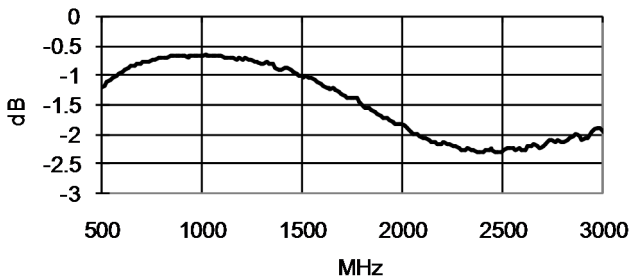


4:1 Transmission Line Transformer  
500 - 3000 MHz

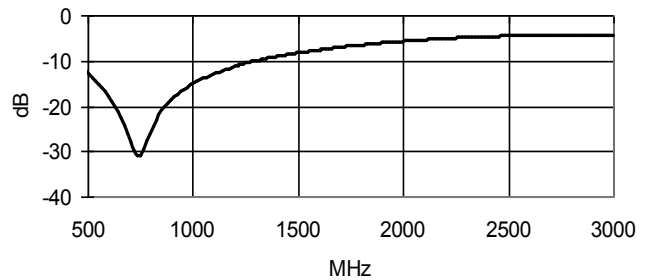
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Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 50\Omega$  <sup>1</sup>

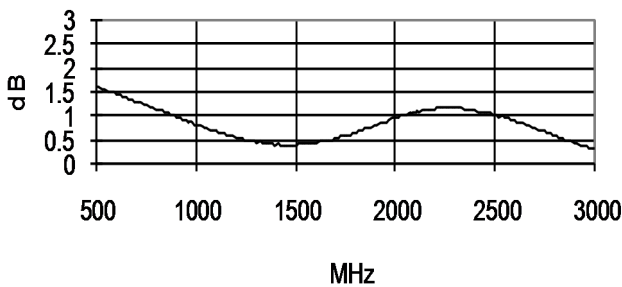
Insertion Loss



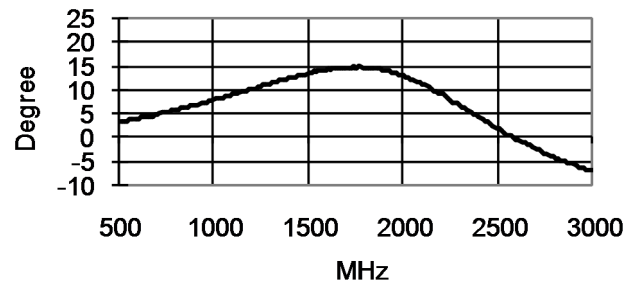
Input Return Loss



Amplitude Unbalance



Phase Unbalance



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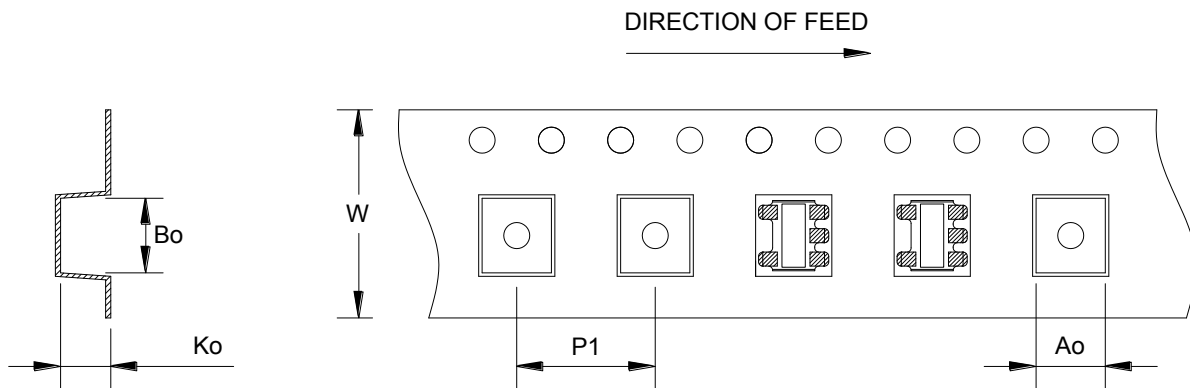
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**4:1 Transmission Line Transformer**  
**500 - 3000 MHz**

Rev. V3

## Tape & Reel Information



Item	Dimension
Ao	4.10mm +/- 0.1mm
Bo	4.20mm +/- 0.1mm
Ko	3.40mm +/- 0.1mm
W	12.00mm +/- 0.3mm
P1	8.00mm +/- 0.1mm

## Ordering Information

Part number	Description
MABACT0065	2000 piece reel

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