## RoHS Compliant

9:1 Transmission Line Step-up Transformer 5-220MHz



#### MABA-007488-CT9550 V1P

#### Features

- Surface Mount
- 9:1 Impedance
- Excellent amplitude and phase balance
- Can be used in both 50  $\Omega$  and 75  $\Omega$  systems
- 260°C Reflow Compatible
- RoHS\* Compliant
- RoHS version of MABAES0022
- Available on Tape and Reel. Reel quantity 900

#### Description

M/ACom's MABA-007488-CT9550 is a 9:1 Transmission Line step up transformer in a low cost, surface mount package. Ideally suited for high volume



#### Case Style: SM-55



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

#### **Pin Configuration**

Function	Config 1 Pin No.	Config 2 Pin No.	
Input	6	4	
Output 1	1	3	
Output 2	3	1	
Ground	4	6	
Not connected	2,5	2,5	

#### **Ordering Information**

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Part Number	Package		
MABA-007488-CT9550TR	900 piece reel		
MABA-007488-CT95TB	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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#### Electrical Specifications: $T_A = 25^{\circ}C$ , $Z_0 = 75\Omega$

Parameter		Units	Typical	Minimum	Maximum
Frequency Range 5-220	)	MHz			
Insertion Loss 1 (From Pir (Short Connections)	n 6 to 1 & From Pin 4 to 3} 5 - 155 MHz 155-220 MHz	dB dB	0.2 0.8	_	0.5 1.0
Amplitude Imbalance 1	5 - 55 MHz 55 –155 MHz 155 –220 MHz	dB dB dB	0.03 0.04 0.14	-	0.2 0.3 0.5
Phase Imbalance 1	5-55 MHz 55 –155 MHz 155 –220 MHz	0 0 0	0.5 1.1 1.5	 	1.0 2.0 2.5
Insertion Loss 2 (From Pir	n 6 to 3 & From Pin 4 to 1}				
(Cross connections)	5 - 55 MHz 55-100 MHz 100-220 MHz	dB dB dB	0.8 1.0 1.4		1.0 1.2 1.8
Amplitude Imbalance 2	5 - 55 MHz 55 –155 MHz 155 –220 MHz	dB dB dB	0.03 0.04 0.14	 	0.2 0.3 0.5
Phase Imbalance 2	5-55 MHz 55 –100 MHz 100 –220 MHz	0 0 0	1.0 1.4 2.5		2.0 3.0 4.0
Input Return Loss	5-220 MHz	dB	10	8	_

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

Parameter	Absolute Maximum		
Max Input Power	250mW		
DC current	30mA		
Operating Temperature	-20°C to +85°C		
Storage Temperature	-55°C to +100°C		

1. 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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#### Schematic for Config 1





#### Typical Performance Curves: $T_A = 25^{\circ}C$ , $Z_0 = 75\Omega$

#### Insertion Loss 1 & 2 (Reference Value -15.45dB)



#### **Amplitude Unbalance**







### Input Return Loss



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V1P

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