

RoHS Compliant



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

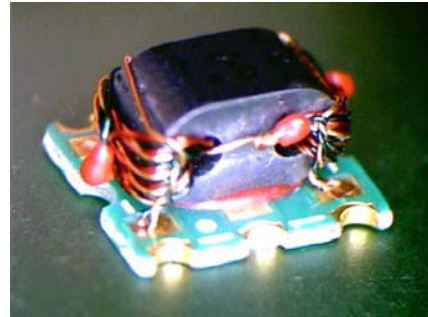
MABA-007488-CT9550
V1P

Features

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

Description

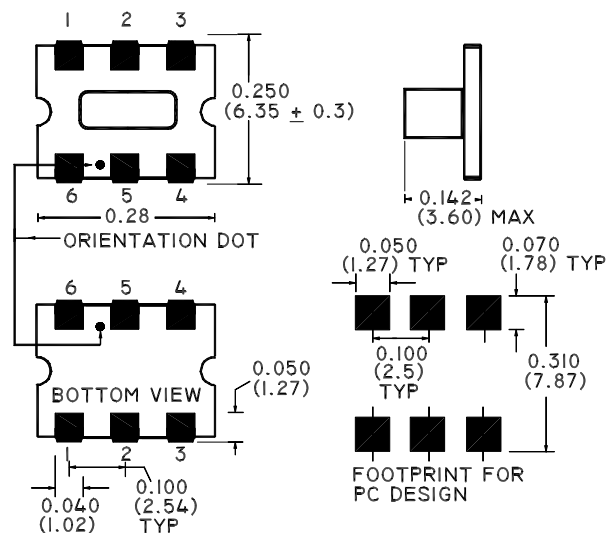
M/ACom's MABA-007488-CT9550 is a 9:1 Transmission Line step up transformer in a low cost, surface mount package. Ideally suited for high volume



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

Case Style: SM-55



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

Ordering Information

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.

1

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

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.

• North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400
• India Tel: +91.80.4155721 • China Tel: +86.21.2407.1588

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Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75\Omega$

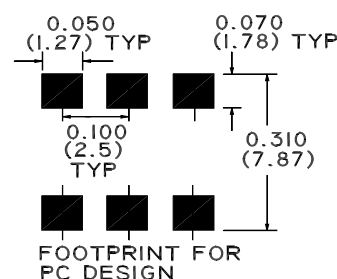
Parameter	Units	Typical	Minimum	Maximum
Frequency Range 5-220	MHz			
Insertion Loss 1 {From Pin 6 to 1 & From Pin 4 to 3} (Short Connections) 5 - 155 MHz 155-220 MHz	dB dB	0.2 0.8	— —	0.5 1.0
Amplitude Imbalance 1 5 - 55 MHz 55 -155 MHz 155 -220 MHz	dB dB dB	0.03 0.04 0.14	— — —	0.2 0.3 0.5
Phase Imbalance 1 5-55 MHz 55 -155 MHz 155 -220 MHz	$^\circ$ $^\circ$ $^\circ$	0.5 1.1 1.5	— — —	1.0 2.0 2.5
Insertion Loss 2 {From Pin 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	$^\circ$ $^\circ$ $^\circ$	1.0 1.4 2.5	— — —	2.0 3.0 4.0
Input Return Loss 5-220 MHz	dB	10	8	—

Absolute Maximum Ratings ^{1,2}

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

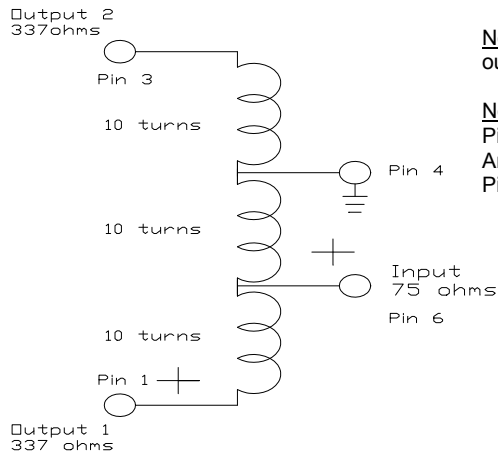
Recommended PCB Configuration



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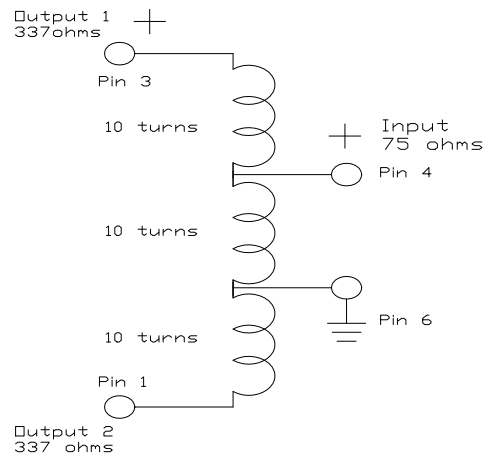
Schematic for Config 1



Note: Terminate unused output

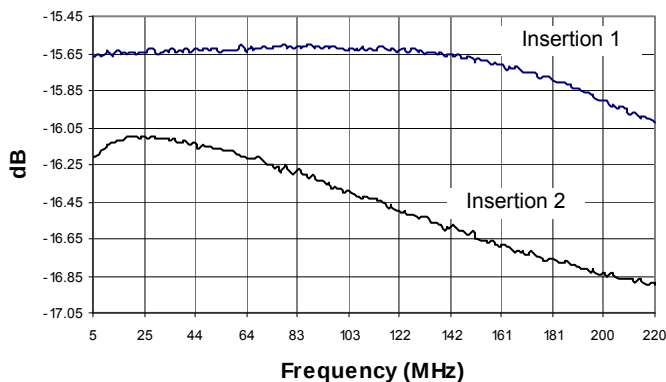
Note: When Pin 4 is the I/P
Pin 6 is ground
And when Pin 6 is the I/P
Pin 4 is ground.

Schematic for Config 2

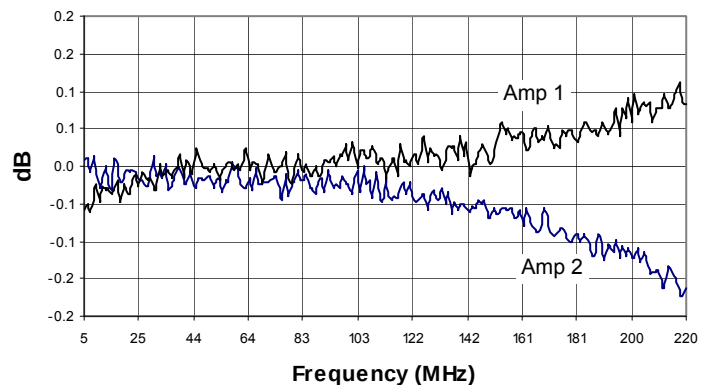


Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 75\Omega$

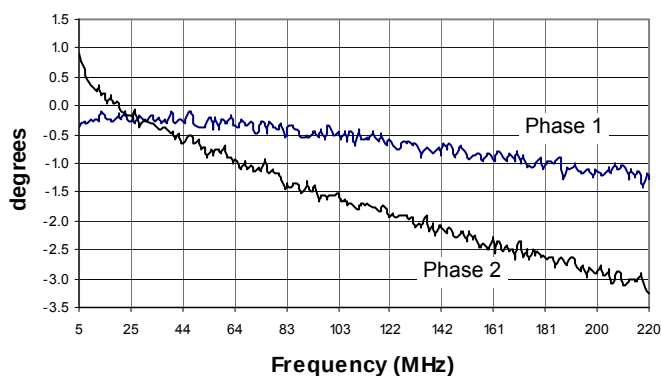
Insertion Loss 1 & 2 (Reference Value -15.45dB)



Amplitude Unbalance



Phase Balance



Input Return Loss

