

E-Series RF 1:4 Flux Coupled Step-up Transformer 2 – 800 MHz

Rev. V4

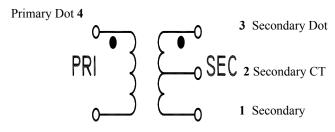
Features

- 1:4 Impedance Ratio
- CT on Secondary
- Surface Mount
- Tape and reel packaging available

Description

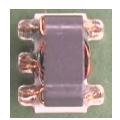
M/A-COM's ETC4-1-2 is a 1:4 RF flux coupled stepup transformer in a low cost, surface mount package. Ideally suited for high volume cellular and wireless applications. Typical applications include single to balanced mode conversion and impedance matching. Parts are packaged in tape & reel.

Schematic



Primary 5

Product Image

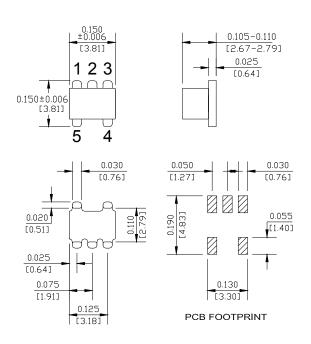


Pin Configuration

Pin No.	Function		
1	Secondary		
2	Secondary CT		
3	Secondary Dot		
4	Primary Dot		
5	Primary		

3. The exposed pad centered on the package bottom must be connected to RF and DC ground.

SM-22 package



* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

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.

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 Visit www.macomtech.com for additional data sheets and product information.

ETC4-1-2TR



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

Parameter	Test Conditions	Frequency	Units	Min	Тур	Max
RF Frequency	_	2 - 800	MHz	_	_	_
Insertion Loss	F _L —f _U	10 - 100 5 - 600 2 - 800	dB dB dB		1.21 —	1.0 2.0 3.0
Amplitude Unbalance	_	10 - 100 2 - 800	dB dB	_	_	0.25 1.0
Phase Unbalance	_	10 - 500 2 - 800	Degrees Degrees	_	_	2.0 10.0

6. External DC blocking capacitors are required on all RF ports (39 pF capacitors are recommended).

Absolute Maximum Ratings 4,5

Parameter	Absolute Maximum
DC Power	250mW
DC Current	30mA
Operating Temperature	-55°C to +85°C
Storage Temperature	-55°C to +125°C

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

[†] Reference Application Note M538 for lead-free solder reflow recommendations. Meets JEDEC moisture sensitivity level 1 requirements.

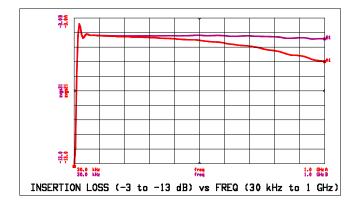


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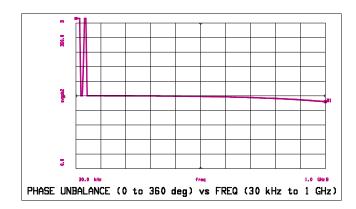
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Typical Performance Curves

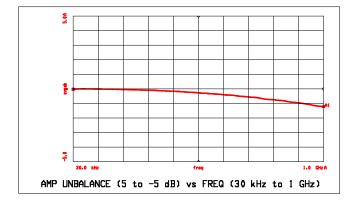
Insertion Loss



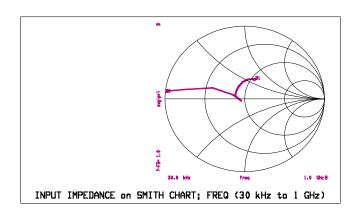
Phase Unbalance



Amplitude Unbalance



Input Impedance



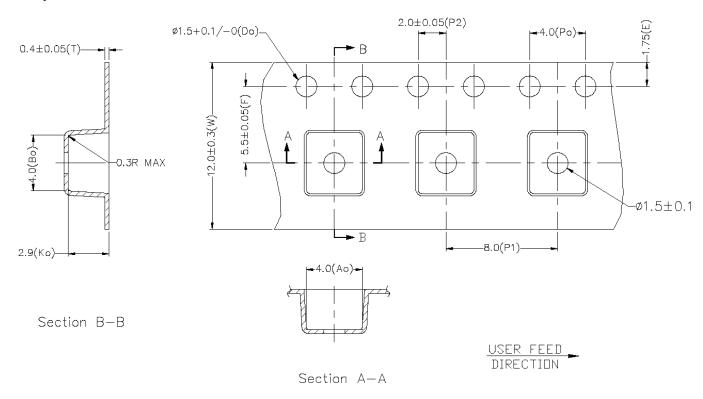
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Tape & Reel Information



Item	Dimension
Ao	4.00mm +/-0.1mm
Во	4.00mm +/-0.1mm
Ko	2.9mm +/-0.1mm
W	12.00mm +/-0.3mm
P1	8.00mm +/-0.1mm

Ordering Information

Part Number	Package
ETC4-1-2TR	2000 piece reel

- 1. Reference Application Note M513 for reel size information.
- 2. All sample boards include 5 loose parts.