

SURFACE MOUNT RF Transformer

50Ω 5 to 300 MHz

TC3-1T+

TC3-1TX*
Upgraded Version*

Mini-Circuits

- *Addition of Top Hat® Feature Benefits**
- Allows Faster Pick-and-Place
 - Enables Visual Identification Marking

FEATURES

- Excellent Amplitude Unbalance (0.3 dB Typ) and Phase Unbalance (5 Deg. Typ) in 1 dB Bandwidth
- Plastic Base with Leads
- Good Return Loss
- Aqueous Washable



Generic photo used for illustration purposes only

CASE STYLE: AT224-1A

+RoHS Compliant

The +Suffix identifies RoHS Compliance.

See our website for methodologies and qualifications

APPLICATIONS

- Impedance Matching
- Balanced Antennas

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (Secondary/Primary)			3		Ohms
Frequency Range		5		300	MHz
Insertion Loss ¹	- 5-300		3 2 1		dB

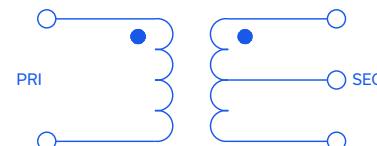
1. Insertion Loss is referenced to mid-band loss, 0.4 dB typ.

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-20°C to +85°C
Storage Temperature	-55°C to +100°C
RF Power	0.25 W
DC Current	30 mA

Permanent damage may occur if any of these limits are exceeded.

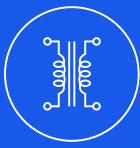
CONFIG. A



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REV. G
ECO-025349
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SURFACE MOUNT

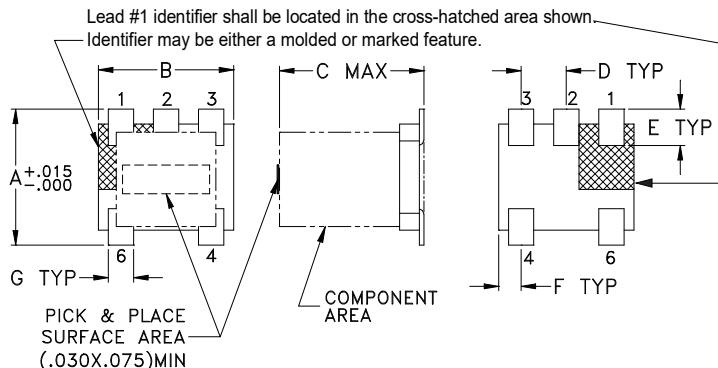
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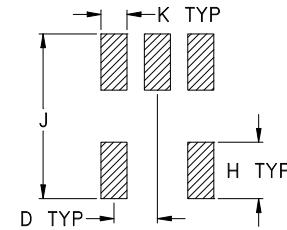
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PIN CONNECTIONS

PRIMARY DOT	6
PRIMARY	4
SECONDARY DOT	1
SECONDARY	3
SECONDARY CT	2

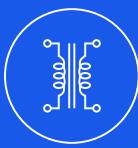
PRODUCT MARKING: N/A**DEMO BOARD MCL P/N: TB-TC3-1T+****OUTLINE DRAWING**

PCB Land Pattern

Suggested Layout,
Tolerance to be within $\pm .002$ in**OUTLINE DIMENSIONS (Inch mm)**

A	B	C	D	E	F
.150 3.81	.150 3.81	.160 4.06	.050 1.27	.040 1.02	.025 0.64
G	H	J	K		wt
.028 0.71	.065 1.65	.190 4.83	.030 0.76		grams 0.15

TAPE & REEL INFORMATION: F17



SURFACE MOUNT

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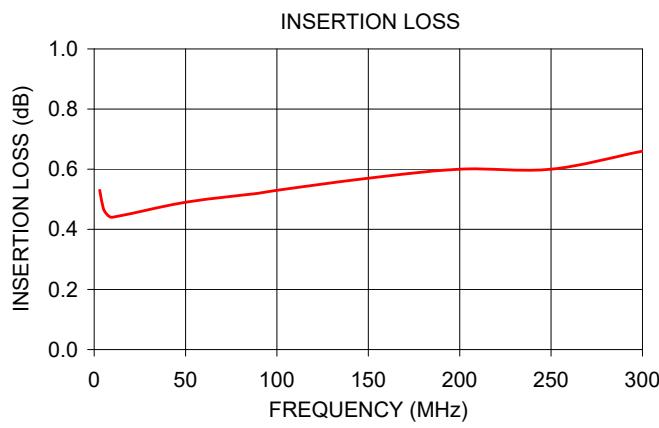
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TYPICAL PERFORMANCE DATA

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)
3	0.53	21.45
7	0.45	24.23
10	0.44	24.89
50	0.49	24.99
90	0.52	24.79
100	0.53	24.74
150	0.57	24.15
200	0.60	23.65
250	0.60	22.64
300	0.66	21.73



NOTES

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html

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