

RF Transformer

TC1-42+

 50Ω 0.25 to 400 MHz

FEATURES

- Plastic base with solder plated leads
- Excellent amplitude unbalance, 0.2 dB typ. and phase unbalance, 3 deg. typ. in 1dB bandwidth
- 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

- · Balanced to unbalanced
- · Push-pull amplifier

ELECTRICAL SPECIFICATIONS AT 25°C

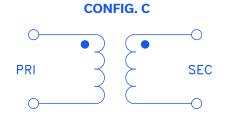
Parameter	Frequency (MHz)	Min.	Тур.	Max.	Unit
Impedance Ratio			1		Ohm
Frequency Range		0.25		400	MHz
	0.25-400		3		
Insertion Loss*	0.35-250		2		dB
	0.7-150		1		

^{*}Insertion Loss is referenced to mid-band loss, 0.3 dB typ.

MAXIMUM RATINGS

Parameter	Ratings	
Operating Temperature	-40°C to 85°C	
Storage Temperature	-55°C to 100°C	
RF Power	0.25W	
DC Current	30mA	

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



REV. C ECO-022029 TC1-42+ MCL NY 240607



SURFACE MOUNT

Transformer

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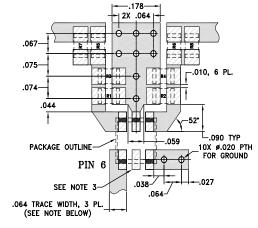
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PIN CONNECTIONS

PRIMARY DOT	6
PRIMARY	4
SECONDARY DOT	1
SECONDARY	3
NOT USED	2.5

PRODUCT MARKING: N/A

DEMO BOARD MCL P/N: TB-77 SUGGESTED PCB LAYOUT (PL-243)

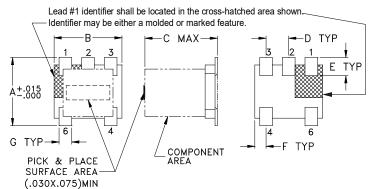


RESISTORS R1-R8: 0805 SIZE

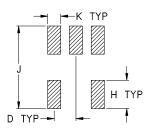
NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE.
FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
3. THIS PAD IS NOT REQUIRED FOR AT224 CASE STYLES.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

OUTLINE DRAWING



PCB Land Pattern



Suggested Layout, Tolerance to be within±.002

OUTLINE DIMENSIONS (Inch)

F	Ε	D	С	В	Α
.025	.040	.050	.160	.150	.150
0.64	1.02	1.27	4.06	3.81	3.81
wt		K	J	Н	G
grams		.030	.190	.065	.028
0.15		0.76	4.83	1.65	0.71

TAPE & REEL INFORMATION: F17



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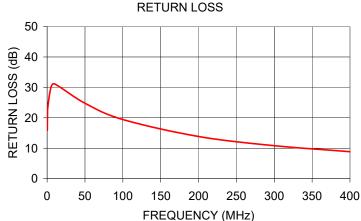
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TYPICAL PERFORMANCE DATA

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)
0.25	0.79	15.85
0.50	0.63	20.29
1.00	0.52	23.72
5.00	0.34	29.93
10.00	0.30	31.13
50.00	0.37	24.78
100.00	0.48	19.43
200.00	0.69	13.85
300.00	0.95	10.83
400.00	1.44	8.85





NOTES

A. 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.

B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.

C. 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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