

RF Transformer

50Ω 0.5 to 550 MHz

Maximum Ratings

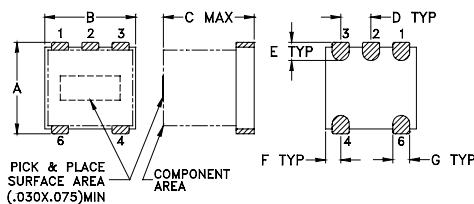
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	250mW
DC Current	30mA

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

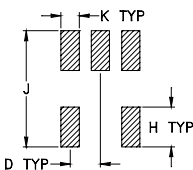
Pin Connections

PRIMARY DOT	6
PRIMARY	4
SECONDARY DOT	1
SECONDARY CT	2
SECONDARY	3
NOT USED	5

Outline Drawing AT224-3



PCB Layout Pattern



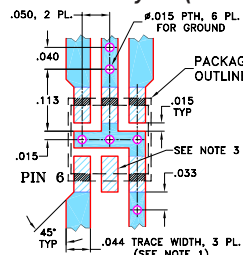
**Suggested Layout,
Tolerance to be within ± 0.002**

Outline Dimensions (inch)

A	B	C	D	E	F
.150	.150	.150	.050	.030	.025
3.81	3.81	3.81	1.27	0.76	0.64
G	H	J	K	wt	
.028	.065	.190	.030	grams	
0.71	1.65	4.83	0.76	0.10	

Demo Board MCL P/N: TB-145


Suggested PCB Layout (PL-244)




NOTES: 1. TRACE THICKNESS IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC CONSTANT "020" - 0.015" COPPER: 1/2 OZ. ON 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 STYLE.

 DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Notes

Notes:

- A. Performance and quality attributes and conditions 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/MCLStore/terms.jsp

Features

- suitable for tin/lead and RoHS solder systems
- low insertion loss, 0.4 dB typ. in 1 dB Bandwidth
- excellent return loss, 25 dB typ. in 1 dB Bandwidth
- aqueous washable

Applications

- impedance matching, 50 to 75 ohms
- balanced amplifier



CASE STYLE: AT224-3

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



**Available Tape and Reel
at no extra cost**

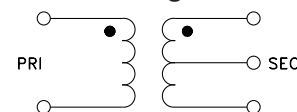
Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500
13"	1000, 2000

Transformer Electrical Specifications

Ω RATIO (Secondary/Primary)	FREQUENCY (MHz)	INSERTION LOSS*		
		3 dB MHz	2 dB MHz	1 dB MHz
1.5	0.5-550	0.5-550	1-350	2-200

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

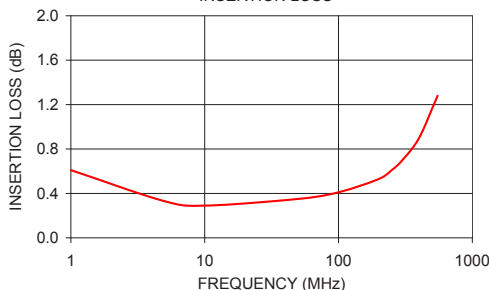
Config. A



Typical Performance Data

	FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)
	0.50	0.82	15.72
	1.00	0.61	19.84
	5.00	0.33	28.81
	10.00	0.29	32.35
	50.00	0.35	28.60
	100.00	0.41	23.52
	200.00	0.53	18.07
	250.00	0.61	16.13
	300.00	0.70	14.71
	400.00	0.90	12.52
	550.00	1.28	10.19

INSERTION LOSS



INPUT RETURN LOSS

