

# Surface Mount RF Transformer

50Ω 0.4 to 500 MHz

TC1-1TX+  
Upgraded Version\*

TC1-1T+

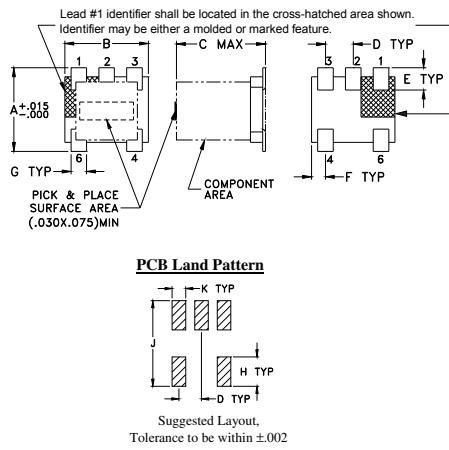
## Maximum Ratings

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.	

## Pin Connections

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

## Outline Drawing AT224-1A



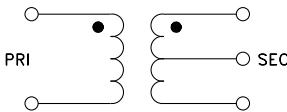
## Outline Dimensions (inch)

A	B	C	D	E	F
.150	.150	.160	.050	.040	.025
3.81	3.81	4.06	1.27	1.02	0.64

G	H	J	K	wt
.028	.065	.190	.030	grams 0.15

## Config. A

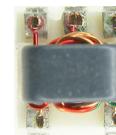


## Features

- usable over 0.4-500 MHz
- excellent amplitude unbalance, 0.1 dB typ.
- and phase unbalance, 2 deg typ. in 1 dB bandwidth
- good return loss
- plastic base with leads
- aqueous washable

## Applications

- VHF/UHF receivers/transmitters
- push-pull amplifiers



CASE STYLE: AT224-1A

PRICE: \$2.19 ea. QTY(20)

\$1.19 ea. QTY(100)

\*Addition of Top hat™ feature

### Benefits

- Allows faster pick-and-place
- Enables visual identification marking

### +RoHS Compliant

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

## Electrical Specifications

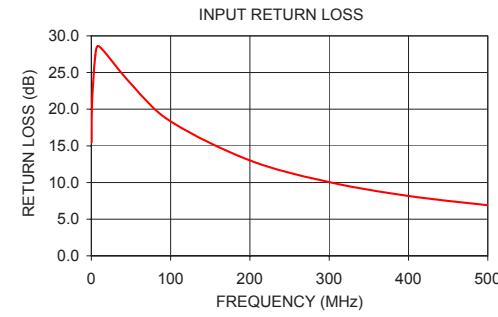
Ω RATIO	FREQUENCY (MHz)	INSERTION LOSS*			PHASE UNBALANCE (Deg.)		AMPLITUDE UNBALANCE (dB)	
		3 dB MHz	2 dB MHz	1 dB MHz	Typ.	1 dB bandwidth	2 dB bandwidth	1 dB bandwidth
1	0.4-500	0.4-500	0.5-300	1-100	2	5	0.1	0.6

\* Insertion Loss is referenced to mid-band loss, 0.35 dB typ.

Available Tape and Reel at no extra cost	
Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500
13"	1000, 2000

## Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Deg.)
0.30	0.88	15.46	0.06	0.03
1.00	0.57	21.01	0.04	0.05
5.00	0.33	27.35	0.02	0.01
10.00	0.32	28.55	0.02	0.15
50.00	0.40	23.46	0.02	0.63
100.00	0.51	18.34	0.06	1.24
200.00	0.78	13.01	0.21	2.57
300.00	1.10	10.06	0.47	3.99
400.00	1.46	8.16	0.82	5.66
500.00	1.84	6.90	1.26	7.50



### 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-Circuits' 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/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)