

# Surface Mount RF Transformer

50Ω

5 to 500 MHz

TC4-1W-7ALN+



CASE STYLE: AT224-1  
PRICE: \$1.19 ea. QTY (100)

## Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.25W
DC Current	150mA

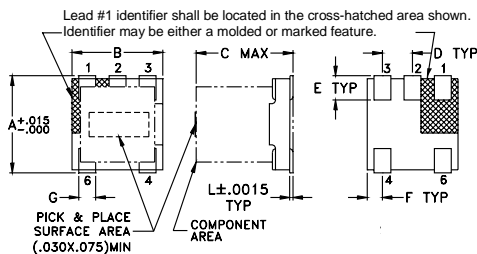
\*Applied through center tap, equal current to secondary dot & secondary.

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

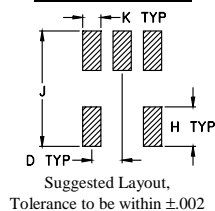
## Pin Connections

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

## Outline Drawing AT224-1



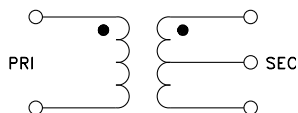
## PCB Land Pattern



## 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	L	wt
.028	.065	.190	.030	.007	grams
0.71	1.65	4.83	0.76	0.18	0.15

## Config. A



## Features

- good return loss
- impedance matching
- plastic base with leads
- aqueous washable

## Applications

- wireless infrastructure
- Impedance matching

## +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

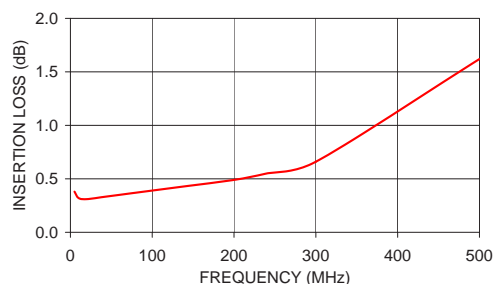
Ω RATIO (Secondary/Primary)	FREQUENCY (MHz)	INSERTION LOSS		
		3 dB MHz	2 dB MHz	1 dB MHz
4	5-500	5-500	10-300	25-200

Note: Electrical specifications defined with DC current at secondary and secondary dot equal.  
For DC imbalance of up to 7.5mA, the insertion loss degrades less than 1 dB.

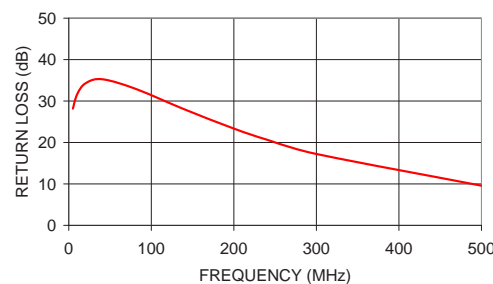
## Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)
5.0	0.38	28.17
10.0	0.32	31.57
20.0	0.31	34.24
40.0	0.33	35.27
80.0	0.37	33.01
140.0	0.43	28.01
200.0	0.49	23.35
300.0	0.66	17.23
400.0	1.02	12.75
500.0	1.62	9.57

TC4-1W-7ALN+  
INSERTION LOSS



TC4-1W-7ALN+  
RETURN LOSS



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



[www.minicircuits.com](http://www.minicircuits.com) P.O. Box 35166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

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TC4-1W-7ALN+  
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