

Mini-Circuits®

SURFACE MOUNT

## RF Transformer

TC4-1W-7ALN+

50Ω 5 to 500 MHz

## FEATURES

- Good return loss
- Impedance matching
- Plastic base with leads
- Aqueous washable



Generic photo used for illustration purposes only

CASE STYLE: AT224-1

**+RoHS Compliant**The +Suffix identifies RoHS Compliance.  
See our website for methodologies and qualifications

## APPLICATIONS

- Wireless infrastructure
- Impedance matching

## ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (Secondary/Primary)			4		Ohm
Frequency Range		5		500	MHz
Insertion Loss*	5-500		3		dB
Phase Unbalance	10-300		2		Deg.
Amplitude Unbalance	25-200		1		dB

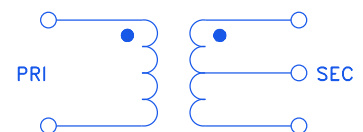
Note: Electrical specifications defined with DC current at secondary and secondary dot equal. For DC imbalance of up to 7.5mA, the insertion loss degrades less than 1 dB.

## ABSOLUTE MAXIMUM RATINGS

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

\*Applied through center tap, equal current to secondary dot & secondary.  
Permanent damage may occur if any of these limits are exceeded.

## CONFIG. A



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www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

REV. C  
ECO-022715  
TC4-1W-7ALN+  
MCL NY  
240808

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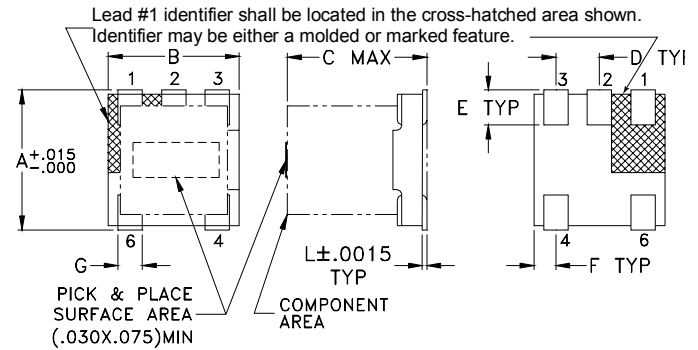


## PIN CONNECTIONS

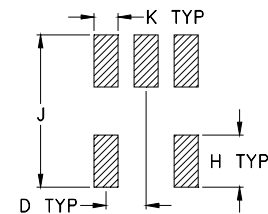
PRIMARY DOT	6
PRIMARY	4
SECONDARY DOT	1
SECONDARY	3
SECONDARY CT	2
NOT USED	5

PRODUCT MARKING: N/A

## OUTLINE DRAWING



## PCB Land Pattern



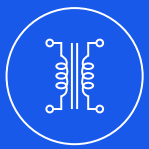
Suggested Layout,  
Tolerance to be within  $\pm .002$

## OUTLINE DIMENSIONS (Inch mm)

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

Weight: 0.15 grams

## TAPE &amp; REEL INFORMATION: F17



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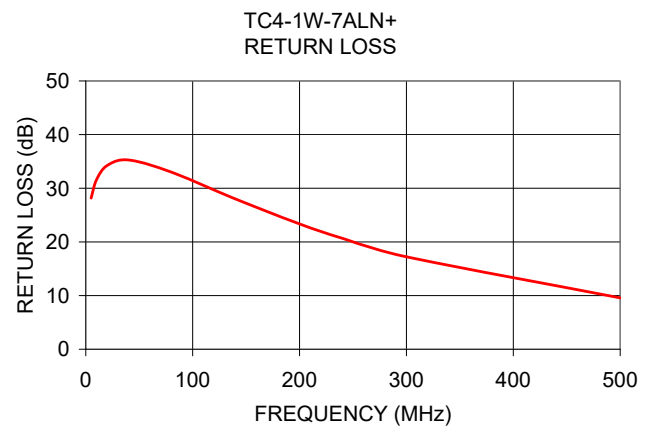
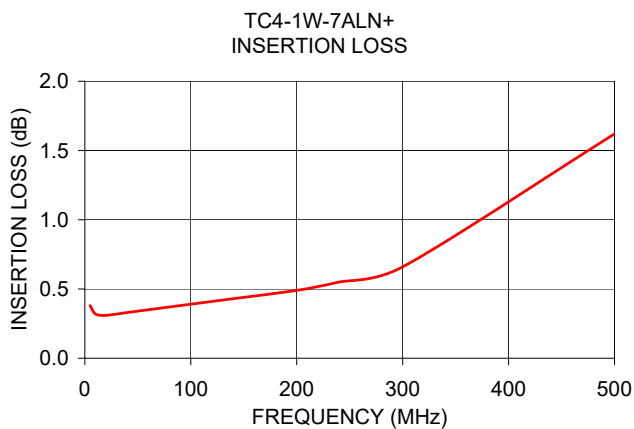
# RF Transformer

TC4-1W-7ALN+

50 $\Omega$  5 to 500 MHz

## 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



### 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](http://www.minicircuits.com/terms/viewterm.html)

