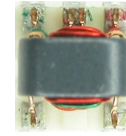


# Surface Mount RF Transformer

## TC9-1

50Ω      2 to 200 MHz



CASE STYLE: AT224  
PRICE: Contact Sales Dept.

### Maximum Ratings

Operating Temperature	-20°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

### Features

- good return loss
- excellent amplitude unbalance, 0.1dB typ. and phase unbalance, 1 deg typ. in 1dB band width
- leadless surface mount
- aqueous washable

### Applications

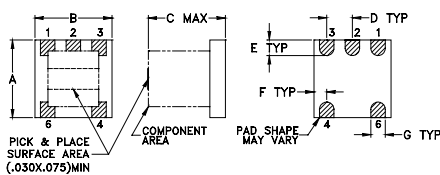
- impedance matching

### Transformer Electrical Specifications

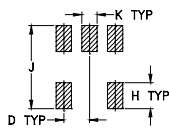
Ω RATIO (Secondary/Primary)	FREQUENCY (MHz)	INSERTION LOSS*		
		3 dB MHz	2 dB MHz	1 dB MHz
9	2-200	2-200	3-100	5-40

\* Insertion Loss is referenced to mid-band loss, 0.7 dB typ.

### Outline Drawing AT224



### PCB Land Pattern



### Outline Dimensions (inch/mm)

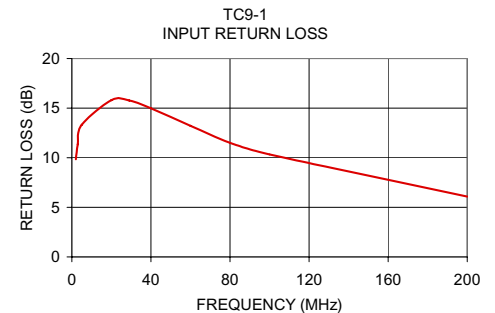
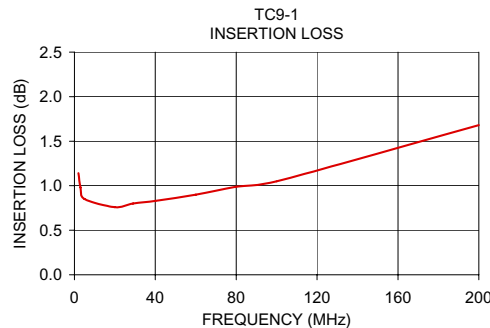
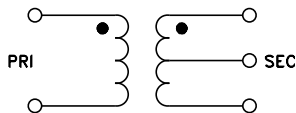
A	B	C	D	E	F
.150	.150	.150	.050	.030	.025
3.81	3.81	3.81	1.27	0.76	0.64
G	H	J	K	wt	
.028	.065	.190	.030	grams	
0.71	1.65	4.83	0.76	0.10	

NON-CATALOG

### Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)
2.00	1.14	9.85
3.00	0.98	11.35
5.00	0.85	13.33
20.00	0.76	15.80
29.00	0.80	15.77
40.00	0.83	14.99
60.00	0.90	13.22
80.00	0.99	11.50
100.00	1.05	10.34
200.00	1.68	6.08

### Config. A



**Mini-Circuits**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

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For detailed performance specs & shopping online see web site

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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).

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