

# Surface Mount RF Transformer

## TC1-1G2+

50Ω 1.5 to 500 MHz



### 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
NOT USED	2

### Features

- suitable for tin/lead and RoHS solder systems
- good return loss
- usable over 0.4-500 MHz
- excellent amplitude unbalance, 0.1 dB typ. and phase unbalance, 2 deg. typ. in 1 dB bandwidth
- aqueous washable

CASE STYLE: AT224-3  
PRICE: \$2.39 ea. QTY (20)  
\$1.39 ea. QTY (100)

### +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

### Applications

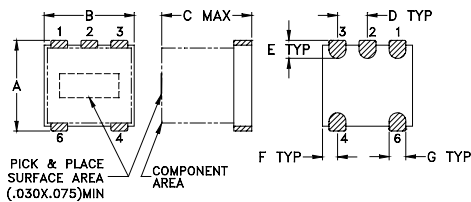
- balanced to unbalanced transformation
- push-pull amplifiers

### Transformer Electrical Specifications

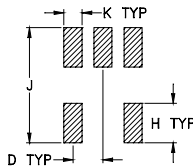
Ω RATIO	FREQUENCY (MHz)	INSERTION LOSS*		
		3 dB MHz	2 dB MHz	1 dB MHz
1	1.5-500	1.5-500	2.5-400	5-350

\* Insertion Loss is referenced to mid-band loss, 0.6 dB typ.

### Outline Drawing AT224-3



### PCB Land Pattern



Suggested Layout,  
Tolerance to be within ±.002

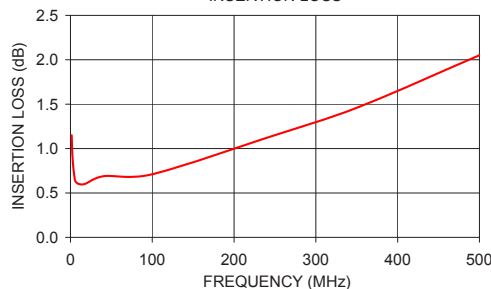
### Outline Dimensions (inch/mm)

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

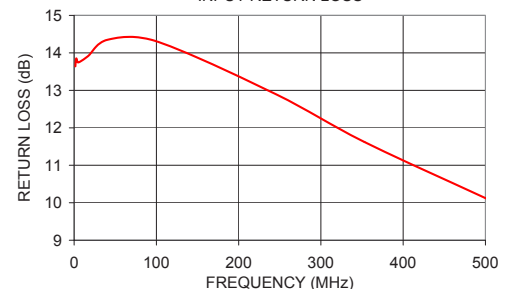
### Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)
1.51	1.15	13.64
2.49	0.91	13.85
4.35	0.72	13.75
6.87	0.62	13.76
16.75	0.60	13.91
40.86	0.69	14.35
99.67	0.71	14.31
243.10	1.13	12.92
353.08	1.47	11.62
502.30	2.06	10.10

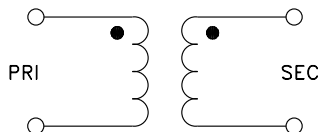
INSERTION LOSS



INPUT RETURN LOSS



### Config. C



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

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IF/RF MICROWAVE COMPONENTS

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-Circuit's 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-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

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