

Surface Mount RF Transformer

50Ω 650 to 4000 MHz

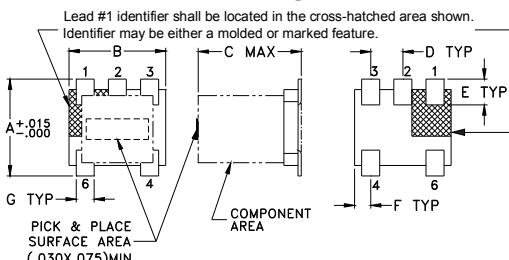
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	250mW
DC Current	30mA
Permanent damage may occur if any of these limits are exceeded.	

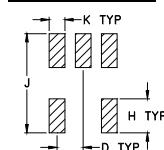
Pin Connections

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

Outline Drawing AT224-1A



PCB Land Pattern



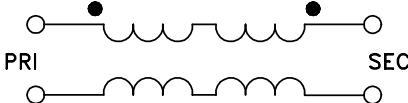
Outline Dimensions (inch mm)

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

0.71 1.65 4.83 0.76 0.15

Config. G



Features

- wideband, 650 to 4000 MHz
- balanced transmission line
- good return loss
- excellent amplitude unbalance, 0.5 dB typ. and phase unbalance, 3 deg typ. in 1 dB bandwidth
- plastic base with leads
- aqueous washable

Applications

- balanced to unbalanced transformation
- push-pull amplifiers
- PCS/DCS
- MMDS

TC1-1-43+



CASE STYLE: AT224-1A

PRICE: \$1.99 ea. QTY (20)

\$0.99 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 ($T_{AMB} = 25^\circ C$)

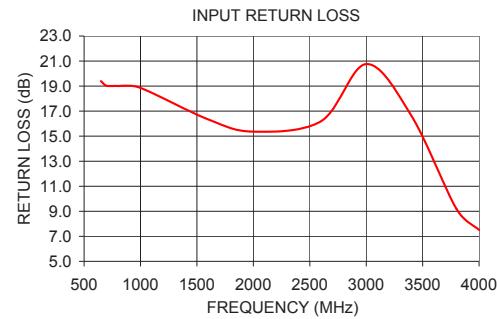
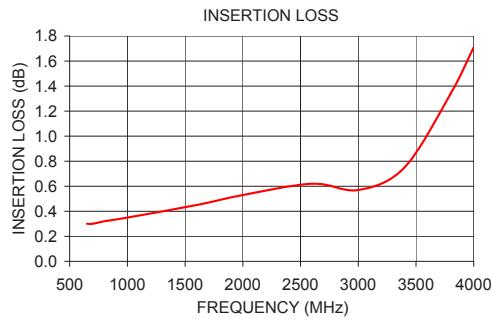
Ω RATIO	FREQUENCY (MHz)	INSERTION LOSS*		PHASE UNBALANCE (Deg.) Typ.		AMPLITUDE UNBALANCE (dB) Typ.	
		2 dB MHz	1 dB MHz	1 dB bandwidth	2 dB bandwidth	1 dB bandwidth	2 dB bandwidth
1	650-4000	650-4000	800-3000	3	4	0.5	0.5

*Insertion Loss is referenced to mid-band loss, 0.5 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.)
650.00	0.30	19.40	0.72	7.04
700.00	0.30	19.03	0.70	6.11
800.00	0.32	19.01	0.65	4.73
1000.00	0.35	18.85	0.50	3.45
1600.00	0.45	16.34	0.15	0.32
2000.00	0.53	15.36	0.05	0.42
2600.00	0.62	16.20	0.40	0.66
3000.00	0.57	20.76	0.56	1.07
3800.00	1.34	9.18	0.41	4.79
4000.00	1.71	7.51	0.09	5.95



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

TC1-1-43X+
Upgraded Version*

Mini-Circuits®

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

REV. OR
M123971
TC1-1-43+
ED-13728A
IG/CP/AM
131220
Page 1 of 1