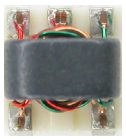
Surface Mount

RF Transformer

TC3-1T+

TC3-1TX+ Upgraded Version*

50Ω 5 to 300 MHz



CASE STYLE: AT224-1
PRICE: $2.29 ea. QTY (20)
$1.29 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

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

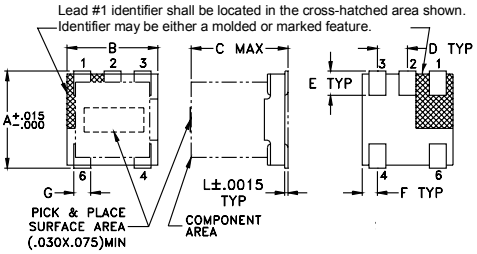
Features

- excellent amplitude unbalance (0.3 dB typ) and phase unbalance (5 deg. typ) in 1 dB bandwidth
- plastic base with leads
- good return loss
- aqueous washable

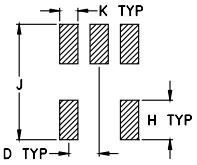
Applications

- impedance matching
- balanced antennas

Outline Drawing AT224-1



PCB Land Pattern



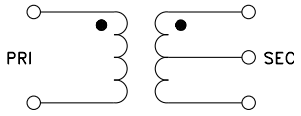
Suggested Layout,
Tolerance to be within ±.002

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

Config. A



Transformer Electrical Specifications

Ω RATIO (Secondary/Primary)	FREQUENCY (MHz)	INSERTION LOSS* 3 dB MHz	2 dB MHz	1 dB MHz
3	5-300	—	—	5-300

* Insertion Loss is referenced to mid-band loss, 0.4 dB typ.

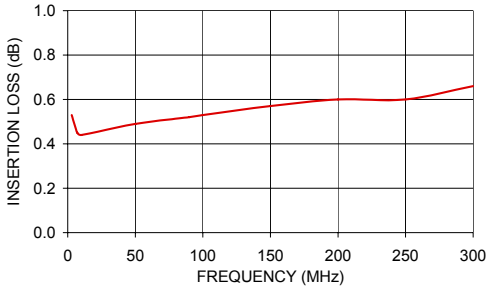
Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500
13"	1000, 2000

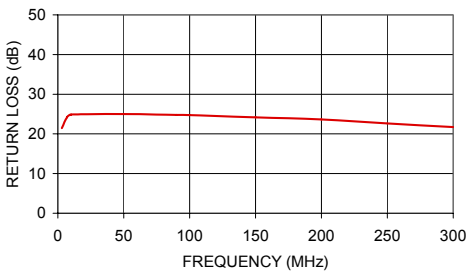
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)
3.00	0.53	21.45
7.00	0.45	24.23
10.00	0.44	24.89
50.00	0.49	24.99
90.00	0.52	24.79
100.00	0.53	24.74
150.00	0.57	24.15
200.00	0.60	23.65
250.00	0.60	22.64
300.00	0.66	21.73

TC3-1T+
INSERTION LOSS



TC3-1T+
INPUT RETURN LOSS



Notes
A. 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.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. 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