

Surface Mount RF Transformer

50Ω 2 to 1100 MHz

TC4-11+

TC4-11X+
Upgraded Version*



Generic photo used for illustration purposes only

CASE STYLE: AT224-1

*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

Available Tape and Reel at no extra cost

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

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	3
SECONDARY DOT	1
SECONDARY	3

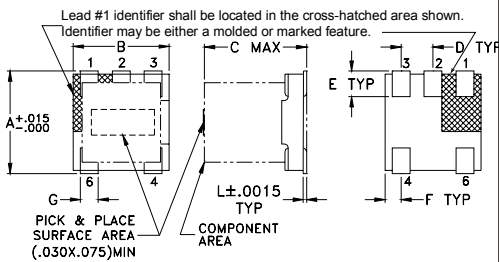
Features

- wideband 2-1100 MHz
- good return loss
- terminations, solder plated with nickel barrier for solderability and excellent leach resistance
- step-down autotransformer
- plastic base with leads
- aqueous washable

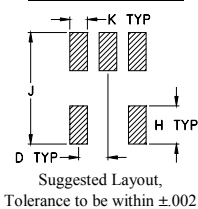
Applications

- cellular

Outline Drawing AT224-1



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

Transformer Electrical Specifications

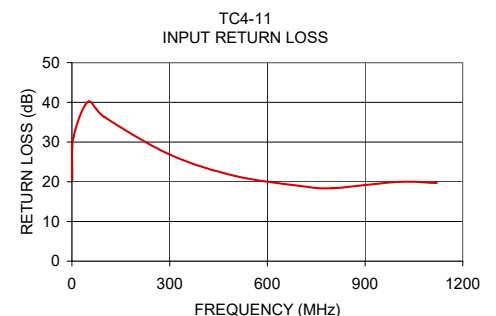
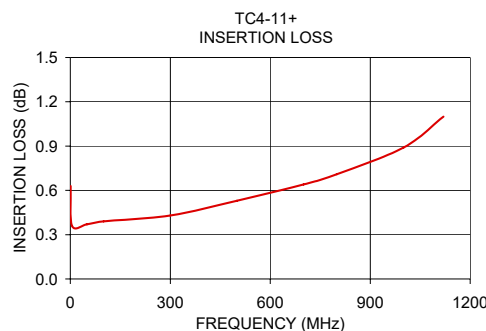
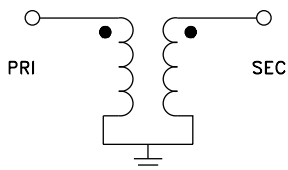
Ω RATIO (Primary/Secondary)	FREQUENCY (MHz)	INSERTION LOSS*		
		3 dB MHz	2 dB MHz	1 dB MHz
50/12.5	2-1100	—	2-1100	5-700

* Insertion Loss is referenced to mid-band loss, 0.4 dB typ. Stepdown, 50 ohm primary, 5.2 pF across secondary

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)
1.00	0.63	20.35
5.00	0.36	31.19
50.00	0.37	40.18
100.00	0.39	36.30
300.00	0.43	26.86
500.00	0.53	21.49
700.00	0.64	18.96
800.00	0.71	18.37
1000.00	0.89	19.97
1120.00	1.10	19.69

Config. D



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-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

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

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