

# Surface Mount RF Transformer

50Ω 0.4 to 450 MHz

## ADT2-1T+ ADT2-1T



CASE STYLE: CD542

**+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"	500, 1000

### Maximum Ratings

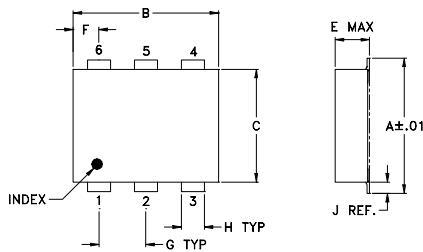
Operating Temperature	-20°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.25W
DC Current	30mA

Permanent damage may occur if any of these limits are exceeded.

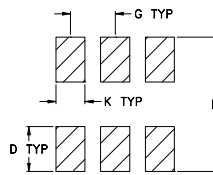
### Pin Connections

PRIMARY DOT	3
PRIMARY	1
SECONDARY DOT	6
SECONDARY	4
SECONDARY CT	5
NOT USED	2

### Outline Drawing



### PCB Land Pattern



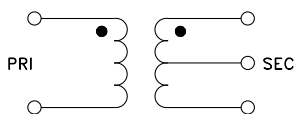
Suggested Layout,  
Tolerance to be within ±.002

### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.112	.055	.100
6.91	7.87	5.59	2.54	2.84	1.40	2.54
H	J	K	L			wt
.030	.026	.065	.300			grams
0.76	0.66	1.65	7.62			0.20

Demo Board MCL P/N: TB-430

### Config. A



### Features

- excellent return loss, 18 dB typ. in 1 dB bandwidth
- excellent amplitude unbalance, 0.2 dB typ. and phase unbalance, 1 deg. typ. in 1dB bandwidth
- aqueous washable
- protected under US patent 6,133,525

### Applications

- impedance matching
- balanced amplifier

### Transformer Electrical Specifications

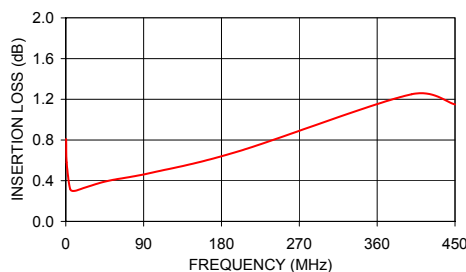
Ω RATIO (Secondary/Primary)	FREQUENCY (MHz)	INSERTION LOSS*			PHASE UNBALANCE (Deg.) Typ.		AMPLITUDE UNBALANCE (dB) Typ.	
		3 dB MHz	2 dB MHz	1 dB MHz	1 dB bandwidth	2 dB bandwidth	1 dB bandwidth	2 dB bandwidth
2	0.4-450	0.4-450	0.6-400	1-200	1	1	0.2	0.3

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

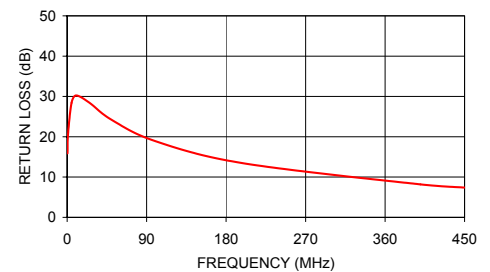
### Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Deg.)
0.40	0.81	15.88	0.15	0.26
1.00	0.58	20.61	0.20	0.31
5.00	0.32	28.42	0.23	0.34
10.00	0.30	30.23	0.25	0.23
25.00	0.34	28.47	0.26	0.17
50.00	0.40	24.24	0.26	0.13
100.00	0.48	18.91	0.22	0.22
200.00	0.69	13.40	0.08	0.14
400.00	1.25	8.18	0.63	1.99
450.00	1.15	7.38	0.92	2.76

ADT2-1T  
INSERTION LOSS



ADT2-1T  
INPUT RETURN LOSS



### 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-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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