

# Surface Mount RF Transformer

## ADT8-1T

50Ω 0.1 to 130 MHz

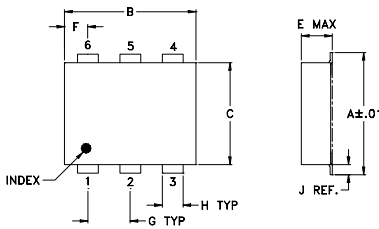
### Maximum Ratings

Operating Temperature	-20°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.5W
DC Current	30mA

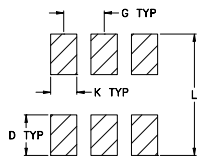
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern



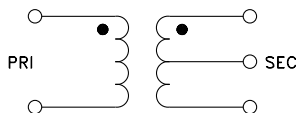
Suggested Layout,  
Tolerance to be within ±.002

### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.206	.055	.100
6.91	7.87	5.59	2.54	5.23	1.40	2.54
H	J	K	L	wt		
.030	.026	.065	.300	grams		
0.76	0.66	1.65	7.62	0.40		

Demo Board MCL P/N: TB-430

### Config. A



### Features

- excellent amplitude unbalance, 0.05 dB typ. in 1 dB bandwidth
- excellent return loss, 20 dB typ. in 1 dB bandwidth
- aqueous washable
- protected under US patent 6,133,525

### Applications

- impedance matching
- balanced amplifiers



Generic photo used for illustration purposes only

CASE STYLE: CD637

### Transformer Electrical Specifications

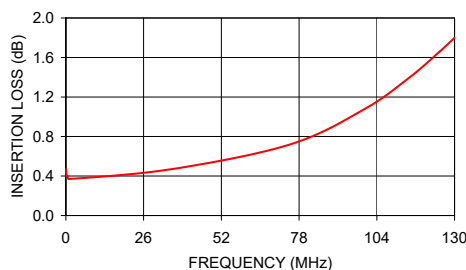
Ω RATIO (Secondary/Primary)	FREQUENCY (MHz)	INSERTION LOSS*			PHASE UNBALANCE (Deg.) Typ.		AMPLITUDE UNBALANCE (dB) Typ.	
		3 dB MHz	2 dB MHz	1 dB MHz	1 dB bandwidth	2 dB bandwidth	1 dB bandwidth	2 dB bandwidth
8	0.1-130	0.1-130	0.15-110	0.2-75	1	2	0.5	0.1

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

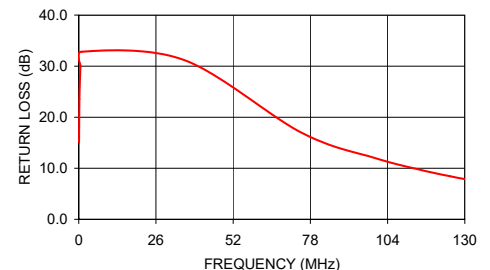
### Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Deg.)
0.09	0.47	15.05	0.04	0.00
0.24	0.40	23.55	0.04	0.00
0.57	0.40	29.96	0.04	0.03
1.00	0.37	32.82	0.04	0.04
35.50	0.47	31.20	0.04	0.91
75.00	0.72	16.98	0.01	2.34
100.00	1.08	11.97	0.04	3.69
115.00	1.40	9.71	0.09	4.78
125.00	1.66	8.44	0.14	5.67
130.00	1.80	7.87	0.17	6.17

ADT8-1T  
INSERTION LOSS



ADT8-1T  
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.
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