

# Surface Mount RF Transformer

## ADT4-1T+

50Ω 9 to 625 MHz

### Maximum Ratings

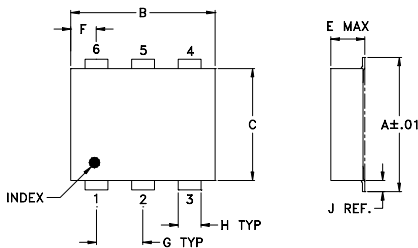
Operating Temperature	-20°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	1W
DC Current	30mA

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

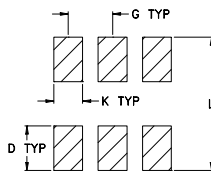
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern



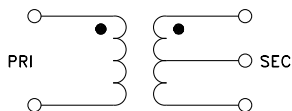
Suggested Layout,  
Tolerance to be within ±.002

### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.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, 25 dB typ.
- excellent amplitude unbalance, 0.2 dB typ. phase unbalance, 1 deg. typ. in 1 dB bandwidth
- high RF power up to 1 watt
- aqueous washable
- protected under US patent 6,133,525

### Applications

- impedance matching
- baluns



Generic photo used for illustration purposes only

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"	10, 20, 50, 100, 200
13"	500, 1000

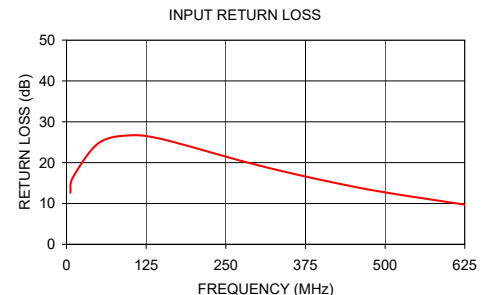
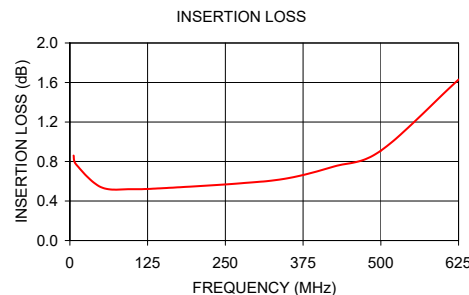
### Transformer Electrical Specifications

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
4	9-625	9-625	10-550	14-500	1	3	0.2	0.3

\* Insertion Loss is referenced to mid-band loss, 0.55 dB typ.

### Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Deg.)
6.00	0.86	12.61	0.00	0.01
10.00	0.77	16.33	0.00	0.04
50.00	0.54	24.74	0.00	0.09
100.00	0.52	26.69	0.02	0.29
150.00	0.53	25.75	0.04	0.37
275.00	0.58	20.40	0.16	1.00
350.00	0.63	17.49	0.25	1.59
425.00	0.75	14.94	0.33	2.45
500.00	0.91	12.72	0.44	3.89
625.00	1.63	9.71	0.54	7.70



### 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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