

Surface Mount

# RF Transformer

## ADT16-6T

50Ω 0.1 to 70 MHz

### Maximum Ratings

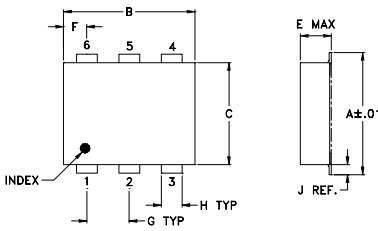
Operating Temperature	-20°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.25W
DC Current	30mA

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

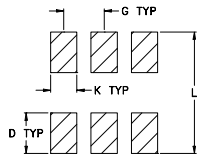
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern



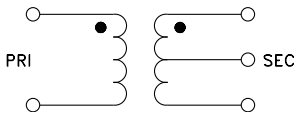
Suggested Layout,  
Tolerance to be within ±.002

### 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 return loss, 16 dB typ. in 1 dB bandwidth
- excellent amplitude unbalance, 0.05 dB typ.
- excellent phase unbalance, 1 deg. typ. in 1 dB bandwidth
- aqueous washable
- protected under US patent 6,133,525

### Applications

- impedance matching
- baluns



Generic photo used for illustration purposes only

CASE STYLE: CD637

### Transformer Electrical Specifications

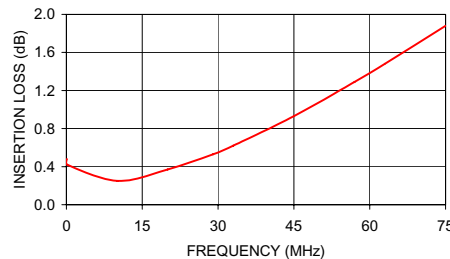
Ω RATIO (Secondary/Primary)	FREQUENCY (MHz)	INSERTION LOSS*			PHASE UNBALANCE (Deg.) Typ.		AMPLITUDE UNBALANCE (dB) Typ.	
		3 dB MHz	2 dB MHz	1 dB MHz	1 dB bandwidth	2 dB bandwidth	1 dB bandwidth	2 dB bandwidth
16	0.1-70	0.1-70	0.18-45	0.30-33	1	2	0.05	0.1

\* Insertion Loss is referenced to mid-band loss, 0.3 dB typ.

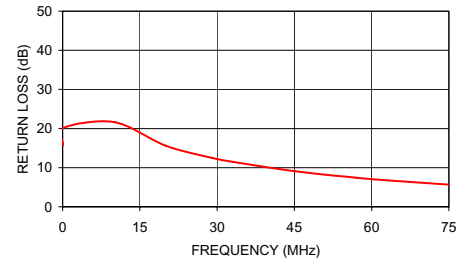
### Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Deg.)
0.10	0.48	15.80	0.01	0.00
0.18	0.42	20.18	0.01	0.05
10.11	0.25	21.64	0.01	0.41
20.04	0.37	15.61	0.01	0.08
29.00	0.53	12.52	0.04	1.07
33.00	0.62	11.49	0.06	1.24
45.00	0.93	9.10	0.12	1.71
57.00	1.29	7.41	0.21	2.19
63.00	1.48	6.74	0.27	2.45
75.00	1.88	5.66	0.40	3.05

ADT16-6T  
INSERTION LOSS



ADT16-6T  
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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