

Surface Mount

# RF Transformer

## ADTL2-18

50Ω 30 to 1800 MHz



Generic photo used for illustration purposes only

CASE STYLE: CD542

### Maximum Ratings

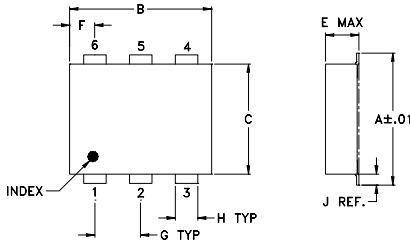
Operating Temperature	-20°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.25W
DC Current	30mA

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

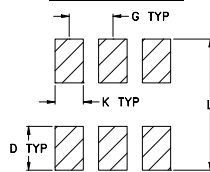
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern



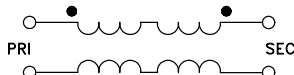
Suggested Layout,  
Tolerance to be within ±.002

### 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-94

### Config. G



### Features

- wideband, 30 to 1800 MHz
- balanced transmission line
- excellent amplitude unbalance, 0.3 dB typ. and phase unbalance, 3 deg. typ. in 1dB bandwidth
- aqueous washable
- protected under US patent 6,133,525

### Applications

- baluns
- wideband impedance matching
- cellular
- PCN
- GPS

### 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	30-1800	30-1800	-	100-1500	3	-	0.3	-

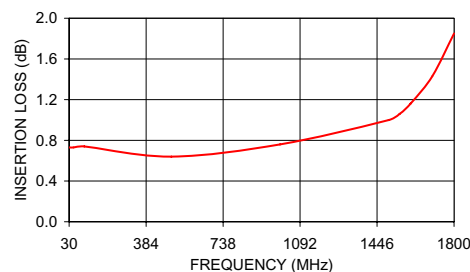
\* Insertion Loss is referenced to mid-band loss, 0.6 dB typ.

\*\* Deviation from 180°

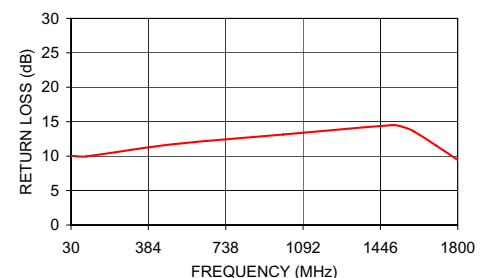
### Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Deg.)
30.00	0.73	10.06	1.07	5.86
50.00	0.73	10.01	0.95	3.68
100.00	0.74	9.96	0.85	1.64
500.00	0.64	11.73	0.64	2.41
1000.00	0.76	13.14	0.25	3.74
1500.00	1.00	14.50	0.18	1.90
1550.00	1.06	14.22	0.22	1.55
1600.00	1.16	13.58	0.24	1.24
1700.00	1.43	11.56	0.30	0.50
1800.00	1.85	9.44	0.34	0.29

ADTL2-18  
INSERTION LOSS



ADTL2-18  
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)

