

# Surface Mount RF Transformer

50Ω 20 to 1200 MHz

## ADTL1-12+ ADTL1-12



CASE STYLE: CD542

### Maximum Ratings

Operating Temperature -20°C to 85°C

Storage Temperature -55°C to 100°C

RF Power 2W

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

### Features

- wideband, 20 to 1200 MHz
- balanced transmission line
- excellent amplitude unbalance, 0.3 dB typ. and phase unbalance, 3 deg. typ. in 1 dB bandwidth
- RF power, 2W
- aqueous washable
- protected under US patent 6,133,525

### Applications

- impedance matching
- balanced amplifier
- baluns
- cellular
- VHF

### +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

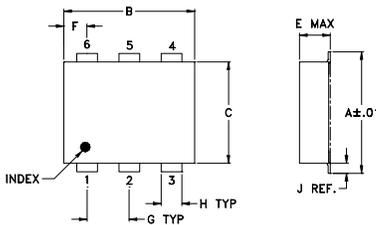
Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500
13"	500, 1000

### Transformer Electrical Specifications

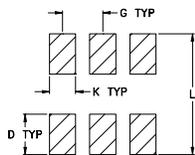
Ω RATIO	FREQUENCY (MHz)	INSERTION LOSS*			PHASE UNBALANCE (Deg.) Typ.		AMPLITUDE UNBALANCE (dB) Typ.	
		3 dB MHz	2 dB MHz	1 dB MHz	1 dB bandwidth	2 dB bandwidth	1 dB bandwidth	2 dB bandwidth
1	20-1200	-	20-1200	50-1000	3	4	0.3	0.5

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

### Outline Drawing



### PCB Land Pattern



Suggested Layout, Tolerance to be within ±.002

### Outline Dimensions (inch/mm)

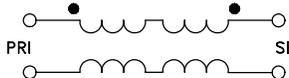
A	B	C	D	E	F	G
.272	.310	.220	.100	.112	.055	.100
6.91	7.87	5.59	2.54	2.84	1.40	2.54

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

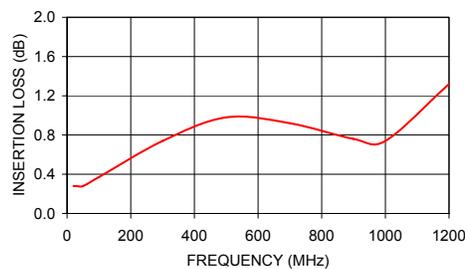
### Config. G



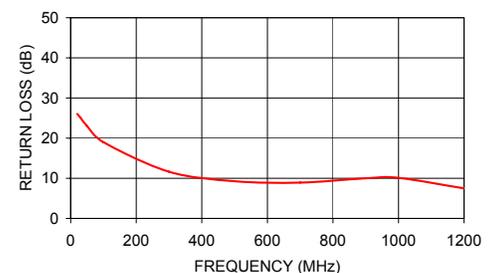
### Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Deg.)
20.00	0.28	26.05	0.32	3.48
30.00	0.28	25.08	0.26	2.31
50.00	0.28	23.04	0.28	1.42
100.00	0.37	18.99	0.23	0.30
300.00	0.74	11.63	0.17	0.99
500.00	0.98	9.26	0.04	1.35
700.00	0.92	8.93	0.14	0.79
900.00	0.76	10.00	0.48	0.35
1000.00	0.74	10.10	0.65	0.92
1200.00	1.32	7.49	0.99	2.65

ADTL1-12  
INSERTION LOSS



ADTL1-12  
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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