

# Frequency Mixer

## ADE-18W+ ADE-18W

Level 7 (LO Power +7 dBm) 1750 to 3500 MHz



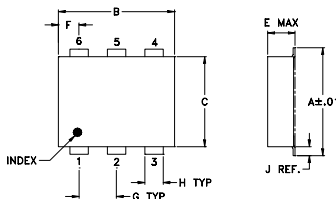
### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

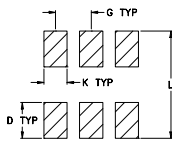
### Pin Connections

LO	4
RF	6
IF	3
GROUND	1,2,5

### Outline Drawing



### PCB Land Pattern

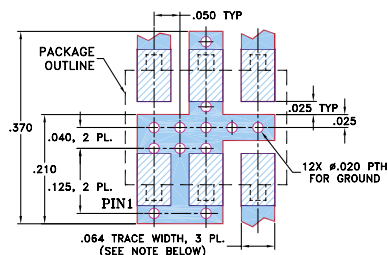


Suggested Layout,  
Tolerance to be within ±.002

### 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-02 Suggested PCB Layout (PL-051)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.  
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
  - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### Features

- low conversion loss, 5.4 dB typ.
- good isolation, 33 dB typ.
- low profile package
- aqueous washable
- protected by U.S. Patent 6,133,525

### Applications

- PCS
- MMDS
- ISM

CASE STYLE: CD542  
PRICE: \$3.95 ea. QTY (10-49)

**+ RoHS compliant in accordance with EU Directive (2002/95/EC)**

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

### Electrical Specifications

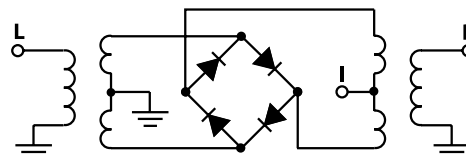
FREQUENCY (MHz)		CONVERSION LOSS (dB)			LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)
LO/RF	IF	$\bar{X}$	$\sigma$	Total Range Max.	Typ.	Min.	Typ.	Min.	Typ.
1750-3500	DC-700	5.4	0.30	8.9	33	20	12	7	11

1 dB COMP.: +1 dBm typ.

### Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
1750.00	1780.00	5.42	31.90	20.60	2.84	3.01
1784.78	1814.78	5.43	32.30	20.10	2.58	2.88
1932.61	1962.61	4.79	33.10	16.00	1.77	2.92
2080.44	2110.44	4.68	33.50	14.30	1.75	3.01
2228.26	2258.26	4.92	33.80	13.80	2.16	3.06
2376.09	2406.09	5.19	34.60	14.20	2.46	2.96
2523.91	2553.91	5.23	32.90	14.10	2.49	2.76
2671.74	2701.74	4.79	30.80	13.70	2.52	2.55
2819.57	2849.57	4.97	28.40	15.20	2.49	2.96
2967.39	2997.39	5.53	27.50	16.20	2.40	3.50
3000.00	3030.00	5.69	27.70	16.30	2.40	3.06
3115.21	3145.22	6.58	27.50	17.30	2.84	3.06
3263.04	3293.04	7.28	25.70	17.20	4.03	3.32
3410.87	3440.87	7.07	24.90	17.20	5.49	3.79
3470.00	3500.00	7.01	25.10	17.30	6.26	3.95
3500.00	3530.00	6.96	25.00	16.80	6.26	4.42
3558.70	3588.70	6.93	25.00	16.60	5.85	4.42
3706.52	3736.52	7.74	26.40	15.70	7.00	5.33

### Electrical Schematic



**Mini-Circuits**  
ISO 9001 ISO 14001 CERTIFIED

ALL NEW  
minicircuits.com

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: [www.minicircuits.com](http://www.minicircuits.com)

[www.DataSheet4U.com](http://www.DataSheet4U.com)

RF/IF MICROWAVE COMPONENTS

REV. E  
M102713  
ADE-18W  
ED-5808/2  
070412  
Page 1 of 2

## Performance Charts

