

# Surface Mount High Reliability Mixer

Level 7 (LO Power +7 dBm) 10 to 2000 MHz

## ADE-R11X+



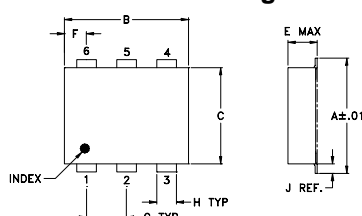
### Maximum Ratings

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

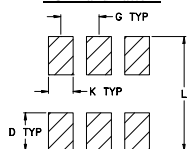
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern

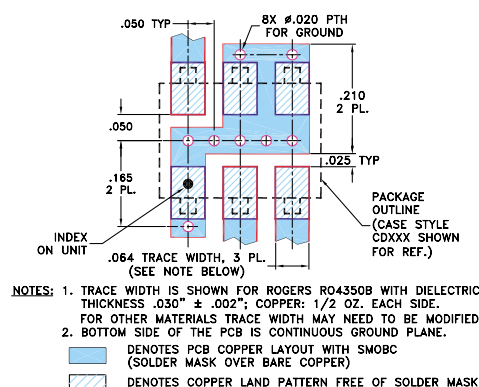


Suggested Layout,  
Tolerance to be within ±.002

### Outline Dimensions (inch)

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-03 Suggested PCB Layout (PL-052)



### Features

- hermetically sealed ceramic quad
- low conversion loss, 7.5 dB typ.
- excellent L-R isolation, 40 dB typ. and L-I isolation, 42 dB typ.
- low profile package
- aqueous washable
- protected by US Patent 6,133,525

### Applications

- cellular
- PCN
- VHF & UHF
- communication receivers & transmitters

CASE STYLE: CD542

PRICE: \$3.35 ea. QTY. (10-49)

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

The +Suffix has been added in order to identify 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 $f_L$ - $f_U$	IF	Mid-Band m		Total Range Max.		L	M	U	L	M	U							
		$\overline{X}$	$\sigma$									Max.	Typ. Min.		Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.
10-2000	10-1000	7.5	0.10	8.5	9.8	62	45	40	23	30	20	60	45	42	30	33	22	10

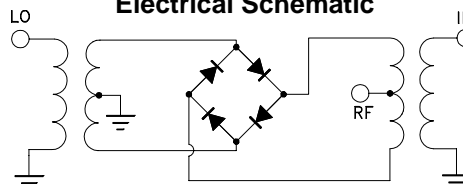
1 dB COMP.: +1 dBm typ.

L = low range [ $f_L$  to  $10 f_L$ ] M = mid range [ $10 f_L$  to  $f_U/2$ ] U = upper range [ $f_U/2$  to  $f_U$ ]  
m = mid band [ $2f_L$  to  $f_U/2$ ]

### 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
10.10	40.10	6.45	67.93	79.41	1.02	2.85
130.10	160.10	7.36	65.68	60.43	1.04	2.91
250.10	280.10	7.49	56.25	55.31	1.14	2.87
370.10	400.10	7.41	51.12	51.53	1.28	2.90
490.10	520.10	7.56	47.66	48.27	1.46	3.00
550.10	580.10	7.62	45.95	47.41	1.54	3.06
610.10	640.10	7.79	45.53	46.25	1.61	3.11
730.10	760.10	7.92	41.36	44.01	1.80	3.19
850.10	880.10	7.72	41.52	41.70	1.92	3.26
910.10	940.10	7.7	39.11	40.49	1.91	3.33
1090.10	1120.10	7.38	32.22	40.52	1.76	3.52
1150.10	1180.10	7.47	32.32	39.41	1.77	3.62
1270.10	1300.10	7.74	34.73	37.46	1.98	3.70
1390.10	1420.10	7.7	35.59	36.31	1.86	3.67
1510.10	1540.10	7.82	34.24	35.95	1.74	3.75
1630.10	1660.10	7.92	31.15	35.10	1.61	3.87
1750.10	1780.10	8.17	27.34	33.79	1.46	3.87
1870.10	1900.10	8.51	25.71	31.20	1.32	3.87
1990.10	2020.10	8.86	26.13	30.31	1.24	4.12
2070.10	2100.10	9.25	26.67	30.14	1.19	4.27

### Electrical Schematic



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