

Surface Mount Frequency Mixer

Level 7 (LO Power +7 dBm) 200 to 1000 MHz

ADE-4+ ADE-4



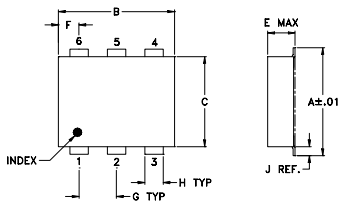
Maximum Ratings

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

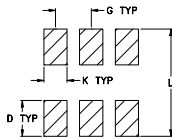
Pin Connections

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

Outline Drawing



PCB Land Pattern

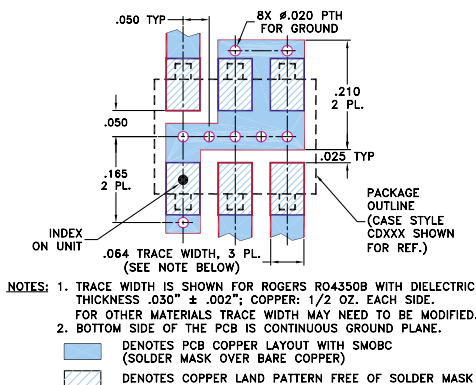


Suggested Layout,
Tolerance to be within ±.002

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

- low conversion loss, 6.8 dB typ.
- good L-R isolation, 53 dB typ.
- low profile package
- aqueous washable
- low cost
- protected by U.S. Patent 6,133,525

Applications

- cellular
- VHF/UHF receivers

CASE STYLE: CD542
PRICE: \$4.25 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	M	Total Range		L	M	U	L	M	U	Typ.
$f_L - f_U$		\bar{X}	σ	Max.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	
200-1000	DC-800	6.8	0.10	8.5	60 45	53 40	45 30	45 30	40 22	35 20	15

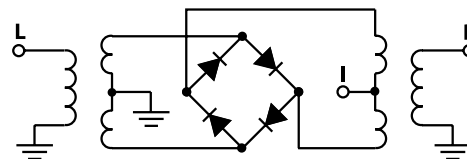
1 dB COMP.: +1 dBm typ.

L = 200-400 MHz M = 400-500 MHz U = 500-1000 MHz

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
200.00	230.00	7.14	60.34	44.99	1.41	2.56
250.00	280.00	6.82	59.00	43.67	1.38	2.28
300.00	330.00	6.87	57.00	43.34	1.39	2.20
350.00	380.00	7.02	59.50	42.50	1.40	2.10
375.00	405.00	6.89	59.01	42.17	1.40	2.10
400.00	430.00	6.97	59.17	41.33	1.39	2.17
450.00	480.00	6.72	56.50	40.17	1.37	2.04
475.00	505.00	6.82	56.67	39.67	1.36	2.10
500.00	530.00	6.85	57.32	39.17	1.37	2.10
550.00	580.00	6.93	56.67	38.50	1.39	2.10
600.00	630.00	7.03	55.83	37.84	1.39	2.10
650.00	680.00	6.90	54.33	37.00	1.34	2.10
675.00	705.00	6.94	53.34	36.67	1.34	2.13
700.00	730.00	6.90	52.84	36.17	1.34	2.07
750.00	780.00	6.96	51.50	35.33	1.32	2.20
800.00	830.00	7.00	49.83	34.50	1.28	2.10
850.00	880.00	6.83	48.00	32.99	1.24	2.28
900.00	930.00	6.70	47.00	31.66	1.22	2.20
950.00	980.00	6.81	45.83	30.83	1.18	2.41
1000.00	1030.00	6.82	44.33	30.33	1.11	2.46

Electrical Schematic



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RF/IF MICROWAVE COMPONENTS

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Performance Charts

