

Surface Mount Frequency Mixer

Level 13 (LO Power +13 dBm) 5 to 3500 MHz

ADE-35MH+
ADE-35MH



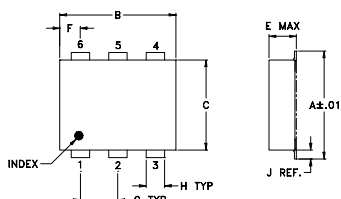
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA
Permanent damage may occur if any of these limits are exceeded.	

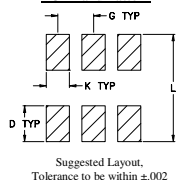
Pin Connections

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

Outline Drawing



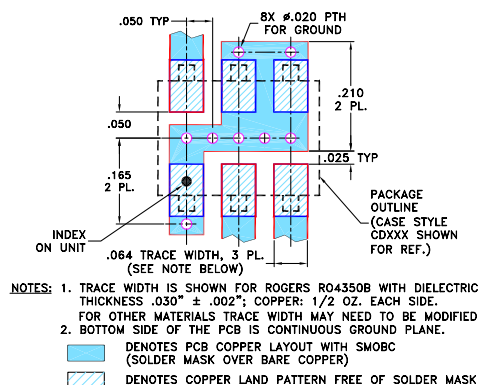
PCB Land Pattern



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-03 Suggested PCB Layout (PL-052)



Features

- low conversion loss, 6.9 dB typ.
- good L-R isolation, 33 dB typ.; L-I isolation, 28 dB typ.
- low profile package
- aqueous washable
- protected by U.S. Patent 6,133,525

Applications

- PCS
- MMDS
- ISM
- instrumentation

CASE STYLE: CD542
PRICE: \$9.95 ea. QTY (10)

+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"	10, 20, 50, 100, 200, 500
13"	500, 1000

Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)						IP3 at center band (dBm)
LO/RF	IF	Mid-Band				L	M	U	L	M	U	L	M	U				
		m																
		Total Range																
f _L -f _U		$\overline{X}$	σ	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.		
5-3500	5-2500	6.9	0.10	9.3	10.5	47	28	33	23	38	18	34	23	28	18	23	17	18

1 dB COMP.: +9 dBm typ.

L = low range [f_L to $10 f_L$]

M = mid range [$10 f_L$ to $f_U/2$]

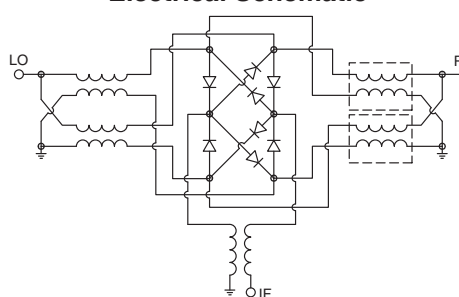
m = mid band [$2f_L$ to $f_U/2$]

U = upper range [$f_U/2$ to f_U]

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 +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
5.00	35.00	7.36	49.90	34.20	1.35	2.37
25.00	55.00	6.76	51.40	34.10	1.20	2.32
75.00	105.00	6.54	54.00	33.90	1.20	2.25
100.00	130.00	6.52	52.70	34.00	1.19	2.30
250.00	280.00	7.05	42.40	33.80	1.10	2.18
500.00	530.00	7.02	35.40	31.50	1.10	2.16
884.28	914.28	7.09	32.20	27.50	1.55	1.91
1000.00	1030.00	7.22	32.20	26.30	1.64	1.91
1326.38	1356.38	7.87	33.40	24.70	2.37	1.84
1547.43	1577.43	7.39	35.80	24.00	2.40	1.81
1768.47	1798.47	7.30	38.90	23.00	2.16	1.78
2000.00	2030.00	7.30	40.00	23.30	2.04	1.63
2431.62	2461.62	7.45	39.50	24.20	2.18	1.30
3000.00	2970.00	7.66	31.10	24.50	2.20	1.56
3315.81	3285.81	7.39	28.10	25.10	1.92	1.87
3536.85	3506.85	7.97	27.10	25.60	1.71	2.06

Electrical Schematic



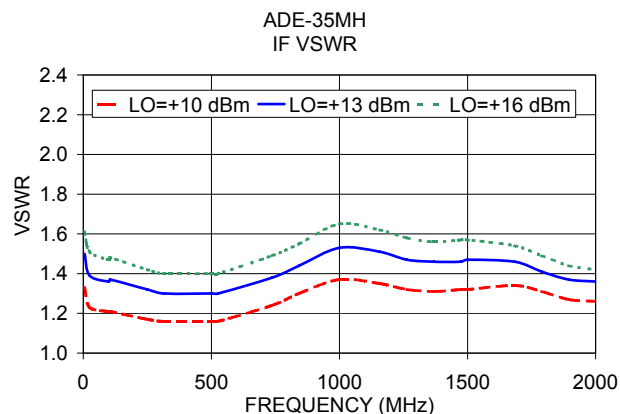
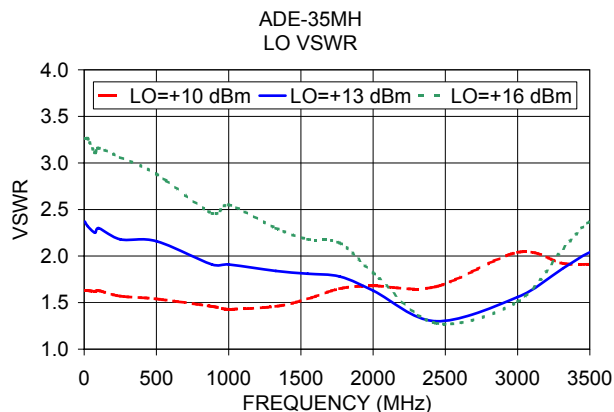
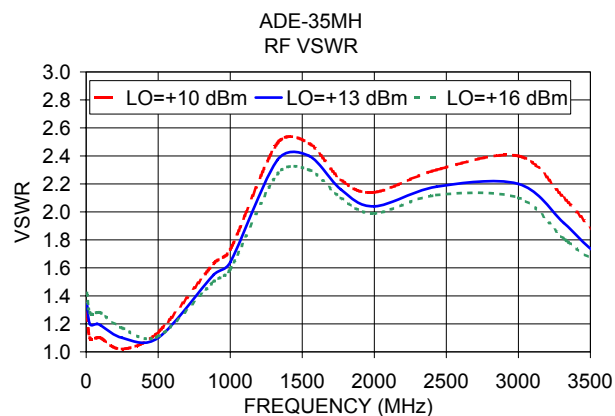
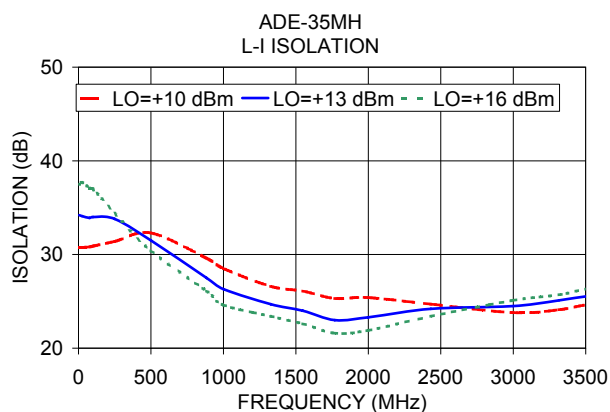
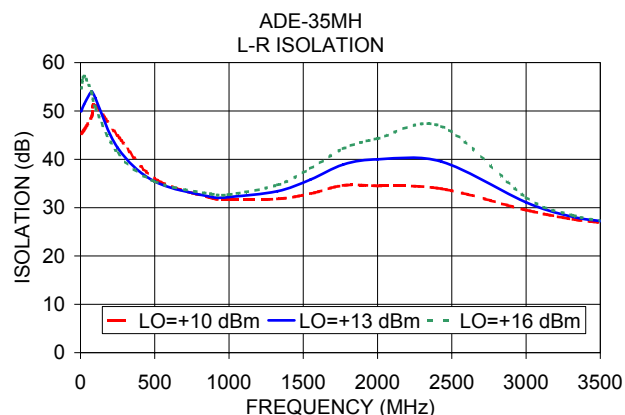
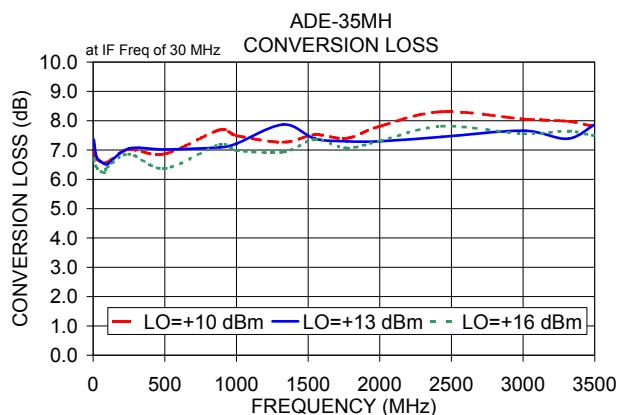
Notes

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Performance Charts

ADE-35MH+ ADE-35MH



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