

Surface Mount Frequency Mixer

Level 17 (LO Power +17 dBm) 5 to 750 MHz

ADE-1HW+
ADE-1HW



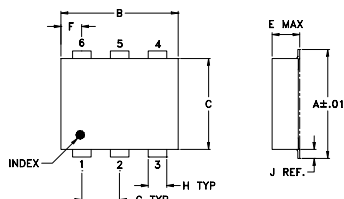
Maximum Ratings

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.	

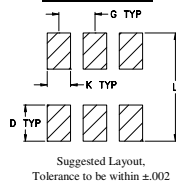
Pin Connections

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

Outline Drawing



PCB Land Pattern

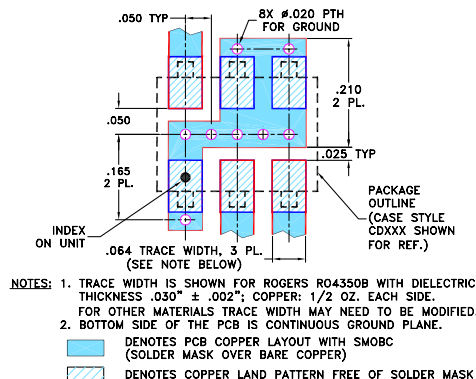


Outline Dimensions (inch)

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, 6.0 dB typ.
- excellent L-R isolation, 48 dB typ.
- excellent L-I isolation, 40 dB typ.
- aqueous washable
- protected by US patent 6,133,525

Applications

- VHF/UHF receivers

CASE STYLE: CD542
PRICE: \$6.45 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 m		Total Range Max.		L	M	U	L	M	U	
f_L - f_U		$\bar{X}$	σ	Max.	Max.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	
5-750	DC-750	6.0	0.10	7.2	8.8	64 45	48 35	42 28	50 35	40 30	30 18	

1 dB COMP.: +14 dBm typ.

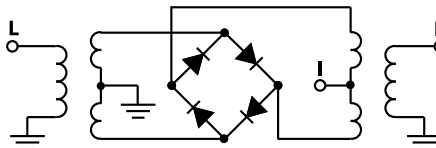
L = low range [f_L to 10 f_L]
m = mid band [$2f_L$ to $f_U/2$]

M = mid range [10 f_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 +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm
5.00	35.00	6.34	64.80	52.10	1.35	1.38
10.00	40.00	6.07	64.50	50.90	1.20	1.38
20.00	50.00	6.03	62.90	48.30	1.12	1.38
50.00	80.00	5.86	59.30	44.20	1.06	1.41
65.19	95.19	5.76	56.90	44.10	1.04	1.51
130.18	160.18	5.68	54.80	41.00	1.02	1.58
195.17	225.17	5.82	48.90	41.90	1.00	1.66
250.00	280.00	5.92	47.90	40.80	1.02	1.62
260.16	290.16	5.73	47.80	40.30	1.02	1.64
295.00	325.00	5.93	47.00	38.80	1.04	1.75
300.00	330.00	5.90	46.80	38.90	1.04	1.75
325.15	355.15	5.96	45.70	39.20	1.04	1.68
390.14	420.14	6.02	46.40	34.70	1.08	1.84
455.13	485.13	6.15	45.20	31.60	1.11	1.80
500.00	530.00	6.24	43.40	30.70	1.13	1.87
520.12	550.12	6.25	42.90	30.20	1.14	1.81
585.11	615.11	6.25	41.50	28.10	1.16	2.06
650.10	680.10	6.16	40.30	26.60	1.22	2.23
715.09	745.09	6.52	39.10	26.10	1.29	2.18
750.00	780.00	6.73	38.60	25.60	1.37	2.58

Electrical Schematic



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ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

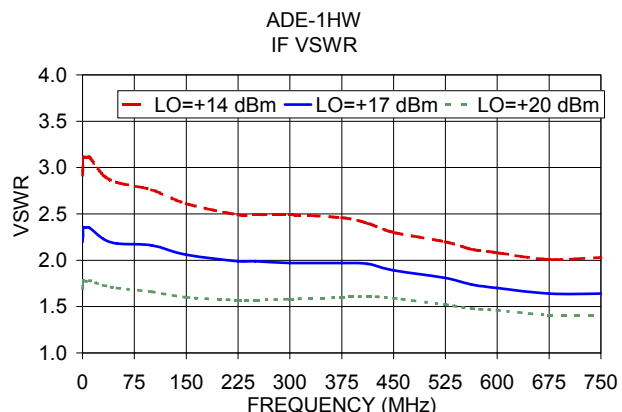
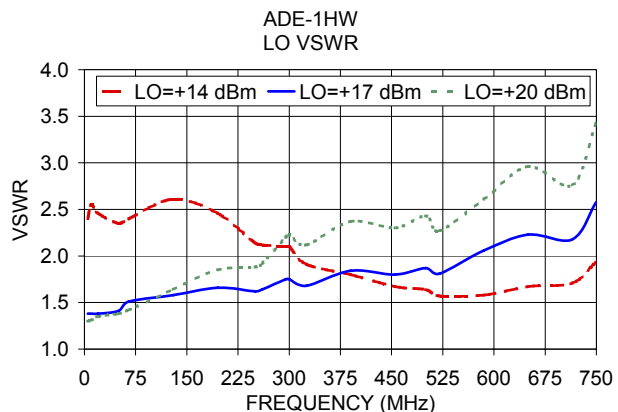
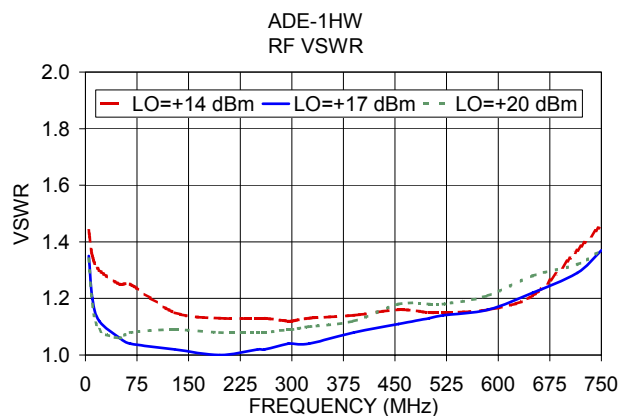
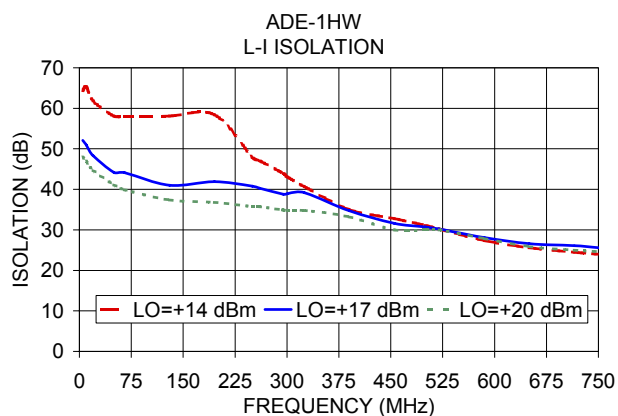
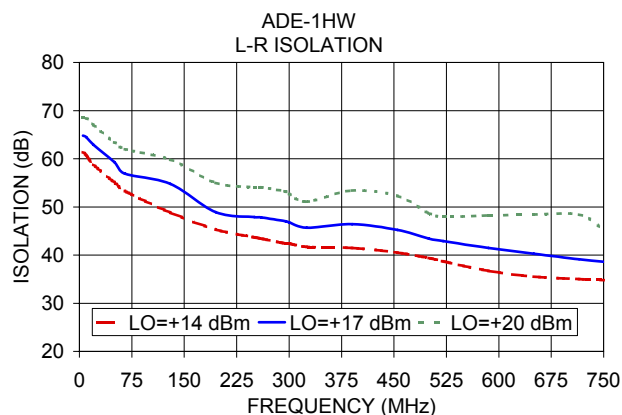
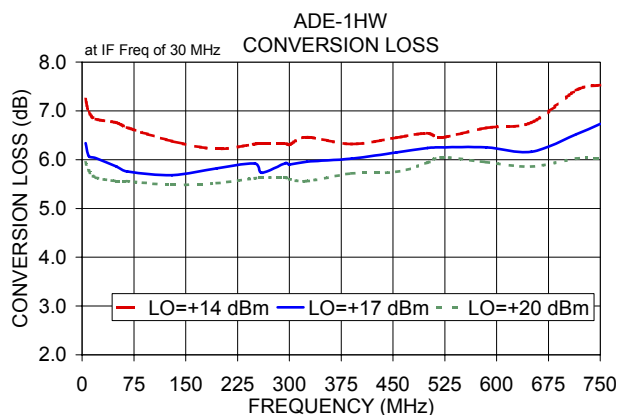
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For detailed performance specs
& shipping online see web site

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Performance Charts

ADE-1HW+ ADE-1HW



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