

Surface Mount Frequency Mixer

Level 13 (LO Power +13 dBm) 0.5 to 600 MHz

ADE-1MHW+
ADE-1MHW



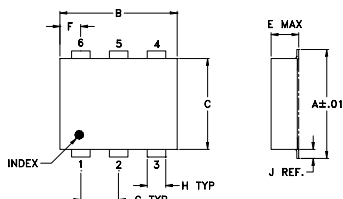
Maximum Ratings

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.	

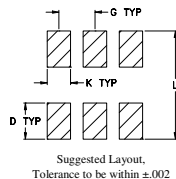
Pin Connections

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

Outline Drawing



PCB Land Pattern

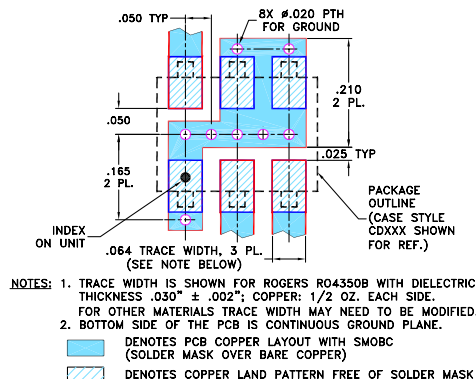


Outline Dimensions (inch)

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, 5.2 dB typ.
- excellent L-R isolation, 53 dB typ.
- excellent IP3, 17 dBm typ.
- aqueous washable
- protected by US patent 6,133,525

Applications

- HF/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

Reel Size	Available Tape and Reel at no extra cost
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					
		$\bar{X}$	σ	Max.			Typ.	Min.	Typ.	Min.		Typ.	Min.	Typ.	Min.	Typ.	Min.		Typ.
0.5-600	DC-600	5.2	0.10	6.9	8.0	63	50	53	32	43	20	56	40	44	25	30	20	17	

1 dB COMP.: +9 dBm typ.

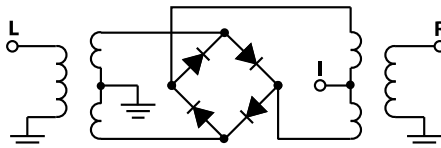
L = low range [f_L to $10 f_L$]
m = mid band [$2 f_L$ to $f_U/2$]

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 +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
0.50	30.50	5.48	63.60	56.70	1.55	2.76
1.00	31.00	5.16	63.60	56.40	1.33	2.72
2.00	32.00	4.81	63.60	56.40	1.22	2.76
5.00	35.00	4.57	62.50	55.30	1.18	2.72
10.00	40.00	4.52	61.10	54.10	1.17	2.72
20.00	50.00	4.56	59.90	51.80	1.16	2.76
50.00	80.00	4.58	56.70	46.60	1.12	2.72
62.59	92.59	4.68	55.50	45.30	1.13	2.72
100.00	130.00	4.77	54.50	42.70	1.10	2.84
125.09	155.09	4.83	55.00	41.60	1.09	2.88
150.00	180.00	4.89	53.60	40.60	1.09	2.80
187.58	217.58	4.96	47.90	40.10	1.09	2.76
200.00	230.00	5.02	48.60	40.30	1.09	2.84
250.00	280.00	5.01	49.80	38.40	1.07	2.72
300.00	330.00	5.15	42.70	37.90	1.08	2.80
312.57	342.57	5.11	41.80	37.50	1.06	2.76
375.06	405.06	5.11	41.40	32.60	1.05	2.84
400.00	430.00	5.13	41.90	30.60	1.01	3.06
500.00	530.00	6.20	42.00	31.50	1.38	3.57
625.04	655.04	6.05	35.00	26.30	1.82	3.16

Electrical Schematic



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IF/RF MICROWAVE COMPONENTS

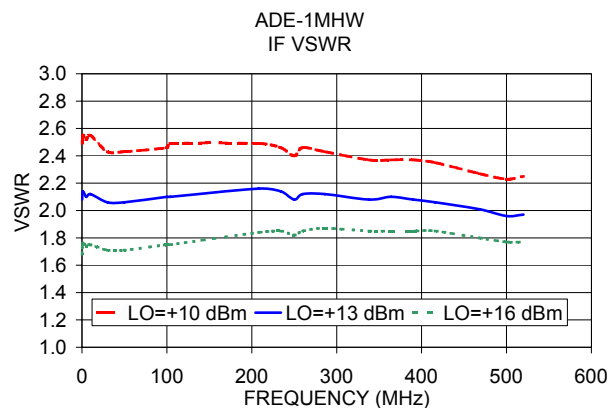
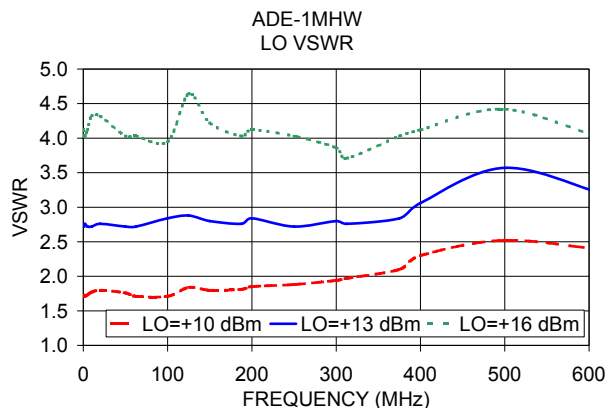
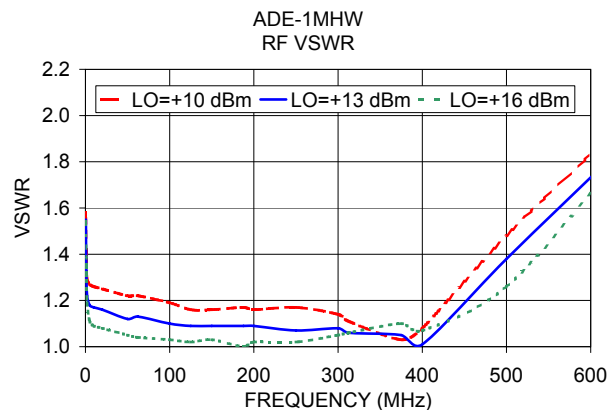
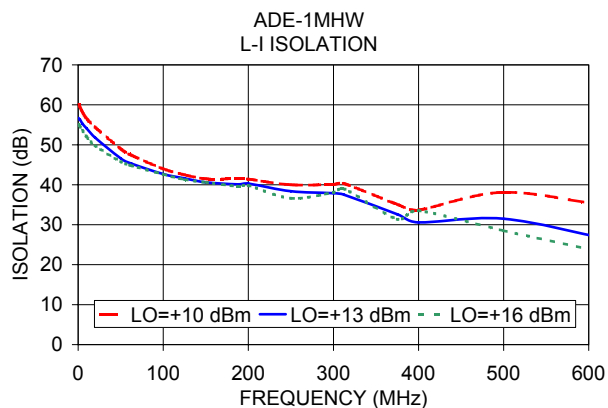
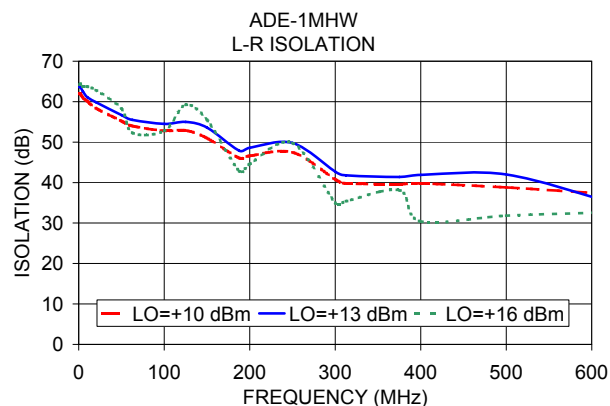
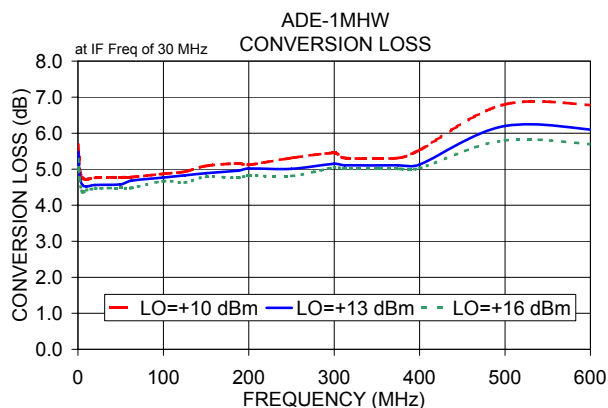
For detailed performance specs & shopping online see web site

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

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Performance Charts

ADE-1MHW+ ADE-1MHW



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