

High Reliability Mixer

Level 13 (LO Power +13 dBm) 5 to 600 MHz

ADE-R1MHW+



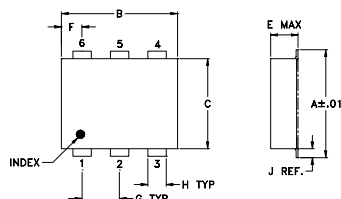
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA

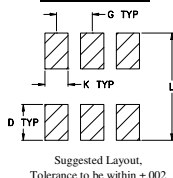
Pin Connections

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

Outline Drawing



PCB Land Pattern

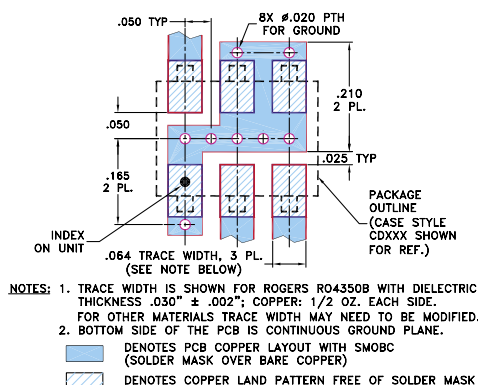


Outline Dimensions (inch)

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

- hermetically sealed ceramic quad
- low conversion loss, 5.2 dB typ.
- excellent L-R isolation, 53 dB typ.
- excellent IP3, 18 dBm typ.
- low profile package
- aqueous washable
- protected by US patent 6,133,525

Applications

- HF/VHF/UHF/ receivers

CASE STYLE: CD542

PRICE: \$6.85 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	IF	Mid-Band m		Total Range Max.	L	M	U	L	M	U								
		$\bar{X}$	σ															
		Max.	Max.															
f_L - f_U		Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ.							
5-600	DC-600	5.2	0.10	6.9	8.0	63	50	53	35	43	27	56	40	44	28	30	20	18

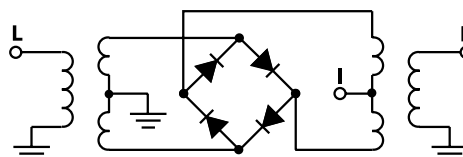
1 dB COMP.: +9 dBm typ.

L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] 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 +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
3.25	33.25	5.66	61.47	53.84	1.36	2.37
5.50	35.50	5.38	60.99	53.36	1.23	2.39
7.75	37.75	5.28	60.52	52.86	1.17	2.39
10.00	40.00	5.22	60.02	52.39	1.14	2.37
12.00	42.00	5.20	59.77	51.99	1.12	2.39
27.00	57.00	5.20	57.23	49.41	1.07	2.40
42.00	72.00	5.19	55.28	47.25	1.05	2.37
57.00	87.00	5.18	53.83	45.41	1.03	2.33
102.00	132.00	5.18	51.52	42.92	1.04	2.37
155.00	185.00	5.20	48.58	40.94	1.04	2.35
205.00	235.00	5.27	47.97	39.72	1.06	2.51
255.00	285.00	5.30	44.90	37.91	1.08	2.43
303.75	333.75	5.35	44.64	36.96	1.11	2.70
351.25	381.25	5.46	42.61	34.91	1.12	2.48
398.75	428.75	5.41	40.40	32.47	1.18	2.84
446.25	476.25	5.55	38.26	30.77	1.21	2.62
480.00	510.00	5.58	37.54	30.22	1.23	3.06
500.00	530.00	5.66	37.42	30.16	1.24	2.97
550.00	580.00	5.66	36.13	28.38	1.28	2.70
600.00	630.00	5.54	35.82	27.39	1.30	2.79

Electrical Schematic



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