

Surface Mount Frequency Mixer

Level 7 (LO Power +7 dBm) 10 to 2000 MHz

ADE-11X+
ADE-11X



Maximum Ratings

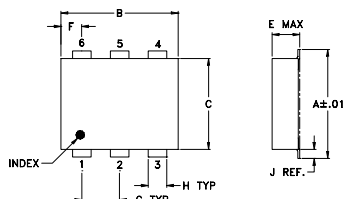
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

Permanent damage may occur if any of these limits are exceeded.

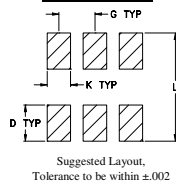
Pin Connections

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

Outline Drawing



PCB Land Pattern

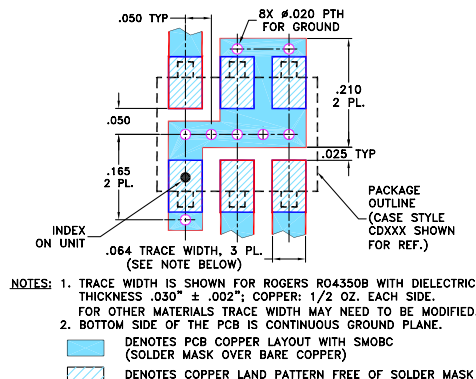


Outline Dimensions (inch)

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, 7.1 dB typ.
- excellent L-R isolation, 36 dB typ. & L-I isolation, 37 dB typ.
- low profile package
- aqueous washable
- protected by U.S. Patent 6,133,525

Applications

- cellular
- PCN
- VHF & UHF
- communication receivers & transmitters

CASE STYLE: CD542
PRICE: \$1.99 ea. QTY (20)

+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"	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.	Max.	L		M		U		L		M		U		
		$\bar{X}$	σ			Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	
		f_L - f_U																
10-2000	5-1000	7.1	0.10	8.2	9.8	62	45	36	20	27	18	60	45	37	20	38	20	9

1 dB COMP.: +1 dBm typ.

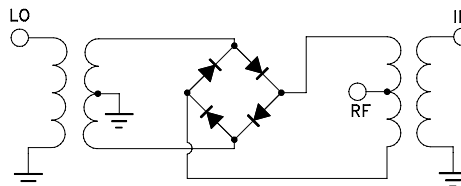
L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]

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 +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
10.1	40.1	6.96	64.83	64.24	1.08	2.86
70.1	100.1	7.28	61.55	55.99	1.02	2.54
130.1	160.1	7.34	58.29	52.05	1.05	2.61
250.1	280.1	7.46	53.74	47.47	1.15	2.54
310.1	340.1	7.46	52.18	45.94	1.23	2.65
430.1	460.1	7.65	48.59	42.89	1.40	2.65
550.1	580.1	7.57	44.12	40.93	1.58	2.72
670.1	700.1	7.78	42.25	39.40	1.74	2.86
790.1	820.1	7.84	39.37	37.63	1.84	2.90
850.1	880.1	7.64	39.00	37.00	1.81	2.90
970.1	1000.1	7.43	36.19	36.87	1.76	3.09
1030.1	1060.1	7.47	35.41	36.35	1.73	3.18
1150.1	1180.1	7.62	34.28	35.45	1.74	3.29
1210.1	1240.1	7.93	34.68	34.87	1.81	3.37
1450.1	1480.1	7.88	32.49	35.07	1.61	3.16
1510.1	1540.1	7.81	30.67	35.52	1.58	3.24
1630.1	1660.1	7.86	28.65	36.47	1.49	3.43
1810.1	1840.1	8.31	26.47	35.66	1.35	3.82
1930.1	1960.1	8.76	25.40	35.41	1.25	3.99
2050.1	2080.1	9.42	24.27	32.47	1.21	4.23

Electrical Schematic



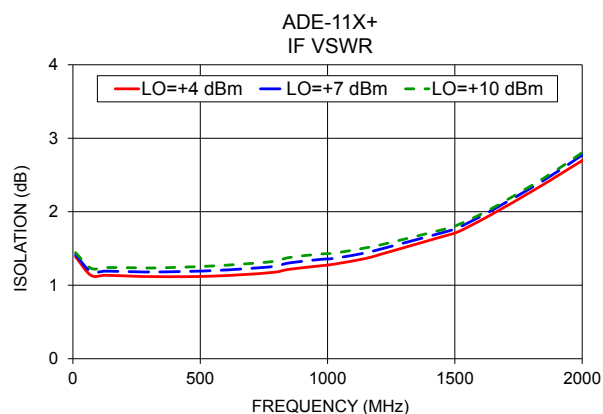
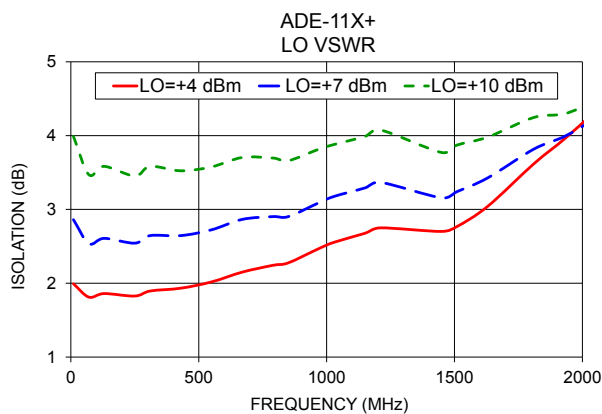
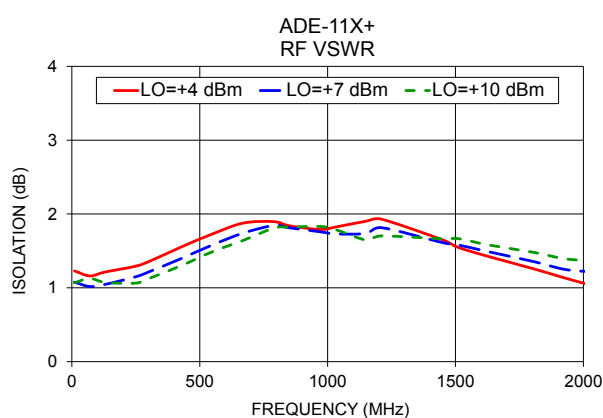
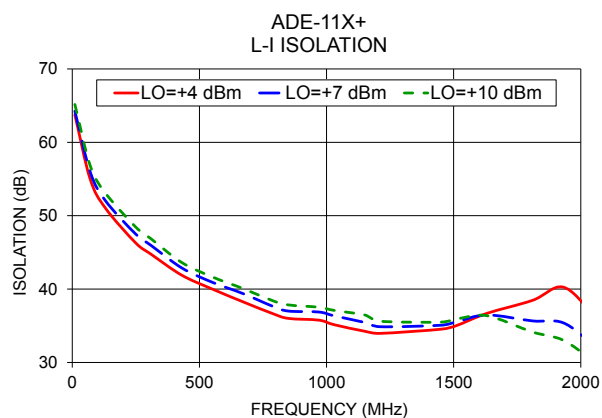
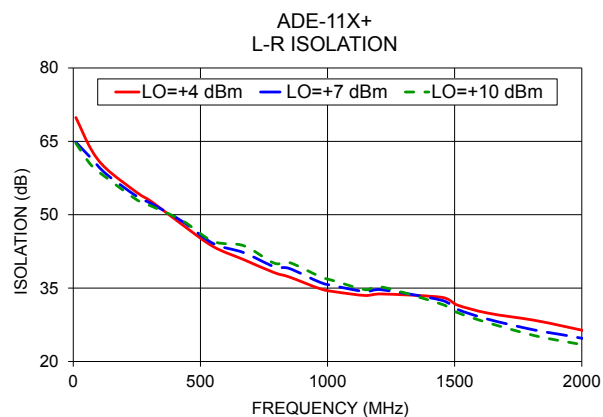
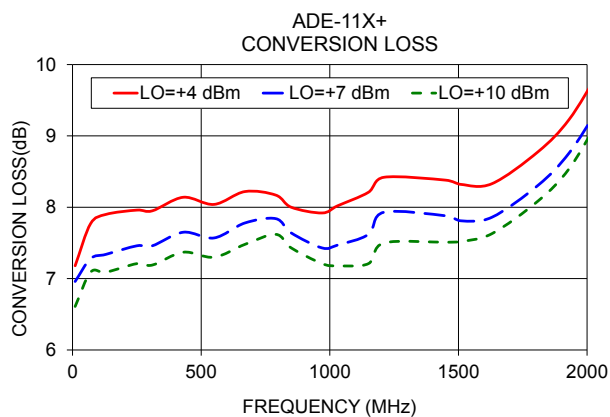
Notes

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Performance Charts

ADE-11X+ ADE-11X



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