

Surface Mount Frequency Mixer

Level 4 (LO Power +4 dBm) 10 to 1000 MHz

ADEX-10L+ ADEX-10L



Maximum Ratings

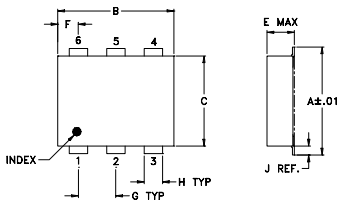
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

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

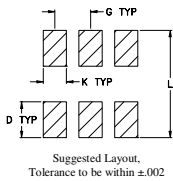
Pin Connections

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

Outline Drawing



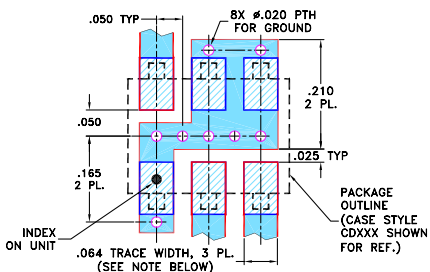
PCB Land Pattern



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

- excellent L-R isolation, 60 dB typ.
- low conversion loss, 7.2 dB typ.
- flat conversion loss ±0.2 dB typ. over entire band
- good VSWR, 1.5:1 typ. for LO & RF, 1.8:1 Typ. for IF
- good performance to 1500 MHz
- aqueous washable
- protected by U.S. Patents 6,133,525 & 6,947,717

Applications

- cellular
- PCN

CASE STYLE: CD542
PRICE: \$2.95 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)										
		L	M	U	L	M	U											
LO/RF $f_L - f_U$	Mid-Band m Total Range Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.										
10-1000	DC-800	7.2	0.10	8.2 [†]	8.8 [†]	75	55	60	40	47	37	40	26	33	20	24	13	16

1 dB COMP: +1 dBm typ.

[†]Conversion loss increases 0.8 dB when IF is above 150 MHz

L = low range [f_L to 10 f_L]

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

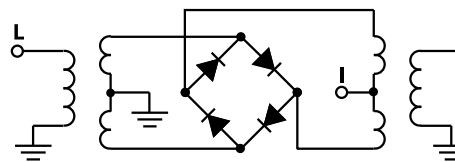
M = mid range [$10 f_L$ to $f_U/2$]

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	LO	LO	LO
10.00	40.00	7.30	82.88	58.83	1.54
25.00	55.00	7.23	82.79	51.06	1.54
55.00	85.00	7.27	80.30	44.57	1.53
70.00	100.00	7.31	78.35	42.47	1.53
100.00	130.00	7.37	75.43	39.36	1.51
172.00	202.00	7.31	68.52	34.38	1.48
244.00	274.00	7.21	64.68	31.33	1.46
316.00	346.00	7.20	61.44	29.83	1.44
352.00	382.00	7.13	60.51	29.38	1.43
424.00	454.00	7.19	61.30	28.92	1.43
460.00	490.00	7.21	61.56	28.63	1.42
532.00	562.00	7.21	59.88	28.24	1.39
604.00	634.00	7.46	57.30	27.79	1.40
640.00	670.00	7.49	55.44	27.54	1.40
712.00	742.00	7.58	52.02	26.70	1.40
748.00	778.00	7.46	51.61	25.74	1.40
820.00	850.00	7.38	51.53	23.84	1.39
856.00	886.00	7.34	52.51	22.81	1.39
928.00	958.00	7.43	51.02	21.76	1.35
1000.00	1030.00	7.65	47.97	21.23	1.27

Electrical Schematic



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For detailed performance specs & shipping online see web site

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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

