

Frequency Mixer

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

ADEX-10L+

ADEX-10L



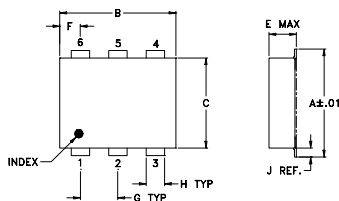
Maximum Ratings

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.	

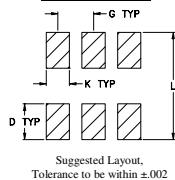
Pin Connections

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

Outline Drawing



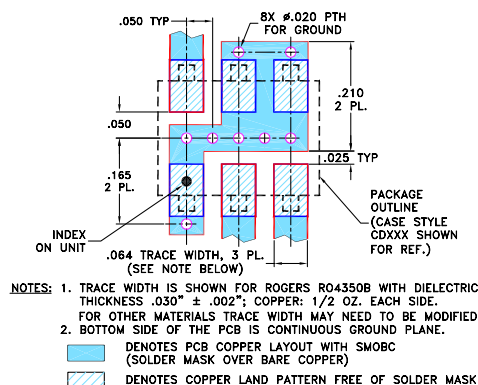
PCB Land Pattern



Outline Dimensions (inch)

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)
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.			
		f_L - f_U																
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 $f_U/2$]

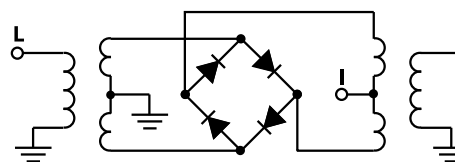
M = mid range [$10 f_L$ to $f_U/2$]

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 +4dBm	LO +4dBm	LO +4dBm	LO +4dBm	LO +4dBm
10.00	40.00	7.30	82.88	58.83	1.54	1.18
25.00	55.00	7.23	82.79	51.06	1.54	1.13
55.00	85.00	7.27	80.30	44.57	1.53	1.12
70.00	100.00	7.31	78.35	42.47	1.53	1.14
100.00	130.00	7.37	75.43	39.36	1.51	1.15
172.00	202.00	7.31	68.52	34.38	1.48	1.21
244.00	274.00	7.21	64.68	31.33	1.46	1.25
316.00	346.00	7.20	61.44	29.83	1.44	1.29
352.00	382.00	7.13	60.51	29.38	1.43	1.28
424.00	454.00	7.19	61.30	28.92	1.43	1.28
460.00	490.00	7.21	61.56	28.63	1.42	1.27
532.00	562.00	7.21	59.88	28.24	1.39	1.27
604.00	634.00	7.46	57.30	27.79	1.40	1.29
640.00	670.00	7.49	55.44	27.54	1.40	1.30
712.00	742.00	7.58	52.02	26.70	1.40	1.34
748.00	778.00	7.46	51.61	25.74	1.40	1.38
820.00	850.00	7.38	51.53	23.84	1.39	1.38
856.00	886.00	7.34	52.51	22.81	1.39	1.42
928.00	958.00	7.43	51.02	21.76	1.35	1.48
1000.00	1030.00	7.65	47.97	21.23	1.27	1.57

Electrical Schematic



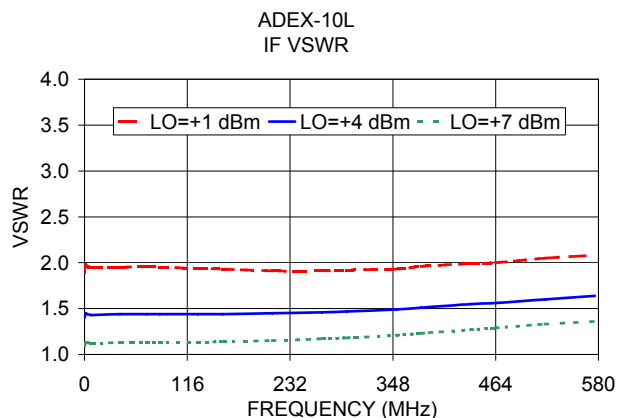
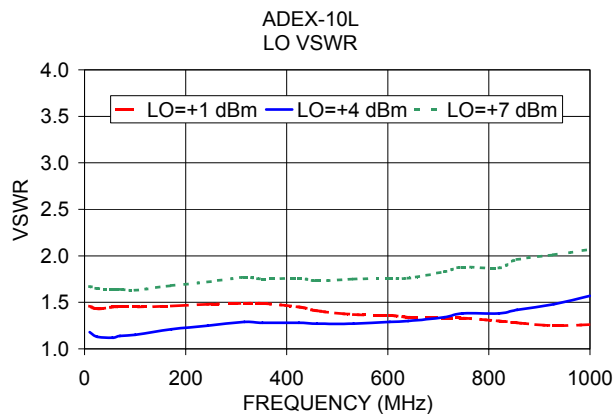
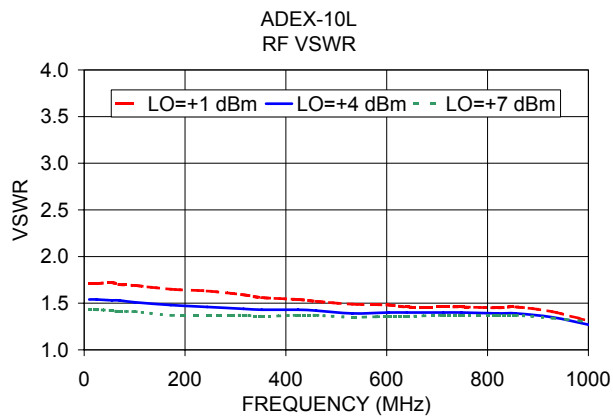
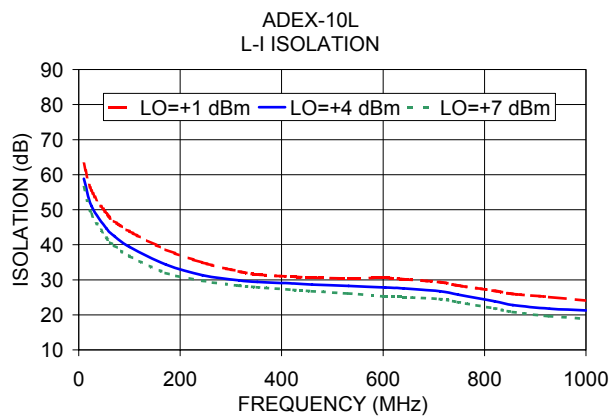
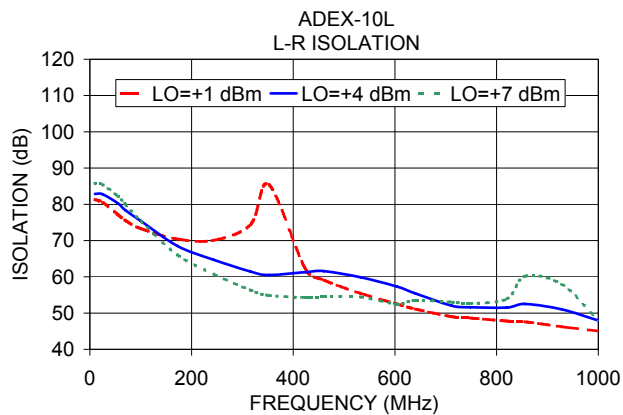
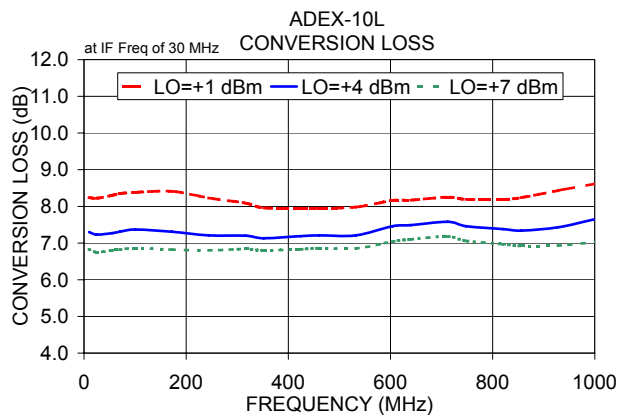
Notes

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Performance Charts

ADEX-10L+ ADEX-10L



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