

Surface Mount High Reliability Mixer

ADEX-R10+

Level 7 (LO Power +7 dBm) 10 to 1000 MHz



CASE STYLE: CD542

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

Features

- hermetically sealed ceramic quad
- low conversion loss, 7.0 dB typ.
- excellent L-R isolation, 60 dB typ.
- flat conversion loss, ±0.2 dB typ. over entire band
- good VSWR, 2:1 typ. for LO, 1.3:1 typ. for RF, 1.2:1 typ. for IF
- good performance to 1500 MHz
- low profile package
- aqueous washable
- protected by US Patent 6,133,525 and 6,947,717

Applications

- cellular

+RoHS Compliant

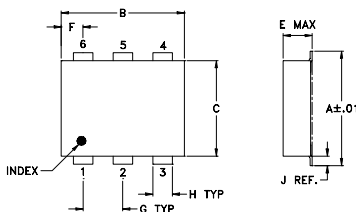
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



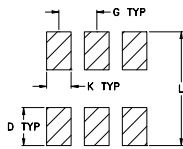
Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500
13"	500,1000

Outline Drawing



PCB Land Pattern

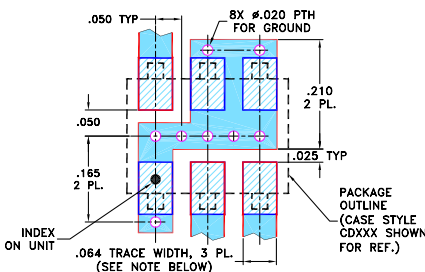


Suggested Layout, Tolerance to be within ±.002

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)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

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							
10-1000	DC-800	70	55	60	40	47	37	40	26	33	20	26	13	16

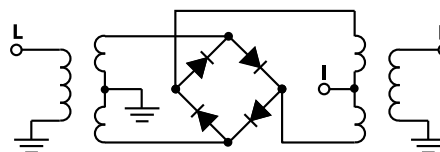
1 dB COMP.: +1 dBm typ.

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)	
						LO +7dBm
10.10	40.10	6.25	64.76	56.08	1.29	2.06
70.10	100.10	6.59	67.01	40.99	1.39	1.75
130.10	160.10	6.64	67.47	36.34	1.33	1.84
190.10	220.10	6.53	71.13	34.52	1.37	1.78
250.10	280.10	6.67	76.47	33.57	1.38	1.80
310.10	340.10	6.60	65.84	32.17	1.37	1.86
370.10	400.10	6.59	60.70	31.37	1.40	1.87
430.10	460.10	6.55	54.79	29.87	1.39	1.91
490.10	520.10	6.57	53.46	29.02	1.38	1.98
550.10	580.10	6.65	53.03	27.88	1.37	2.01
610.10	640.10	6.58	50.93	26.59	1.34	2.06
670.10	700.10	6.50	47.52	25.33	1.36	2.11
730.10	760.10	6.67	45.16	24.43	1.35	2.15
790.10	820.10	6.74	44.18	23.85	1.31	2.26
850.10	880.10	6.85	45.23	23.02	1.28	2.29
910.10	940.10	6.87	47.66	22.46	1.19	2.32
970.10	1000.10	6.48	50.13	21.53	1.10	2.35
1030.10	1060.10	6.27	55.18	19.99	1.02	2.32
1090.10	1120.10	6.14	53.76	18.95	1.15	2.43
1150.10	1180.10	6.10	47.59	18.31	1.26	2.49

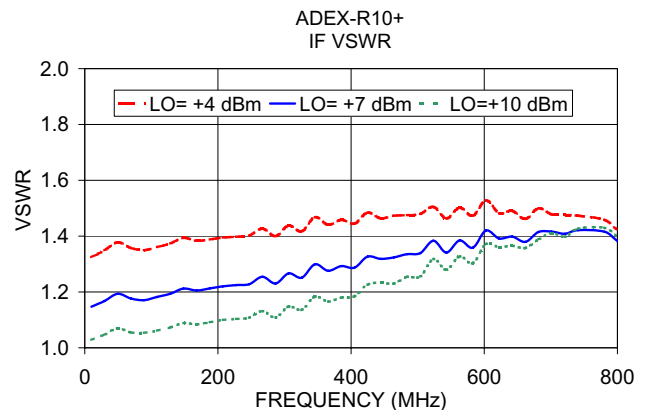
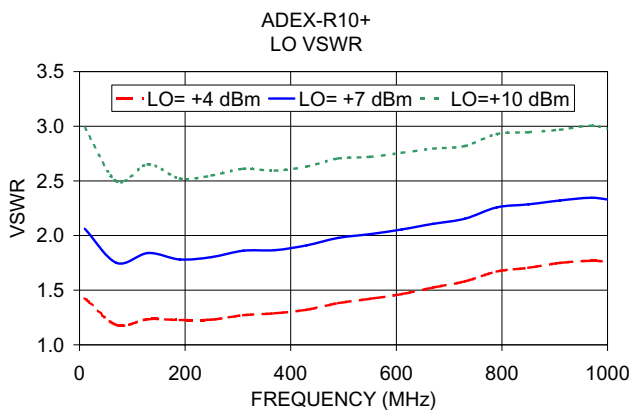
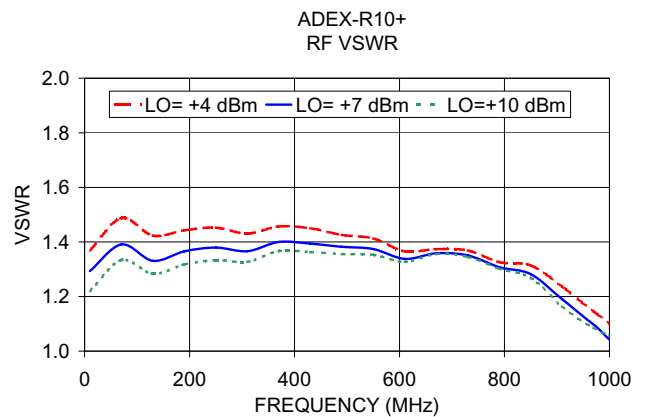
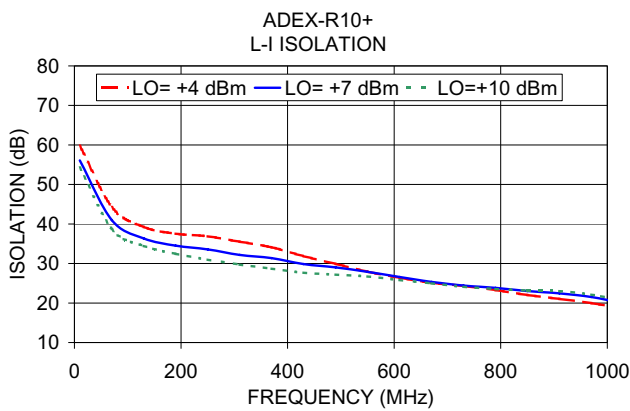
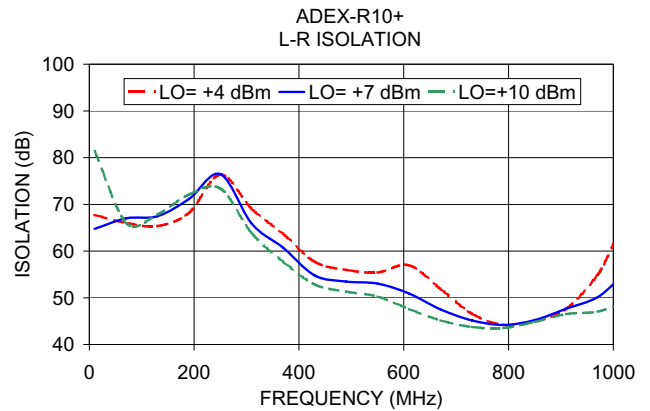
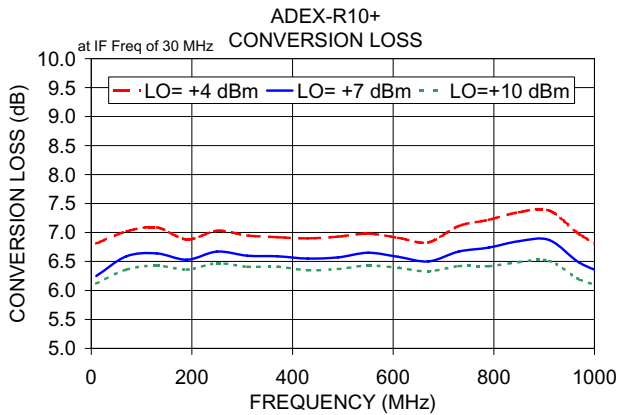
Electrical Schematic



Notes

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