

Surface Mount Frequency Mixer

ADE-35+

Level 7 (LO Power +7 dBm) 1600 to 3500 MHz



CASE STYLE: CD542

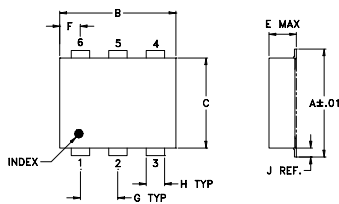
Maximum Ratings

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.	

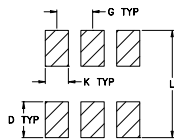
Pin Connections

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

Outline Drawing



PCB Land Pattern

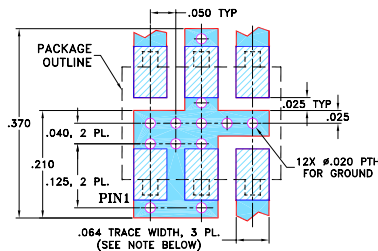


Suggested Layout,
Tolerance to be within ±.002

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-02 Suggested PCB Layout (PL-051)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .050" ± .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.

Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
 B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
 C. The parts covered by this specification document are subject to Mini-Circuit's 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp

Features

- low conversion loss, 6.3 dB typ.
- good isolation, 25 dB typ.
- aqueous washable
- protected by U.S. Patent 6,133,525
- low cost

Applications

- MMDS

+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

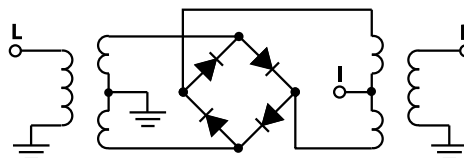
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)	LO-IF ISOLATION (dB)	IP3 at center band (dBm)
LO/RF $f_L - f_U$	\bar{X} σ Max.	Typ. Min.	Typ. Min.	Typ.
1600-3500 DC-1500	6.3 0.50 9.8	25 16	22 12	11

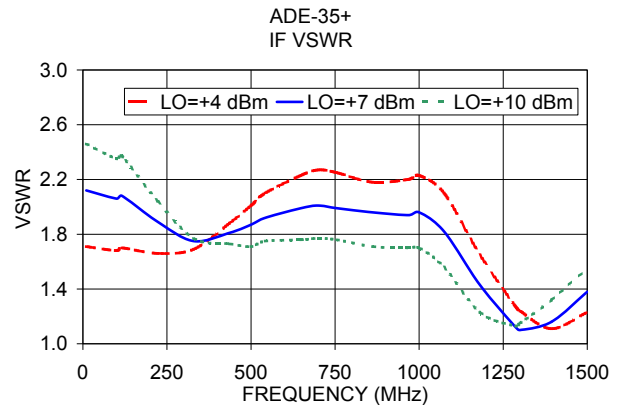
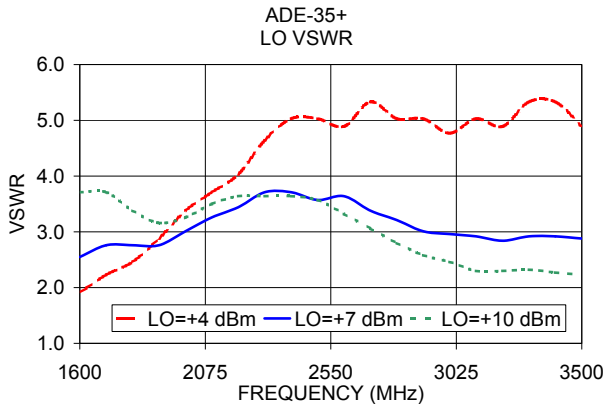
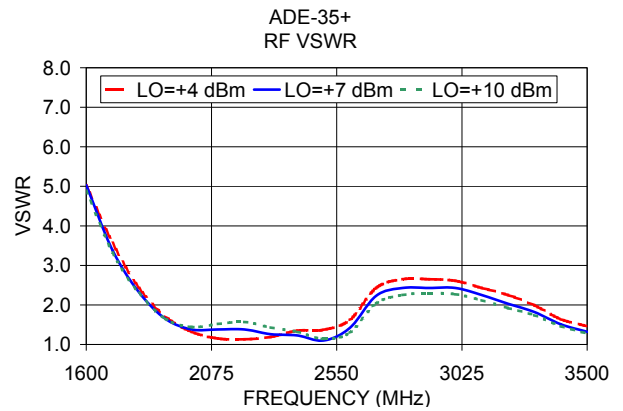
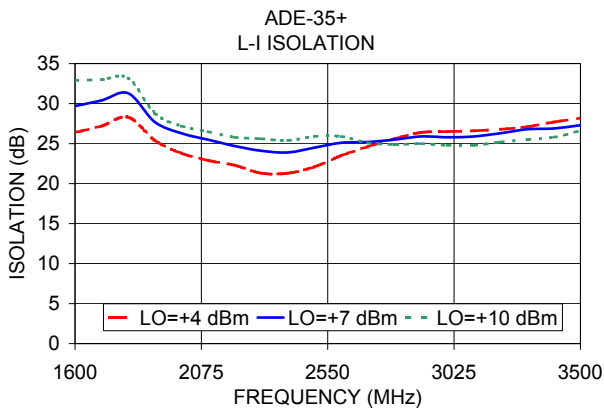
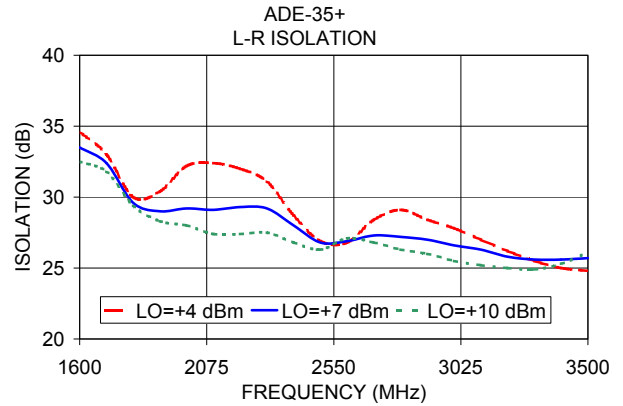
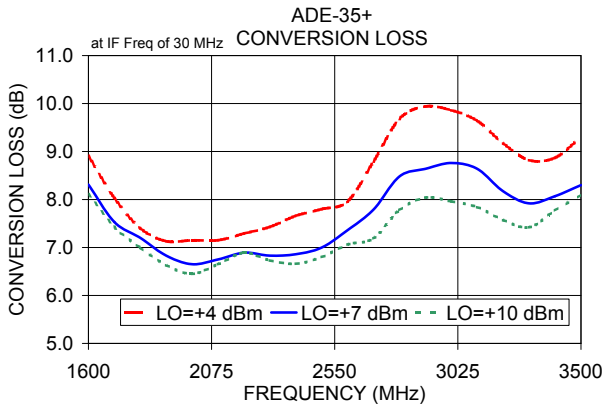
1 dB COMP: +1 dBm typ.
Phase detection, positive polarity

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
1600.00	1630.00	8.31	33.50	29.70	5.03	2.55
1700.00	1730.00	7.53	32.40	30.40	3.38	2.76
1800.00	1830.00	7.20	29.60	31.30	2.32	2.76
1900.00	1930.00	6.83	29.00	27.70	1.65	2.76
2000.00	2030.00	6.65	29.20	26.30	1.38	3.01
2100.00	2130.00	6.75	29.10	25.50	1.38	3.26
2200.00	2230.00	6.89	29.30	24.70	1.38	3.44
2300.00	2330.00	6.83	29.20	24.10	1.26	3.71
2400.00	2430.00	6.86	28.00	23.90	1.23	3.71
2500.00	2530.00	7.00	26.80	24.50	1.10	3.57
2600.00	2630.00	7.36	26.90	25.10	1.42	3.64
2700.00	2730.00	7.79	27.30	25.20	2.23	3.38
2800.00	2830.00	8.48	27.20	25.50	2.43	3.21
2900.00	2930.00	8.64	27.00	25.90	2.43	3.01
3000.00	3030.00	8.76	26.60	25.80	2.43	2.96
3100.00	3130.00	8.64	26.30	25.90	2.25	2.92
3200.00	3230.00	8.17	25.80	26.30	2.03	2.84
3300.00	3330.00	7.92	25.60	26.80	1.82	2.92
3400.00	3430.00	8.07	25.60	26.90	1.51	2.92
3500.00	3530.00	8.30	25.70	27.30	1.32	2.88

Electrical Schematic





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