

Surface Mount Frequency Mixer

ADE-35+

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



CASE STYLE: CD542

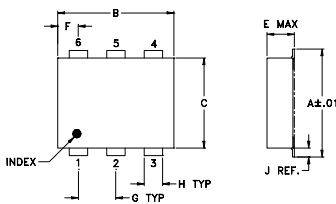
Maximum Ratings

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.	

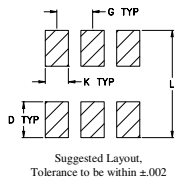
Pin Connections

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

Outline Drawing



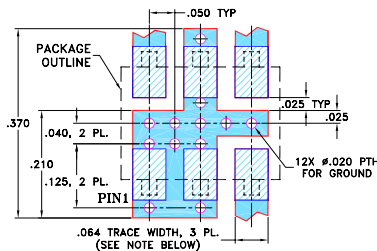
PCB Land Pattern



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

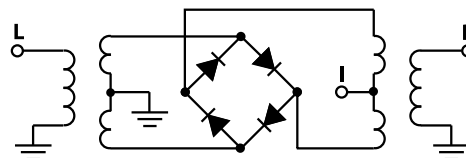
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)	LO-IF ISOLATION (dB)	IP3 at center band (dBm)
LO/RF	$f_L - f_U$	Typ. Min.	Typ. Min.	Typ.
1600-3500	DC-1500	6.3 0.50 9.8	25 16	22 12 11

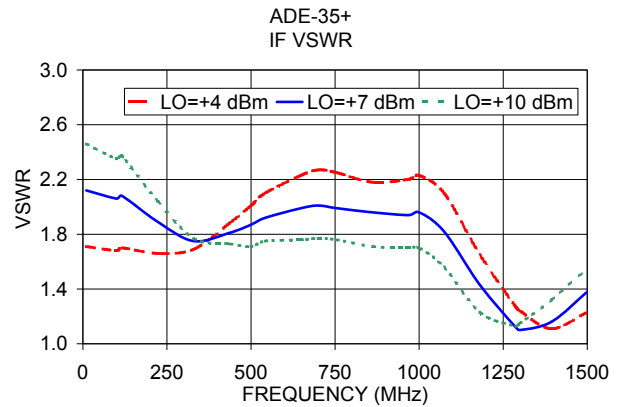
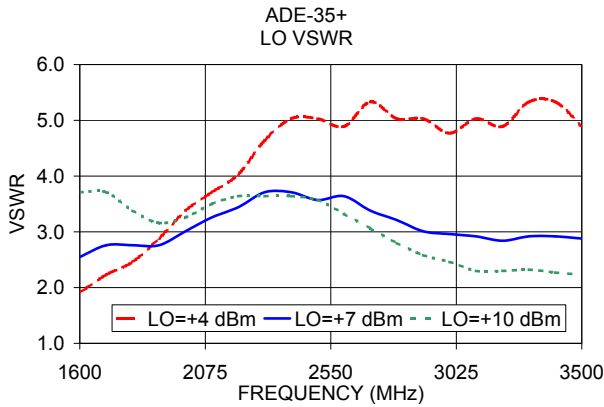
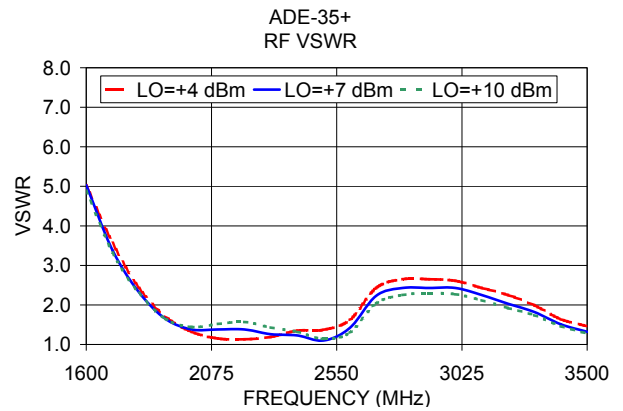
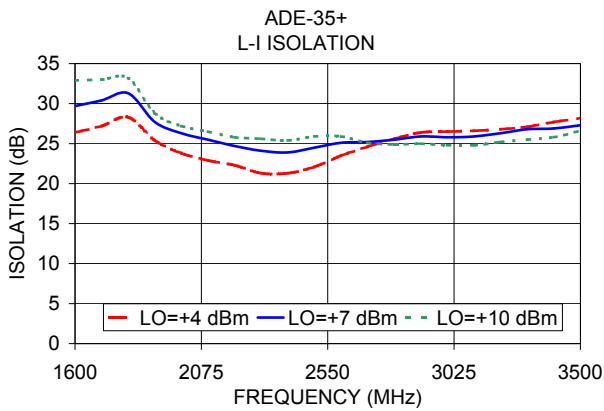
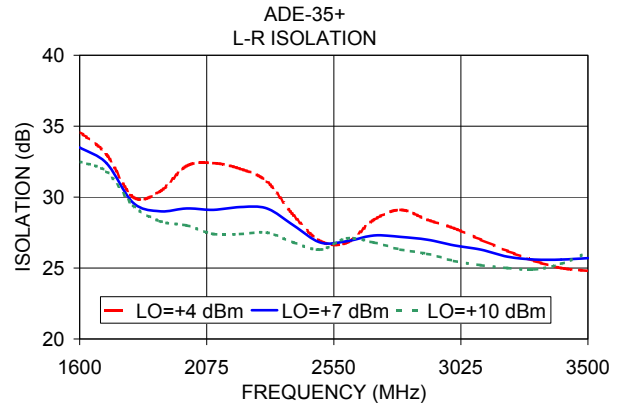
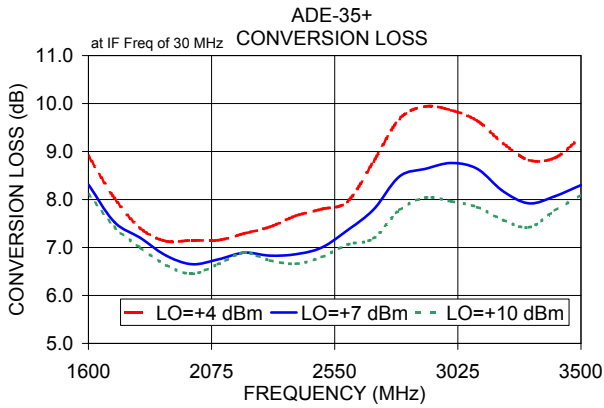
1 dB COMP: +1 dBm typ.
 Phase detection, positive polarity

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
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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