

Frequency Mixer

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

ADE-35+



Generic photo used for illustration purposes only

CASE STYLE: CD542

+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
13"	500, 1000

Maximum Ratings

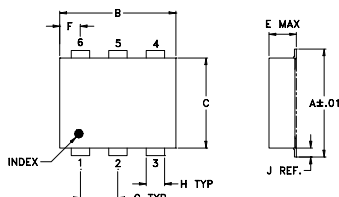
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

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

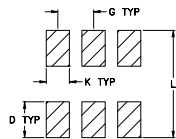
Pin Connections

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

Outline Drawing



PCB Land Pattern

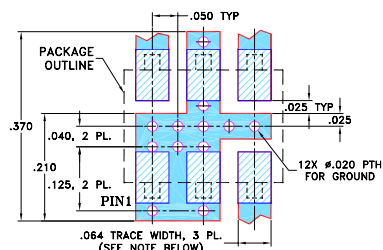
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch)

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 .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

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

Electrical Specifications

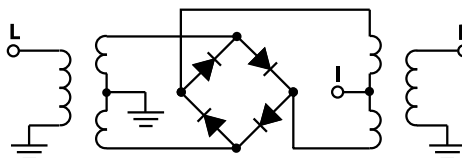
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)	LO-IF ISOLATION (dB)	IP3 at center band (dBm)
LO/RF $f_L - f_U$	$\bar{X}$ σ Max.	Typ. Min.	Typ. Min.	Typ.
1600-3500 DC-1500	6.3 0.50 9.8	25 16	22 12	11

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

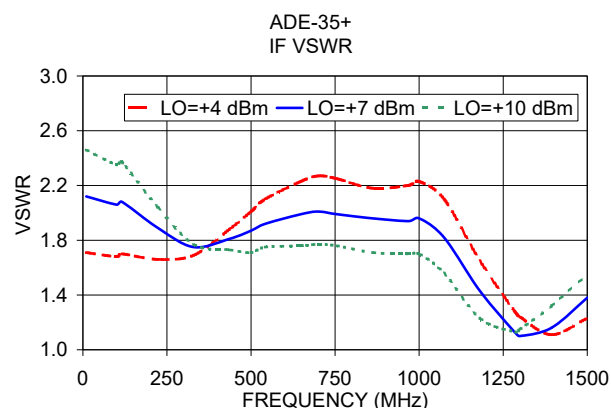
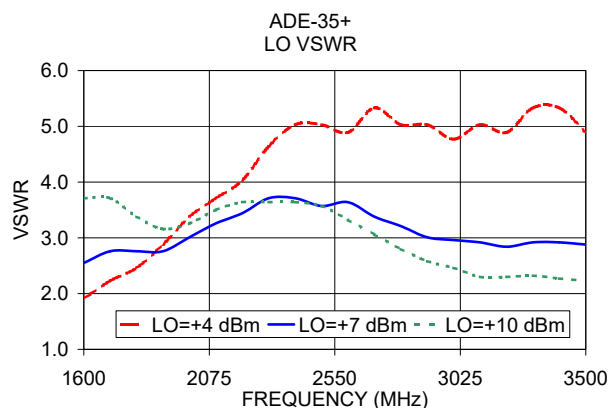
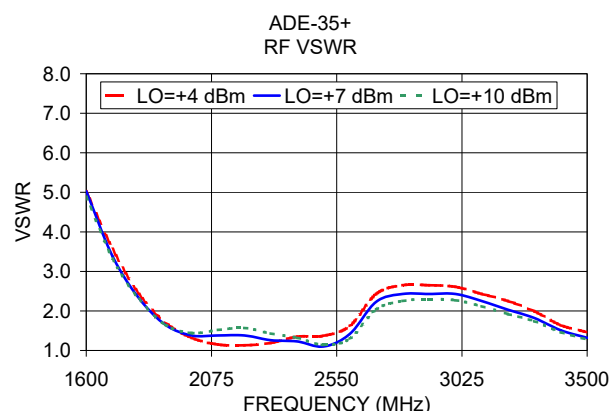
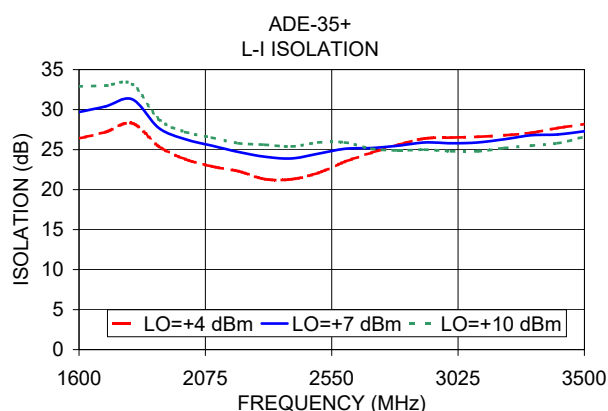
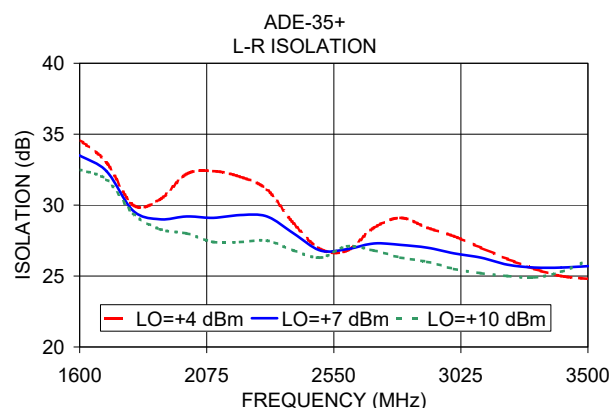
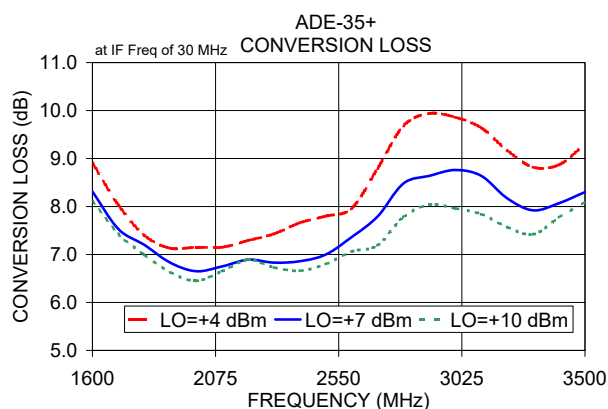
Electrical Schematic



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.
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