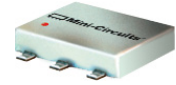


# High Reliability Mixer

## ADE-R35LH+

Level 10 (LO Power +10 dBm) 1800 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

### Features

- hermetically sealed ceramic quad
- low conversion loss, 6.8 dB typ.
- good isolation, 25 dB typ.
- low profile package
- aqueous washable
- protected by US Patent 6,133,525

### Applications

- MMDS

**+RoHS Compliant**

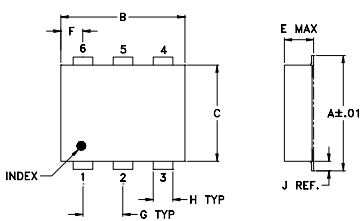
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



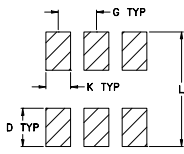
Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	10, 20, 50, 100, 200, 500
13"	500, 1000

### Outline Drawing



### PCB Land Pattern

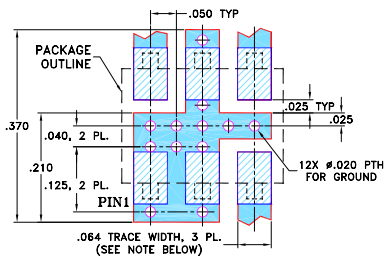


Suggested Layout, Tolerance to be within ±.002

### 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-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

### Electrical Specifications

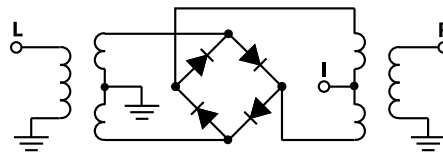
FREQUENCY (MHz)	CONVERSION LOSS (dB)		LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)	
	LO/RF	IF	$\bar{X}$	$\sigma$	Max.	Typ. Min.		Typ. Min.
1800-3500	DC-1000		6.8	0.50	9.2	25 16	22 12	14

1 dB COMP: +5 dBm typ.  
Phase detection, positive polarity

### Typical Performance Data

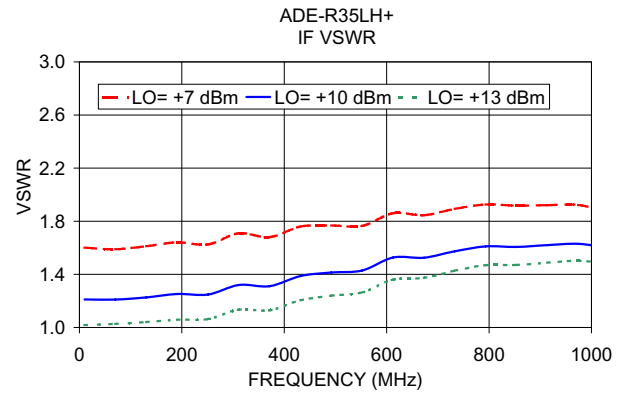
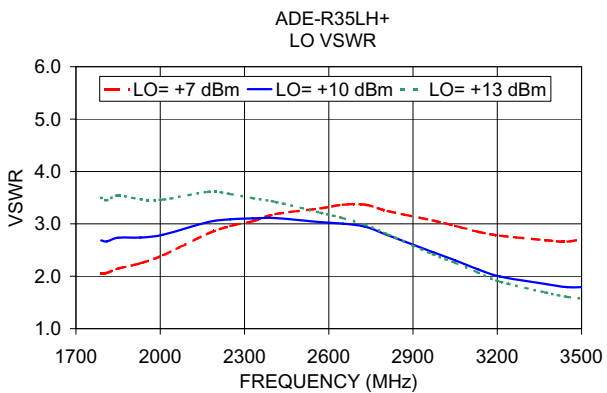
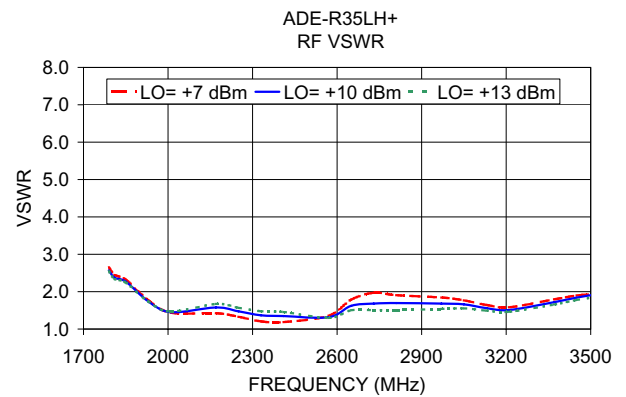
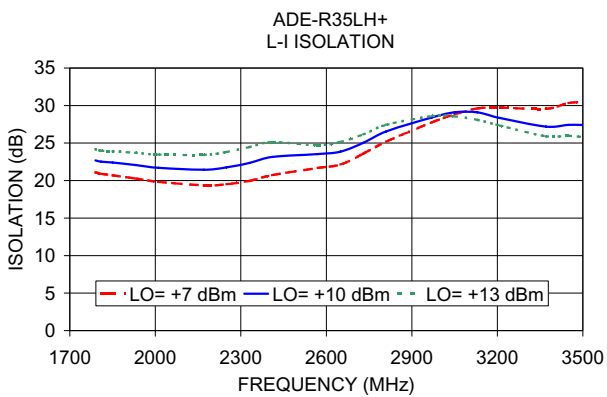
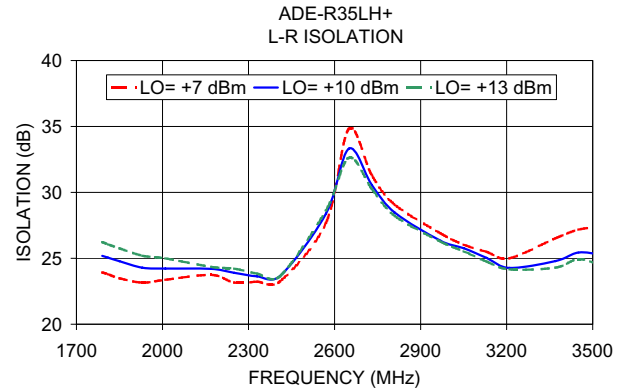
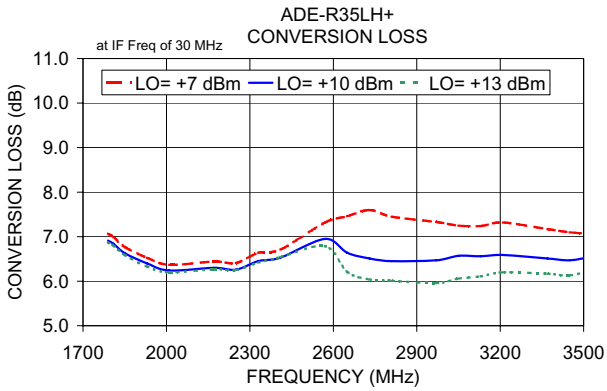
Frequency (MHz)	Conversion Loss (dB)		Isolation L-R (dB)		Isolation L-I (dB)		VSWR RF Port (:1)		VSWR LO Port (:1)	
	LO	RF	LO	RF	LO	RF	LO	RF	LO	RF
1790.00	1820.00	6.91	25.19	22.69	2.57	2.68				
1810.00	1840.00	6.84	25.05	22.52	2.37	2.67				
1850.00	1880.00	6.63	24.78	22.41	2.27	2.73				
1930.00	1960.00	6.40	24.29	22.08	1.74	2.74				
2010.00	2040.00	6.24	24.22	21.70	1.45	2.79				
2170.00	2200.00	6.30	24.20	21.45	1.58	3.03				
2250.00	2280.00	6.26	23.90	21.76	1.47	3.09				
2330.00	2360.00	6.45	23.63	22.34	1.37	3.11				
2410.00	2440.00	6.53	23.66	23.15	1.35	3.11				
2570.00	2600.00	6.95	28.38	23.53	1.32	3.03				
2650.00	2680.00	6.64	33.32	23.86	1.62	3.00				
2730.00	2760.00	6.51	30.55	25.03	1.68	2.95				
2810.00	2840.00	6.45	28.46	26.55	1.70	2.78				
2970.00	3000.00	6.47	26.33	28.41	1.68	2.46				
3050.00	3080.00	6.57	25.77	29.10	1.66	2.31				
3130.00	3160.00	6.56	25.03	29.10	1.56	2.14				
3210.00	3240.00	6.59	24.27	28.34	1.51	1.99				
3370.00	3400.00	6.51	24.79	27.19	1.72	1.85				
3450.00	3480.00	6.47	25.44	27.42	1.84	1.79				
3530.00	3560.00	6.55	25.28	27.40	1.94	1.80				

### Electrical Schematic



**Notes**

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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