

# Surface Mount Frequency Mixer

Level 7 (LO Power +7 dBm) 800 to 1000 MHz

## ADE-901+ ADE-901



### Maximum Ratings

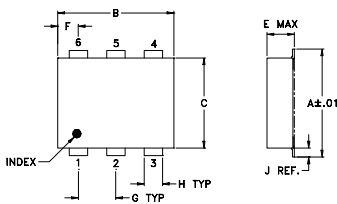
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

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

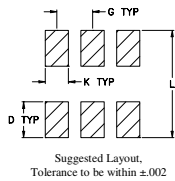
### Pin Connections

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

### Outline Drawing



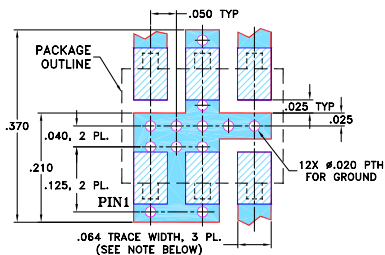
### PCB Land Pattern



### 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:**
- 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.
  - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- 

### Features

- low conversion loss, 5.9 dB typ.
- good isolation, 32 dB typ.
- low profile package
- aqueous washable
- protected by U.S. Patent 6,133,525

### Applications

- cellular
- ISM/GSM

CASE STYLE: CD542  
PRICE: \$2.95 ea. QTY (20)

**+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

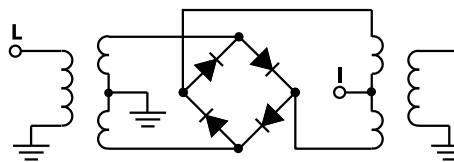
FREQUENCY (MHz)		CONVERSION LOSS (dB)			LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)
LO/RF	IF	$\bar{X}$	$\sigma$	Max.	Typ.	Min.	Typ.	Min.	Typ.
800-1000	DC-200	5.9	0.10	7.3	32	22	26	18	13

1 dB COMP.: +1 dBm typ.

### 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
800.00	830.00	5.99	33.00	25.00	1.21	2.68
810.53	840.53	5.85	33.16	25.16	1.20	2.76
821.05	851.05	5.89	33.17	25.17	1.20	2.84
831.58	861.58	5.80	33.17	25.00	1.19	2.92
842.11	872.11	5.85	33.17	25.34	1.19	2.96
852.63	882.63	5.88	33.33	25.17	1.19	2.96
863.16	893.16	5.89	33.33	25.33	1.18	2.92
873.68	903.68	5.86	33.50	25.33	1.17	2.88
884.21	914.21	5.86	33.67	25.50	1.16	2.88
894.74	924.74	5.89	33.50	25.50	1.15	3.01
905.26	935.26	5.91	33.50	25.34	1.13	3.11
915.79	945.79	5.84	33.50	25.33	1.12	3.16
926.32	956.32	5.92	33.33	25.33	1.10	3.21
936.84	966.84	5.86	33.50	25.00	1.08	3.21
947.37	977.37	5.92	33.34	24.84	1.06	3.21
957.90	987.90	5.91	33.33	24.67	1.04	3.16
968.42	998.42	5.87	33.50	24.50	1.02	3.21
978.95	1008.95	5.80	33.50	24.50	1.01	3.32
989.47	1019.47	5.86	33.50	24.34	1.01	3.38
1000.00	1030.00	5.82	33.50	24.34	1.03	3.44

### Electrical Schematic

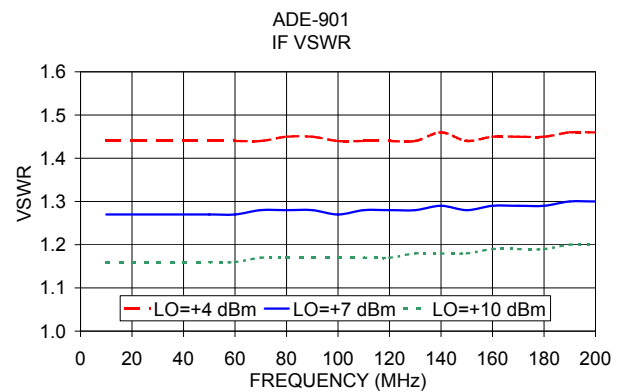
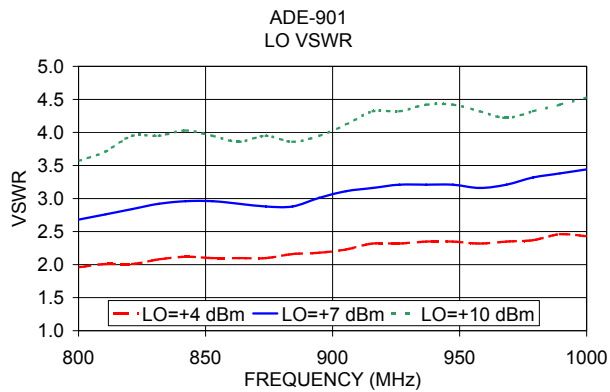
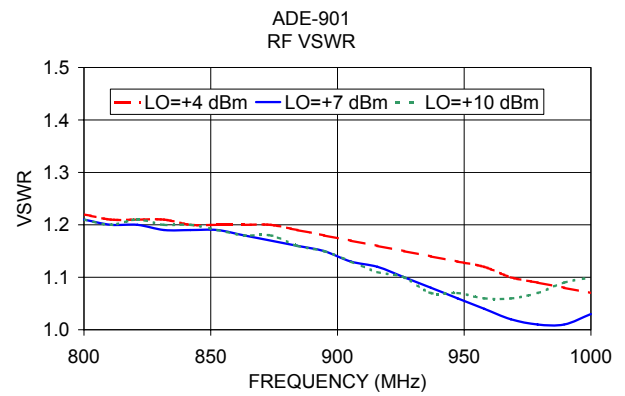
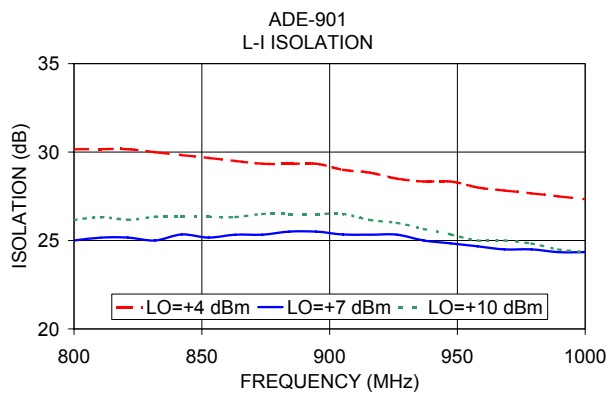
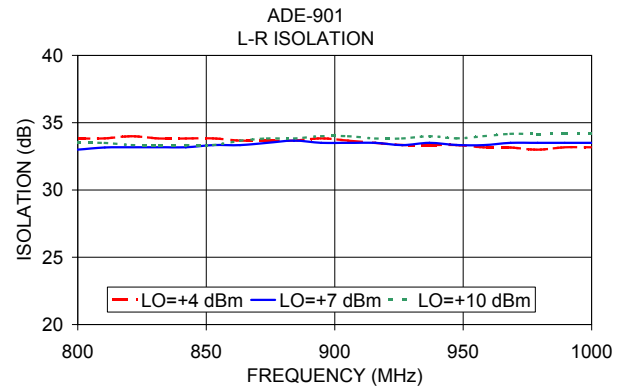
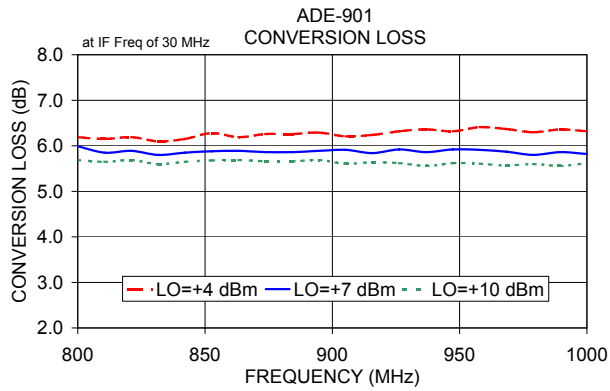


### Notes

- 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.
- The parts covered by this specification document are subject to Mini-Circuits 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-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)



## Performance Charts



**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-Circuits 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-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)