

Frequency Mixer

ADE-901

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



CASE STYLE: CD542

Maximum Ratings

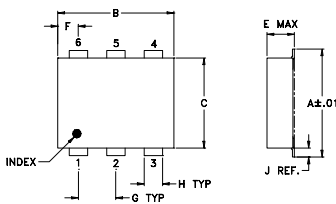
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

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

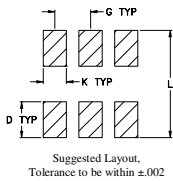
Pin Connections

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

Outline Drawing



PCB Land Pattern

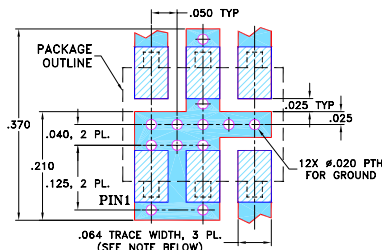


Outline Dimensions (inch/mm)

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 R04350B 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

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.
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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

Electrical Specifications

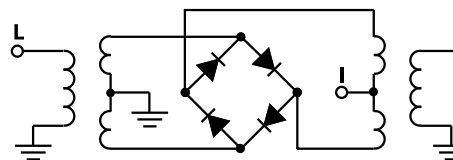
FREQUENCY (MHz)		CONVERSION LOSS (dB)			LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)
LO/RF	IF	\bar{X}	σ	Max.	Typ.	Min.	Typ.	Min.	Typ.
800-1000	DC-200	5.9	0.10	7.3	32	22	26	18	13

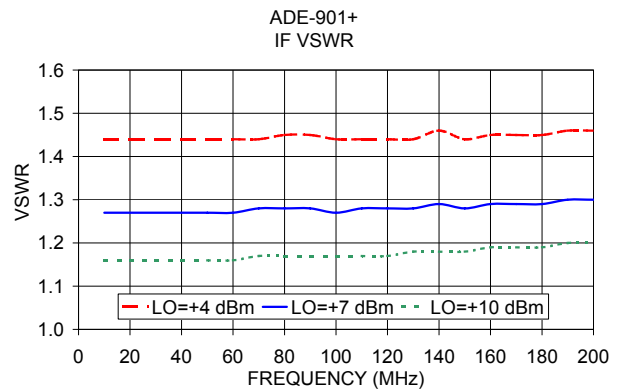
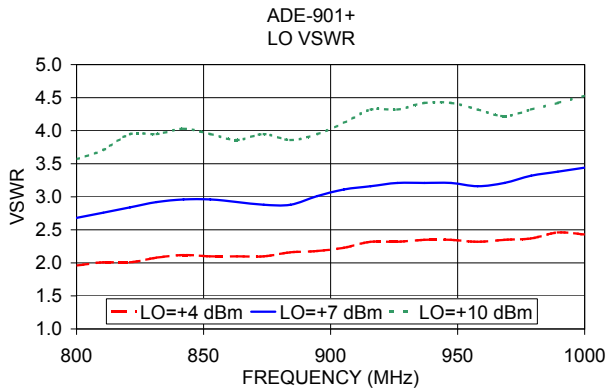
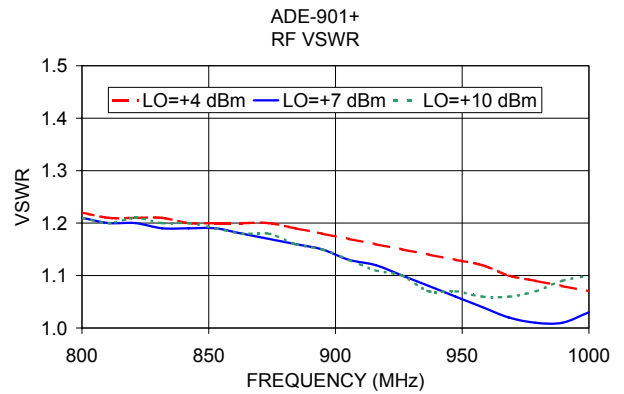
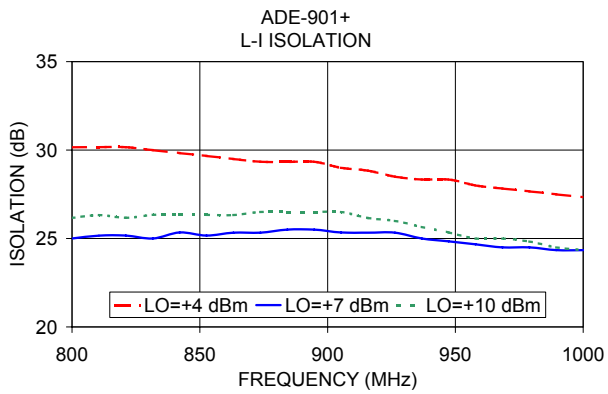
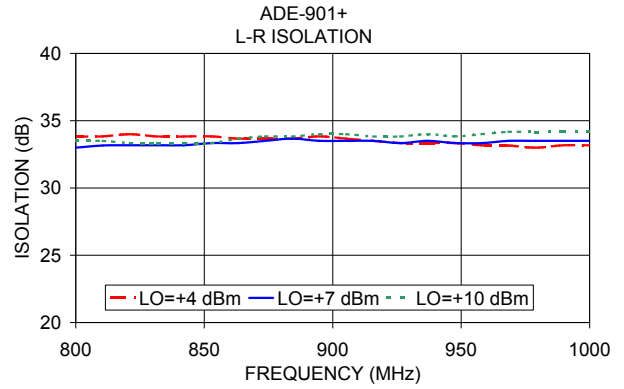
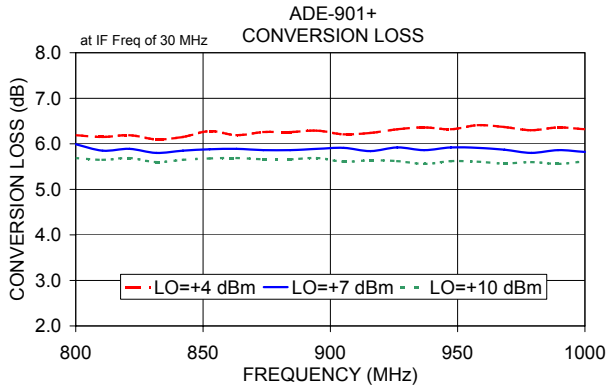
1 dB COMP.: +1 dBm typ.

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





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