

Surface Mount

Frequency Mixer

ADE-30

Level 7 (LO Power +7 dBm) 200 to 3000 MHz



Generic photo used for illustration purposes only

CASE STYLE: CD542

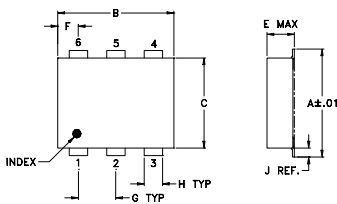
Maximum Ratings

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.	

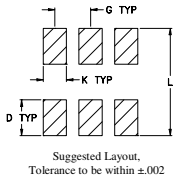
Pin Connections

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

Outline Drawing



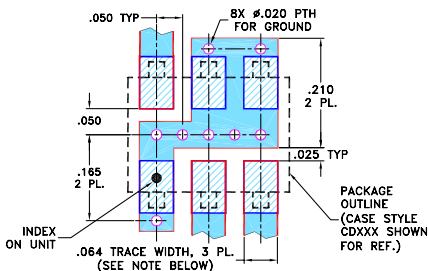
PCB Land Pattern



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-03 Suggested PCB Layout (PL-052)



- 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.
- 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.
 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, 4.5 dB typ.
- excellent L-R isolation, 35 dB typ.
- low profile package
- aqueous washable
- protected by U.S. Patent 6,133,525

Applications

- cellular
- PCN
- instrumentation
- ISM

Electrical Specifications

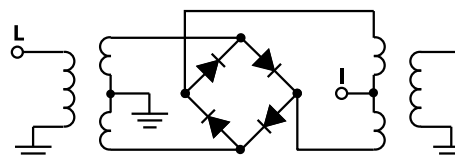
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)
		Typ.	Min.	Typ.	Min.	
200-3000	DC-1000	35	20	20	7	14

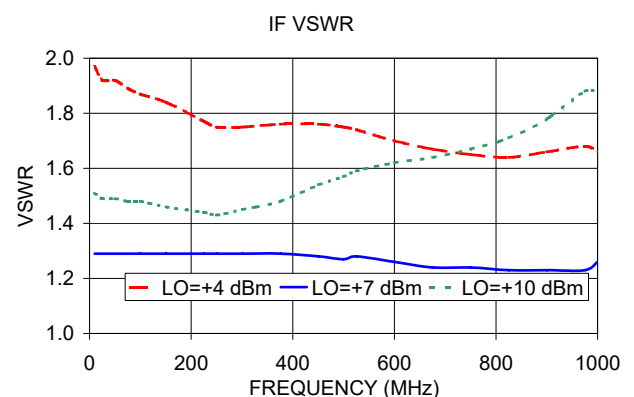
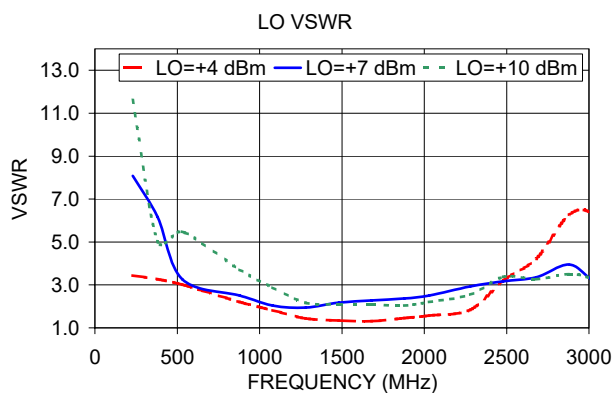
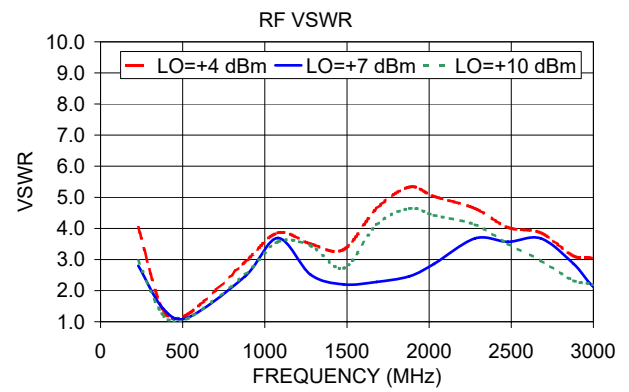
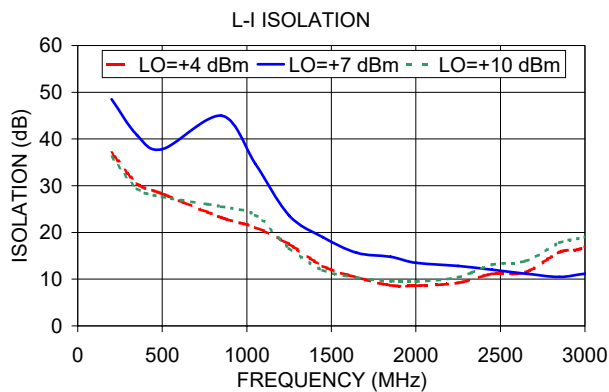
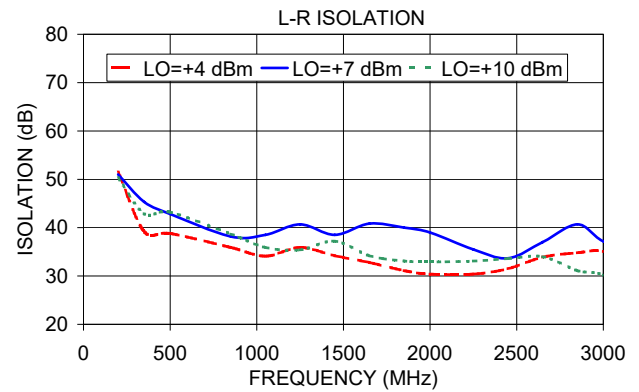
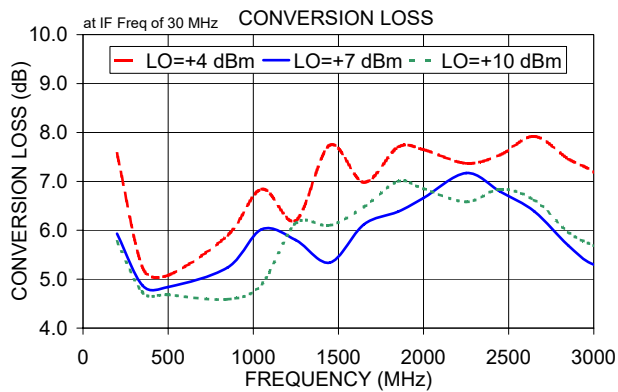
1 dB COMP.: +1 dBm typ.
 m=mid band [$2f_L$ to $f_U/2$]

Typical Performance Data

Frequency (MHz)	Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
200.00	230.00	5.93	51.00	2.80	8.08
350.00	380.00	4.87	45.33	1.43	6.17
500.00	530.00	4.84	42.83	1.13	3.26
850.00	880.00	5.24	38.17	2.46	2.51
1050.00	1080.00	6.02	38.50	3.69	2.04
1250.00	1280.00	5.80	40.67	2.51	1.95
1450.00	1480.00	5.34	38.50	2.20	2.17
1650.00	1680.00	6.12	40.83	2.28	2.28
1850.00	1880.00	6.38	40.00	2.46	2.37
2000.00	2030.00	6.66	39.00	2.86	2.51
2250.00	2280.00	7.17	35.50	3.68	2.93
2450.00	2480.00	6.79	33.67	3.57	3.17
2650.00	2680.00	6.39	37.00	3.68	3.36
2850.00	2880.00	5.69	40.67	2.86	3.95
3000.00	3030.00	5.30	37.17	2.01	3.17

Electrical Schematic





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