Surface Mount

High Reliability Mixer

ADE-R901+

Level 7 (LO Power +7 dBm) 300 to 1000 MHz

CASE STYLE: CD542
PRICE: $3.35 ea. QTY. (10-49)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Maximum Ratings

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

Pin Connections

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

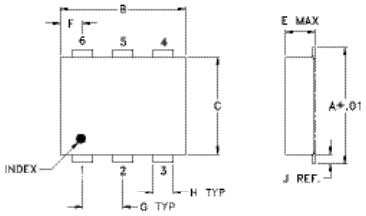
Features

- hermetically sealed ceramic quad
- low conversion loss, 5.9 dB typ.
- good L-R isolation, 38 dB typ.
- low profile package
- aqueous washable
- protected by US Patent 6,133,525

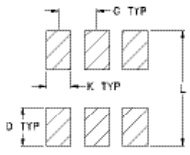
Applications

- cellular
- ISM/GSM

Outline Drawing



PCB Land Pattern



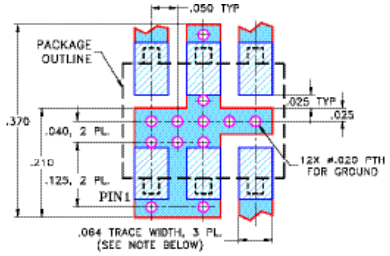
Suggested Layout,
Tolerance to be within ±.002

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

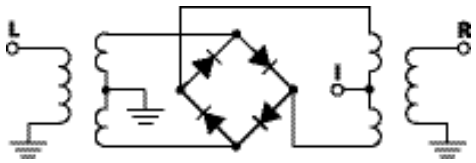
FREQUENCY (MHz)		CONVERSION LOSS (dB)			LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)
LO/RF	IF								
f_L-f_U		$\overline{X}$	σ	Max.	Typ.	Min.	Typ.	Min.	Typ.
300-1000	DC-200	5.9	0.10	7.5	38	25	28	20	13

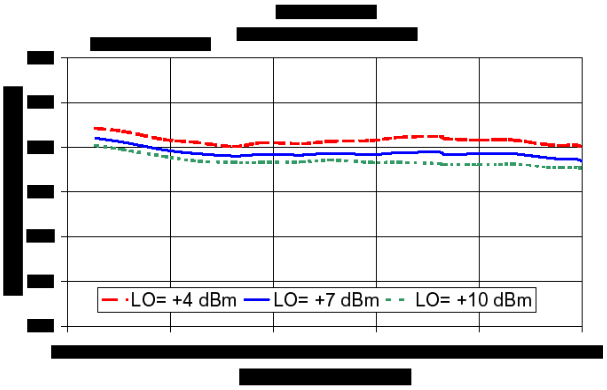
1 dB COMP.: +1 dBm typ.

Typical Performance Data

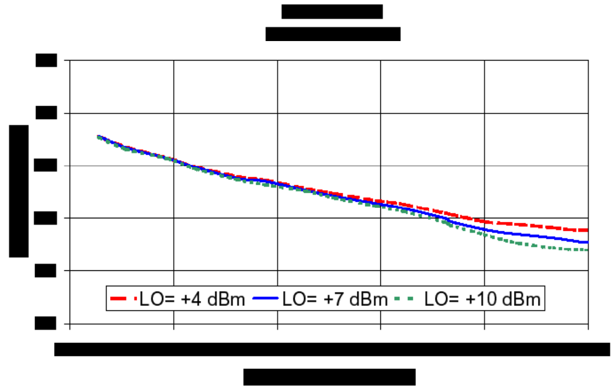
Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
291.24	321.24	6.20	47.77	41.40	1.73	2.96
331.44	361.44	6.11	46.70	40.45	1.62	2.98
391.75	421.75	5.94	45.70	38.98	1.51	2.92
431.96	461.96	5.87	44.86	38.09	1.44	2.95
492.27	522.27	5.81	43.80	36.31	1.38	2.94
532.47	562.47	5.84	43.52	35.60	1.33	2.95
592.78	622.78	5.83	42.64	34.24	1.29	2.95
632.99	662.99	5.87	42.11	33.30	1.24	2.93
693.30	723.30	5.84	41.41	32.25	1.21	2.91
733.51	763.51	5.88	40.94	31.42	1.15	2.89
793.81	823.81	5.89	39.97	30.05	1.10	2.91
800.00	830.00	5.84	39.69	28.77	1.13	2.96
850.00	880.00	5.86	38.93	28.14	1.03	2.97
880.00	910.00	5.87	38.60	27.71	1.05	3.02
900.00	930.00	5.86	38.47	27.46	1.06	3.01
940.00	970.00	5.77	38.06	27.07	1.10	3.01
950.00	980.00	5.77	38.13	27.08	1.10	3.03
970.00	1000.00	5.74	37.95	26.90	1.10	3.08
990.00	1020.00	5.74	37.75	26.65	1.14	3.13
1000.00	1030.00	5.70	37.75	26.52	1.18	3.13

Electrical Schematic





LO= +4 dBm
LO= +7 dBm
LO= +10 dBm



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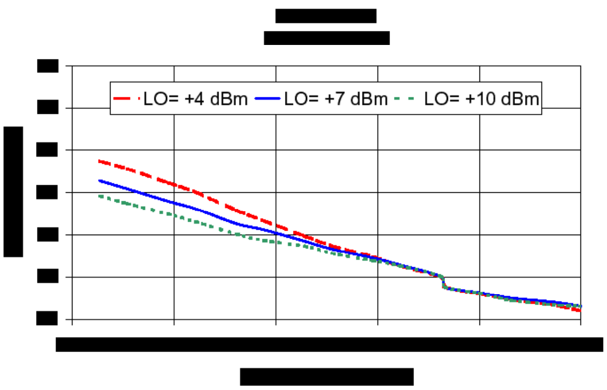

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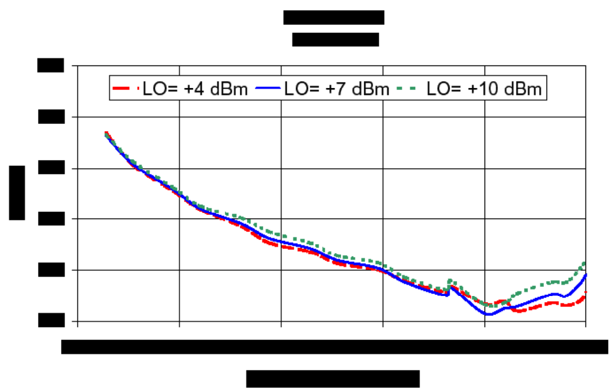

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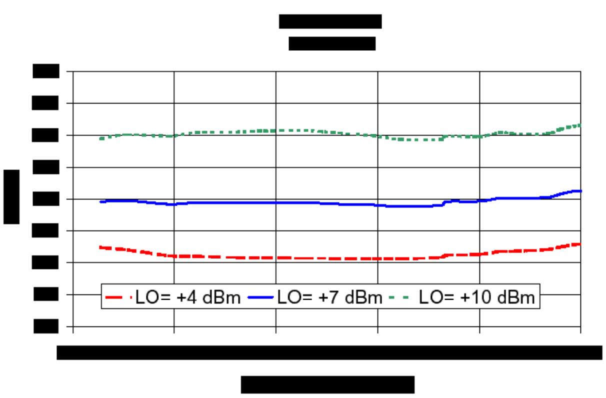

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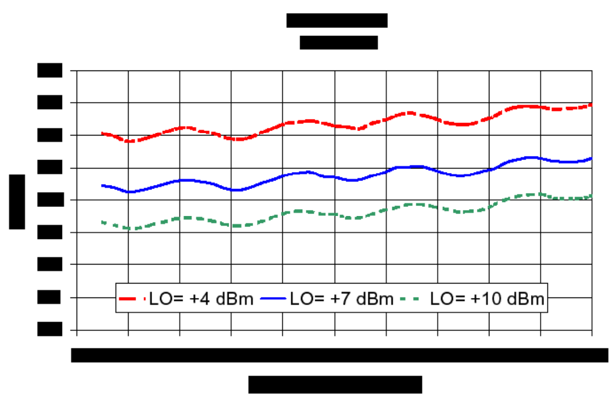

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