

Surface Mount High Reliability Mixer

ADE-R20+

Level 7 (LO Power +7 dBm) 1500 to 2800 MHz



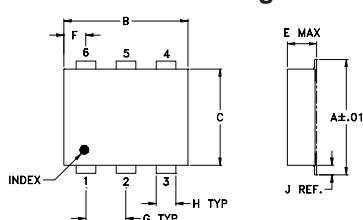
Maximum Ratings

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.	

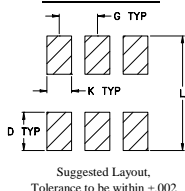
Pin Connections

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

Outline Drawing



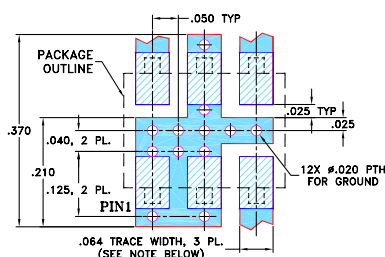
PCB Land Pattern



Outline Dimensions (inch)

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.
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- hermetically sealed ceramic quad
- low conversion loss, 5.8 dB typ.
- excellent L-R isolation, 30 dB typ.
- low profile package
- aqueous washable
- protected by US Patent 6,133,525

Applications

- digital cellular
- digital cordless phone
- PCN

Electrical Specifications

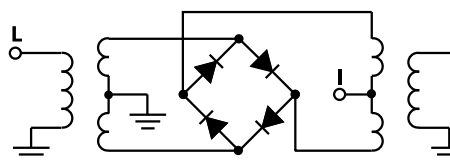
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)			
		Typ.	Min.	Typ.	Min.				
1500-2800	DC-500	5.8	0.10	8.0	30	22	28	15	12

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)	
						LO +7dBm
1460.00	1490.00	6.21	37.65	20.28	1.34	1.81
1560.00	1590.00	5.95	37.70	22.72	1.28	1.80
1660.00	1690.00	5.94	36.06	25.56	1.50	1.79
1740.00	1770.00	5.91	35.29	27.83	1.66	1.79
1840.00	1870.00	5.80	33.78	30.47	1.75	1.83
1920.00	1950.00	5.79	32.65	32.64	1.83	1.86
2020.00	2050.00	5.79	31.63	35.32	1.90	1.92
2100.00	2130.00	5.81	30.85	37.17	1.92	1.95
2200.00	2230.00	5.78	30.15	39.95	1.90	2.00
2280.00	2310.00	5.80	29.99	41.69	1.84	2.08
2380.00	2410.00	5.74	30.06	43.43	1.74	2.17
2460.00	2490.00	5.72	30.05	44.18	1.70	2.16
2560.00	2590.00	5.75	29.85	45.60	1.70	2.28
2640.00	2670.00	5.90	30.06	45.88	1.73	2.36
2740.00	2770.00	6.08	30.64	44.97	1.77	2.41
2820.00	2850.00	6.35	31.39	43.67	1.91	2.42

Electrical Schematic



Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

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For detailed performance specs & shopping online see web site

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