

Surface Mount High Reliability Mixer

ADE-R20+

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



CASE STYLE: CD542

Maximum Ratings

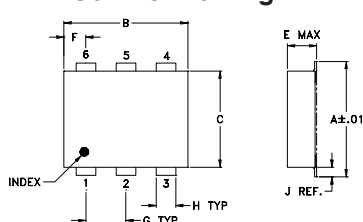
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

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

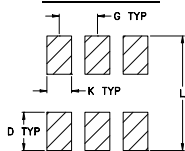
Pin Connections

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

Outline Drawing



PCB Land Pattern

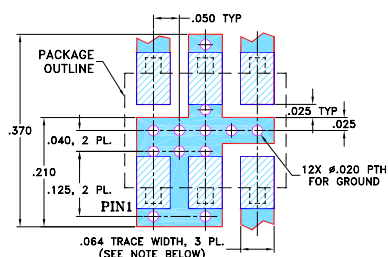


Suggested Layout,
Tolerance to be within ±.002

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.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - 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

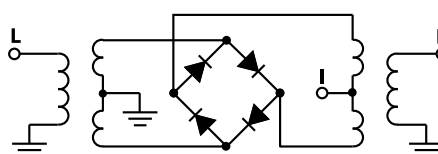
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 at center band (dBm)			
		Typ.	Min.	Typ.	Min.				
1500-2800	DC-500	5.8	0.10	8.0	30	22	28	15	12

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

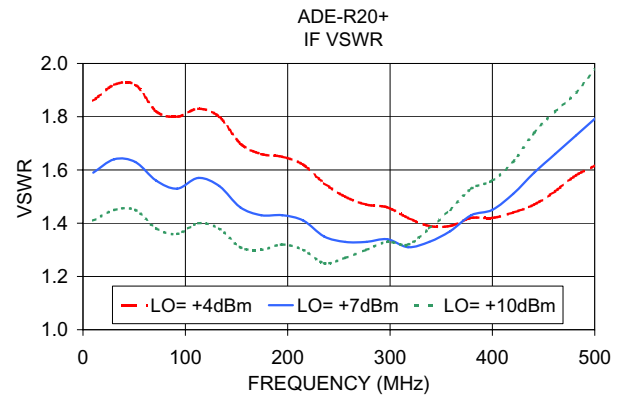
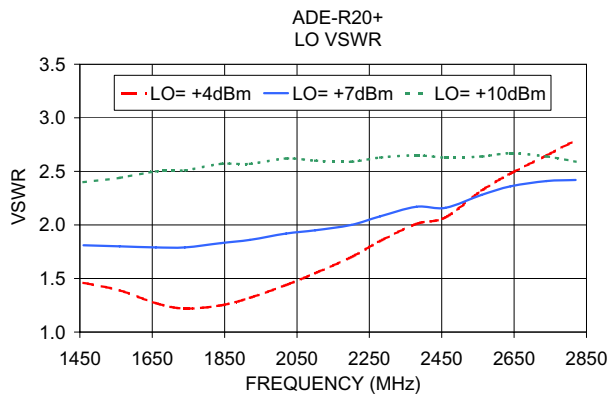
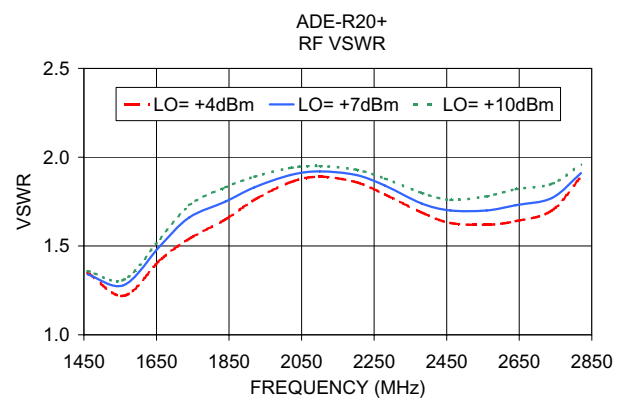
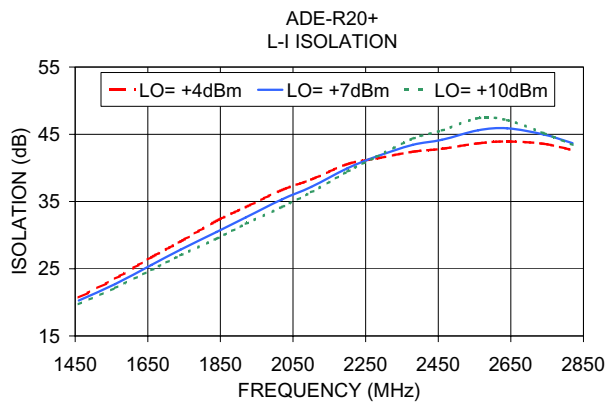
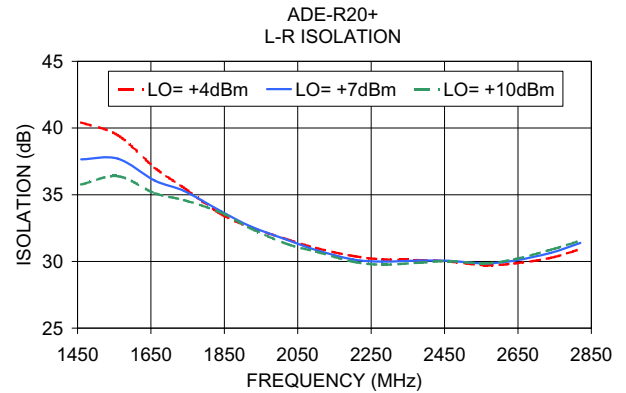
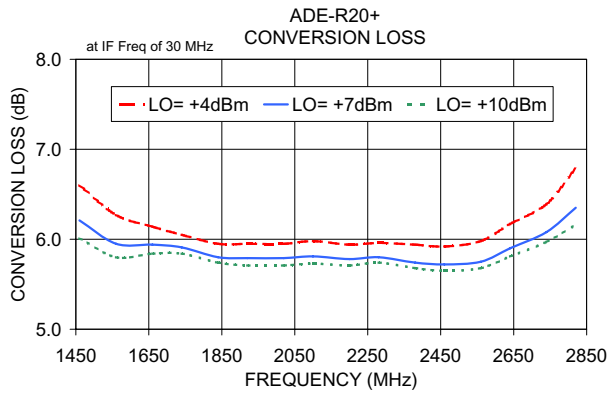
Electrical Schematic



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.
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