

Surface Mount High Reliability Mixer

ADE-R1L+

Level 3 (LO Power +3 dBm) 2 to 500 MHz



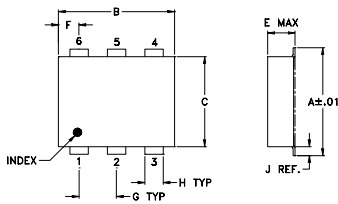
Maximum Ratings

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

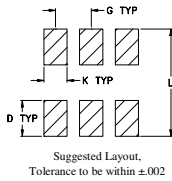
Pin Connections

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

Outline Drawing



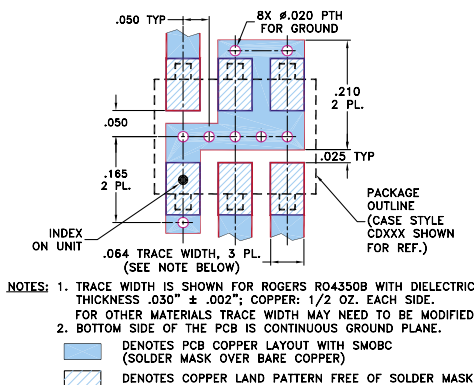
PCB Land Pattern



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)



Features

- hermetically sealed ceramic quad
- low conversion loss, 5.6 dB typ.
- excellent L-R isolation, 55 dB typ.
- low profile package
- aqueous washable
- protected by US patent 6,133,525

Applications

- cellular
- instrumentation

Electrical Specifications

FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			IP3 at center band (dBm)		
		L	M	U	L	M	U			
2-500	DC-500	68	55	44	35	60	45	35	25	14

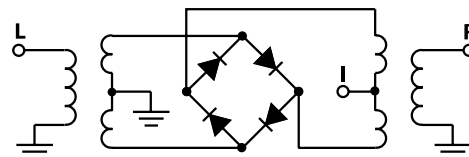
1 dB COMP.: 0 dBm typ.

L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]
 \bar{X} = Mid-Band Max. Total Range Max.

Typical Performance Data

Frequency (MHz)	Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
2.00	32.00	6.61	65.26	1.65	1.65
6.00	36.00	5.88	65.10	1.28	1.64
8.00	38.00	5.76	65.14	1.23	1.65
10.00	40.00	5.69	65.06	1.21	1.65
59.00	89.00	5.63	62.33	1.11	1.65
108.00	138.00	5.66	57.94	1.10	1.66
157.00	187.00	5.66	54.76	1.08	1.64
206.00	236.00	5.69	51.63	1.07	1.70
230.50	260.50	5.75	50.62	1.07	1.71
255.00	285.00	5.74	49.85	1.06	1.67
279.50	309.50	5.76	48.93	1.05	1.74
304.00	334.00	5.79	47.42	1.05	1.83
328.50	358.50	5.86	46.02	1.05	1.78
353.00	383.00	5.87	44.99	1.05	1.73
377.50	407.50	5.90	44.68	1.06	1.85
402.00	432.00	6.00	44.64	1.08	1.94
426.50	456.50	6.05	44.52	1.09	1.84
451.00	481.00	6.09	43.69	1.10	1.83
475.50	505.50	6.09	43.36	1.11	2.02
500.00	530.00	6.17	43.65	1.12	2.03

Electrical Schematic



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