

Surface Mount High Reliability Mixer

ADE-R12MH+

Level 13 (LO Power +13 dBm) 10 to 1200 MHz



Maximum Ratings

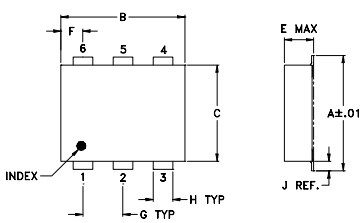
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

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

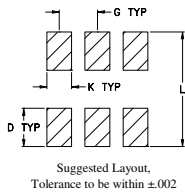
Pin Connections

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

Outline Drawing



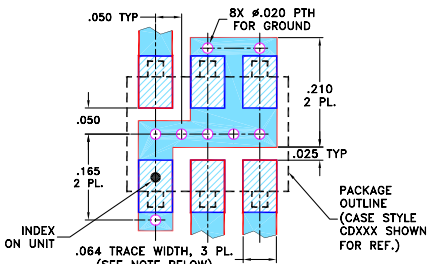
PCB Land Pattern



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: 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, 6.8 dB typ.
- good L-R isolation, 50 dB typ. and L-I isolation, 42 dB typ.
- low profile package
- aqueous washable
- protected by US Patent 6,133,525

Applications

- cellular
- VHF/UHF receivers

CASE STYLE: CD542
PRICE: \$6.85 ea. QTY. (10)

+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Reel Size	Available Tape and Reel at no extra cost
7"	10, 20, 50, 100, 200, 500
13"	500, 1000

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							
10-1200	DC-1200	62	48	50	38	40	28	68	40	42	30	30	21	22

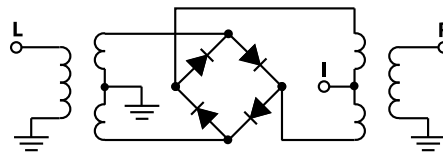
1 dB COMP.: +9 dBm typ.

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]
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)	
	RF	LO	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
10.10	40.10	6.13	68.33	53.93	1.48	1.61				
70.10	100.10	6.91	62.43	47.49	1.35	1.57				
130.10	160.10	6.98	59.21	44.13	1.42	1.62				
190.10	220.10	6.76	56.97	42.43	1.39	1.63				
250.10	280.10	6.89	56.40	41.73	1.41	1.64				
350.10	380.10	6.93	55.00	40.87	1.45	1.70				
450.10	480.10	6.9	51.95	40.80	1.47	1.78				
550.10	580.10	6.96	51.85	40.17	1.46	1.88				
650.10	680.10	6.88	68.22	37.88	1.45	1.95				
710.10	740.10	7.13	59.49	41.47	1.50	2.03				
750.10	780.10	7.27	54.31	42.70	1.47	2.07				
810.10	840.10	7.46	49.02	41.53	1.49	2.13				
850.10	880.10	7.23	47.42	40.65	1.43	2.14				
910.10	940.10	6.93	47.58	37.13	1.37	2.18				
950.10	980.10	6.82	46.68	35.55	1.28	2.22				
1010.10	1040.10	6.71	44.86	33.89	1.21	2.34				
1050.10	1080.10	6.71	43.57	33.85	1.11	2.39				
1110.10	1140.10	6.88	42.66	34.63	1.02	2.51				
1150.10	1180.10	6.93	41.51	35.99	1.10	2.53				
1210.10	1240.10	7.24	40.45	38.19	1.22	2.65				

Electrical Schematic



Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED
IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shipping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

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