

High Reliability Mixer

Level 10 (LO Power +10 dBm) 10 to 2000 MHz

ADE-R11XLH+



Maximum Ratings

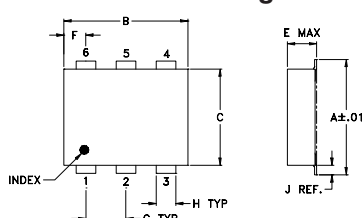
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

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

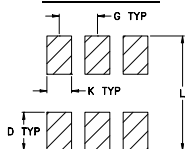
Pin Connections

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

Outline Drawing



PCB Land Pattern

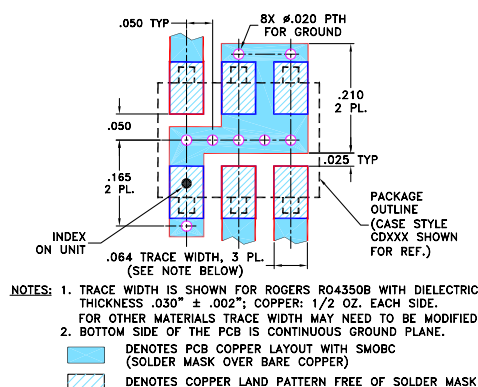


Suggested Layout,
Tolerance to be within ±0.02

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-03 Suggested PCB Layout (PL-052)



Features

- hermetically sealed ceramic quad
- low conversion loss, 7.5 dB typ.
- good L-R isolation, 30 dB typ. and L-I isolation, 37 dB typ.
- low profile package
- aqueous washable
- protected by US Patent 6,133,525

Applications

- cellular
- PCN
- VHF & UHF
- communication receivers & transmitters

CASE STYLE: CD542
PRICE: \$3.35 ea. QTY. (20)

+RoHS Compliant

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



Available Tape and Reel
at no extra cost

Reel Size	Devices/Reel
7"	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)
LO/RF f_L - f_U	IF	Mid-Band m		Total Range Max.		L	M	U	L	M	U	L	M	U				
		$\bar{X}$	σ	Max.	Max.										Typ. Min.	Typ. Min.	Typ. Min.	
10-2000	10-1000	7.5	0.10	8.6	9.8	55	40	36	23	28	18	65	50	45	30	38	22	11

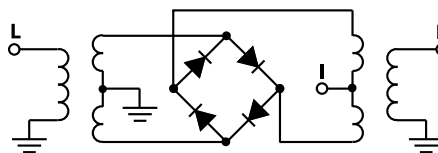
1 dB COMP: +5 dBm typ.

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 [$2 f_L$ 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 +10dBm	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm
10.10	40.10	6.77	56.91	69.62	1.68	2.46
70.10	100.10	7.24	49.85	61.63	1.03	2.34
190.10	220.10	7.32	44.40	54.10	1.15	2.38
250.10	280.10	7.39	43.78	51.73	1.18	2.36
370.10	400.10	7.51	41.53	48.30	1.35	2.43
490.10	520.10	7.64	39.35	45.15	1.42	2.54
550.10	580.10	7.66	36.88	44.27	1.54	2.56
790.10	820.10	8.05	31.99	41.42	1.88	2.80
850.10	880.10	8.00	30.73	39.82	1.94	2.80
970.10	1000.10	7.74	30.04	38.61	1.82	2.99
1090.10	1120.10	7.57	28.49	37.93	1.70	3.26
1270.10	1300.10	7.93	25.95	36.18	1.90	3.40
1390.10	1420.10	8.09	24.78	34.14	1.96	3.42
1450.10	1480.10	7.99	24.97	33.05	1.70	3.30
1570.10	1600.10	7.62	25.97	31.74	1.51	3.43
1690.10	1720.10	7.61	26.02	30.29	1.26	3.67
1750.10	1780.10	7.67	25.90	29.59	1.21	3.76
1870.10	1900.10	7.96	25.91	28.80	1.07	4.11
1990.10	2020.10	8.35	26.52	28.47	1.06	4.47
2070.10	2100.10	8.72	27.50	28.56	1.10	4.78

Electrical Schematic



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ISO 9001 ISO 14001 AS 9100 CERTIFIED

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

IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

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