

Surface Mount Frequency Mixer

ADEX-10H+

Level 17 (LO Power +17 dBm) 10 to 1000 MHz

Maximum Ratings

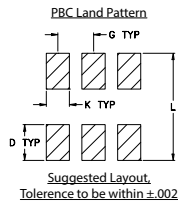
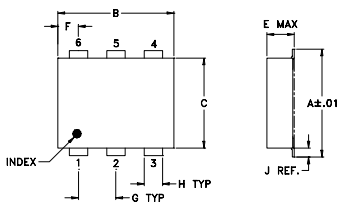
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA

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

Pin Connections

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

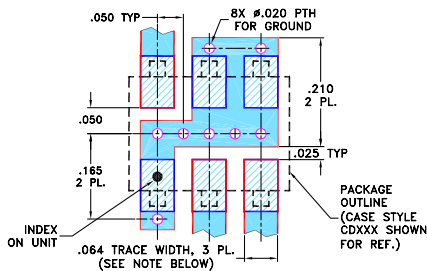
Outline Drawing



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

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.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuit's 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp

Features

- excellent L-R isolation, 55 dB typ.
- excellent conversion loss flatness, ±0.35 dB typ. over entire band
- low conversion loss, 7.0 dB typ.
- good VSWR, 1.4:1 typ. for LO, 1.6:1 typ. for RF, 1.4:1 typ. for IF
- good performance to 1500 MHz
- aqueous washable
- protected by U.S. Patents 6,133,525 and 6,947,717

Applications

- cellular
- PCN



Generic photo used for illustration purposes only
CASE STYLE: CD542

+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
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											
LO/RF f_L-f_U	Mid-Band f_m Total Range Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.										
10-1000	DC-800	7.0	0.10	8.5 [†]	9.5 [†]	68	55	55	40	47	31	46	30	32	20	26	13	22

1 dB COMP: +14 dBm typ.

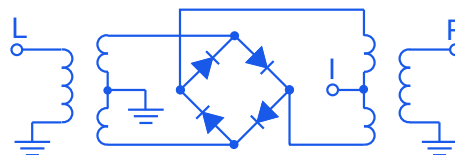
[†]Conversion loss increases 0.5 dB when IF is above 150 MHz

L = low range [f_L to $10 f_U$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]

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 +17dBm
10.0	40.0	7.3	74.1	50.8	1.6	1.1
22.0	52.0	7.2	71.8	48.3	1.6	1.1
40.0	70.0	7.3	69.3	45.9	1.6	1.1
52.0	82.0	7.3	68.1	44.5	1.6	1.2
70.0	100.0	7.3	66.7	42.7	1.5	1.2
88.0	118.0	7.3	66.0	41.2	1.5	1.2
94.0	124.0	7.2	65.8	40.8	1.5	1.2
100.0	130.0	7.2	65.5	40.4	1.5	1.2
160.0	190.0	7.2	61.7	36.8	1.5	1.3
220.0	250.0	7.0	58.6	34.0	1.5	1.3
280.0	310.0	7.1	56.7	32.8	1.5	1.3
400.0	430.0	7.2	57.3	32.2	1.5	1.3
460.0	490.0	7.2	53.7	31.8	1.5	1.4
520.0	550.0	7.2	50.0	31.5	1.5	1.4
580.0	610.0	7.3	49.1	30.6	1.5	1.4
700.0	730.0	7.7	45.6	29.9	1.6	1.5
760.0	790.0	7.8	44.2	28.5	1.6	1.7
820.0	850.0	7.7	41.9	26.5	1.5	1.7
940.0	970.0	7.5	36.6	23.5	1.4	1.9
1000.0	1030.0	7.4	35.4	22.5	1.3	2.0

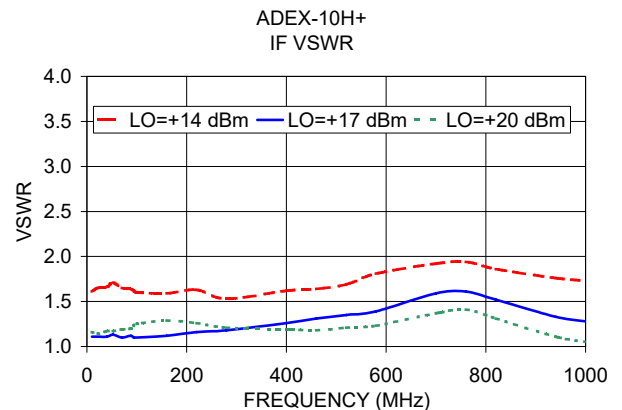
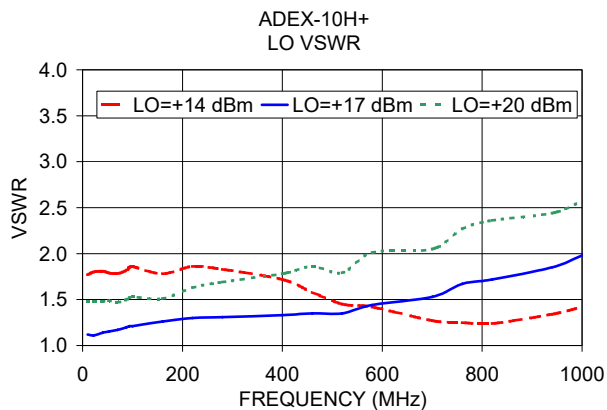
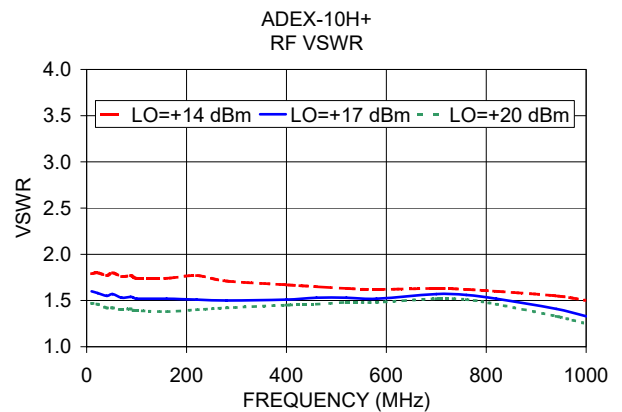
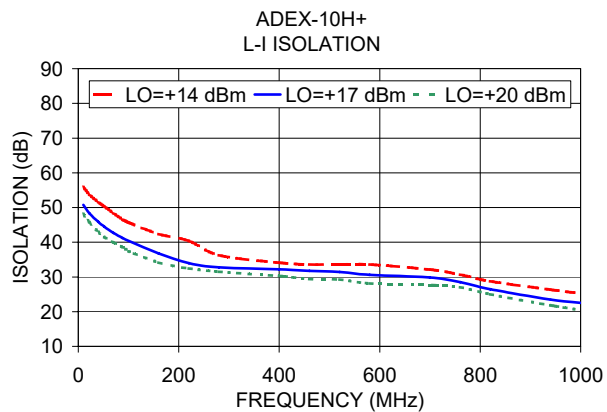
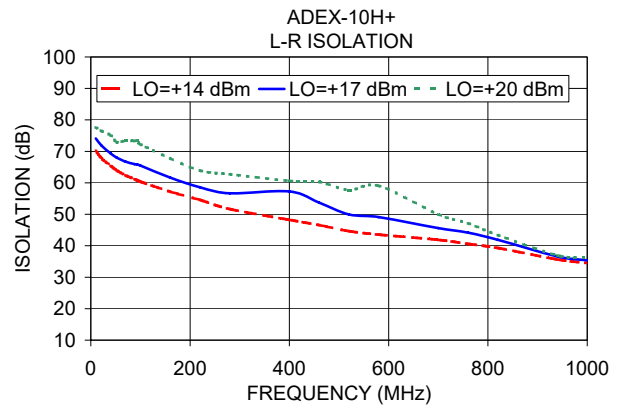
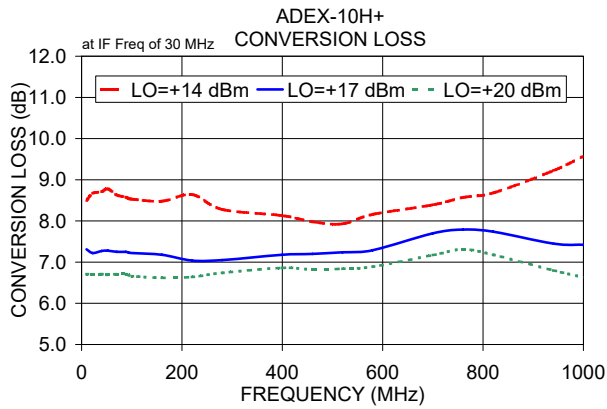
Electrical Schematic



Mini-Circuits

www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

REV. E
M158496
ADEX-10H+
ED-9813/1
DJ/TD/CP/AM
220922
Page 1 of 2



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.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document 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

