

High IP3 Frequency Mixer

LAVI-252H+

Level 17 (LO Power +17 dBm) 200 to 2500 MHz



CASE STYLE: CK605
PRICE: \$24.95 ea. QTY. (1-9)
\$17.95 ea. QTY. (100)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Maximum Ratings

Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C
LO Power	+23 dBm
RF Power	+20 dBm

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

Pin Connections

LO	10
RF	14
IF	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Features

- high IP3, 25 dBm typ.
- wideband, 200 to 2500 MHz
- excellent L-R isolation, 40 dB typ. and L-I isolation, 45 dB typ.
- high 1 dB compression, 17 dBm typ.
- shielded metal cover
- aqueous washable
- protected by US Patent 6,807,407

Applications

- cellular/PCS base stations
- ISM applications
- wideband communications
- defense communications

Electrical Specifications (T_{AMB}=25°C)

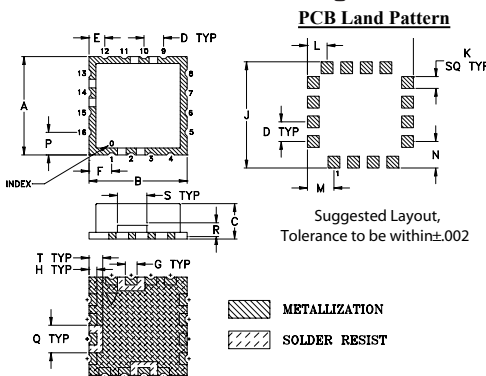
FREQUENCY (MHz)			CONVERSION LOSS* (dB)			RF in at 1dB Compr (dBm)	IP3 (dBm)	LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)	
RF	LO	IF	Typ.	σ	Max.	Typ.	Typ.	Typ.	Min.	Typ.	Min.
200-2500	130-2430	50-2000	7.8	0.25	10.3	+17	25	40	25	45	33

*Conversion Loss at IF=70 MHz

Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)	IP3 (dBm)	IF Freq. (MHz)	VSWR IF (:1)
RF	LO	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm
200.10	130.10	7.15	49.54	47.51	1.47	2.09	22.89	50.10	1.31
360.10	290.10	7.07	45.88	49.54	1.64	2.26	23.73	200.10	1.40
520.10	450.10	6.99	46.60	53.42	1.72	2.44	23.68	350.10	1.55
640.10	570.10	7.22	45.06	57.45	1.73	2.57	25.47	500.10	1.81
840.10	770.10	7.34	43.28	71.70	1.69	2.75	24.43	650.10	1.97
960.10	890.10	7.40	42.56	58.43	1.67	2.80	25.57	800.10	2.19
1240.10	1170.10	7.59	44.20	48.94	1.70	2.76	26.35	950.10	2.25
1400.10	1330.10	7.80	44.57	47.62	1.69	2.68	26.80	1100.10	2.31
1560.10	1490.10	7.62	41.48	46.18	1.53	2.59	26.27	1250.10	2.21
1720.10	1650.10	7.54	39.51	46.16	1.26	2.53	24.16	1400.10	2.19
1880.10	1810.10	7.72	39.24	45.42	1.32	2.61	23.32	1550.10	1.93
2000.10	1930.10	7.79	38.56	44.29	1.51	2.70	24.43	1700.10	1.77
2160.10	2090.10	8.20	36.91	44.23	1.75	2.77	25.60	1850.10	1.54
2360.10	2290.10	8.64	35.23	47.27	1.96	2.68	26.89	1930.10	1.51
2500.10	2430.10	9.15	34.83	52.94	2.05	2.54	27.99	2000.10	1.46

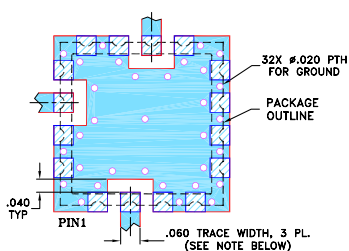
Outline Drawing



Outline Dimensions (inch)

A	B	C	D	E	F	G	H	J	K
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060
12.7	12.7	4.572	2.54	2.032	2.921	1.524	1.016	13.72	1.524
L	M	N	P	Q	R	S	T	wt.	
.100	.135	.135	.115	.140	.070	.150	.070	grams	
2.54	3.429	3.429	2.921	3.556	1.778	3.81	1.778	1.0	

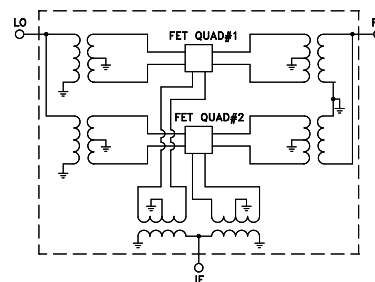
Demo Board MCL P/N: TB-433+ Suggested PCB Layout (PL-012)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR FR4 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

Electrical Schematic



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shipping online see web site

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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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Page 1 of 2

