

High IP3 Frequency Mixer

LAVI-2VH+

Level 23 (LO Power +23 dBm) 2 to 1100 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	+25 dBm
RF Power	+24 dBm
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

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

Features

- very high IP3, 34 dBm typ.
- wideband, 2 to 1100 MHz
- excellent L-R isolation, 48 dB typ. and L-I isolation, 47 dB typ.
- high 1 dB compression, 23 dBm typ.
- shielded metal cover
- aqueous washable
- protected by US Patent 6,807,407

Applications

- cellular base stations
- mobile radio
- defense communications
- CATV
- VHF/UHF radios

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

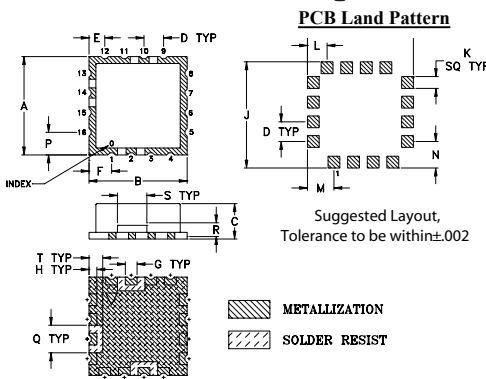
FREQUENCY (MHz)			CONVERSION LOSS (dB)			RF in at 1dB Compr (dBm)	IP3* (dBm)	LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)	
RF	LO	IF	Typ.	σ	Max.	Typ.	Typ.	Typ.	Min.	Typ.	Min.
2-1100	2-1100	2-1000	7.5	0.12	9.5	+23	34	48	37	47	36

* Specified at RF = 1000 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 +23dBm	LO +23dBm	LO +23dBm	LO +23dBm	LO +23dBm	LO +23dBm	LO +23dBm	LO +23dBm
2.10	32.10	6.21	54.85	54.80	1.23	4.05	33.04	2.00	1.23
5.10	35.10	6.21	54.39	54.54	1.22	4.11	32.18	5.00	1.22
12.10	42.10	6.23	53.71	53.75	1.23	4.13	30.70	12.00	1.23
52.10	82.10	6.18	55.03	54.87	1.27	2.52	29.56	52.00	1.25
100.10	130.10	6.38	57.25	55.04	1.36	4.01	29.36	100.00	1.31
220.10	250.10	6.62	56.89	52.84	1.50	2.99	31.29	220.00	1.46
300.10	330.10	6.60	50.40	49.21	1.53	3.43	30.65	300.00	1.58
420.10	450.10	6.94	47.19	48.38	1.53	3.32	31.86	420.00	1.80
500.10	530.10	6.75	43.95	45.44	1.49	3.93	31.63	500.00	1.90
620.10	650.10	6.97	42.14	42.90	1.46	3.45	31.02	620.00	2.06
740.10	770.10	7.36	39.64	41.69	1.41	5.01	30.87	740.00	2.07
820.10	850.10	7.48	43.30	49.90	1.24	3.85	32.54	820.00	1.74
900.10	930.10	7.40	47.94	58.49	1.13	2.87	33.19	900.00	1.60
1010.10	1040.10	7.52	50.72	63.09	1.10	3.66	33.24	975.00	1.59
1070.10	1100.10	7.70	54.52	52.16	1.09	2.19	32.54	1000.00	1.55

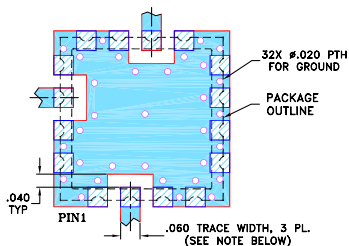
Outline Drawing



Outline Dimensions (inch/mm)

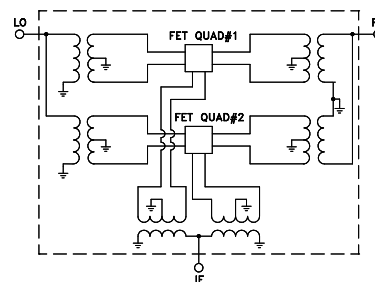
A	B	C	D	E	F	G	H	J	K
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060
12.7	12.7	4.572	2.54	2.032	2.921	1.524	1.016	13.72	1.524
L	M	N	P	Q	R	S	T	wt.	
.100	.135	.135	.115	.140	.070	.150	.070	grams	
2.54	3.429	3.429	2.921	3.556	1.778	3.81	1.778	grams	1.0

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.
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
4. 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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IF/RF MICROWAVE COMPONENTS

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