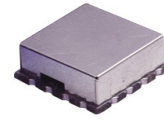


Surface Mount

# Frequency Mixer

## LAVI-25VH+

Level 23 (LO Power +23dBm) 400 to 2500 MHz



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

### Maximum Ratings

Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C
LO Power	+25 dBm
RF Power	+23 dBm

### Pin Connections

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

### Features

- RoHS compliant
- very high IP3, 32 dBm typ.
- wideband, 400 to 2500 MHz
- excellent L-R isolation, 50 dB typ. and L-I isolation, 45 dB typ.
- high 1 dB compression, 20 dBm typ.
- shielded metal cover
- U.S. patent 6,807,407

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

The +suffix has been added in order to identify RoHS Compliance. There has been no change to the model's material, form, fit, or function. See our web site for RoHS Compliance methodologies and qualifications.

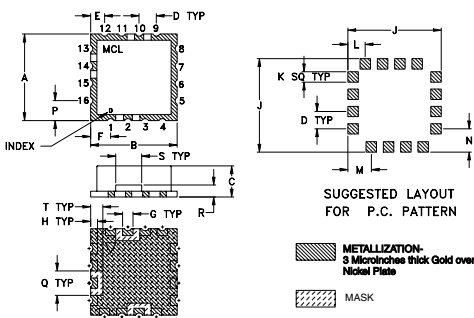
### Applications

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

### Electrical Specifications (T<sub>AMB</sub>=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.	$\sigma$	Max.	Typ.	Typ.	Min.	Typ.	Min.	
400-2500	650-2800	70-1500	7.8	0.25	9.6	+20	32	50	35	45	30

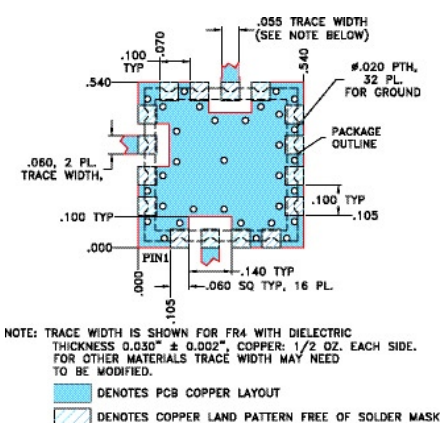
### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060	.100	.135	.135	.115	.140	.070	.150	.070	grams
12.70	12.70	4.57	2.54	2.03	2.92	1.52	1.02	13.72	1.52	1.50	3.43	3.43	2.92	3.56	1.78	3.81	1.78	1.0

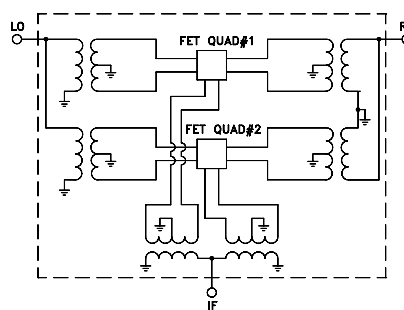
### Demo Board MCL P/N: TB-10 Suggested PCB Layout (PL-012)



### Typical Performance Data

Frequency		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF (-1)	VSWR LO (-1)	IP3 (dBm)	IF Freq. (MHz)	VSWR IF (-1)
RF MHz	LO MHz	LO +23dBm	LO +23dBm	LO +23 dBm	LO +23 dBm	LO +23 dBm	LO +23 dBm	LO +23 dBm	LO +23 dBm
400.10	650.11	7.31	56.98	55.33	1.70	2.76	31.41	70.00	1.07
580.10	834.40	7.32	55.57	45.22	1.73	3.12	32.54	100.00	1.15
760.10	1018.68	7.13	50.30	43.63	1.72	2.86	32.24	150.00	1.35
940.10	1202.97	7.39	45.50	42.65	1.77	2.52	34.15	200.00	1.58
1120.10	1387.25	7.69	43.61	38.94	2.02	2.31	32.65	250.00	1.62
1300.10	1571.54	7.58	42.32	40.68	1.99	2.32	32.17	300.00	1.71
1480.10	1755.82	7.33	44.25	41.72	1.79	2.54	31.38	350.00	1.83
1660.10	1940.11	7.55	46.42	45.12	1.54	3.12	30.99	450.00	2.11
1840.10	2124.40	7.76	54.12	46.33	1.43	3.71	31.99	650.00	2.26
2020.10	2308.68	7.76	48.47	43.32	1.44	4.13	32.38	850.00	2.04
2200.10	2492.97	7.68	41.85	36.56	1.50	4.40	32.37	1050.00	1.82
2380.10	2677.25	7.61	39.02	33.28	1.57	3.89	32.32	1250.00	1.56
2500.10	2800.11	7.91	39.71	34.21	1.70	2.47	31.79	1500.00	1.47

### electrical schematic



INTERNET <http://www.minicircuits.com>

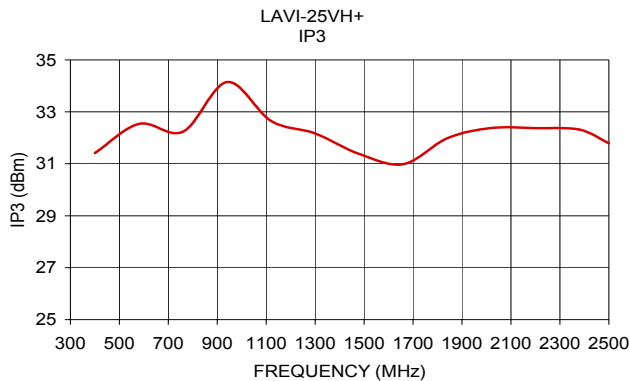
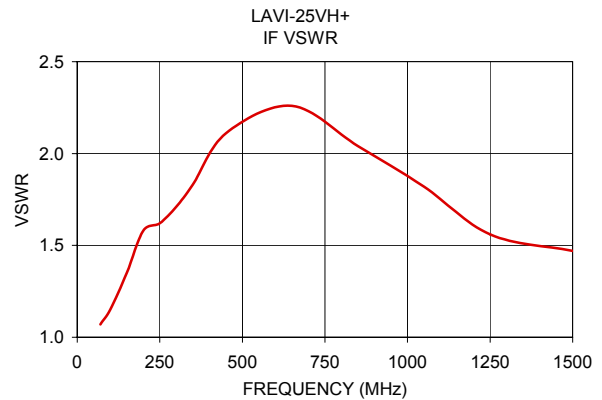
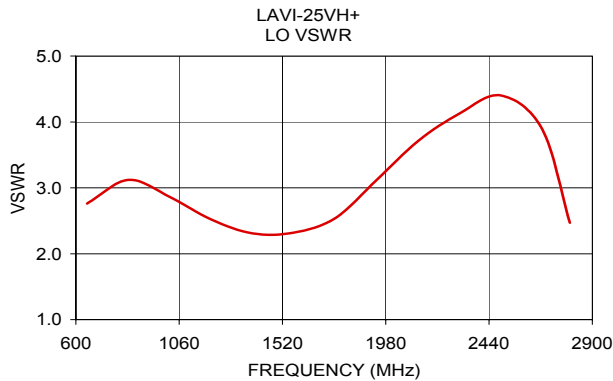
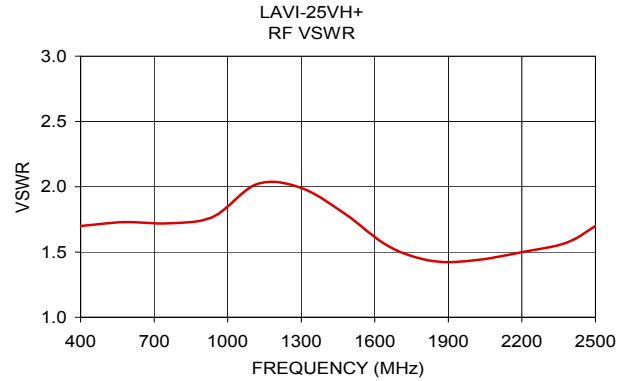
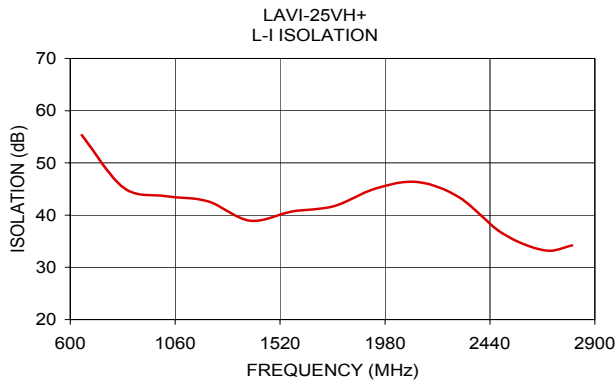
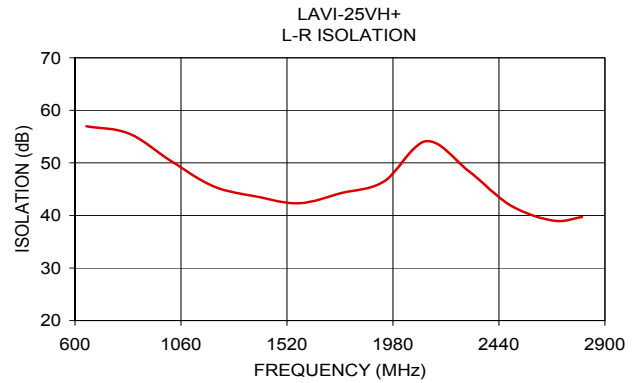
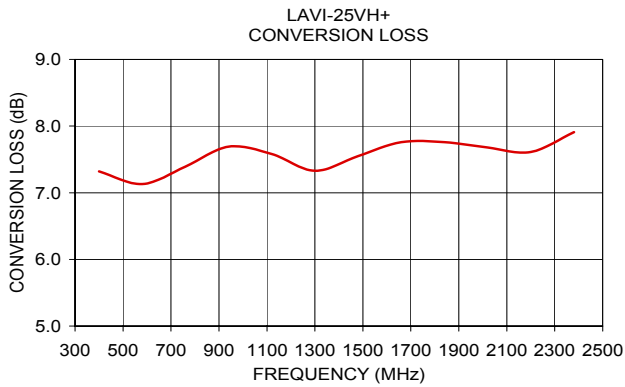
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 Page 1 of 3



## Harmonic Table ( $T_{AMB} = 25^{\circ}C$ ) (Relative to desired IF output)

RF HARMONICS ORDER	RF.CAL (-dBc)											
	0	1	2	3	4	5	6	7	8	9	10	
0	-	-	9	16	20	23	22	55	31	49	43	53
1	-	36	+0	27	16	41	35	54	48	52	57	57
2	100	45	60	49	62	44	58	51	60	61	68	71
3	>111	82	82	79	67	77	69	88	79	90	94	109
4	>125	102	100	100	91	99	92	93	98	97	108	102
5	>125	119	115	110	105	112	107	>117	109	116	>119	>120
6	>125	>118	>122	118	>121	115	>115	>117	117	116	>123	>118
7	>125	>119	>119	>122	123	>117	>121	>116	>121	120	>123	>122
8	>125	>120	>119	>117	>123	>121	>120	>122	>121	>121	>121	122
9	>125	>119	>120	>120	>119	>124	>123	>121	>122	>122	>120	>123
10	>125	>120	>119	>120	>119	>122	>123	122	>122	>121	>122	>121

### LO HARMONICS ORDER

Test conditions: RF IN: 1250.10 MHz, +.02 dBm.  
 LO IN: 1500.01 MHz, +23.00 dBm.  
 IF OUT: 249.91 MHz, -7.56 dBm.  
 C. LOSS: 7.58 dB.