

Surface Mount

Frequency Mixer

LAVI-25VH+

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

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

Applications

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

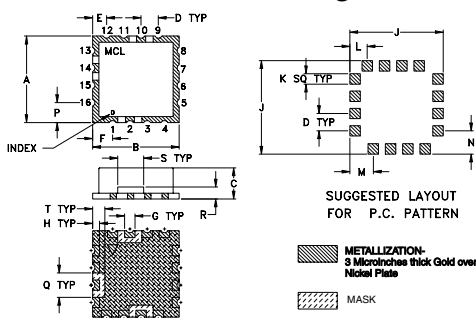


CASE STYLE: CK605
PRICE: \$24.95 ea. QTY (1-9)
\$17.95 ea. QTY. (100)

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

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

Outline Drawing

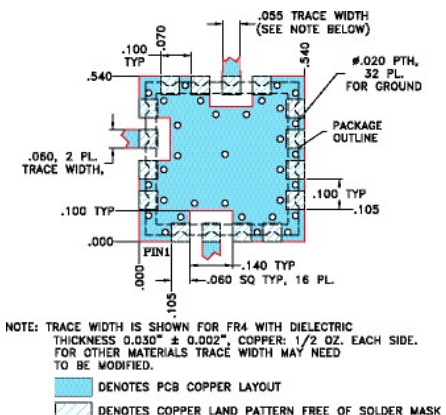


Outline Dimensions (inch)

A	B	C	D	E	F	G	H	J
.500	.500	.180	.100	.080	.115	.060	.040	.540
12.70	12.70	4.57	2.54	2.03	2.92	1.52	1.02	13.72

K	L	M	N	P	Q	R	S	T	wt.
.060	.100	.135	.135	.115	.140	.070	.150	.070	grams
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)



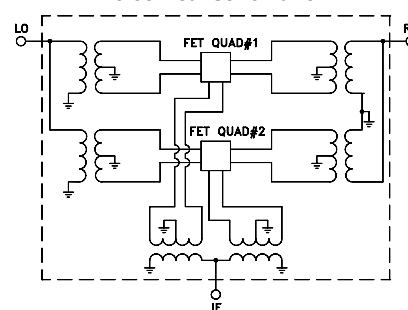
Electrical Specifications (T_{AMB}=25°C)

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.
400-2500	650-2800	70-1500	7.8	0.25	9.6	+20	32	50	35	45	30

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



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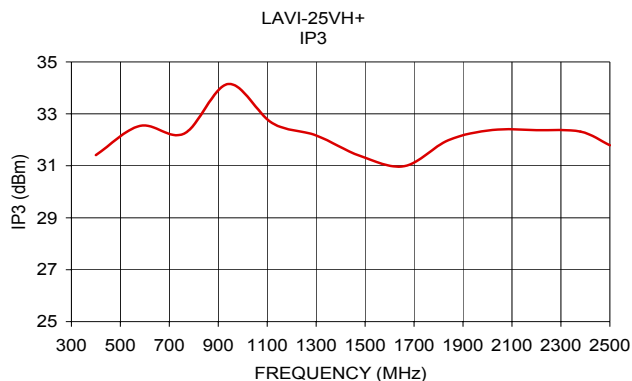
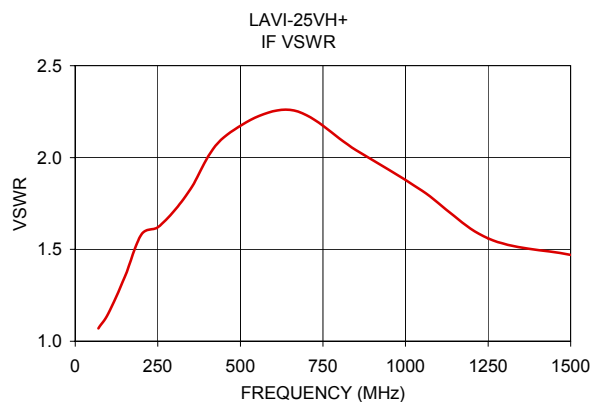
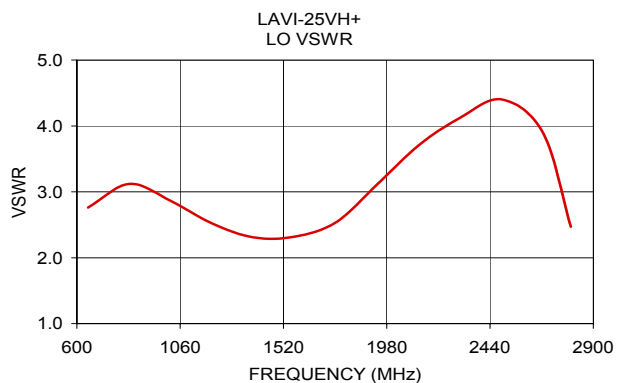
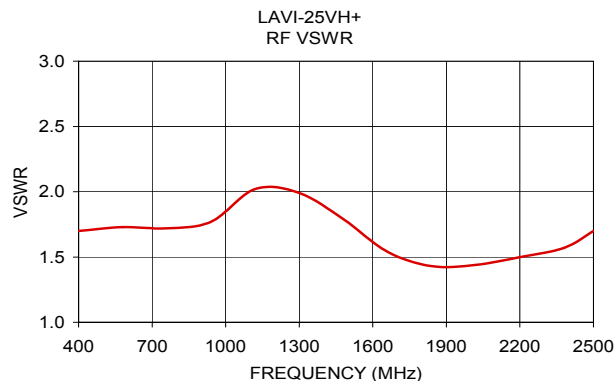
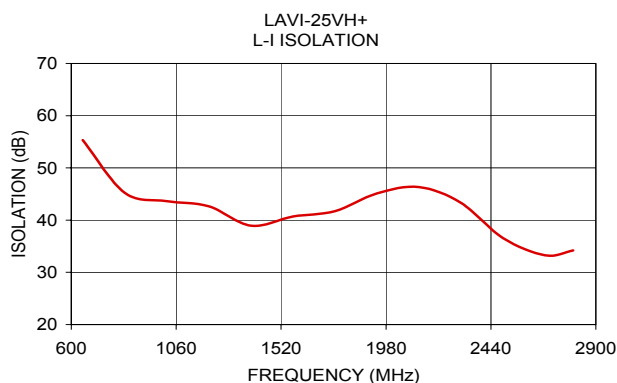
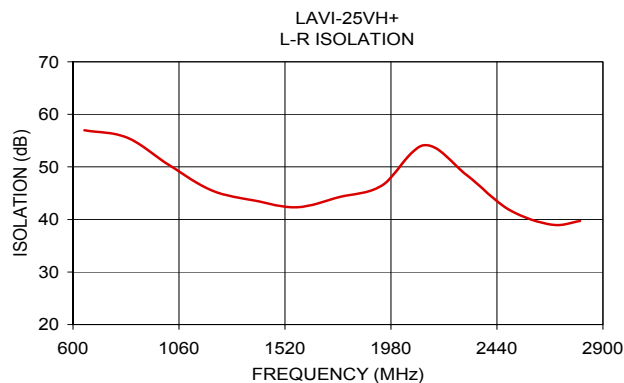
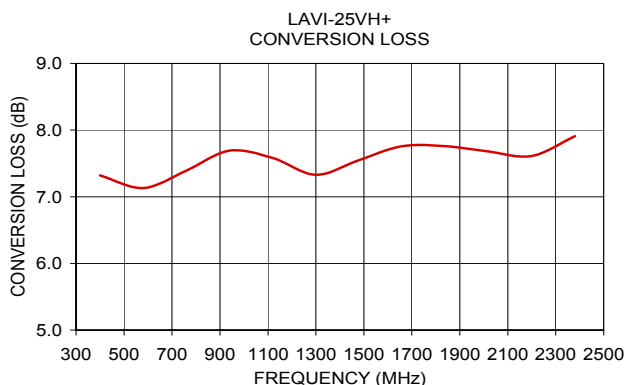
Mini-Circuits ISO 9001 & ISO 14001 Certified

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REV. A
M100734
ED-11851/1
LAVI-25VH+
DJ/CP
060221
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Harmonic Table ($T_{AMB} = 25^{\circ}\text{C}$)
(Relative to desired IF output)

RF.CAL		RF HARMONICS ORDER										
(-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, +0.02 dBm.
 LO IN: 1500.01 MHz, +23.00 dBm.
 IF OUT: 249.91 MHz, -7.56 dBm.
 C. LOSS: 7.58 dB.