

Surface Mount

Frequency Mixer

LAVI-17VH+

Level 21 (LO Power +21dBm) 470 to 1730 MHz

Maximum Ratings

Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C
LO Power	+24 dBm
RF Power	+21 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, 470 to 1730 MHz
- excellent L-R isolation, 52 dB typ. and L-I isolation, 50 dB typ.
- high 1 dB compression, 20 dBm typ.
- shielded metal cover
- U.S. patent 6,807,407

Applications

- satellite communication
- UHF receivers, transmitters
- GPS
- cellular
- defense communication



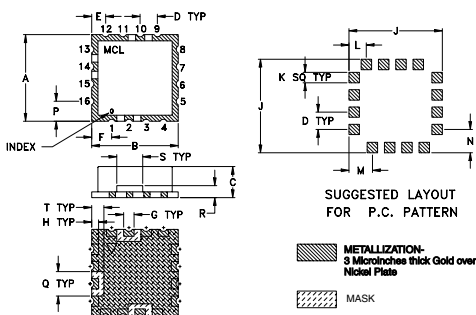
CASE STYLE: CK605

PRICE: \$22.95 ea. QTY (1-9)
\$15.95 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.

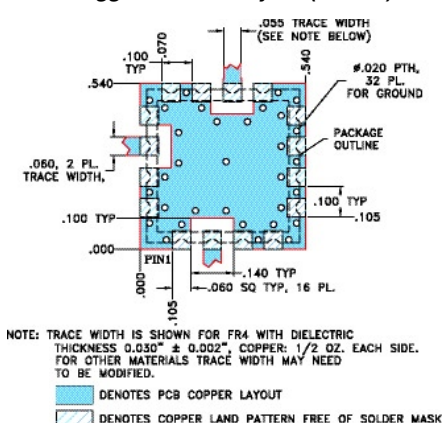
Outline Drawing



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
.060	.100	.135	.135	.115	.140	.070	.150	.070
1.52	1.50	3.43	3.43	2.92	3.56	1.78	3.81	1.78

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



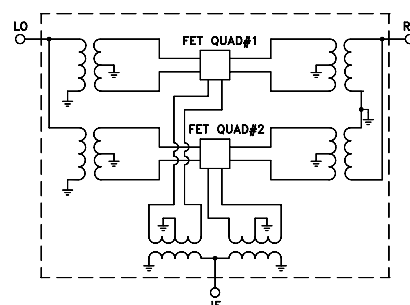
Electrical Specifications (T_{AMB}=25°C)

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.
470-1730	600-1800	70-1000	6.8	0.2	8.9	+20	32	52	38	50	36

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 +21dBm	LO +21dBm	LO +21dBm	LO +21 dBm	LO +21 dBm	LO +21 dBm		LO +23 dBm
430.10	564.90	6.11	50.26	60.35	1.57	4.42	30.29	70.00	1.95
470.10	600.10	6.54	52.88	58.91	1.57	4.24	29.54	100.00	1.80
570.90	696.10	6.52	55.33	52.96	1.68	4.10	29.38	120.00	1.81
671.70	792.10	6.47	53.24	49.22	1.81	3.87	30.88	140.00	1.78
772.50	888.10	6.41	49.96	48.12	1.91	3.58	32.01	160.00	1.73
873.30	984.10	6.32	46.96	47.11	1.98	3.21	33.60	180.00	1.71
1074.90	1176.10	6.38	43.21	44.31	1.92	2.44	33.09	200.00	1.70
1175.70	1272.10	6.47	43.47	42.45	1.84	2.22	31.68	300.00	1.57
1276.50	1368.10	6.61	45.03	42.04	1.75	2.20	31.26	400.00	1.42
1377.30	1464.10	6.84	46.98	42.95	1.67	2.46	31.39	500.00	1.29
1478.10	1560.10	7.10	48.08	45.58	1.60	2.91	30.48	600.00	1.17
1578.90	1656.10	7.38	51.04	50.04	1.53	3.38	31.09	700.00	1.13
1679.70	1752.10	7.59	57.31	57.60	1.49	3.73	31.52	750.00	1.13
1730.10	1800.10	7.65	60.39	53.90	1.45	4.07	30.32	800.00	1.13
1770.10	1835.30	7.57	55.84	48.95	1.45	3.75	31.57	1000.00	1.12

electrical schematic



Mini-Circuits

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Mini-Circuits ISO 9001 & ISO 14001 Certified

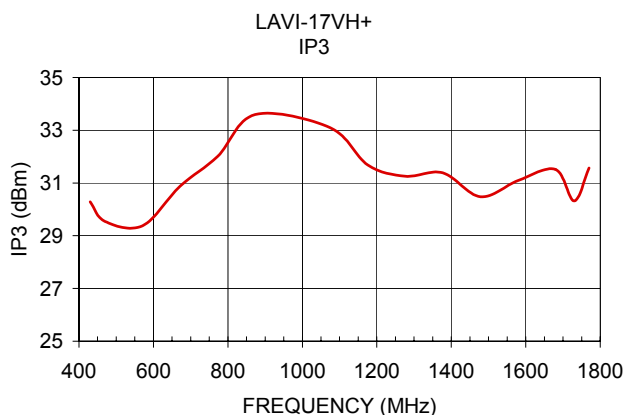
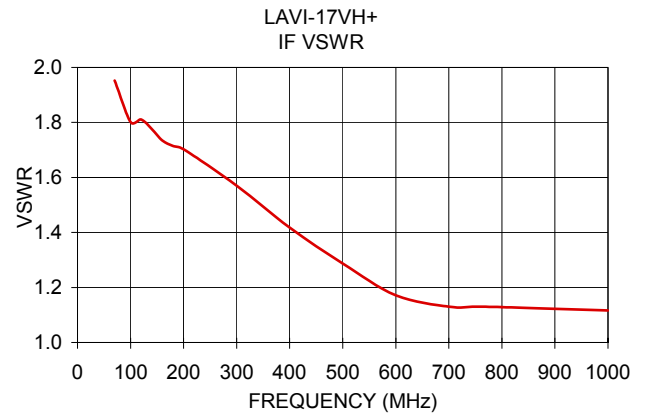
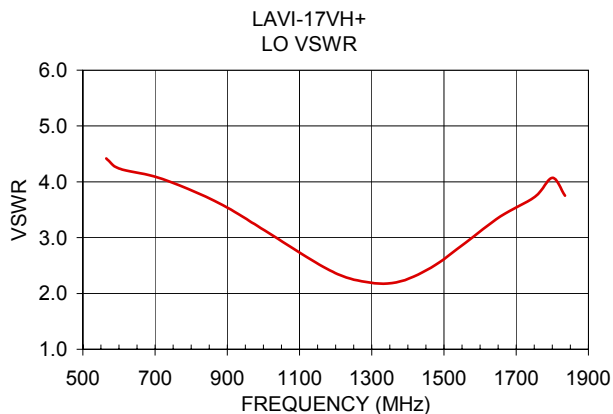
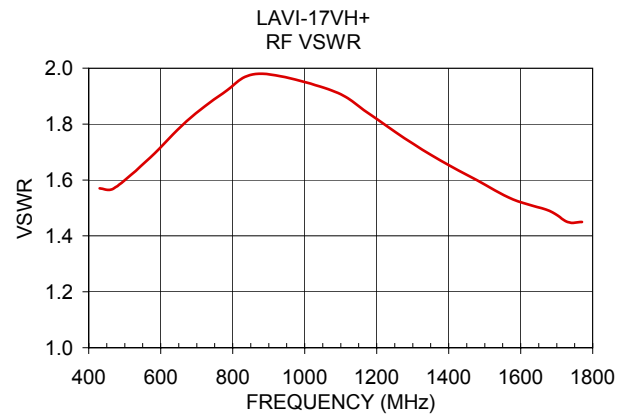
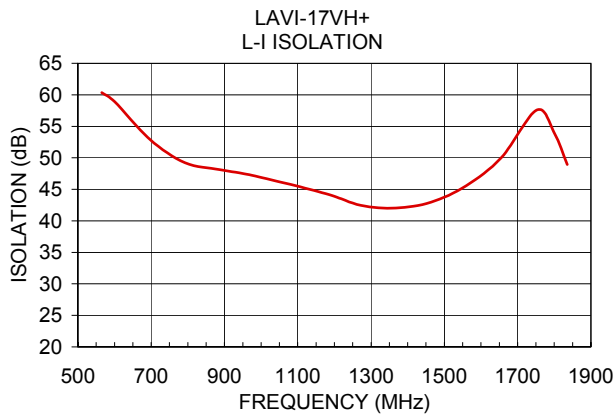
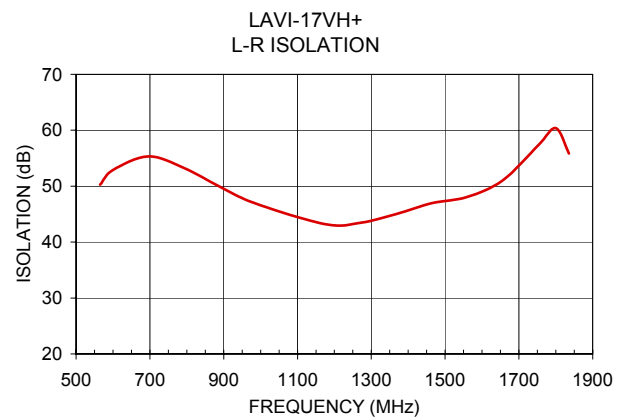
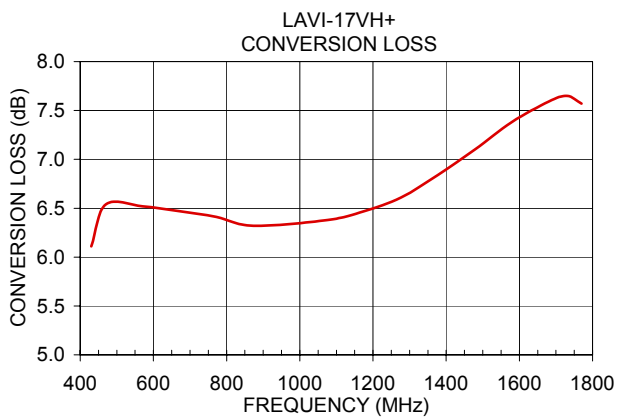
INTERNET <http://www.minicircuits.com>



REV. OR
M97027
ED-11828/1
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060221
Page 1 of 3

Performance Charts

LAVI-17VH+



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

RF CAL											
(-dBc)											
RF HARMONICS ORDER	0	1	2	3	4	5	6	7	8	9	10
	-	-	22	27	26	25	36	40	45	52	46
	1	28	0	39	18	41	36	58	50	55	66
	2	90	69	66	55	66	59	71	59	81	70
	3	93	103	79	86	75	87	82	97	86	101
	4	96	102	100	97	94	94	94	100	100	101
	5	94	102	101	99	97	95	95	97	100	104
	6	96	104	102	100	96	96	94	93	97	102
	7	91	100	102	104	98	97	96	92	96	102
	8	94	102	100	101	101	100	93	94	93	99
	9	93	92	102	95	99	85	102	79	90	79
	10	94	92	73	83	70	80	59	71	59	67
LO HARMONICS ORDER											

Test conditions: RF IN: 1100 MHz, 0 dBm.
 LO IN: 1200 MHz, 21 dBm.
 IF OUT: 100 MHz.
 C. LOSS: 7.13 dB.