

Up Converter Frequency Mixer

LAVI-U252VH+

Level 21 (LO Power +21 dBm) 10 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	+24 dBm
IF Power	+21 dBm
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

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

Features

- up converter mixer
- wide input frequency range
- very high IP3, 30 dBm typ.
- excellent L-R isolation, 45 dB typ;
L-I isolation, 51 dB typ.
- good 1 dB compression, 16 dBm typ.
- shielded metal cover
- aqueous washable
- protected by US Patent 6,807,407

Applications

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

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

FREQUENCY (MHz)			CONVERSION LOSS* (dB)			LO-IF (IN) ISOLATION (dB)		LO-RF (OUT) ISOLATION (dB)		IP3 at center band (dBm)
IF (IN)	LO	RF (OUT)	Typ.	σ**	Max.	Typ.	Min.	Typ.	Min.	Typ.
10-1300	1800-2800	1500-2500	7.8	0.15	9.5	51	33	45	27	30

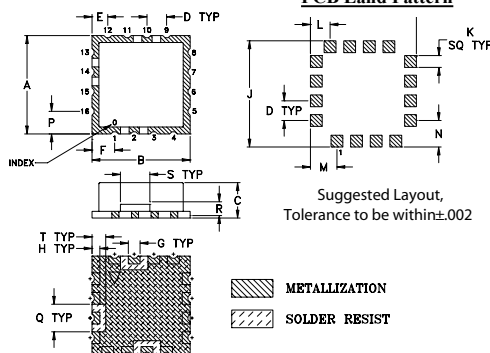
1 dB COMPR. +16 dBm typ.
* Conversion Loss at 300 MHz IF
** σ is a standard deviation.

Typical Performance Data

Frequency (MHz)			Conversion Loss (dB)	Isolation L-I (dB)	Isolation L-R (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)	IP3 (dBm)
IF (IN)	LO	RF (OUT)	LO +21dBm	LO +21dBm	LO +21dBm	LO +21dBm	LO +21dBm	LO +21dBm
300.00	1800.00	1500.00	7.23	55.10	49.97	2.01	3.15	29.03
300.00	1850.00	1550.00	7.05	53.96	48.85	1.95	3.51	30.35
300.00	1900.00	1600.00	7.10	55.08	50.06	1.84	3.04	29.42
300.00	1950.00	1650.00	7.05	54.08	49.09	1.72	3.95	30.71
300.00	2050.00	1750.00	7.13	55.63	48.31	1.49	4.07	30.90
300.00	2100.00	1800.00	7.14	57.37	47.58	1.38	3.72	29.99
300.00	2150.00	1850.00	7.07	56.86	45.18	1.27	4.13	30.44
300.00	2200.00	1900.00	7.06	57.94	44.09	1.19	4.12	29.92
300.00	2300.00	2000.00	7.14	57.28	41.15	1.09	4.37	30.36
300.00	2400.00	2100.00	7.33	55.34	38.74	1.21	4.92	31.47
300.00	2450.00	2150.00	7.44	53.11	38.21	1.31	4.21	31.32
300.00	2500.00	2200.00	7.62	49.33	36.92	1.40	5.85	31.99
300.00	2600.00	2300.00	7.95	44.55	36.63	1.57	5.54	32.82
300.00	2700.00	2400.00	8.14	42.26	38.18	1.62	4.41	33.63
300.00	2750.00	2450.00	8.08	42.86	40.66	1.60	5.42	32.28
300.00	2800.00	2500.00	7.96	41.67	40.72	1.52	3.70	32.62

Outline Drawing

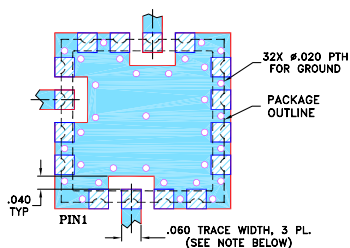
PCB Land Pattern



Outline Dimensions (inch/mm)

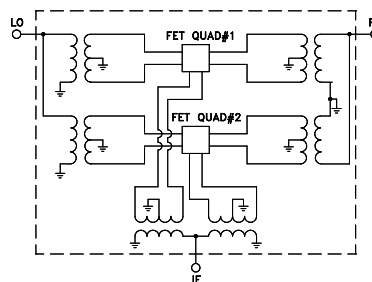
A	B	C	D	E	F	G	H	J	K
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060
12.7	12.7	4.572	2.54	2.032	2.921	1.524	1.016	13.72	1.524
L	M	N	P	Q	R	S	T	wt.	
.100	.135	.135	.115	.140	.070	.150	.070	grams	
2.54	3.429	3.429	2.921	3.556	1.778	3.81	1.778	1.0	

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



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IF/RF MICROWAVE COMPONENTS

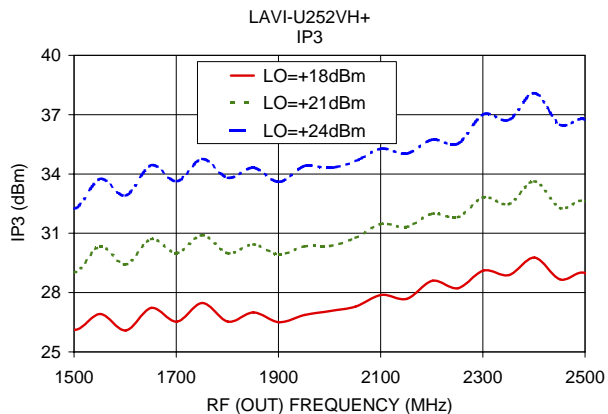
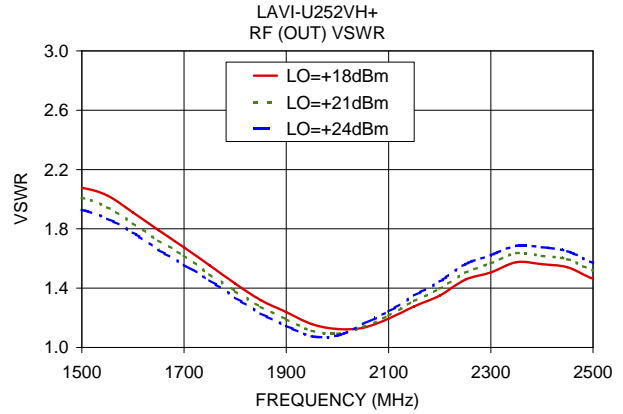
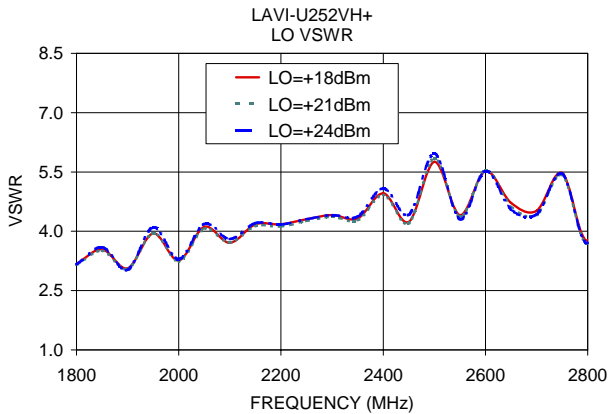
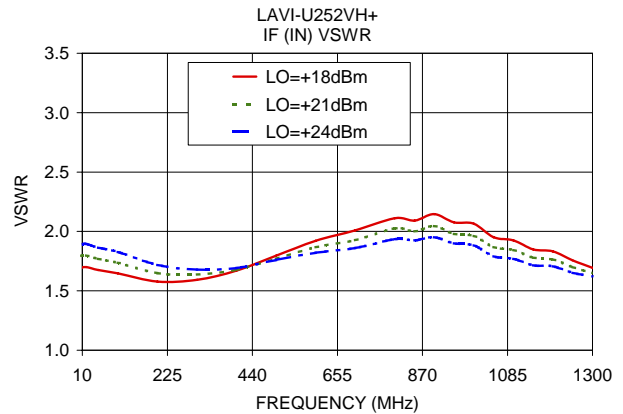
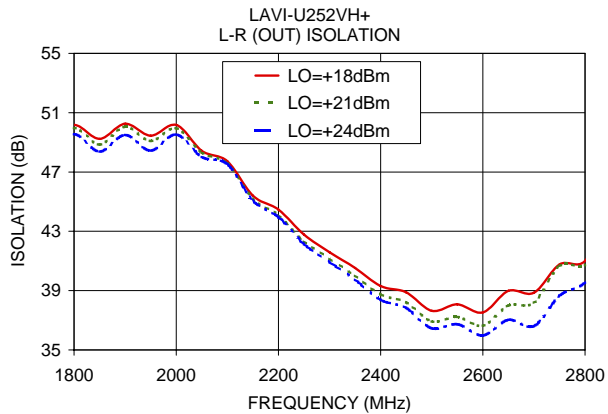
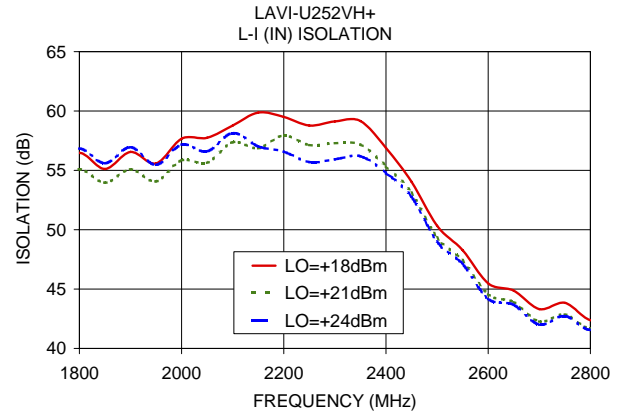
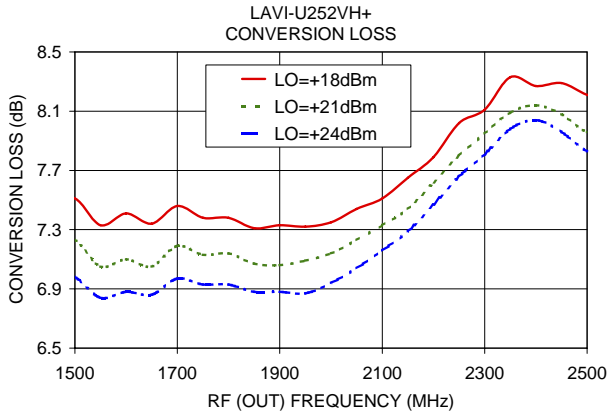
For detailed performance specs & shipping online see web site

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-Circuits' 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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Performance Charts

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For detailed performance specs & shopping online see web site

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