

Up Converter Frequency Mixer

LAVI-U182H+

Level 19 (LO Power +19 dBm) 10 to 1800 MHz

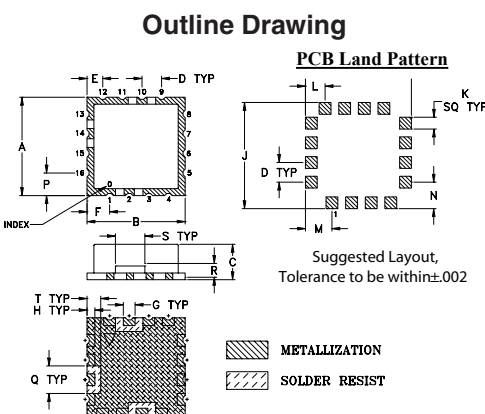
Maximum Ratings

Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C
LO Power	+22 dBm
IF Power	+18 dBm

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

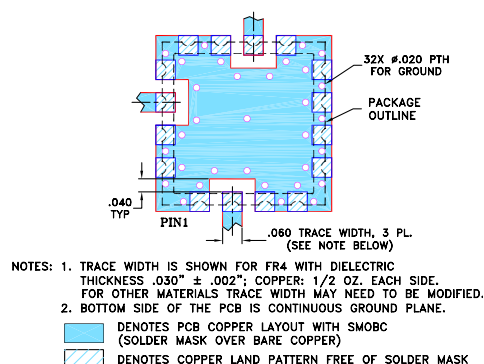
LO	10
IF (IN)	14
RF (OUT)	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16



Outline Dimensions (inch)

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)



Features

- up converter mixer
- very high IP3, 32 dBm typ.
- excellent L-R isolation, 53 dB typ;
L-I isolation, 40 dB typ.
- high 1 dB compression, 15 dBm typ.
- shielded metal cover
- aqueous washable
- protected by US Patent 6,807,407

Applications

- mobile radio
- cellular
- GPS
- defense communication

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.	
10-250	1490-1730	1560-1800	8.3	0.15	9.6	40	29	53	42	32

1 dB COMPR. +15 dBm typ.

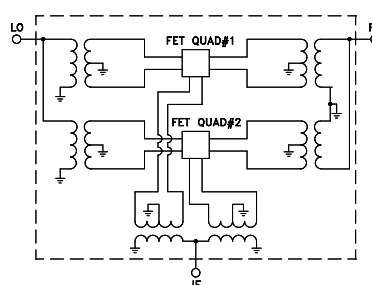
* Conversion Loss at IF=70 MHz.

** 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 +19dBm	LO +19dBm	LO +19dBm	LO +19dBm	LO +19dBm	LO +19dBm
70.00	1490.10	1560.10	8.18	41.20	59.83	1.84	4.44	30.65
70.00	1500.10	1570.10	8.18	40.95	59.21	1.82	4.07	31.19
70.00	1550.10	1620.10	8.23	38.32	55.88	1.74	2.57	32.91
70.00	1600.10	1670.10	8.20	35.10	54.20	1.65	1.86	33.07
70.00	1610.10	1680.10	8.21	34.64	53.72	1.63	1.82	33.37
70.00	1620.10	1690.10	8.22	34.08	53.06	1.62	1.81	33.47
70.00	1630.10	1700.10	8.26	33.53	52.86	1.61	1.83	33.38
70.00	1640.10	1710.10	8.28	33.02	52.99	1.60	1.89	32.17
70.00	1650.10	1720.10	8.30	32.64	52.92	1.58	1.97	32.67
70.00	1660.10	1730.10	8.31	32.39	52.98	1.57	2.08	32.28
70.00	1670.10	1740.10	8.31	32.02	52.97	1.56	2.21	31.68
70.00	1680.10	1750.10	8.34	31.74	52.96	1.54	2.36	31.93
70.00	1690.10	1760.10	8.35	31.56	52.93	1.53	2.52	31.81
70.00	1700.10	1770.10	8.38	31.47	52.95	1.52	2.69	31.18
70.00	1730.10	1800.10	8.46	31.22	52.18	1.49	3.28	30.24

Electrical Schematic



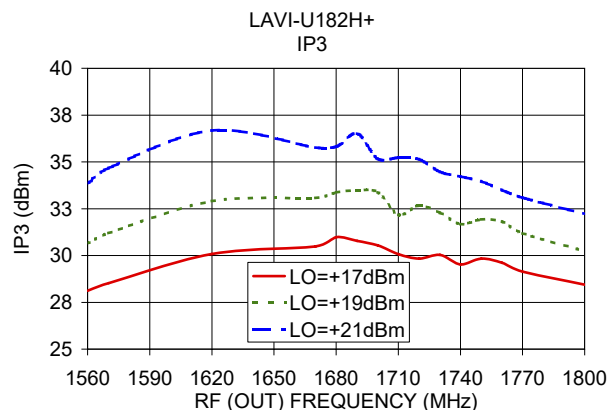
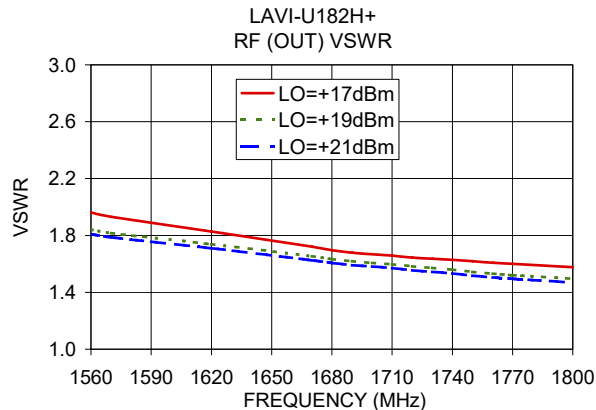
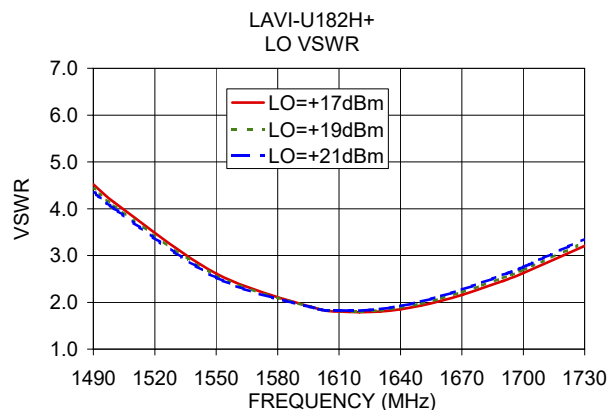
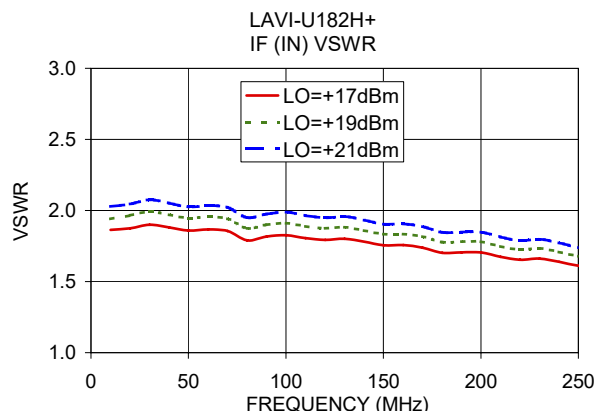
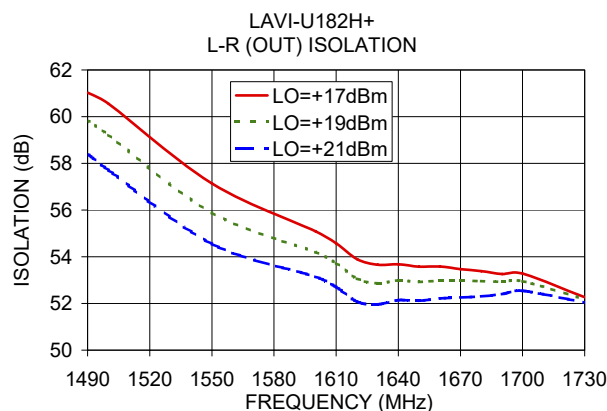
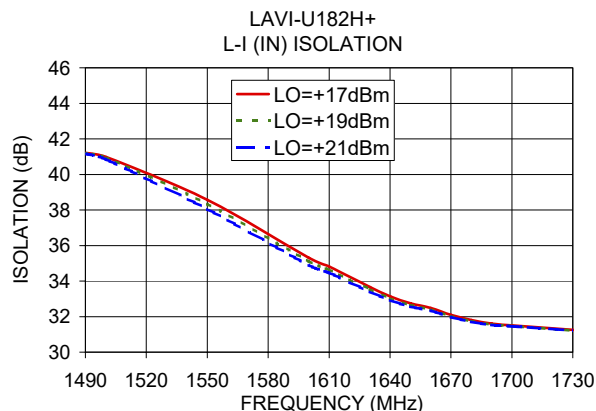
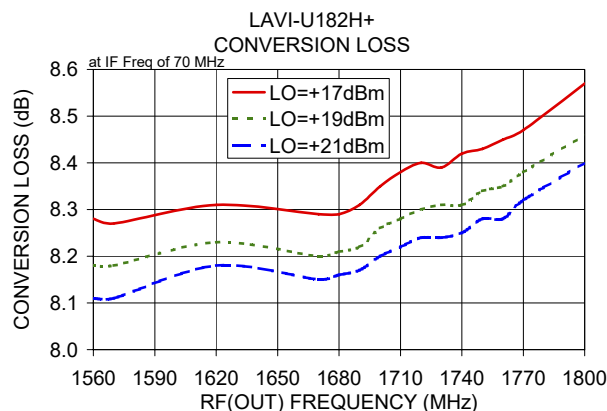
Notes

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Performance Charts

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