

# High IP3 Frequency Mixer

## LAVI-711H+

Level 17 (LO Power +17 dBm) 220 to 710 MHz



CASE STYLE: CK605

**+RoHS Compliant**

The +Suffix identifies 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	+23 dBm
RF Power	+21 dBm
Permanent damage may occur if any of these limits are exceeded.	

### Pin Connections

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

### Features

- very high IP3, 30 dBm typ.
- low conversion loss, 7.3 dB typ.
- excellent L-R isolation, 50 dB typ. and L-I isolation, 40 dB typ.
- high 1 dB compression, 20 dBm typ.
- shielded metal cover
- aqueous washable
- protected by US Patent 6,807,407

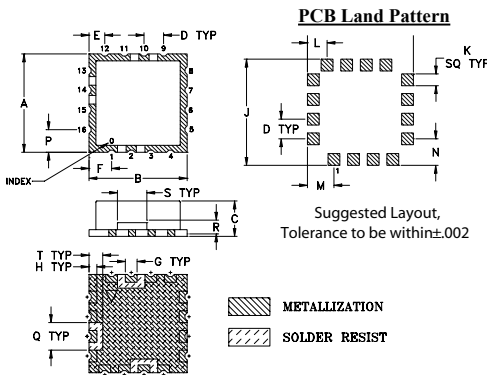
### Applications

- cellular/PCS base stations
- ISM applications
- 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.	σ	Max.	Typ.	Typ.	Typ.	Min.	Typ.	Min.
220-710	250-740	10-500	7.3	0.25	9.0	+20	30	50	40	40	29

### Outline Drawing



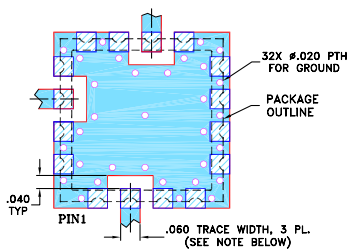
### Outline Dimensions (inch/mm)

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)



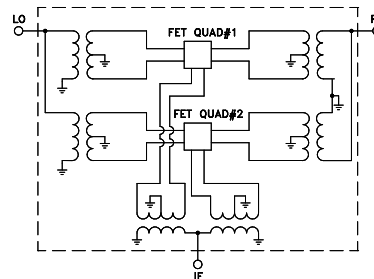
- NOTES: 1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.  
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)	IP3 (dBm)	IF Freq. (MHz)	VSWR IF (:1)
RF	LO	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm
220.10	250.10	7.37	58.20	42.61	1.24	3.44	27.05	10.10	1.07
245.10	275.10	7.33	58.37	41.84	1.27	3.44	27.24	50.10	1.10
270.10	300.10	7.38	58.15	41.44	1.27	3.40	27.47	100.10	1.18
295.10	325.10	7.39	59.45	40.60	1.28	3.35	27.83	150.10	1.30
320.10	350.10	7.29	57.31	40.07	1.30	3.31	28.59	200.10	1.37
345.10	375.10	7.31	56.89	39.15	1.30	3.22	28.92	250.10	1.49
370.10	400.10	7.33	56.33	38.49	1.31	3.12	28.72	300.10	1.55
395.10	425.10	7.26	55.25	37.32	1.33	2.96	29.29	350.10	1.68
420.10	450.10	7.27	54.20	36.46	1.35	2.78	30.08	360.10	1.66
445.10	475.10	7.28	54.23	35.93	1.34	2.57	30.08	370.10	1.71
470.10	500.10	7.31	53.26	35.82	1.34	2.34	30.88	380.10	1.72
495.10	525.10	7.34	50.69	34.89	1.36	2.11	31.80	390.10	1.69
520.10	550.10	7.57	48.58	32.99	1.35	1.92	32.30	400.10	1.74
545.10	575.10	7.78	48.42	31.25	1.32	1.78	30.64	410.10	1.81
570.10	600.10	7.55	47.58	31.44	1.30	1.75	30.23	420.10	1.79
595.10	625.10	7.40	45.58	32.28	1.31	1.81	30.72	430.10	1.81
620.10	650.10	7.43	43.91	33.02	1.32	1.92	30.51	440.10	1.86
645.10	675.10	7.47	42.94	33.63	1.33	2.06	30.05	450.10	1.86
670.10	700.10	7.49	42.71	34.42	1.34	2.24	29.07	460.10	1.83
710.10	740.10	7.55	43.16	35.55	1.37	2.52	27.02	500.10	1.94

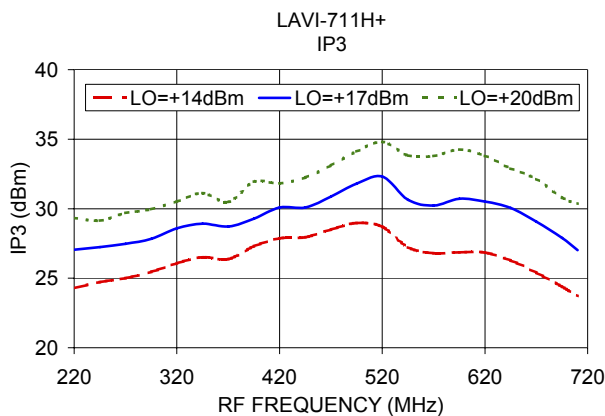
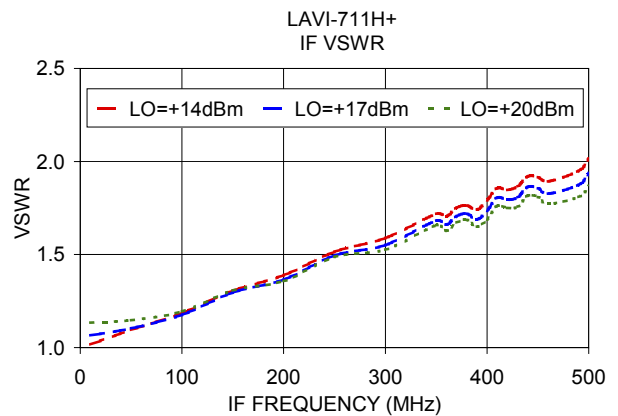
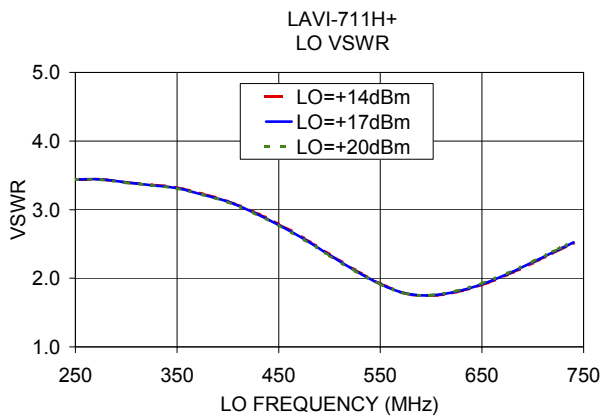
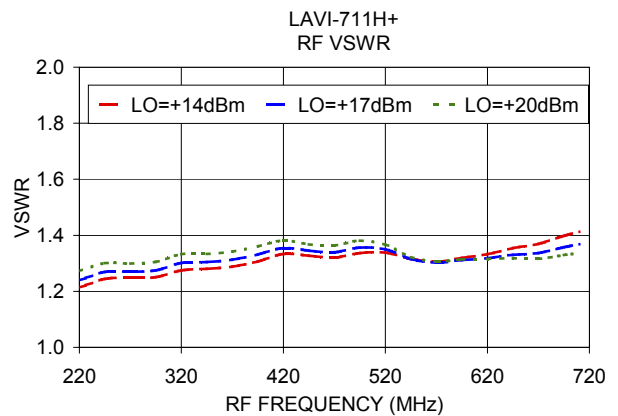
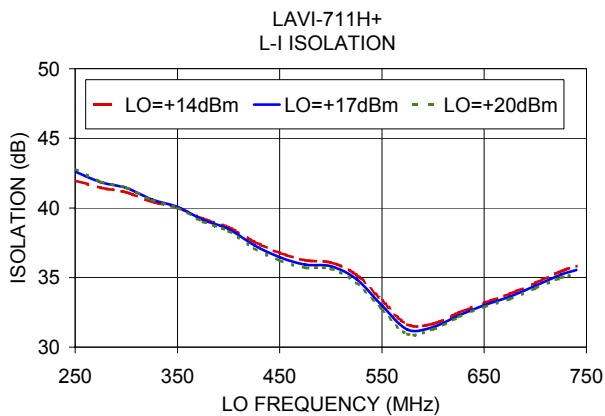
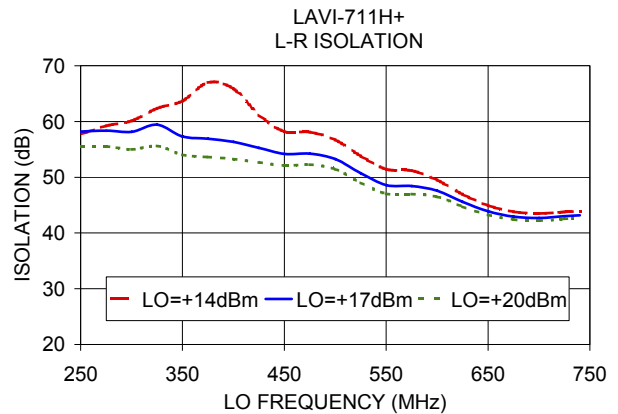
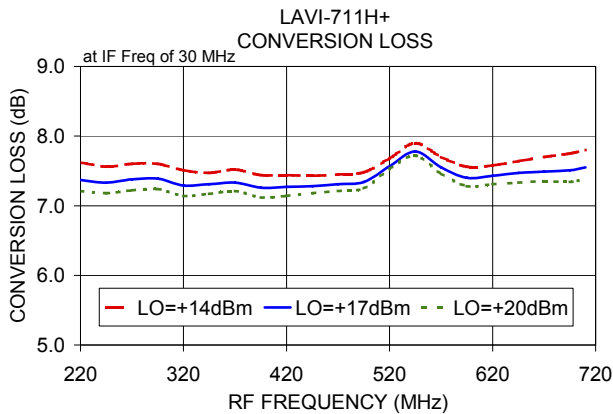
### Electrical Schematic



#### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
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