

Frequency Mixer

LAVI-25VH+

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	CONVERSION LOSS IF FIXED @IF(OUT)=250MHz (dB)		
		@LO (dBm)		
		+22	+23	+24
10.1	260.1	9.06	8.98	8.88
90.4	340.4	7.23	7.17	7.12
170.7	420.7	7.24	7.20	7.17
250.9	500.9	7.31	7.28	7.25
331.2	581.2	7.36	7.33	7.32
411.5	661.5	7.46	7.42	7.40
491.8	741.8	7.41	7.38	7.36
572.0	822.0	7.40	7.37	7.34
652.3	902.3	7.38	7.34	7.32
732.6	982.6	7.43	7.40	7.37
812.9	1062.9	7.51	7.46	7.43
893.2	1143.2	7.67	7.63	7.60
973.4	1223.4	7.85	7.80	7.76
1053.7	1303.7	8.00	7.94	7.90
1134.0	1384.0	8.13	8.08	8.02
1214.3	1464.3	8.27	8.21	8.16
1294.5	1544.5	8.36	8.30	8.23
1354.8	1604.8	8.37	8.30	8.24
1435.0	1685.0	8.30	8.22	8.14
1495.2	1745.2	8.22	8.15	8.07
1575.5	1825.5	8.25	8.17	8.10
1635.7	1885.7	8.22	8.15	8.08
1716.0	1966.0	8.19	8.11	8.05
1776.2	2026.2	8.17	8.10	8.04
1856.5	2106.5	8.20	8.11	8.05
1916.7	2166.7	8.16	8.07	8.01
1997.0	2247.0	8.08	8.00	7.93
2057.2	2307.2	8.05	7.98	7.91
2137.5	2387.5	8.05	7.97	7.90
2197.7	2447.7	8.00	7.91	7.84
2277.9	2527.9	7.97	7.88	7.82
2338.2	2588.2	8.08	8.00	7.95
2418.4	2668.4	8.23	8.17	8.12
2478.6	2728.6	8.21	8.16	8.11
2558.9	2808.9	8.37	8.32	8.28
2619.1	2869.1	8.71	8.67	8.63
2699.4	2949.4	9.06	9.03	9.01
2759.6	3009.6	9.22	9.19	9.18
2839.9	3089.9	9.72	9.70	9.70
2900.1	3150.1	10.31	10.30	10.28

RF (IN) (MHz)	LO (MHz)	IP3 INPUT (dBm)		
		@LO (dBm)		
		+22	+23	+24
10.1	260.1	21.49	22.49	23.46
90.4	340.4	24.75	26.01	27.38
170.7	420.7	26.67	27.74	28.42
250.9	500.9	29.56	30.25	31.05
331.2	581.2	30.75	31.31	31.79
411.5	661.5	32.56	33.61	34.47
491.8	741.8	32.42	33.16	33.92
572.0	822.0	32.66	33.48	34.28
652.3	902.3	33.00	34.38	35.06
732.6	982.6	31.63	32.42	33.41
812.9	1062.9	32.46	33.35	34.33
893.2	1143.2	31.19	32.06	32.81
973.4	1223.4	30.51	31.56	32.64
1053.7	1303.7	29.32	30.21	31.10
1134.0	1384.0	29.53	30.25	31.46
1214.3	1464.3	29.50	30.31	31.06
1294.5	1544.5	30.70	31.68	32.76
1354.8	1604.8	30.10	30.72	31.52
1435.0	1685.0	30.86	31.75	32.86
1495.2	1745.2	31.40	32.30	33.45
1575.5	1825.5	32.14	33.31	34.99
1635.7	1885.7	31.08	31.86	32.87
1716.0	1966.0	31.34	32.28	33.30
1776.2	2026.2	31.23	32.20	33.17
1856.5	2106.5	31.56	32.61	33.63
1916.7	2166.7	32.70	34.29	35.85
1997.0	2247.0	32.22	33.47	34.82
2057.2	2307.2	31.76	32.70	33.79
2137.5	2387.5	30.93	31.77	32.63
2197.7	2447.7	33.00	34.51	36.64
2277.9	2527.9	31.13	32.37	33.37
2338.2	2588.2	31.10	32.35	33.50
2418.4	2668.4	30.08	30.92	31.79
2478.6	2728.6	30.31	31.23	32.34
2558.9	2808.9	29.08	30.01	30.95
2619.1	2869.1	30.22	31.52	32.94
2699.4	2949.4	29.51	30.86	32.23
2759.6	3009.6	28.92	29.91	30.92
2839.9	3089.9	28.89	30.02	30.24
2900.1	3150.1	29.49	30.52	31.21



Frequency Mixer

LAVI-25VH+

Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1450MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=400MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=2500.1MHz (dB)
		@LO (dBm)			@LO (dBm)			@LO (dBm)
		+23			+23			+23
1329.9	120.1	10.09	10.1	410.1	9.10	2270.0	230.1	10.26
1259.7	190.3	9.03	90.4	490.4	6.92	2210.0	290.1	9.92
1189.5	260.5	8.68	170.6	570.6	7.19	2150.0	350.1	9.79
1119.3	330.7	8.43	250.9	650.9	7.41	2090.0	410.1	9.58
1049.1	400.9	8.06	331.1	731.1	7.33	2030.0	470.1	9.51
978.9	471.1	7.91	411.4	811.4	7.23	1970.0	530.1	9.22
908.7	541.3	8.00	491.6	891.6	7.11	1910.0	590.1	8.99
838.4	611.6	7.98	571.9	971.9	7.22	1850.0	650.1	8.96
768.2	681.8	7.80	652.1	1052.1	7.32	1790.0	710.1	8.95
698.0	752.0	7.89	732.4	1132.4	7.33	1730.0	770.1	8.67
627.8	822.2	7.91	812.6	1212.6	7.44	1670.0	830.1	8.62
557.6	892.4	7.80	892.9	1292.9	7.48	1610.0	890.1	8.73
487.4	962.6	7.76	973.1	1373.1	7.29	1550.0	950.1	8.84
417.2	1032.8	7.88	1053.4	1453.4	7.31	1490.0	1010.1	8.77
347.0	1103.0	7.96	1133.6	1533.6	7.42	1430.0	1070.1	8.90
276.8	1173.2	8.07	1213.9	1613.9	7.29	1370.0	1130.1	8.87
206.6	1243.4	8.18	1294.1	1694.1	7.18	1310.0	1190.1	8.83
136.4	1313.6	7.90	1374.4	1774.4	7.15	1250.0	1250.1	9.06
66.2	1383.8	7.99	1454.6	1854.6	7.06	1190.0	1310.1	8.91
10.0	1460.0	9.73	1534.9	1934.9	7.05	1130.0	1370.1	9.02
139.8	1589.8	8.13	1615.1	2015.1	6.99	1070.0	1430.1	8.94
269.6	1719.6	8.16	1695.4	2095.4	7.02	1010.0	1490.1	9.04
399.4	1849.4	7.85	1775.6	2175.6	7.35	950.0	1550.1	9.02
529.2	1979.2	7.62	1855.9	2255.9	7.55	890.0	1610.1	9.02
659.0	2109.0	7.81	1936.1	2336.1	7.66	830.0	1670.1	8.93
788.8	2238.8	7.90	2016.4	2416.4	7.99	770.0	1730.1	8.76
918.5	2368.5	8.00	2096.6	2496.6	8.34	710.0	1790.1	8.78
1048.3	2498.3	7.87	2176.9	2576.9	8.66	650.0	1850.1	8.82
1152.2	2602.2	7.94	2257.1	2657.1	8.88	590.0	1910.1	8.73
1282.0	2732.0	7.96	2337.4	2737.4	8.92	530.0	1970.1	8.66
1385.8	2835.8	8.14	2417.6	2817.6	8.99	470.0	2030.1	8.66
1515.6	2965.6	8.49	2497.9	2897.9	9.17	410.0	2090.1	8.72
1619.4	3069.4	8.75	2578.2	2978.2	9.21	370.0	2130.1	8.77
1749.2	3199.2	9.12	2658.4	3058.4	9.31	310.0	2190.1	8.73
1853.1	3303.1	9.26	2738.7	3138.7	9.38	270.0	2230.1	8.78
1982.8	3432.8	9.26	2839.0	3239.0	9.52	210.0	2290.1	8.84
2086.7	3536.7	9.45	2919.2	3319.2	9.69	170.0	2330.1	8.56
2216.5	3666.5	9.66	3019.5	3419.5	9.90	110.0	2390.1	8.26
2320.3	3770.3	9.87	3099.8	3499.8	10.13	70.0	2430.1	8.17
2450.1	3900.1	10.46	3200.1	3600.1	10.31	10.0	2490.1	10.39

Frequency Mixer

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Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)		
	@LO (dBm)			@LO (dBm)		
	+22	+23	+24	+22	+23	+24
260.1	45.70	45.80	45.77	43.20	43.28	43.40
340.4	45.55	45.57	45.54	43.29	43.30	43.26
420.7	46.11	46.05	46.14	43.49	43.45	43.48
500.9	46.67	46.62	46.63	43.62	43.53	43.49
581.2	49.05	48.99	49.06	45.20	45.06	45.08
661.5	54.04	54.00	53.84	50.37	50.36	50.12
741.8	62.82	62.01	60.72	60.49	60.25	59.96
822.0	55.49	55.61	55.88	52.98	52.90	52.85
902.3	51.47	51.61	51.76	49.63	49.78	49.88
982.6	48.73	48.84	48.86	47.73	47.85	47.86
1062.9	46.53	46.63	46.75	46.23	46.38	46.51
1143.2	44.97	45.08	45.09	44.93	45.06	45.08
1223.4	43.93	44.04	44.17	43.25	43.36	43.41
1303.7	43.62	43.74	43.85	41.31	41.36	41.36
1384.0	42.14	42.18	42.20	38.38	38.36	38.28
1464.3	44.34	44.35	44.30	40.87	41.08	41.17
1544.5	43.72	43.80	43.72	42.46	42.65	42.68
1604.8	44.00	44.10	44.26	42.84	43.07	43.24
1685.0	44.28	44.40	44.53	41.76	41.88	41.72
1745.2	44.12	44.22	44.13	41.45	41.50	41.36
1825.5	43.83	43.86	43.70	42.67	42.73	42.59
1885.7	44.15	43.99	44.12	43.69	43.57	43.65
1966.0	43.86	43.84	43.92	44.79	44.82	44.91
2026.2	44.02	44.11	44.16	45.77	45.92	45.95
2106.5	44.64	44.72	44.56	47.97	48.21	48.18
2166.7	46.59	46.61	46.63	51.41	51.61	51.90
2247.0	50.62	50.87	51.01	57.10	56.75	56.50
2307.2	51.34	51.35	51.46	49.56	49.10	48.88
2387.5	47.13	47.17	47.09	43.28	43.07	42.84
2447.7	44.77	44.70	44.39	40.35	40.13	39.74
2527.9	43.53	43.56	43.43	37.60	37.54	37.33
2588.2	43.57	43.39	43.25	36.45	36.28	36.13
2668.4	44.21	44.20	44.11	35.42	35.45	35.39
2728.6	44.47	44.40	44.28	35.19	35.16	35.08
2808.9	44.17	44.00	43.72	35.37	35.36	35.22
2869.1	42.85	42.87	42.62	35.57	35.66	35.52
2949.4	41.51	41.49	41.44	36.12	36.13	36.12
3009.6	40.66	40.66	40.82	36.52	36.56	36.69
3089.9	39.30	39.42	39.47	37.02	37.19	37.26
3150.1	38.49	38.62	38.73	37.33	37.46	37.50

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB)		
		@LO (dBm)		
		+22	+23	+24
10.1	260.1	12.28	12.20	12.17
90.4	340.4	26.72	26.67	26.04
170.7	420.7	30.96	31.07	31.49
250.9	500.9	33.10	33.09	33.00
331.2	581.2	32.98	32.40	31.57
411.5	661.5	36.71	36.61	37.06
491.8	741.8	35.95	35.42	34.55
572.0	822.0	33.02	32.49	32.45
652.3	902.3	36.02	35.43	34.70
732.6	982.6	33.39	32.32	30.87
812.9	1062.9	37.09	36.21	35.46
893.2	1143.2	38.26	36.87	34.93
973.4	1223.4	40.99	38.70	35.85
1053.7	1303.7	47.79	44.41	40.87
1134.0	1384.0	41.24	38.50	33.43
1214.3	1464.3	44.04	43.86	41.16
1294.5	1544.5	44.07	43.68	39.50
1354.8	1604.8	42.29	43.56	44.04
1435.0	1685.0	52.96	51.38	35.52
1495.2	1745.2	40.38	42.30	48.19
1575.5	1825.5	37.50	38.81	40.72
1635.7	1885.7	35.67	36.55	38.56
1716.0	1966.0	32.44	32.63	32.81
1776.2	2026.2	31.65	31.88	32.14
1856.5	2106.5	30.23	30.28	30.27
1916.7	2166.7	29.42	29.42	29.40
1997.0	2247.0	29.18	29.19	29.28
2057.2	2307.2	28.45	28.42	28.36
2137.5	2387.5	28.32	28.25	28.19
2197.7	2447.7	28.64	28.55	28.50
2277.9	2527.9	29.54	29.43	29.37
2338.2	2588.2	30.17	30.02	29.88
2418.4	2668.4	28.97	28.81	28.75
2478.6	2728.6	26.93	26.89	26.90
2558.9	2808.9	25.45	25.38	25.21
2619.1	2869.1	25.39	25.37	25.22
2699.4	2949.4	26.40	26.35	26.10
2759.6	3009.6	27.19	27.03	26.66
2839.9	3089.9	28.28	27.94	27.85
2900.1	3150.1	29.19	28.95	28.61



Frequency Mixer

LAVI-25VH+

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1)		
		@LO (dBm)		
		+22	+23	+24
10.1	260.1	1.85	1.88	1.92
90.4	340.4	1.35	1.37	1.40
170.7	420.7	1.53	1.55	1.58
250.9	500.9	1.67	1.69	1.70
331.2	581.2	1.70	1.72	1.74
411.5	661.5	1.69	1.70	1.72
491.8	741.8	1.67	1.68	1.69
572.0	822.0	1.64	1.64	1.64
652.3	902.3	1.62	1.61	1.61
732.6	982.6	1.65	1.64	1.63
812.9	1062.9	1.81	1.79	1.78
893.2	1143.2	2.04	2.02	2.00
973.4	1223.4	2.26	2.24	2.22
1053.7	1303.7	2.39	2.36	2.34
1134.0	1384.0	2.40	2.38	2.36
1214.3	1464.3	2.38	2.36	2.33
1294.5	1544.5	2.31	2.28	2.25
1354.8	1604.8	2.24	2.21	2.18
1435.0	1685.0	2.13	2.10	2.07
1495.2	1745.2	2.10	2.07	2.04
1575.5	1825.5	1.95	1.92	1.90
1635.7	1885.7	1.86	1.83	1.81
1716.0	1966.0	1.76	1.74	1.72
1776.2	2026.2	1.72	1.69	1.67
1856.5	2106.5	1.69	1.67	1.65
1916.7	2166.7	1.66	1.64	1.62
1997.0	2247.0	1.65	1.63	1.62
2057.2	2307.2	1.64	1.63	1.62
2137.5	2387.5	1.60	1.59	1.58
2197.7	2447.7	1.59	1.58	1.58
2277.9	2527.9	1.60	1.60	1.60
2338.2	2588.2	1.61	1.62	1.63
2418.4	2668.4	1.67	1.68	1.70
2478.6	2728.6	1.74	1.76	1.78
2558.9	2808.9	1.83	1.86	1.88
2619.1	2869.1	1.91	1.94	1.97
2699.4	2949.4	2.07	2.10	2.13
2759.6	3009.6	2.22	2.25	2.28
2839.9	3089.9	2.41	2.45	2.46
2900.1	3150.1	2.53	2.57	2.59

LO (MHz)	LO VSWR (:1)		
	@LO (dBm)		
	+22	+23	+24
260.1	3.67	3.67	3.67
340.4	3.47	3.47	3.47
420.7	3.26	3.26	3.26
500.9	3.04	3.04	3.03
581.2	2.84	2.84	2.83
661.5	2.72	2.72	2.71
741.8	2.71	2.71	2.70
822.0	2.77	2.77	2.76
902.3	2.85	2.84	2.84
982.6	2.91	2.91	2.91
1062.9	2.95	2.95	2.95
1143.2	2.95	2.96	2.96
1223.4	2.93	2.93	2.93
1303.7	2.88	2.87	2.87
1384.0	2.83	2.82	2.82
1464.3	2.80	2.79	2.78
1544.5	2.78	2.78	2.77
1604.8	2.78	2.78	2.78
1685.0	2.79	2.79	2.79
1745.2	2.79	2.78	2.77
1825.5	2.85	2.84	2.84
1885.7	2.92	2.92	2.92
1966.0	2.95	2.95	2.94
2026.2	2.93	2.92	2.90
2106.5	2.98	2.98	2.97
2166.7	2.99	2.98	2.98
2247.0	2.89	2.88	2.87
2307.2	2.83	2.82	2.80
2387.5	2.73	2.72	2.72
2447.7	2.61	2.61	2.61
2527.9	2.46	2.45	2.44
2588.2	2.37	2.37	2.36
2668.4	2.29	2.28	2.28
2728.6	2.25	2.25	2.25
2808.9	2.23	2.23	2.22
2869.1	2.22	2.21	2.20
2949.4	2.26	2.25	2.25
3009.6	2.31	2.31	2.31
3089.9	2.33	2.33	2.33
3150.1	2.32	2.31	2.31

IF (OUT) (MHz)	IF VSWR @LO=2800MHz (:1)		
	@LO (dBm)		
	+22	+23	+24
10.1	1.92	1.95	1.99
90.1	1.17	1.17	1.18
170.1	1.57	1.58	1.58
250.1	1.78	1.79	1.80
330.1	1.97	1.98	1.98
410.1	2.25	2.25	2.26
490.1	2.42	2.43	2.43
550.1	2.48	2.48	2.48
630.1	2.48	2.48	2.47
690.1	2.44	2.44	2.43
770.1	2.35	2.34	2.33
830.1	2.22	2.20	2.18
910.1	2.01	1.99	1.97
970.1	1.87	1.85	1.83
1050.1	1.71	1.68	1.65
1110.1	1.62	1.59	1.55
1190.1	1.48	1.44	1.41
1250.1	1.40	1.37	1.34
1330.1	1.40	1.38	1.36
1390.1	1.46	1.44	1.43
1470.0	1.54	1.54	1.54
1530.0	1.62	1.63	1.64
1610.0	1.78	1.80	1.82
1670.0	1.87	1.89	1.92
1750.0	2.02	2.04	2.08
1810.0	2.07	2.10	2.14
1890.0	2.18	2.22	2.26
1950.0	2.26	2.30	2.34
2030.0	2.34	2.38	2.43
2090.0	2.30	2.34	2.39
2170.0	2.27	2.32	2.36
2230.0	2.26	2.30	2.35
2310.0	2.18	2.21	2.25
2370.0	2.20	2.24	2.28
2450.0	2.21	2.24	2.28
2510.0	2.12	2.15	2.18
2590.0	2.06	2.09	2.12
2650.0	2.10	2.13	2.15
2730.0	2.11	2.13	2.16
2790.0	2.35	2.38	2.41

Frequency Mixer

LAVI-25VH+

Harmonics Tables

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	18	24	26	31	35	46	55	45	51	69
1	-	28	+0	27	15	40	35	53	45	50	51	56
2	65	44	66	47	53	36	56	40	68	47	73	56
3	>90	76	59	67	56	65	53	71	60	71	70	76
4	>90	84	>87	74	82	74	85	75	>87	74	80	79
5	>90	85	>87	>87	>87	>87	84	>87	82	>87	81	>87
6	88	>87	84	>87	82	80	85	>87	>87	>87	>87	>87
7	>90	>87	>87	>87	>87	>87	>87	>87	>87	>87	>87	86
8	>90	>87	>87	86	85	>87	>87	>87	>87	84	>87	>87
9	89	>87	83	>87	>87	86	>87	86	84	>87	>87	86
10	>90	>87	>87	86	>87	79	>87	>87	83	>87	>87	86
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 1450 MHz; 5.00 dBm.
 LO IN: 1650 MHz; +23.00 dBm
 IF OUT: 200 MHz; -3.44 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	26	28	33	33	46	40	51	44	61	68
1	-	29	+0	30	18	42	39	56	43	62	60	77
2	45	37	56	39	44	28	49	34	65	47	61	62
3	88	52	44	53	34	47	33	53	44	58	69	65
4	>90	58	61	62	65	56	62	51	69	48	75	56
5	>90	70	68	67	56	67	59	72	52	70	55	68
6	90	73	77	81	81	70	78	87	80	66	77	61
7	87	80	78	79	75	79	65	78	66	83	68	88
8	86	91	83	88	81	80	85	71	84	73	83	70
9	90	96	94	95	90	>96	82	92	80	95	75	85
10	>90	93	>96	>96	87	91	87	82	85	80	82	79
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 1450 MHz; 15.00 dBm.
 LO IN: 1650 MHz; +23.00 dBm
 IF OUT: 200 MHz; 6.35 dBm

- Notes: 1. All Harmonics are in (dBc) relative to IF OUTPUT.
 2. + entry denotes harmonics are in (dBc) above IF OUTPUT.
 3. RF Cal represent the Harmonics level of the RF input signal to the mixer.

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 101012
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