

Frequency Mixer

LAVI-17VH+

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	CONVERSION LOSS IF FIXED @IF(OUT)=130MHz (dB)		
		@LO (dBm)		
		+19	+21	+23
10.1	140.1	5.89	5.78	5.66
89.8	219.8	6.30	6.20	6.12
169.6	299.6	6.40	6.30	6.24
249.3	379.3	6.49	6.41	6.35
329.1	459.1	6.54	6.45	6.37
408.8	538.8	6.59	6.50	6.44
488.6	618.6	6.63	6.54	6.47
568.3	698.3	6.68	6.59	6.51
648.0	778.0	6.70	6.60	6.53
727.8	857.8	6.81	6.70	6.63
807.5	937.5	6.88	6.77	6.70
887.3	1017.3	7.08	6.98	6.91
967.0	1097.0	7.35	7.26	7.18
1046.7	1176.7	7.54	7.44	7.37
1126.5	1256.5	7.68	7.59	7.52
1206.2	1336.2	7.84	7.74	7.68
1286.0	1416.0	8.05	7.95	7.90
1365.7	1495.7	8.16	8.08	8.02
1445.5	1575.5	8.26	8.18	8.13
1525.2	1655.2	8.29	8.22	8.17
1604.9	1734.9	8.31	8.23	8.19
1684.7	1814.7	8.39	8.31	8.25
1764.4	1894.4	8.49	8.40	8.33
1844.2	1974.2	8.58	8.46	8.40
1923.9	2053.9	8.63	8.52	8.43
2003.6	2133.6	8.66	8.53	8.43
2083.4	2213.4	8.66	8.51	8.39
2163.1	2293.1	8.72	8.55	8.44
2242.9	2372.9	8.78	8.61	8.48
2322.6	2452.6	8.88	8.69	8.54
2402.4	2532.4	8.86	8.66	8.47
2482.1	2612.1	8.85	8.61	8.40
2561.8	2691.8	8.90	8.60	8.40
2641.6	2771.6	9.05	8.74	8.53
2721.3	2851.3	9.21	8.86	8.63
2801.1	2931.1	9.37	9.06	8.83
2880.8	3010.8	9.61	9.27	9.02
2960.6	3090.6	9.85	9.50	9.38
3040.3	3170.3	10.19	9.82	9.54
3100.1	3230.1	10.61	10.23	10.12

RF (IN) (MHz)	LO (MHz)	IP3 INPUT (dBm)		
		@LO (dBm)		
		+19	+21	+23
10.1	140.1	23.20	25.37	27.45
89.8	219.8	26.42	28.70	30.41
169.6	299.6	28.22	29.83	30.98
249.3	379.3	29.35	31.18	32.71
329.1	459.1	29.96	31.91	33.84
408.8	538.8	29.83	32.06	34.24
488.6	618.6	30.23	32.40	34.55
568.3	698.3	29.65	31.50	33.68
648.0	778.0	29.91	32.19	34.52
727.8	857.8	29.56	31.83	33.84
807.5	937.5	30.30	32.90	34.85
887.3	1017.3	29.23	31.09	32.55
967.0	1097.0	29.09	30.87	32.70
1046.7	1176.7	28.53	30.40	32.14
1126.5	1256.5	28.60	30.63	32.62
1206.2	1336.2	28.39	30.29	32.10
1286.0	1416.0	28.68	30.92	33.36
1365.7	1495.7	28.55	30.48	32.60
1445.5	1575.5	29.08	31.37	34.18
1525.2	1655.2	29.11	31.15	33.54
1604.9	1734.9	29.67	31.77	34.81
1684.7	1814.7	29.81	31.95	34.88
1764.4	1894.4	30.10	32.31	35.40
1844.2	1974.2	29.66	32.12	34.97
1923.9	2053.9	29.47	31.72	34.73
2003.6	2133.6	28.08	30.22	32.73
2083.4	2213.4	27.29	29.25	31.89
2163.1	2293.1	26.05	28.01	29.84
2242.9	2372.9	25.44	27.27	29.21
2322.6	2452.6	24.62	26.32	28.12
2402.4	2532.4	23.81	25.44	27.34
2482.1	2612.1	22.97	24.78	26.75
2561.8	2691.8	22.05	24.07	25.80
2641.6	2771.6	21.32	23.52	25.30
2721.3	2851.3	20.50	22.77	24.65
2801.1	2931.1	20.24	22.38	24.35
2880.8	3010.8	19.80	22.01	24.22
2960.6	3090.6	19.48	21.87	24.07
3040.3	3170.3	19.04	21.39	23.89
3100.1	3230.1	18.88	21.28	23.75



Frequency Mixer

LAVI-17VH+

Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1100MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=460MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1730.1MHz (dB)
		@LO (dBm)			@LO (dBm)			@LO (dBm)
		+21			+21			+21
1079.9	20.1	9.19	10.1	470.1	13.85	1490.0	240.1	10.24
1029.7	70.3	7.97	50.3	510.3	7.08	1450.0	280.1	10.10
979.6	120.4	7.56	90.6	550.6	6.64	1410.0	320.1	9.86
929.4	170.6	7.51	130.8	590.8	6.54	1370.0	360.1	9.72
879.3	220.7	7.34	171.0	631.0	6.53	1330.0	400.1	9.55
829.1	270.9	7.28	211.3	671.3	6.51	1290.0	440.1	9.32
779.0	321.0	7.17	251.5	711.5	6.44	1250.0	480.1	9.24
728.8	371.2	6.95	291.7	751.7	6.48	1210.0	520.1	9.15
678.7	421.3	7.21	332.0	792.0	6.49	1170.0	560.1	9.11
628.5	471.5	7.23	372.2	832.2	6.55	1130.0	600.1	9.00
578.4	521.6	7.16	412.4	872.4	6.45	1090.0	640.1	8.87
528.2	571.8	7.06	452.7	912.7	6.41	1050.0	680.1	8.71
478.1	621.9	7.06	492.9	952.9	6.38	1010.0	720.1	8.55
427.9	672.1	7.16	533.1	993.1	6.41	970.0	760.1	8.43
377.8	722.2	7.24	573.4	1033.4	6.55	930.0	800.1	8.42
327.6	772.4	7.23	613.6	1073.6	6.63	890.0	840.1	8.35
260.8	839.2	7.22	653.8	1113.8	6.72	850.0	880.1	8.29
210.6	889.4	7.30	694.1	1154.1	6.73	810.0	920.1	8.18
143.7	956.3	7.46	734.3	1194.3	6.79	770.0	960.1	8.09
93.6	1006.4	7.58	774.5	1234.5	6.86	730.0	1000.1	8.06
26.7	1073.3	9.23	814.8	1274.8	7.01	690.0	1040.1	8.06
33.3	1133.3	8.66	855.0	1315.0	7.16	650.0	1080.1	8.05
126.4	1226.4	7.60	895.2	1355.2	7.25	610.0	1120.1	8.00
196.3	1296.3	7.54	935.4	1395.4	7.35	570.0	1160.1	7.90
289.4	1389.4	7.53	975.7	1435.7	7.32	530.0	1200.1	7.81
359.2	1459.2	7.62	1036.0	1496.0	7.53	490.0	1240.1	7.78
452.4	1552.4	7.58	1076.3	1536.3	7.65	450.0	1280.1	7.84
522.2	1622.2	7.54	1136.6	1596.6	7.87	410.0	1320.1	7.92
615.4	1715.4	7.73	1176.8	1636.8	7.85	370.0	1360.1	7.99
685.2	1785.2	7.74	1237.2	1697.2	7.88	330.0	1400.1	8.00
778.3	1878.3	7.74	1277.4	1737.4	7.91	290.0	1440.1	8.00
848.2	1948.2	7.94	1337.8	1797.8	8.12	250.0	1480.1	8.03
941.3	2041.3	8.06	1378.0	1838.0	8.16	210.0	1520.1	8.10
1011.2	2111.2	8.13	1438.4	1898.4	8.34	190.0	1540.1	8.20
1104.3	2204.3	8.47	1478.6	1938.6	8.44	150.0	1580.1	8.24
1174.1	2274.1	8.67	1538.9	1998.9	8.79	130.0	1600.1	8.27
1267.3	2367.3	8.98	1579.2	2039.2	8.98	90.0	1640.1	8.43
1337.1	2437.1	9.39	1639.5	2099.5	9.36	70.0	1660.1	8.49
1430.3	2530.3	9.86	1679.8	2139.8	9.54	30.0	1700.1	9.45
1500.1	2600.1	10.20	1740.1	2200.1	10.05	10.0	1720.1	14.14



Frequency Mixer

LAVI-17VH+

Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)		
	@LO (dBm)			@LO (dBm)		
	+19	+21	+23	+19	+21	+23
140.1	50.56	50.67	50.82	50.22	50.37	50.43
219.8	47.55	47.50	47.68	44.71	44.58	44.67
299.6	48.07	47.99	48.14	43.87	43.67	43.72
379.3	51.11	51.52	51.77	44.79	44.77	44.80
459.1	52.01	52.43	52.45	46.06	45.98	45.74
538.8	49.68	49.88	50.27	49.10	48.76	48.62
618.6	48.43	48.85	49.12	55.51	55.18	54.77
698.3	47.64	47.86	47.92	62.85	62.90	62.44
778.0	46.52	46.80	46.85	54.60	55.18	55.63
857.8	45.30	45.47	45.48	51.27	51.44	51.86
937.5	44.33	44.31	44.34	49.53	49.66	49.89
1017.3	43.37	43.46	43.25	48.18	48.36	48.44
1097.0	42.84	42.97	42.90	47.81	48.03	47.97
1176.7	43.00	42.97	43.02	46.22	45.99	46.03
1256.5	42.37	42.31	42.51	44.30	44.17	44.13
1336.2	42.47	42.41	42.62	44.08	43.94	43.96
1416.0	42.93	42.86	43.05	44.39	44.21	44.10
1495.7	43.37	43.55	43.61	45.17	45.02	45.06
1575.5	43.86	44.01	43.98	46.25	46.29	46.19
1655.2	44.92	44.92	45.08	46.68	46.59	46.63
1734.9	47.24	47.50	47.69	45.26	45.21	45.29
1814.7	50.79	51.25	51.47	42.99	43.02	42.86
1894.4	52.23	52.87	53.31	40.72	40.72	40.50
1974.2	49.66	49.72	49.68	39.62	39.33	39.32
2053.9	44.70	44.58	44.48	39.85	39.81	39.88
2133.6	41.27	41.14	40.94	39.99	40.04	40.02
2213.4	39.61	39.46	39.13	39.77	39.83	39.78
2293.1	37.63	37.32	37.19	39.31	39.28	39.35
2372.9	36.35	36.01	35.89	39.12	39.09	39.24
2452.6	35.18	35.11	34.99	39.26	39.45	39.56
2532.4	34.47	34.36	34.07	39.84	40.02	40.03
2612.1	33.11	33.00	32.72	39.62	39.82	39.81
2691.8	34.16	33.99	33.63	42.39	42.56	42.60
2771.6	33.54	33.14	32.93	43.80	43.77	43.74
2851.3	33.15	32.84	32.74	46.12	45.98	46.20
2931.1	32.86	32.64	32.51	48.03	47.97	47.96
3010.8	32.53	32.48	32.23	51.57	51.69	51.19
3090.6	32.25	32.07	32.04	57.44	58.18	58.78
3170.3	31.87	31.89	31.72	55.40	55.66	55.67
3230.1	31.97	31.83	31.74	50.52	50.08	49.59

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB)		
		@LO (dBm)		
		+19	+21	+23
10.1	140.1	45.27	46.38	48.00
89.8	219.8	45.37	48.56	50.85
169.6	299.6	47.50	48.80	48.45
249.3	379.3	40.08	38.54	36.91
329.1	459.1	38.09	37.83	40.16
408.8	538.8	35.75	35.18	34.46
488.6	618.6	34.21	33.18	31.94
568.3	698.3	38.06	37.70	37.62
648.0	778.0	38.09	36.86	34.78
727.8	857.8	42.20	41.49	39.97
807.5	937.5	44.17	44.84	43.83
887.3	1017.3	46.60	49.72	46.32
967.0	1097.0	40.70	42.20	46.11
1046.7	1176.7	39.27	41.46	48.41
1126.5	1256.5	36.21	37.10	38.81
1206.2	1336.2	34.59	35.21	36.43
1286.0	1416.0	33.97	34.67	35.92
1365.7	1495.7	32.82	33.22	33.77
1445.5	1575.5	32.06	32.47	33.32
1525.2	1655.2	30.92	31.20	31.57
1604.9	1734.9	29.93	30.15	30.45
1684.7	1814.7	28.91	29.04	29.26
1764.4	1894.4	28.25	28.34	28.48
1844.2	1974.2	28.08	28.16	28.27
1923.9	2053.9	27.94	27.99	28.04
2003.6	2133.6	27.86	27.91	27.96
2083.4	2213.4	27.78	27.78	27.74
2163.1	2293.1	28.11	28.03	27.99
2242.9	2372.9	28.97	28.90	28.78
2322.6	2452.6	30.02	29.95	29.85
2402.4	2532.4	30.41	30.38	30.28
2482.1	2612.1	30.84	30.83	30.82
2561.8	2691.8	31.11	31.15	31.18
2641.6	2771.6	31.98	32.09	32.42
2721.3	2851.3	32.19	32.26	32.30
2801.1	2931.1	32.40	32.43	32.59
2880.8	3010.8	32.81	32.77	32.85
2960.6	3090.6	33.22	32.96	32.25
3040.3	3170.3	33.85	33.58	33.38
3100.1	3230.1	34.64	34.27	33.43



Frequency Mixer

LAVI-17VH+

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1)		
		@LO (dBm)		
		+19	+21	+23
10.1	140.1	1.11	1.10	1.10
89.8	219.8	1.27	1.29	1.30
169.6	299.6	1.42	1.44	1.46
249.3	379.3	1.48	1.50	1.52
329.1	459.1	1.50	1.51	1.53
408.8	538.8	1.53	1.53	1.54
488.6	618.6	1.60	1.60	1.60
568.3	698.3	1.75	1.75	1.75
648.0	778.0	1.92	1.91	1.90
727.8	857.8	2.11	2.09	2.08
807.5	937.5	2.29	2.27	2.25
887.3	1017.3	2.46	2.44	2.42
967.0	1097.0	2.56	2.54	2.52
1046.7	1176.7	2.58	2.56	2.54
1126.5	1256.5	2.60	2.57	2.55
1206.2	1336.2	2.57	2.55	2.53
1286.0	1416.0	2.48	2.46	2.43
1365.7	1495.7	2.34	2.32	2.30
1445.5	1575.5	2.20	2.17	2.14
1525.2	1655.2	2.07	2.04	2.01
1604.9	1734.9	1.97	1.94	1.90
1684.7	1814.7	1.89	1.85	1.81
1764.4	1894.4	1.83	1.79	1.75
1844.2	1974.2	1.79	1.75	1.71
1923.9	2053.9	1.77	1.73	1.68
2003.6	2133.6	1.75	1.70	1.66
2083.4	2213.4	1.72	1.68	1.63
2163.1	2293.1	1.69	1.64	1.60
2242.9	2372.9	1.62	1.58	1.54
2322.6	2452.6	1.55	1.51	1.48
2402.4	2532.4	1.48	1.45	1.41
2482.1	2612.1	1.42	1.39	1.35
2561.8	2691.8	1.37	1.34	1.32
2641.6	2771.6	1.32	1.30	1.28
2721.3	2851.3	1.33	1.31	1.31
2801.1	2931.1	1.38	1.38	1.39
2880.8	3010.8	1.48	1.50	1.52
2960.6	3090.6	1.60	1.63	1.68
3040.3	3170.3	1.73	1.76	1.81
3100.1	3230.1	1.81	1.86	1.92

LO (MHz)	LO VSWR (:1)		
	@LO (dBm)		
	+19	+21	+23
140.1	3.56	3.56	3.56
220.1	3.62	3.62	3.62
300.1	3.73	3.73	3.72
380.1	3.78	3.77	3.77
460.1	3.79	3.78	3.77
540.1	3.75	3.75	3.74
620.1	3.70	3.69	3.68
700.1	3.65	3.65	3.64
780.1	3.58	3.57	3.56
860.1	3.48	3.48	3.48
940.1	3.37	3.37	3.37
1020.1	3.22	3.22	3.22
1100.1	3.06	3.06	3.05
1180.1	2.90	2.89	2.88
1260.1	2.77	2.77	2.75
1340.1	2.66	2.66	2.66
1420.1	2.59	2.60	2.60
1500.1	2.57	2.57	2.57
1580.1	2.57	2.58	2.58
1660.1	2.61	2.61	2.61
1740.1	2.65	2.65	2.64
1820.1	2.66	2.66	2.65
1900.1	2.65	2.65	2.63
1980.1	2.60	2.60	2.60
2060.1	2.55	2.56	2.56
2140.1	2.49	2.50	2.50
2220.1	2.44	2.44	2.44
2300.1	2.41	2.41	2.40
2380.1	2.41	2.41	2.39
2460.1	2.46	2.46	2.44
2540.1	2.53	2.53	2.52
2620.1	2.60	2.59	2.59
2700.1	2.67	2.66	2.66
2780.1	2.71	2.69	2.66
2860.1	2.72	2.71	2.67
2940.1	2.74	2.72	2.69
3020.1	2.77	2.76	2.74
3100.1	2.79	2.78	2.78
3180.1	2.78	2.78	2.78
3240.1	2.71	2.69	2.65

IF (OUT) (MHz)	IF VSWR @LO=1800.1MHz (:1)		
	@LO (dBm)		
	+19	+21	+23
10.1	8.90	8.81	8.68
50.1	2.52	2.58	2.64
90.1	2.12	2.20	2.28
130.1	2.03	2.11	2.20
170.1	1.91	1.99	2.07
210.1	1.85	1.92	2.01
250.1	1.80	1.87	1.95
290.1	1.70	1.77	1.84
330.1	1.61	1.68	1.74
370.1	1.52	1.57	1.64
410.1	1.45	1.51	1.57
450.1	1.36	1.41	1.46
490.1	1.27	1.32	1.37
530.1	1.20	1.24	1.29
570.1	1.12	1.16	1.20
610.1	1.08	1.12	1.15
650.1	1.09	1.10	1.12
690.1	1.15	1.15	1.15
730.1	1.24	1.23	1.23
790.1	1.34	1.33	1.33
830.1	1.43	1.43	1.42
890.1	1.56	1.55	1.54
930.1	1.64	1.64	1.63
990.1	1.77	1.77	1.77
1030.1	1.84	1.84	1.84
1090.1	1.91	1.92	1.92
1130.1	1.92	1.93	1.93
1190.1	2.03	2.04	2.05
1230.1	2.07	2.08	2.10
1290.1	2.11	2.13	2.15
1330.1	2.10	2.12	2.14
1390.1	2.15	2.18	2.20
1430.1	2.12	2.14	2.17
1490.1	2.21	2.24	2.28
1530.1	2.22	2.25	2.29
1590.1	2.29	2.33	2.37
1630.1	2.33	2.36	2.41
1690.1	2.46	2.51	2.56
1730.1	2.50	2.55	2.60
1790.1	2.55	2.59	2.63



Harmonics Tables

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	17	46	57	71	70	>73	>73	68	>73	68
1	-	9	+0	53	48	67	>73	>73	72	>73	>73	>73
2	75	23	21	36	66	72	>73	>73	71	70	67	>73
3	>90	42	23	53	69	68	>73	71	>73	72	>73	71
4	>90	43	41	48	68	>73	>73	65	>73	>73	>73	67
5	>90	51	47	56	>73	69	>73	>73	72	>73	70	>73
6	>90	67	64	62	68	>73	>73	>73	>73	69	67	>73
7	82	55	>73	>73	70	>73	70	>73	>73	>73	>73	73
8	>90	>73	70	72	>73	72	73	>73	>73	71	72	70
9	>90	69	>73	69	>73	>73	>73	>73	>73	>73	>73	>73
10	>90	>73	66	72	70	71	71	>73	72	>73	>73	71
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 1100 MHz; 5.00 dBm.
 LO IN: 1230 MHz; +21.00 dBm
 IF OUT: 130 MHz; -17.29 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	15	47	59	74	>76	>76	>76	>76	>76	>76
1	-	6	+0	49	50	70	72	>76	73	70	>76	>76
2	59	14	15	36	>76	72	>76	>76	75	>76	>76	>76
3	86	28	18	52	67	75	>76	75	>76	>76	71	>76
4	79	36	23	46	60	73	>76	>76	>76	>76	>76	72
5	58	48	33	50	64	69	>76	74	72	>76	>76	>76
6	64	39	37	59	64	75	>76	>76	>76	>76	>76	>76
7	>90	50	57	54	75	68	>76	>76	>76	>76	>76	>76
8	>90	53	51	74	73	>76	>76	>76	>76	>76	71	>76
9	87	51	73	60	73	>76	>76	74	>76	>76	>76	75
10	87	56	63	73	75	>76	>76	>76	>76	>76	>76	>76
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 1100 MHz; 15.00 dBm.
 LO IN: 1230 MHz; +21.00 dBm
 IF OUT: 130 MHz; -14.31 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.

