

Frequency Mixer

LAVI-10VH+

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	CONVERSION LOSS IF FIXED @IF(OUT)=175MHz (dB)			RF (IN) (MHz)	LO (MHz)	IP3 INPUT (dBm)		
		@LO (dBm)					@LO (dBm)		
		+18	+21	+24			+18	+21	+24
10.1	185.1	6.35	6.06	5.87	10.1	185.1	19.46	22.97	26.51
70.3	245.3	6.31	6.14	6.03	70.3	245.3	23.89	27.26	29.17
130.6	305.6	6.21	6.07	5.97	130.6	305.6	27.62	30.12	32.33
190.8	365.8	6.38	6.30	6.43	190.8	365.8	29.52	31.22	26.35
251.0	426.0	6.36	6.28	6.23	251.0	426.0	30.32	33.01	35.98
311.3	486.3	6.44	6.36	6.30	311.3	486.3	29.92	32.09	34.02
371.5	546.5	6.50	6.42	6.38	371.5	546.5	30.95	34.64	38.63
431.7	606.7	6.44	6.35	6.29	431.7	606.7	29.94	32.61	34.61
492.0	667.0	6.45	6.34	6.26	492.0	667.0	30.89	34.00	36.33
552.2	727.2	6.48	6.37	6.29	552.2	727.2	30.42	33.52	36.53
612.4	787.4	6.40	6.29	6.20	612.4	787.4	29.88	32.56	34.78
672.7	847.7	6.48	6.35	6.25	672.7	847.7	30.50	34.03	38.21
732.9	907.9	6.54	6.40	6.32	732.9	907.9	29.64	32.22	34.25
793.1	968.1	6.64	6.49	6.39	793.1	968.1	30.95	35.30	39.80
853.4	1028.4	6.84	6.72	6.62	853.4	1028.4	30.08	33.23	36.51
913.6	1088.6	7.00	6.89	6.80	913.6	1088.6	29.35	32.27	35.39
993.9	1168.9	7.23	7.12	7.04	993.9	1168.9	28.84	32.77	37.16
1054.1	1229.1	7.35	7.25	7.18	1054.1	1229.1	28.41	31.50	34.98
1134.4	1309.4	7.50	7.39	7.33	1134.4	1309.4	27.94	31.53	36.17
1194.7	1369.7	7.68	7.56	7.49	1194.7	1369.7	26.98	30.00	33.37
1275.0	1450.0	7.93	7.78	7.68	1275.0	1450.0	26.17	28.86	32.34
1335.2	1510.2	8.02	7.84	7.74	1335.2	1510.2	25.50	28.15	31.45
1415.5	1590.5	8.22	8.02	7.90	1415.5	1590.5	24.85	27.41	30.17
1475.8	1650.8	8.40	8.17	8.03	1475.8	1650.8	24.08	26.40	28.92
1556.1	1731.1	8.60	8.33	8.14	1556.1	1731.1	23.00	25.68	28.07
1616.3	1791.3	8.68	8.38	8.16	1616.3	1791.3	22.13	24.99	27.86
1696.6	1871.6	8.86	8.49	8.24	1696.6	1871.6	21.19	24.29	27.35
1756.8	1931.8	9.05	8.65	8.38	1756.8	1931.8	20.60	23.74	27.07
1837.2	2012.2	9.28	8.83	8.51	1837.2	2012.2	19.82	22.89	26.18
1897.4	2072.4	9.38	8.89	8.53	1897.4	2072.4	19.16	22.05	25.43
1977.7	2152.7	9.51	8.96	8.56	1977.7	2152.7	18.57	21.49	24.77
2037.9	2212.9	9.67	9.09	8.67	2037.9	2212.9	18.45	21.33	24.71
2118.2	2293.2	9.92	9.24	8.81	2118.2	2293.2	17.77	20.71	23.82
2178.5	2353.5	9.97	9.24	8.77	2178.5	2353.5	17.30	20.12	23.13
2258.8	2433.8	10.02	9.28	8.80	2258.8	2433.8	17.14	19.89	22.93
2319.0	2494.0	10.21	9.50	8.98	2319.0	2494.0	17.11	19.62	22.72
2399.3	2574.3	10.53	9.75	9.20	2399.3	2574.3	16.62	18.95	21.98
2459.6	2634.6	10.64	9.85	9.30	2459.6	2634.6	16.59	18.79	21.79
2539.9	2714.9	11.18	10.36	9.89	2539.9	2714.9	16.75	19.09	21.92
2600.1	2775.1	11.98	11.23	10.88	2600.1	2775.1	17.03	19.43	21.97

Frequency Mixer

LAVI-10VH+

Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=650MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=300MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1000.1MHz (dB)
		@LO (dBm) +21			@LO (dBm) +21			@LO (dBm) +21
629.9	20.1	13.15	10.1	310.1	13.80	980.0	20.1	13.69
598.4	51.6	8.84	50.3	350.3	6.87	960.2	39.9	9.99
566.9	83.1	8.01	90.5	390.5	6.41	940.4	59.7	9.27
535.3	114.7	7.35	130.7	430.7	6.34	920.6	79.5	8.86
503.8	146.2	7.11	171.0	471.0	6.32	900.8	99.3	8.36
472.3	177.7	6.96	211.2	511.2	6.37	881.0	119.1	8.01
440.8	209.2	6.72	251.4	551.4	6.35	861.2	138.9	7.83
409.3	240.7	6.74	291.6	591.6	6.47	841.4	158.7	7.75
377.7	272.3	6.67	331.8	631.8	6.53	821.6	178.5	7.58
346.2	303.8	6.55	392.1	692.1	6.62	801.8	198.3	7.30
314.7	335.3	6.44	432.3	732.3	6.54	782.0	218.1	7.21
283.2	366.8	6.38	492.7	792.7	6.41	762.2	237.9	7.14
251.7	398.3	6.31	532.9	832.9	6.36	742.4	257.7	7.11
220.1	429.9	6.28	593.2	893.2	6.42	722.7	277.4	7.02
188.6	461.4	6.33	633.4	933.4	6.49	702.9	297.2	6.99
157.1	492.9	6.34	693.7	993.7	6.49	683.1	317.0	6.93
125.6	524.4	6.37	733.9	1033.9	6.53	663.3	336.8	6.74
94.1	555.9	6.46	794.2	1094.2	6.62	643.5	356.6	6.91
62.5	587.5	6.70	834.5	1134.5	6.77	623.7	376.4	6.91
31.0	619.0	7.94	894.8	1194.8	6.87	603.9	396.2	6.88
10.0	660.0	13.77	935.0	1235.0	6.93	564.3	435.8	6.79
98.5	748.5	6.49	995.3	1295.3	6.96	544.5	455.6	6.74
187.0	837.0	6.33	1035.5	1335.5	7.08	504.9	495.2	6.70
275.4	925.4	6.33	1095.8	1395.8	7.30	485.1	515.0	6.70
363.9	1013.9	6.47	1136.1	1436.1	7.43	445.5	554.6	6.65
452.4	1102.4	6.54	1196.4	1496.4	7.47	425.7	574.4	6.71
540.9	1190.9	6.67	1236.6	1536.6	7.52	386.1	614.0	6.76
629.4	1279.4	6.88	1296.9	1596.9	7.60	366.3	633.8	6.72
717.8	1367.8	6.96	1337.1	1637.1	7.75	326.7	673.4	6.73
806.3	1456.3	7.18	1397.4	1697.4	7.86	306.9	693.2	6.69
894.8	1544.8	7.45	1437.7	1737.7	8.02	267.3	732.8	6.69
983.3	1633.3	7.59	1498.0	1798.0	8.25	247.6	752.5	6.75
1071.8	1721.8	7.88	1538.2	1838.2	8.50	208.0	792.1	6.81
1160.2	1810.2	8.12	1598.5	1898.5	8.78	188.2	811.9	6.86
1248.7	1898.7	8.29	1638.7	1938.7	8.95	148.6	851.5	6.93
1337.2	1987.2	8.64	1699.0	1999.0	9.26	128.8	871.3	6.96
1455.2	2105.2	9.04	1739.2	2039.2	9.58	89.2	910.9	7.25
1543.6	2193.6	9.57	1799.6	2099.6	10.10	69.4	930.7	7.45
1661.6	2311.6	10.05	1839.8	2139.8	10.31	29.8	970.3	8.67
1750.1	2400.1	10.68	1900.1	2200.1	10.55	10.0	990.1	13.97

Frequency Mixer

LAVI-10VH+

Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB)		
	@LO (dBm)			@LO (dBm)					@LO (dBm)		
	+18	+21	+24	+18	+21	+24			+18	+21	+24
185.1	50.33	50.56	50.57	46.87	46.98	46.93	10.1	185.1	45.63	47.90	50.53
245.3	48.08	48.40	48.40	44.42	44.46	44.58	70.3	245.3	41.88	44.12	44.63
305.6	48.76	48.84	48.97	44.65	44.63	44.76	130.6	305.6	47.32	47.38	34.35
365.8	50.91	51.32	50.47	46.27	46.47	48.68	190.8	365.8	39.73	38.15	29.10
426.0	55.89	56.59	57.01	49.12	48.62	48.21	251.0	426.0	42.65	40.12	36.39
486.3	67.09	70.76	69.97	48.26	47.68	46.99	311.3	486.3	43.43	42.15	39.63
546.5	56.54	56.32	56.30	46.59	45.95	45.66	371.5	546.5	41.72	41.50	40.79
606.7	52.45	52.28	51.72	46.89	46.69	46.48	431.7	606.7	39.59	38.85	36.06
667.0	50.62	50.72	50.54	46.81	46.90	46.70	492.0	667.0	39.21	38.45	35.65
727.2	49.34	49.47	49.29	47.25	47.31	46.97	552.2	727.2	38.08	38.57	38.72
787.4	47.98	48.23	48.20	48.50	48.84	48.77	612.4	787.4	37.77	38.11	38.74
847.7	47.63	47.93	48.09	51.63	52.92	53.96	672.7	847.7	37.99	38.43	39.12
907.9	47.98	48.29	48.88	53.70	54.17	54.11	732.9	907.9	38.64	39.15	39.84
968.1	48.82	49.16	49.69	46.28	46.36	46.65	793.1	968.1	39.44	40.12	41.24
1028.4	48.34	49.01	49.33	44.48	44.78	44.90	853.4	1028.4	39.64	40.22	41.43
1088.6	47.83	48.45	48.77	44.25	44.55	44.68	913.6	1088.6	39.27	39.83	41.04
1168.9	47.18	47.47	47.33	45.39	45.71	45.78	993.9	1168.9	38.51	39.26	41.14
1229.1	48.07	48.38	48.23	46.49	46.91	46.98	1054.1	1229.1	37.08	37.35	37.88
1309.4	50.17	50.14	48.78	43.57	43.55	43.48	1134.4	1309.4	36.19	36.57	38.67
1369.7	50.33	50.54	50.67	40.14	40.00	40.06	1194.7	1369.7	35.18	35.40	35.79
1450.0	53.63	53.75	51.94	39.31	39.22	39.26	1275.0	1450.0	34.23	34.34	34.30
1510.2	51.74	52.11	52.20	37.31	37.14	36.93	1335.2	1510.2	33.61	33.75	33.96
1590.5	49.54	50.21	50.73	35.93	35.64	35.41	1415.5	1590.5	34.03	33.67	33.26
1650.8	47.45	47.99	48.29	34.92	34.58	34.08	1475.8	1650.8	31.67	31.28	29.89
1731.1	44.70	44.93	45.23	33.52	33.16	32.99	1556.1	1731.1	30.78	30.54	30.39
1791.3	42.87	43.06	42.93	32.45	32.33	31.94	1616.3	1791.3	30.12	29.80	29.35
1871.6	41.37	41.46	41.30	31.57	31.45	31.14	1696.6	1871.6	29.92	29.84	29.66
1931.8	40.41	40.51	40.19	31.03	31.04	30.69	1756.8	1931.8	29.84	29.90	29.95
2012.2	39.60	39.32	39.04	30.61	30.38	30.08	1837.2	2012.2	29.86	29.94	29.93
2072.4	38.78	38.71	38.78	30.09	30.05	29.87	1897.4	2072.4	29.81	29.89	29.97
2152.7	38.02	37.84	37.71	29.58	29.57	29.34	1977.7	2152.7	29.52	29.50	29.60
2212.9	37.77	37.52	37.45	29.37	29.36	29.14	2037.9	2212.9	29.93	29.94	30.09
2293.2	37.68	37.48	36.84	29.22	29.24	29.02	2118.2	2293.2	30.11	30.06	30.10
2353.5	37.91	37.56	37.36	29.21	29.05	29.03	2178.5	2353.5	30.39	30.38	30.38
2433.8	37.81	37.41	37.38	29.37	29.19	29.22	2258.8	2433.8	31.00	31.05	31.05
2494.0	37.39	36.98	36.55	29.57	29.44	29.21	2319.0	2494.0	31.42	31.44	31.41
2574.3	36.58	36.30	35.13	29.81	29.95	29.88	2399.3	2574.3	31.25	31.30	31.26
2634.6	36.28	36.06	35.42	30.06	30.23	30.16	2459.6	2634.6	30.94	30.83	30.62
2714.9	35.82	35.66	35.12	30.83	31.03	30.91	2539.9	2714.9	30.50	30.19	29.89
2775.1	35.26	34.88	33.49	31.48	31.56	31.64	2600.1	2775.1	30.44	30.03	29.40

Frequency Mixer

LAVI-10VH+

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1)			LO (MHz)	LO VSWR (:1)			IF (OUT) (MHz)	IF VSWR @LO=1175MHz (:1)		
		@LO (dBm)				@LO (dBm)				@LO (dBm)		
		+18	+21	+24		+18	+21	+24		+18	+21	+24
10.1	185.1	1.10	1.07	1.11	185.1	4.75	4.75	4.75	10.0	10.69	10.37	10.19
70.3	245.3	1.19	1.24	1.28	245.3	5.61	5.61	5.59	29.9	3.33	3.31	3.31
130.6	305.6	1.31	1.36	1.40	305.6	6.81	6.78	6.76	69.7	1.86	1.92	1.99
190.8	365.8	1.39	1.44	1.50	365.8	7.80	7.76	7.34	89.7	1.70	1.78	1.86
251.0	426.0	1.43	1.47	1.51	426.0	7.90	7.87	7.76	129.5	1.55	1.65	1.73
311.3	486.3	1.44	1.47	1.51	486.3	7.17	7.14	7.08	149.4	1.49	1.59	1.68
371.5	546.5	1.43	1.46	1.49	546.5	6.17	6.13	6.09	189.2	1.46	1.55	1.64
431.7	606.7	1.42	1.43	1.45	606.7	5.27	5.23	5.19	209.1	1.43	1.53	1.61
492.0	667.0	1.48	1.48	1.48	667.0	4.54	4.53	4.52	249.0	1.40	1.49	1.57
552.2	727.2	1.58	1.56	1.55	727.2	3.95	3.93	3.91	268.9	1.38	1.46	1.54
612.4	787.4	1.68	1.65	1.63	787.4	3.45	3.43	3.42	308.7	1.37	1.44	1.51
672.7	847.7	1.81	1.77	1.73	847.7	3.02	3.01	3.01	328.6	1.33	1.40	1.47
732.9	907.9	1.94	1.89	1.86	907.9	2.62	2.61	2.61	368.4	1.36	1.41	1.47
793.1	968.1	2.10	2.04	2.00	968.1	2.30	2.30	2.29	388.4	1.34	1.39	1.44
853.4	1028.4	2.22	2.16	2.11	1028.4	2.07	2.07	2.08	428.2	1.30	1.33	1.37
913.6	1088.6	2.31	2.26	2.21	1088.6	1.95	1.96	1.98	448.1	1.31	1.34	1.37
993.9	1168.9	2.36	2.31	2.26	1168.9	2.10	2.13	2.15	487.9	1.26	1.28	1.30
1054.1	1229.1	2.33	2.27	2.23	1229.1	2.49	2.52	2.55	507.8	1.27	1.27	1.29
1134.4	1309.4	2.30	2.23	2.18	1309.4	3.35	3.40	3.43	547.7	1.28	1.27	1.27
1194.7	1369.7	2.28	2.20	2.15	1369.7	4.20	4.26	4.32	567.6	1.26	1.24	1.23
1275.0	1450.0	2.22	2.14	2.07	1450.0	5.31	5.36	5.41	607.4	1.28	1.23	1.21
1335.2	1510.2	2.16	2.07	2.01	1510.2	5.87	5.85	5.70	627.3	1.31	1.26	1.23
1415.5	1590.5	2.07	1.97	1.91	1590.5	6.28	6.21	5.99	667.2	1.27	1.21	1.17
1475.8	1650.8	2.02	1.92	1.85	1650.8	6.39	6.37	6.28	687.1	1.30	1.23	1.18
1556.1	1731.1	1.95	1.85	1.77	1731.1	6.19	6.15	6.03	726.9	1.33	1.25	1.20
1616.3	1791.3	1.91	1.81	1.73	1791.3	5.87	5.74	5.44	746.8	1.31	1.23	1.18
1696.6	1871.6	1.85	1.75	1.66	1871.6	5.42	5.31	5.06	786.6	1.39	1.31	1.25
1756.8	1931.8	1.81	1.70	1.61	1931.8	5.17	5.14	5.07	806.6	1.40	1.32	1.26
1837.2	2012.2	1.75	1.64	1.55	2012.2	4.75	4.73	4.64	846.4	1.43	1.35	1.30
1897.4	2072.4	1.73	1.63	1.53	2072.4	4.40	4.32	4.14	866.3	1.44	1.37	1.32
1977.7	2152.7	1.70	1.60	1.50	2152.7	4.09	4.06	3.97	906.1	1.48	1.42	1.37
2037.9	2212.9	1.66	1.56	1.47	2212.9	3.90	3.89	3.86	926.0	1.48	1.42	1.38
2118.2	2293.2	1.61	1.51	1.43	2293.2	3.59	3.56	3.50	965.9	1.57	1.51	1.48
2178.5	2353.5	1.59	1.49	1.42	2353.5	3.37	3.35	3.28	985.8	1.59	1.54	1.51
2258.8	2433.8	1.52	1.42	1.35	2433.8	3.13	3.12	3.10	1025.6	1.63	1.60	1.57
2319.0	2494.0	1.46	1.38	1.31	2494.0	2.91	2.90	2.88	1045.5	1.66	1.63	1.61
2399.3	2574.3	1.40	1.34	1.27	2574.3	2.59	2.57	2.50	1085.3	1.73	1.69	1.68
2459.6	2634.6	1.36	1.30	1.25	2634.6	2.37	2.37	2.35	1105.3	1.74	1.72	1.71
2539.9	2714.9	1.27	1.22	1.20	2714.9	2.07	2.07	2.06	1145.1	1.86	1.85	1.84
2600.1	2775.1	1.20	1.18	1.20	2775.1	1.86	1.85	1.82	1165.0	1.82	1.80	1.80

Frequency Mixer

Harmonics Tables

LAVI-10VH+

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	27	35	40	35	40	44	41	58	59	51
1	-	30	+0	33	15	39	27	49	42	48	53	67
2	68	52	59	48	62	56	72	51	71	56	66	60
3	>90	82	62	84	59	83	62	80	70	82	74	80
4	>90	>90	>90	>90	>90	>90	88	>90	>90	83	90	>90
5	>90	>90	>90	90	>90	>90	85	>90	>90	88	89	>90
6	>90	>90	>90	>90	>90	88	>90	88	90	>90	>90	>90
7	>90	>90	>90	90	>90	>90	>90	>90	>90	>90	>90	89
8	>90	>90	>90	89	>90	>90	>90	>90	>90	>90	88	>90
9	>90	>90	>90	88	>90	88	>90	>90	>90	89	>90	85
10	>90	>90	>90	>90	>90	>90	>90	>90	>90	>90	89	>90
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 650 MHz; 5.00 dBm.
 LO IN: 825 MHz; +21.00 dBm
 IF OUT: 175 MHz; 0.03 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	25	43	43	36	47	43	50	54	69	53
1	-	30	+0	34	15	41	29	52	42	51	45	66
2	49	42	51	37	56	47	63	42	62	50	59	56
3	88	67	44	64	40	64	43	63	51	68	57	69
4	>90	69	86	65	75	62	75	63	79	61	88	65
5	>90	91	72	84	66	87	71	86	71	80	79	85
6	>90	83	86	84	96	76	92	75	97	77	90	80
7	>90	98	88	96	95	98	84	87	87	88	82	90
8	88	>99	97	>99	95	95	95	89	93	92	96	90
9	>90	>99	>99	>99	>99	>99	94	>99	94	97	99	94
10	>90	98	>99	98	93	>99	93	96	>99	93	98	96
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 650 MHz; 15.00 dBm.
 LO IN: 825 MHz; +21.00 dBm
 IF OUT: 175 MHz; 9.28 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.