Frequency Mixer LAVI-2VH+

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	CONVERSION LOSS IF FIXED @IF(OUT)=30MHz (dB) @LO (dBm)		
		+22	+23	+24
10.1	40.1	6.39	6.47	6.42
50.1	80.1	6.44	6.41	6.39
90.1	120.1	6.69	6.66	6.64
130.1	160.1	6.59	6.56	6.54
170.1	200.1	6.79	6.76	6.75
210.1	240.1	6.78	6.75	6.73
250.1	280.1	6.81	6.79	6.77
290.1	320.1	6.91	6.88	6.86
330.1	360.1	6.83	6.80	6.78
370.1	400.1	7.05	7.02	7.01
410.1	440.1	7.02	7.00	6.98
450.1	480.1	7.12	7.10	7.08
490.1	520.1	7.08	7.05	7.03
530.1	560.1	7.14	7.12	7.09
570.1	600.1	7.23	7.20	7.17
610.1	640.1	7.25	7.22	7.19
650.1	680.1	7.35	7.33	7.31
690.1	720.1	7.34	7.31	7.28
730.1	760.1	7.44	7.41	7.39
770.1	800.1	7.51	7.48	7.46
810.1	840.1	7.66	7.64	7.63
840.1	870.1	7.71	7.68	7.66
880.1	910.1	7.75	7.72	7.69
910.1	940.1	7.79	7.76	7.73
950.1	980.1	7.82	7.78	7.75
980.1	1010.1	7.89	7.86	7.83
1020.1	1050.1	7.97	7.92	7.89
1050.1	1080.1	8.02	7.98	7.95
1090.1	1120.1	8.15	8.10	8.07
1120.1	1150.1	8.25	8.20	8.17
1160.1	1190.1	8.36	8.31	8.27
1190.1	1220.1	8.48	8.42	8.38
1230.1	1260.1	8.62	8.56	8.52
1260.1	1290.1	8.83	8.78	8.73
1300.1	1330.1	9.05	8.98	8.93
1330.1	1360.1	9.28	9.21	9.15
1370.1	1400.1	9.69	9.61	9.54
1400.1	1430.1	9.97	9.89	9.81
1440.1	1470.1	10.61	10.52	10.43
1470.1	1500.1	11.20	11.11	11.02

RF (IN) (MHz)	LO (MHz)	IP3 INPUT (dBm) @LO (dBm)		
		+22	+23	+24
10.1	40.1	30.62	31.24	31.52
50.1	80.1	29.83	30.01	30.52
90.1	120.1	28.88	29.41	30.30
130.1	160.1	29.79	30.61	31.36
170.1	200.1	30.26	30.60	31.63
210.1	240.1	29.95	30.41	31.50
250.1	280.1	30.35	30.92	31.77
290.1	320.1	30.46	31.07	32.18
330.1	360.1	30.89	31.47	31.90
370.1	400.1	30.83	31.75	32.46
410.1	440.1	31.61	32.64	33.08
450.1	480.1	31.02	31.94	32.80
490.1	520.1	32.28	33.00	34.14
530.1	560.1	32.38	33.13	34.64
570.1	600.1	32.63	33.56	34.14
610.1	640.1	31.79	33.03	34.13
650.1	680.1	30.97	32.41	33.19
690.1	720.1	30.47	31.43	31.99
730.1	760.1	30.70	31.27	32.22
770.1	800.1	31.24	32.22	33.60
810.1	840.1	31.73	32.84	34.08
840.1	870.1	32.21	33.17	34.18
880.1	910.1	32.52	33.66	35.05
910.1	940.1	32.75	33.85	34.86
950.1	980.1	33.09	34.62	34.69
980.1	1010.1	33.23	33.94	35.53
1020.1	1050.1	32.50	33.90	34.63
1050.1	1080.1	31.86	33.59	34.00
1090.1	1120.1	31.11	32.37	33.36
1120.1	1150.1	30.47	31.77	32.63
1160.1	1190.1	29.96	30.88	31.85
1190.1	1220.1	29.64	30.59	31.69
1230.1	1260.1	29.09	30.05	31.02
1260.1	1290.1	28.43	29.24	30.46
1300.1	1330.1	27.68	28.35	29.14
1330.1	1360.1	27.38	28.04	28.87
1370.1	1400.1	27.30	28.25	29.14
1400.1	1430.1	26.76	27.53	28.35
1440.1	1470.1	26.61	27.50	28.56
1470.1	1500.1	27.98	29.24	30.33

Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=550.1MHz (dB) @LO (dBm) +23
540.0	10.1	7.44
530.0	20.1	7.45
520.0	30.1	7.46
510.0	40.1	7.46
500.0	50.1	7.42
490.0	60.1	7.42
480.0	70.1	7.42
470.0	80.1	7.40
460.0	90.1	7.40
450.0	100.1	7.41
440.0	110.1	7.39
430.0	120.1	7.37
410.0	140.1	7.40
400.0	150.1	7.39
380.0	170.1	7.36
370.0	180.1	7.36
350.0	200.1	7.35
340.0	210.1	7.38
320.0	230.1	7.33
310.0	240.1	7.35
290.0	260.1	7.34
280.0	270.1	7.26
260.0	290.1	7.31
250.0	300.1	7.28
230.0	320.1	7.24
220.0	330.1	7.26
200.0	350.1	7.19
190.0	360.1	7.23
170.0	380.1	7.21
160.0	390.1	7.22
140.0	410.1	7.22
130.0	420.1	7.14
110.0	440.1	7.18
100.0	450.1	7.15
80.0	470.1	7.12
70.0	480.1	7.17
50.0	500.1	7.17
40.0	510.1	7.18
20.0	530.1	7.20
10.0	540.1	7.48

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=10.1MHz (dB) @LO (dBm) +23
10.0	20.1	6.71
50.0	60.1	6.44
90.0	100.1	6.48
130.0	140.1	6.58
170.0	180.1	6.62
210.0	220.1	6.75
250.0	260.1	6.80
290.0	300.1	6.80
330.0	340.1	6.82
370.0	380.1	6.83
410.0	420.1	6.99
450.0	460.1	7.05
490.0	500.1	7.14
530.0	540.1	7.25
570.0	580.1	7.30
610.0	620.1	7.35
650.0	660.1	7.44
690.0	700.1	7.46
730.0	740.1	7.52
770.0	780.1	7.67
810.0	820.1	7.70
850.0	860.1	7.84
890.0	900.1	7.90
930.0	940.1	7.99
970.0	980.1	8.04
1010.0	1020.1	8.03
1050.0	1060.1	8.09
1090.0	1100.1	8.15
1130.0	1140.1	8.25
1170.0	1180.1	8.36
1210.0	1220.1	8.37
1250.0	1260.1	8.49
1290.0	1300.1	8.60
1310.0	1320.1	8.62
1350.0	1360.1	8.81
1370.0	1380.1	8.90
1410.0	1420.1	9.27
1430.0	1440.1	9.52
1470.0	1480.1	10.29
1490.0	1500.1	10.87

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1100.1MHz (dB) @LO (dBm) +23
1090.0	10.1	8.75
1070.0	30.1	8.78
1050.0	50.1	8.76
1030.0	70.1	8.68
1010.0	90.1	8.65
990.0	110.1	8.69
970.0	130.1	8.71
950.0	150.1	8.67
930.0	170.1	8.61
910.0	190.1	8.61
870.0	230.1	8.59
850.0	250.1	8.57
810.0	290.1	8.51
790.0	310.1	8.52
750.0	350.1	8.50
730.0	370.1	8.42
690.0	410.1	8.44
670.0	430.1	8.43
630.0	470.1	8.43
610.0	490.1	8.40
570.0	530.1	8.36
550.0	550.1	8.34
510.0	590.1	8.31
490.0	610.1	8.22
450.0	650.1	8.19
430.0	670.1	8.15
390.0	710.1	8.13
370.0	730.1	8.12
330.0	770.1	8.24
310.0	790.1	8.23
270.0	830.1	8.23
250.0	850.1	8.29
210.0	890.1	8.21
190.0	910.1	8.13
150.0	950.1	8.09
130.0	970.1	8.03
90.0	1010.1	7.98
70.0	1030.1	7.98
30.0	1070.1	8.07
10.0	1090.1	8.34

Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB) @LO (dBm)			LO-IF ISOLATION (dB) @LO (dBm)		
	+22	+23	+24	+22	+23	+24
40.1	54.31	54.32	54.29	53.81	53.77	53.73
80.1	54.00	54.01	53.91	53.61	53.57	53.56
120.1	54.88	54.73	54.64	55.32	55.19	55.11
160.1	55.38	55.19	55.12	55.29	55.15	54.99
200.1	54.91	54.71	54.46	54.44	54.31	53.99
240.1	53.69	53.44	53.08	53.63	53.38	52.93
280.1	52.41	52.22	51.76	51.89	51.70	51.16
320.1	51.40	51.10	50.74	50.40	50.09	49.65
360.1	49.67	49.31	49.17	48.76	48.42	48.22
400.1	49.21	48.76	48.47	48.42	47.98	47.64
440.1	48.65	48.44	48.14	47.81	47.57	47.37
480.1	48.54	48.32	48.07	47.03	46.83	46.53
520.1	47.06	46.90	46.55	45.63	45.47	45.08
560.1	46.07	45.93	45.60	44.74	44.58	44.19
600.1	44.73	44.48	44.28	43.94	43.67	43.37
640.1	43.78	43.43	43.24	43.15	42.80	42.52
680.1	42.95	42.79	42.61	42.55	42.36	42.07
720.1	42.72	42.53	42.24	42.47	42.29	41.88
760.1	43.34	43.23	42.98	43.47	43.26	42.95
800.1	44.73	44.58	44.03	46.11	45.85	45.20
840.1	46.93	46.96	46.76	48.88	48.82	48.51
870.1	49.06	48.97	48.76	49.51	49.53	49.55
910.1	52.70	52.78	52.84	49.20	49.45	49.87
940.1	54.64	55.13	55.82	48.64	49.06	49.73
980.1	55.47	56.38	58.06	48.43	48.84	49.75
1010.1	55.95	57.12	58.50	48.87	49.56	50.55
1050.1	54.00	54.91	56.06	48.20	48.93	50.46
1080.1	51.75	52.16	52.49	47.24	47.79	48.84
1120.1	50.08	50.44	50.84	45.97	46.45	47.57
1150.1	48.24	48.38	48.59	44.61	44.90	45.46
1190.1	46.87	46.95	47.19	43.16	43.32	43.80
1220.1	45.92	45.92	46.19	42.16	42.26	42.74
1260.1	44.98	44.95	45.04	41.06	41.12	41.40
1290.1	44.26	44.38	44.59	40.15	40.29	40.68
1330.1	43.43	43.55	43.71	39.15	39.33	39.64
1360.1	43.19	43.34	43.63	38.62	38.82	39.34
1400.1	42.74	42.83	42.93	37.92	38.08	38.34
1430.1	42.56	42.68	42.72	37.17	37.33	37.52
1470.1	41.95	41.94	41.98	35.65	35.68	35.73
1500.1	41.07	41.15	41.11	34.40	34.52	34.52

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB) @LO (dBm)		
		+22	+23	+24
10.1	40.1	35.28	35.80	36.87
50.1	80.1	38.97	41.33	49.73
90.1	120.1	38.35	38.83	39.88
130.1	160.1	38.01	38.32	38.60
170.1	200.1	39.78	40.31	40.61
210.1	240.1	39.20	39.27	39.12
250.1	280.1	39.60	39.76	39.41
290.1	320.1	41.84	42.14	42.66
330.1	360.1	39.97	39.87	39.85
370.1	400.1	39.57	39.78	39.65
410.1	440.1	39.58	39.65	39.49
450.1	480.1	41.47	41.57	41.81
490.1	520.1	41.65	41.93	42.35
530.1	560.1	41.87	42.14	42.24
570.1	600.1	41.72	42.08	42.45
610.1	640.1	40.98	41.28	41.41
650.1	680.1	40.32	40.67	41.10
690.1	720.1	38.66	38.85	39.53
730.1	760.1	35.36	35.56	36.17
770.1	800.1	34.36	34.53	36.11
810.1	840.1	34.33	34.51	34.69
840.1	870.1	34.86	35.03	35.02
880.1	910.1	35.57	35.61	35.58
910.1	940.1	35.93	36.03	35.88
950.1	980.1	36.32	36.32	36.19
980.1	1010.1	36.33	36.17	36.31
1020.1	1050.1	36.09	36.11	35.91
1050.1	1080.1	36.54	36.60	36.72
1090.1	1120.1	36.64	36.50	36.56
1120.1	1150.1	37.15	37.25	37.33
1160.1	1190.1	37.56	37.81	37.88
1190.1	1220.1	38.11	38.25	38.30
1230.1	1260.1	39.44	39.64	39.77
1260.1	1290.1	39.52	39.56	39.50
1300.1	1330.1	38.67	38.45	38.41
1330.1	1360.1	37.86	37.68	37.50
1370.1	1400.1	37.64	37.50	37.52
1400.1	1430.1	40.43	40.38	40.32
1440.1	1470.1	45.84	45.08	42.84
1470.1	1500.1	50.11	47.95	45.98

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1) @LO (dBm)		
		+22	+23	+24
10.1	40.1	1.24	1.28	1.26
50.1	80.1	1.34	1.35	1.36
90.1	120.1	1.36	1.38	1.39
130.1	160.1	1.42	1.43	1.44
170.1	200.1	1.47	1.48	1.49
210.1	240.1	1.51	1.52	1.54
250.1	280.1	1.54	1.56	1.57
290.1	320.1	1.56	1.57	1.58
330.1	360.1	1.56	1.58	1.59
370.1	400.1	1.57	1.58	1.59
410.1	440.1	1.57	1.58	1.59
450.1	480.1	1.57	1.57	1.58
490.1	520.1	1.56	1.57	1.58
530.1	560.1	1.54	1.54	1.55
570.1	600.1	1.53	1.53	1.54
610.1	640.1	1.52	1.52	1.52
650.1	680.1	1.50	1.50	1.50
690.1	720.1	1.49	1.48	1.48
730.1	760.1	1.47	1.47	1.47
770.1	800.1	1.45	1.45	1.45
810.1	840.1	1.42	1.42	1.42
840.1	870.1	1.40	1.40	1.40
880.1	910.1	1.39	1.39	1.38
910.1	940.1	1.39	1.38	1.37
950.1	980.1	1.38	1.37	1.36
980.1	1010.1	1.40	1.39	1.37
1020.1	1050.1	1.42	1.40	1.39
1050.1	1080.1	1.42	1.41	1.39
1090.1	1120.1	1.44	1.43	1.41
1120.1	1150.1	1.46	1.44	1.43
1160.1	1190.1	1.47	1.45	1.44
1190.1	1220.1	1.47	1.45	1.44
1230.1	1260.1	1.47	1.45	1.44
1260.1	1290.1	1.46	1.45	1.44
1300.1	1330.1	1.45	1.44	1.43
1330.1	1360.1	1.45	1.43	1.42
1370.1	1400.1	1.43	1.42	1.41
1400.1	1430.1	1.43	1.42	1.41
1440.1	1470.1	1.42	1.41	1.40
1470.1	1500.1	1.41	1.39	1.38

LO (MHz)	LO VSWR (:1) @LO (dBm)		
	+22	+23	+24
40.1	3.10	3.07	3.01
80.1	3.02	3.00	2.95
120.1	3.04	3.01	2.97
160.1	3.15	3.12	3.08
200.1	3.26	3.24	3.19
240.1	3.39	3.37	3.33
280.1	3.56	3.54	3.50
320.1	3.68	3.67	3.63
360.1	3.83	3.82	3.79
400.1	3.90	3.89	3.86
440.1	4.02	4.01	3.98
480.1	4.03	4.01	4.00
520.1	4.08	4.06	4.03
560.1	4.07	4.05	4.03
600.1	4.01	3.99	3.97
640.1	3.95	3.93	3.92
680.1	3.82	3.81	3.79
720.1	3.71	3.70	3.68
760.1	3.56	3.55	3.53
800.1	3.45	3.43	3.40
840.1	3.36	3.35	3.34
870.1	3.27	3.26	3.25
910.1	3.19	3.19	3.19
940.1	3.11	3.10	3.10
980.1	2.96	2.95	2.95
1010.1	2.89	2.89	2.89
1050.1	2.73	2.73	2.73
1080.1	2.63	2.63	2.63
1120.1	2.50	2.50	2.51
1150.1	2.38	2.37	2.37
1190.1	2.25	2.25	2.26
1220.1	2.15	2.15	2.16
1260.1	2.00	2.00	2.01
1290.1	1.92	1.92	1.93
1330.1	1.78	1.79	1.79
1360.1	1.69	1.69	1.70
1400.1	1.58	1.58	1.59
1430.1	1.50	1.50	1.51
1470.1	1.40	1.40	1.41
1500.1	1.33	1.33	1.34

IF (OUT) (MHz)	IF VSWR @LO=1100.1MHz (:1) @LO (dBm)		
	+22	+23	+24
10.1	1.31	1.33	1.35
30.1	1.34	1.35	1.37
50.1	1.36	1.38	1.39
70.1	1.35	1.37	1.39
90.1	1.37	1.39	1.41
110.1	1.39	1.41	1.43
130.1	1.43	1.45	1.46
150.1	1.45	1.47	1.48
170.1	1.47	1.48	1.49
190.1	1.50	1.52	1.53
230.1	1.56	1.58	1.59
250.1	1.60	1.61	1.62
290.1	1.68	1.69	1.70
310.1	1.69	1.70	1.71
350.1	1.76	1.77	1.78
370.1	1.77	1.78	1.79
410.1	1.81	1.81	1.82
430.1	1.83	1.83	1.84
470.1	1.89	1.89	1.89
490.1	1.91	1.91	1.91
530.1	1.91	1.91	1.91
550.1	1.95	1.94	1.94
590.1	1.93	1.92	1.92
610.1	1.93	1.92	1.92
650.1	1.97	1.96	1.95
670.1	1.92	1.91	1.90
710.1	1.92	1.91	1.89
730.1	1.91	1.90	1.89
770.1	1.86	1.84	1.83
790.1	1.89	1.87	1.85
830.1	1.86	1.84	1.82
850.1	1.87	1.84	1.83
890.1	1.84	1.81	1.79
910.1	1.82	1.79	1.77
950.1	1.81	1.78	1.76
970.1	1.77	1.74	1.72
1010.1	1.78	1.75	1.73
1030.1	1.76	1.73	1.71
1070.1	1.73	1.70	1.67
1090.1	1.76	1.73	1.70

Harmonics Tables

RF HARMONICS ORDER	(-dBm)	(-dBc)										
0	-	-	14	16	17	38	34	36	39	54	52	54
1	-	34	+0	44	12	47	19	50	30	52	36	48
2	64	55	66	56	64	52	62	56	65	53	62	55
3	>90	>83	76	>83	74	>83	74	>83	75	>83	79	>83
4	>90	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83
5	>90	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83
6	>90	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83
7	>90	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83
8	>90	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83
9	>90	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83
10	>90	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 550 MHz; 0.00 dBm.
LO IN: 580 MHz; +23.00 dBm
IF OUT: 30 MHz; -7.23 dBm

RF HARMONICS ORDER	(-dBm)	(-dBc)										
0	-	-	25	26	27	42	43	42	45	48	50	62
1	-	34	+0	44	13	48	19	51	31	52	38	49
2	44	45	53	45	52	42	54	46	55	43	54	45
3	66	73	56	80	54	75	53	72	54	68	58	73
4	89	79	83	76	76	74	75	73	75	73	76	72
5	>90	91	84	84	81	84	81	85	86	90	83	90
6	>90	>93	91	89	87	87	85	86	85	87	85	86
7	>90	>93	>93	>93	>93	>93	>93	>93	91	>93	>93	>93
8	>90	>93	>93	>93	>93	>93	>93	>93	>93	>93	>93	>93
9	>90	>93	>93	>93	>93	>93	>93	>93	>93	>93	>93	>93
10	>90	>93	>93	>93	>93	>93	>93	>93	>93	>93	>93	>93
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 550 MHz; 10.00 dBm.
LO IN: 580 MHz; +23.00 dBm
IF OUT: 30 MHz; 2.74 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.