Frequency Mixer LAVI-ED12995/1

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	CONVERSION LOSS IF FIXED @IF(OUT)=70MHz (dB) @LO (dBm)		
		+16	+19	+22
80.1	150.1	10.78	10.43	10.18
160.1	230.1	8.28	8.10	7.97
240.1	310.1	7.15	7.01	6.92
320.1	390.1	6.44	6.33	6.24
400.1	470.1	6.40	6.30	6.23
480.1	550.1	6.54	6.44	6.37
560.1	630.1	6.63	6.53	6.45
640.1	710.1	6.70	6.56	6.47
720.1	790.1	6.77	6.62	6.51
800.1	870.1	6.94	6.76	6.64
880.1	950.1	7.13	6.95	6.81
960.1	1030.1	7.63	7.43	7.30
1040.1	1110.1	9.44	9.22	9.08
1120.1	1190.1	7.72	7.47	7.30
1200.1	1270.1	7.70	7.46	7.29
1280.1	1350.1	7.70	7.46	7.27
1360.1	1430.1	7.69	7.46	7.28
1440.1	1510.1	7.69	7.46	7.28
1520.1	1590.1	7.70	7.47	7.31
1600.1	1670.1	7.65	7.43	7.27
1680.1	1750.1	7.57	7.34	7.19
1760.1	1830.1	7.50	7.29	7.14
1840.1	1910.1	7.46	7.26	7.11
1920.1	1990.1	7.45	7.26	7.12
2000.1	2070.1	7.42	7.24	7.12
2080.1	2150.1	7.40	7.23	7.12
2160.1	2230.1	7.43	7.28	7.17
2240.1	2310.1	7.51	7.38	7.30
2320.1	2390.1	7.65	7.54	7.47
2400.1	2470.1	7.87	7.77	7.71
2480.1	2550.1	8.12	8.03	7.99
2556.1	2626.1	8.34	8.25	8.22
2636.1	2706.1	8.52	8.45	8.42
2712.1	2782.1	8.71	8.63	8.60
2792.1	2862.1	9.03	8.95	8.90
2868.1	2938.1	9.39	9.29	9.25
2948.1	3018.1	9.71	9.61	9.56
3024.1	3094.1	9.98	9.87	9.82
3104.1	3174.1	10.18	10.07	10.02
3180.1	3250.1	10.31	10.21	10.16

RF (IN) (MHz)	LO (MHz)	IP3 INPUT (dBm) @LO (dBm)		
		+16	+19	+22
80.1	150.1	16.42	18.73	20.95
160.1	230.1	21.05	23.51	26.17
240.1	310.1	23.95	26.74	29.65
320.1	390.1	25.75	28.44	31.13
400.1	470.1	26.83	28.98	30.91
480.1	550.1	26.79	29.07	31.40
560.1	630.1	26.64	28.81	31.54
640.1	710.1	26.20	28.82	31.25
720.1	790.1	25.75	28.59	31.00
800.1	870.1	25.52	28.27	31.27
880.1	950.1	24.91	27.76	30.61
960.1	1030.1	21.76	23.99	26.88
1040.1	1110.1	22.95	25.80	28.18
1120.1	1190.1	23.56	26.89	29.47
1200.1	1270.1	23.95	26.45	29.44
1280.1	1350.1	23.59	25.98	28.80
1360.1	1430.1	24.02	26.33	29.38
1440.1	1510.1	24.26	26.74	29.72
1520.1	1590.1	24.22	26.84	29.65
1600.1	1670.1	24.08	26.63	29.52
1680.1	1750.1	24.38	27.12	30.06
1760.1	1830.1	24.60	27.42	30.25
1840.1	1910.1	25.05	28.03	30.95
1920.1	1990.1	25.97	28.98	32.29
2000.1	2070.1	26.75	30.26	33.65
2080.1	2150.1	27.53	31.32	34.98
2160.1	2230.1	28.35	32.42	35.85
2240.1	2310.1	28.94	33.16	37.64
2320.1	2390.1	29.40	33.13	36.34
2400.1	2470.1	29.11	32.89	36.78
2480.1	2550.1	28.01	32.36	36.55
2556.1	2626.1	27.13	31.03	35.38
2636.1	2706.1	26.39	30.42	34.03
2712.1	2782.1	26.59	30.00	35.02
2792.1	2862.1	25.93	29.53	34.08
2868.1	2938.1	25.04	28.08	31.97
2948.1	3018.1	24.82	28.04	31.25
3024.1	3094.1	24.65	27.55	30.97
3104.1	3174.1	24.59	27.67	30.53
3180.1	3250.1	24.53	27.64	30.71

RF (IN) (MHz)	LO (MHz)	COMPRESSION @RF IN=+20dBm (dB) @LO (dBm)		
		+16	+19	+22
80.1	150.1	3.40	2.64	2.11
160.1	230.1	2.60	1.60	0.97
240.1	310.1	1.96	1.06	0.58
320.1	390.1	1.65	0.84	0.45
400.1	470.1	1.35	0.66	0.34
480.1	550.1	1.37	0.66	0.32
560.1	630.1	1.52	0.73	0.35
640.1	710.1	1.74	0.86	0.41
720.1	790.1	2.16	1.05	0.50
800.1	870.1	2.53	1.30	0.59
880.1	950.1	2.81	1.48	0.65
960.1	1030.1	3.20	1.90	1.03
1040.1	1110.1	2.74	1.92	1.19
1120.1	1190.1	3.14	2.00	1.06
1200.1	1270.1	2.80	1.49	0.62
1280.1	1350.1	2.67	1.30	0.54
1360.1	1430.1	2.37	1.15	0.50
1440.1	1510.1	2.28	1.07	0.47
1520.1	1590.1	2.27	1.02	0.46
1600.1	1670.1	2.21	0.98	0.44
1680.1	1750.1	2.13	0.93	0.44
1760.1	1830.1	1.99	0.85	0.40
1840.1	1910.1	1.82	0.78	0.35
1920.1	1990.1	1.60	0.71	0.33
2000.1	2070.1	1.39	0.62	0.31
2080.1	2150.1	1.24	0.56	0.28
2160.1	2230.1	1.14	0.52	0.25
2240.1	2310.1	1.08	0.51	0.25
2320.1	2390.1	1.04	0.47	0.22
2400.1	2470.1	1.09	0.46	0.21
2480.1	2550.1	1.21	0.52	0.24
2556.1	2626.1	1.52	0.65	0.31
2636.1	2706.1	1.63	0.70	0.35
2712.1	2782.1	1.54	0.70	0.31
2792.1	2862.1	1.74	0.75	0.33
2868.1	2938.1	2.04	0.92	0.39
2948.1	3018.1	2.04	0.90	0.41
3024.1	3094.1	2.04	0.91	0.43
3104.1	3174.1	2.08	0.94	0.45
3180.1	3250.1	2.00	0.96	0.45

Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1600MHz (dB) @LO (dBm) +19
1390.0	210.0	10.35
1315.0	285.0	9.56
1240.0	360.0	8.54
1165.0	435.0	7.86
1090.0	510.0	7.83
1015.0	585.0	7.80
940.0	660.0	7.74
865.0	735.0	7.57
790.0	810.0	7.84
715.0	885.0	7.60
640.0	960.0	7.48
565.0	1035.0	7.58
490.0	1110.0	8.71
415.0	1185.0	7.45
340.0	1260.0	7.38
265.0	1335.0	7.42
190.0	1410.0	7.50
115.0	1485.0	7.51
40.0	1560.0	7.43
60.0	1660.0	7.40
160.0	1760.0	7.32
285.0	1885.0	7.12
385.0	1985.0	7.02
510.0	2110.0	7.05
610.0	2210.0	7.12
735.0	2335.0	7.26
835.0	2435.0	7.35
960.0	2560.0	7.55
1060.0	2660.0	7.70
1185.0	2785.0	7.85
1285.0	2885.0	7.95
1410.0	3010.0	8.07
1510.0	3110.0	8.09
1635.0	3235.0	8.20
1735.0	3335.0	8.44
1860.0	3460.0	8.88
1960.0	3560.0	9.09
2085.0	3685.0	9.50
2185.0	3785.0	9.82
2310.0	3910.0	10.40

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1553.9MHz (dB) @LO (dBm) +19
10.1	1564.0	7.44
70.1	1624.0	7.39
130.1	1684.0	7.36
190.1	1744.0	7.31
250.1	1804.0	7.23
310.1	1864.0	7.11
370.1	1924.0	7.05
430.1	1984.0	6.99
490.1	2044.0	7.02
550.1	2104.0	7.07
610.1	2164.0	7.11
670.1	2224.0	7.17
730.1	2284.0	7.22
790.1	2344.0	7.27
850.1	2404.0	7.32
910.1	2464.0	7.38
970.1	2524.0	7.47
1030.1	2584.0	7.52
1090.1	2644.0	7.67
1150.1	2704.0	7.74
1210.1	2764.0	7.80
1270.1	2824.0	7.92
1330.1	2884.0	7.92
1390.1	2944.0	7.96
1450.1	3004.0	8.05
1510.1	3064.0	8.04
1570.1	3124.0	8.11
1630.1	3184.0	8.18
1690.1	3244.0	8.20
1750.1	3304.0	8.42
1810.1	3364.0	8.63
1870.1	3424.0	8.74
1930.1	3484.0	8.91
1990.1	3544.0	9.05
2050.1	3604.0	9.27
2110.1	3664.0	9.52
2150.1	3704.0	9.60
2210.1	3764.0	9.86
2250.1	3804.0	10.02
2310.1	3864.0	10.27

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1646.1MHz (dB) @LO (dBm) +19
1410.1	236.0	10.28
1369.5	276.6	9.82
1328.9	317.2	9.24
1288.4	357.7	8.67
1247.8	398.3	8.17
1207.2	438.9	7.91
1166.6	479.5	7.87
1126.0	520.1	7.87
1085.5	560.6	7.91
1044.9	601.2	7.90
1004.3	641.8	7.83
963.7	682.4	7.81
923.1	723.0	7.66
882.6	763.5	7.62
842.0	804.1	7.49
801.4	844.7	7.85
760.8	885.3	7.67
720.2	925.9	7.56
679.7	966.4	7.53
639.1	1007.0	7.49
598.5	1047.6	7.83
557.9	1088.2	8.83
517.3	1128.8	8.12
497.1	1149.0	7.75
456.5	1189.6	7.46
436.2	1209.9	7.34
395.6	1250.5	7.38
375.3	1270.8	7.38
334.7	1311.4	7.38
314.4	1331.7	7.40
273.9	1372.2	7.45
253.6	1392.5	7.46
213.0	1433.1	7.49
192.7	1453.4	7.51
152.1	1494.0	7.47
131.8	1514.3	7.47
91.3	1554.8	7.45
71.0	1575.1	7.41
30.4	1615.7	7.35
10.1	1636.0	7.42

Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB) @LO (dBm)			LO-IF ISOLATION (dB) @LO (dBm)		
	+16	+19	+22	+16	+19	+22
150.1	37.47	37.52	37.65	39.89	40.19	40.52
230.1	32.93	33.05	33.27	34.10	34.28	34.51
310.1	33.80	34.13	34.39	33.24	33.47	33.70
390.1	35.59	35.75	35.82	35.72	35.90	36.03
470.1	37.78	37.80	37.87	39.78	39.92	40.10
550.1	39.60	39.59	39.50	44.10	44.35	44.51
630.1	42.14	42.14	42.10	46.73	47.02	47.22
710.1	43.80	43.77	43.67	46.01	46.28	46.54
790.1	44.85	44.66	44.49	45.92	46.07	46.29
870.1	45.78	45.56	45.25	45.07	45.32	45.52
950.1	46.75	46.34	46.01	42.53	42.60	42.71
1030.1	46.89	46.30	45.91	38.82	38.79	38.92
1110.1	45.81	46.23	46.60	34.38	34.69	34.86
1190.1	52.41	52.32	52.41	43.88	44.60	45.07
1270.1	52.84	52.24	51.83	46.05	46.27	46.65
1350.1	50.41	50.07	49.86	41.92	41.70	41.73
1430.1	47.45	47.31	46.74	40.73	40.80	40.99
1510.1	45.73	45.64	45.12	41.54	41.55	41.79
1590.1	45.96	45.90	45.25	42.49	42.31	42.62
1670.1	44.93	44.88	44.55	42.87	42.37	42.43
1750.1	43.18	43.00	42.85	43.95	43.26	43.24
1830.1	43.02	42.79	42.55	44.50	43.52	43.25
1910.1	43.37	43.01	42.58	44.40	43.29	42.40
1990.1	44.27	43.91	43.28	43.75	42.52	41.50
2070.1	44.85	44.44	43.78	42.28	41.17	39.98
2150.1	44.72	44.01	43.31	40.58	39.38	38.35
2230.1	44.26	43.41	42.77	38.66	37.64	36.90
2310.1	43.13	42.47	41.74	36.77	36.14	35.44
2390.1	41.64	41.27	40.65	35.78	35.44	34.82
2470.1	40.09	39.74	39.61	35.45	35.03	34.86
2550.1	38.94	38.73	38.74	35.56	35.24	35.14
2626.1	38.21	38.05	38.12	36.04	35.76	35.67
2706.1	37.91	37.81	37.96	36.84	36.57	36.49
2782.1	37.39	37.49	37.49	38.10	38.01	37.80
2862.1	36.51	36.59	36.62	41.91	41.93	41.84
2938.1	36.69	36.87	37.13	46.11	45.86	45.68
3018.1	38.01	38.14	38.50	47.99	47.53	47.46
3094.1	39.25	39.42	39.81	52.33	52.74	52.96
3174.1	39.59	39.94	40.42	45.48	45.97	46.23
3250.1	38.99	39.52	39.95	38.57	38.70	38.78

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB) @LO (dBm)		
		+16	+19	+22
80.1	150.1	26.44	26.13	25.52
160.1	230.1	23.27	22.94	22.57
240.1	310.1	21.83	21.64	21.44
320.1	390.1	28.14	28.34	28.55
400.1	470.1	37.25	37.99	38.61
480.1	550.1	41.10	41.43	41.36
560.1	630.1	39.22	39.03	38.51
640.1	710.1	38.92	38.87	38.56
720.1	790.1	38.04	37.95	37.83
800.1	870.1	38.22	38.11	37.94
880.1	950.1	38.41	38.25	38.09
960.1	1030.1	37.30	36.95	36.21
1040.1	1110.1	37.15	36.65	35.89
1120.1	1190.1	38.75	38.36	37.01
1200.1	1270.1	37.48	36.53	33.95
1280.1	1350.1	36.40	34.68	31.20
1360.1	1430.1	36.88	35.20	31.69
1440.1	1510.1	37.06	35.40	31.87
1520.1	1590.1	36.37	35.00	32.03
1600.1	1670.1	35.66	34.74	32.52
1680.1	1750.1	35.62	34.96	33.52
1760.1	1830.1	35.85	35.33	34.35
1840.1	1910.1	36.17	35.67	34.82
1920.1	1990.1	36.40	35.90	35.13
2000.1	2070.1	36.46	35.82	35.09
2080.1	2150.1	36.30	35.63	34.87
2160.1	2230.1	36.63	35.99	35.25
2240.1	2310.1	37.90	37.31	36.62
2320.1	2390.1	39.39	38.95	38.47
2400.1	2470.1	40.60	40.33	40.22
2480.1	2550.1	41.26	40.96	40.85
2556.1	2626.1	42.11	41.79	41.50
2636.1	2706.1	42.69	42.16	41.72
2712.1	2782.1	42.01	41.48	40.80
2792.1	2862.1	41.02	40.58	39.69
2868.1	2938.1	39.99	39.57	38.39
2948.1	3018.1	40.58	40.29	39.63
3024.1	3094.1	40.13	39.96	39.53
3104.1	3174.1	39.08	38.80	38.31
3180.1	3250.1	37.71	37.46	37.07

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1) @LO (dBm)		
		+16	+19	+22
80.1	150.1	3.12	3.04	3.00
160.1	230.1	1.37	1.39	1.42
240.1	310.1	1.34	1.40	1.44
320.1	390.1	1.47	1.52	1.57
400.1	470.1	1.55	1.60	1.64
480.1	550.1	1.56	1.59	1.62
560.1	630.1	1.57	1.58	1.59
640.1	710.1	1.62	1.60	1.59
720.1	790.1	1.68	1.63	1.59
800.1	870.1	1.80	1.73	1.67
880.1	950.1	1.95	1.86	1.79
960.1	1030.1	2.02	1.92	1.84
1040.1	1110.1	1.61	1.55	1.51
1120.1	1190.1	2.31	2.22	2.14
1200.1	1270.1	2.40	2.30	2.21
1280.1	1350.1	2.37	2.26	2.17
1360.1	1430.1	2.27	2.17	2.08
1440.1	1510.1	2.15	2.05	1.97
1520.1	1590.1	2.03	1.93	1.86
1600.1	1670.1	1.87	1.79	1.72
1680.1	1750.1	1.73	1.65	1.58
1760.1	1830.1	1.59	1.51	1.45
1840.1	1910.1	1.47	1.39	1.33
1920.1	1990.1	1.37	1.30	1.26
2000.1	2070.1	1.30	1.27	1.25
2080.1	2150.1	1.30	1.31	1.32
2160.1	2230.1	1.38	1.42	1.46
2240.1	2310.1	1.50	1.56	1.62
2320.1	2390.1	1.60	1.68	1.75
2400.1	2470.1	1.71	1.80	1.87
2480.1	2550.1	1.80	1.89	1.97
2556.1	2626.1	1.88	1.97	2.05
2636.1	2706.1	1.98	2.08	2.16
2712.1	2782.1	2.09	2.19	2.27
2792.1	2862.1	2.18	2.27	2.35
2868.1	2938.1	2.23	2.31	2.38
2948.1	3018.1	2.33	2.41	2.48
3024.1	3094.1	2.38	2.45	2.51
3104.1	3174.1	2.35	2.42	2.47
3180.1	3250.1	2.37	2.42	2.48

LO (MHz)	LO VSWR (:1) @LO (dBm)		
	+16	+19	+22
150.1	42.38	41.37	40.41
230.1	9.28	9.28	9.23
310.1	5.59	5.58	5.58
390.1	5.79	5.79	5.75
470.1	7.94	7.90	7.87
550.1	11.38	11.31	11.24
630.1	15.39	15.26	15.13
710.1	18.70	18.50	17.93
790.1	20.22	19.76	18.90
870.1	20.45	20.22	19.11
950.1	19.76	19.32	18.30
1030.1	16.89	16.56	15.96
1110.1	12.89	12.89	12.71
1190.1	14.87	14.62	14.15
1270.1	13.49	13.09	12.35
1350.1	12.18	11.77	11.17
1430.1	11.17	10.96	10.62
1510.1	10.13	10.02	9.96
1590.1	9.08	9.04	8.99
1670.1	8.12	8.05	7.97
1750.1	7.22	7.14	7.00
1830.1	6.37	6.28	6.07
1910.1	5.56	5.46	5.22
1990.1	4.83	4.73	4.55
2070.1	4.20	4.13	4.04
2150.1	3.68	3.65	3.64
2230.1	3.33	3.32	3.35
2310.1	3.16	3.17	3.22
2390.1	3.21	3.23	3.28
2470.1	3.43	3.46	3.46
2550.1	3.77	3.76	3.66
2626.1	4.10	4.05	3.88
2706.1	4.41	4.37	4.23
2782.1	4.62	4.59	4.52
2862.1	4.68	4.67	4.66
2938.1	4.66	4.63	4.59
3018.1	4.51	4.45	4.40
3094.1	4.22	4.15	4.07
3174.1	3.93	3.89	3.82
3250.1	3.70	3.69	3.65

IF (OUT) (MHz)	IF VSWR @LO=2600MHz (:1) @LO (dBm)		
	+16	+19	+22
10.1	1.02	1.08	1.14
70.1	1.19	1.20	1.23
130.1	1.32	1.33	1.35
190.1	1.46	1.47	1.49
250.1	1.64	1.65	1.66
310.1	1.77	1.77	1.79
370.1	1.88	1.88	1.90
430.1	2.01	2.01	2.02
490.1	2.01	2.01	2.01
550.1	2.03	2.02	2.01
610.1	2.09	2.07	2.06
670.1	2.06	2.03	2.00
730.1	2.02	1.97	1.95
790.1	1.99	1.94	1.91
850.1	1.89	1.83	1.79
910.1	1.78	1.72	1.67
970.1	1.72	1.64	1.59
1030.1	1.63	1.54	1.48
1090.1	1.55	1.46	1.40
1150.1	1.47	1.38	1.31
1210.1	1.38	1.29	1.22
1270.1	1.30	1.22	1.16
1330.1	1.27	1.21	1.17
1390.1	1.29	1.26	1.25
1470.1	1.32	1.33	1.34
1530.1	1.38	1.40	1.43
1610.1	1.45	1.49	1.52
1670.1	1.53	1.58	1.62
1750.1	1.56	1.62	1.67
1810.1	1.57	1.63	1.68
1890.1	1.54	1.60	1.66
1950.1	1.54	1.60	1.66
2030.1	1.50	1.56	1.62
2090.1	1.49	1.55	1.61
2170.1	1.44	1.50	1.55
2230.1	1.42	1.47	1.52
2310.1	1.43	1.48	1.52
2370.1	1.51	1.57	1.62
2450.1	1.71	1.78	1.83
2510.1	1.95	2.04	2.11

Harmonics Tables

RF HARMONICS ORDER	(-dBm)	(-dBc)										
0	-	-	17	13	20	28	36	46	41	57	59	55
1	-	29	+0	39	16	45	34	59	52	60	60	71
2	57	59	67	68	61	53	66	58	80	74	74	78
3	>90	>82	68	>82	63	77	69	>82	76	>82	>82	>82
4	>90	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82
5	>90	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82
6	>90	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82
7	>90	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82
8	>90	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82
9	>90	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82
10	>90	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: **RF IN: 1600 MHz; 0.00 dBm.**
LO IN: 1670 MHz; +19.00 dBm
IF OUT: 70 MHz; -7.54 dBm

RF HARMONICS ORDER	(-dBm)	(-dBc)										
0	-	-	27	23	30	40	47	66	54	69	73	71
1	-	30	+0	39	16	45	36	59	55	61	63	70
2	37	47	56	59	51	42	57	47	68	66	66	71
3	71	72	48	68	43	59	49	64	56	81	69	76
4	89	74	79	66	80	63	81	62	75	68	85	89
5	>90	>92	>92	84	75	84	68	79	73	85	84	>92
6	>90	>92	>92	>92	88	82	89	77	>92	78	>92	86
7	>90	>92	>92	>92	>92	>92	91	>92	85	>92	86	>92
8	>90	>92	>92	>92	>92	>92	>92	>92	91	>92	>92	>92
9	>90	>92	>92	>92	>92	>92	>92	>92	>92	>92	>92	>92
10	>90	>92	>92	>92	>92	>92	>92	>92	>92	>92	>92	>92
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: **RF IN: 1600 MHz; 10.00 dBm.**
LO IN: 1670 MHz; +19.00 dBm
IF OUT: 70 MHz; 2.36 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.