Frequency Mixer SRA-2400+

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	CONVERSION LOSS IF FIXED @IF(OUT)=30MHz (dB) @LO (dBm)		
		+4	+7	+10
200.1	230.1	13.39	12.50	12.11
300.8	330.8	10.11	9.48	9.15
401.5	431.5	8.31	7.74	7.42
502.2	532.2	6.88	6.42	6.17
602.9	632.9	6.17	5.79	5.58
703.6	733.6	6.18	5.86	5.72
804.3	834.3	6.61	6.16	5.90
905.0	935.0	6.78	5.84	5.37
1005.7	1035.7	7.46	6.31	5.58
1106.4	1136.4	7.43	6.63	6.09
1207.1	1237.1	6.72	6.15	5.84
1307.8	1337.8	6.42	6.07	5.89
1408.5	1438.5	6.24	6.00	5.89
1509.2	1539.2	6.23	6.02	5.96
1609.9	1639.9	6.26	6.11	6.03
1710.6	1740.6	6.16	5.91	5.83
1831.4	1861.4	6.23	5.84	5.67
1932.1	1962.1	6.34	5.87	5.68
2053.0	2083.0	6.97	6.18	5.78
2153.7	2183.7	7.69	6.68	6.06
2274.5	2304.5	8.21	7.25	6.60
2375.2	2405.2	8.25	7.30	6.63
2496.1	2526.1	8.10	7.27	6.77
2596.8	2626.8	7.98	7.08	6.62
2717.6	2747.6	8.00	6.92	6.39
2818.3	2848.3	7.97	7.10	6.42
2939.2	2969.2	7.42	6.75	6.50
3039.9	3069.9	7.38	6.36	5.96
3160.7	3190.7	7.51	6.21	5.75
3261.4	3291.4	7.81	6.33	5.78
3382.2	3412.2	8.06	6.81	6.30
3482.9	3512.9	8.25	6.74	6.24
3603.8	3633.8	7.81	6.61	6.19
3704.5	3734.5	7.40	6.42	6.23
3825.3	3855.3	7.35	6.41	6.07
3926.0	3956.0	7.16	6.30	5.98
4046.9	4076.9	7.19	6.42	6.03
4147.6	4177.6	7.20	6.47	6.09
4268.4	4298.4	7.36	6.67	6.35
4369.1	4399.1	7.85	7.10	6.73

RF (IN) (MHz)	LO (MHz)	IP3 INPUT (dBm) @LO (dBm)		
		+4	+7	+10
200.1	230.1	14.47	17.75	17.95
300.8	330.8	12.99	15.31	16.23
401.5	431.5	11.33	13.20	14.50
502.2	532.2	7.23	8.06	9.60
602.9	632.9	9.27	11.28	12.86
703.6	733.6	9.78	11.03	13.75
804.3	834.3	4.75	7.90	11.46
905.0	935.0	4.22	8.36	13.05
1005.7	1035.7	3.16	6.79	11.04
1106.4	1136.4	2.73	4.71	6.26
1207.1	1237.1	4.34	5.94	6.82
1307.8	1337.8	6.10	7.21	8.80
1408.5	1438.5	8.47	10.74	12.76
1509.2	1539.2	11.94	12.81	16.15
1609.9	1639.9	12.18	12.28	13.74
1710.6	1740.6	13.21	15.51	16.23
1831.4	1861.4	14.61	14.26	15.57
1932.1	1962.1	12.47	15.92	16.92
2053.0	2083.0	7.33	11.05	15.55
2153.7	2183.7	8.16	11.49	15.36
2274.5	2304.5	8.57	10.36	11.39
2375.2	2405.2	7.42	9.43	10.89
2496.1	2526.1	6.53	7.18	8.15
2596.8	2626.8	6.13	7.10	7.47
2717.6	2747.6	5.70	7.45	7.84
2818.3	2848.3	5.21	6.87	9.20
2939.2	2969.2	8.21	7.29	7.48
3039.9	3069.9	5.99	7.12	7.93
3160.7	3190.7	4.63	6.66	8.11
3261.4	3291.4	4.42	6.39	11.24
3382.2	3412.2	6.96	6.01	10.37
3482.9	3512.9	9.29	7.53	10.09
3603.8	3633.8	9.88	9.20	11.46
3704.5	3734.5	5.75	11.77	10.29
3825.3	3855.3	9.83	10.82	11.74
3926.0	3956.0	9.45	12.42	12.00
4046.9	4076.9	9.05	12.86	14.10
4147.6	4177.6	8.48	12.56	15.89
4268.4	4298.4	7.69	9.47	9.84
4369.1	4399.1	8.98	10.88	11.21

RF (IN) (MHz)	LO (MHz)	COMPRESSION @RF IN=+1dBm (dB) @LO (dBm)		
		+4	+7	+10
200.1	230.1	-0.13	-0.06	-0.05
300.8	330.8	0.04	-0.01	-0.02
401.5	431.5	0.48	0.33	0.24
502.2	532.2	0.93	0.66	0.49
602.9	632.9	1.10	0.72	0.52
703.6	733.6	1.10	0.68	0.47
804.3	834.3	1.95	1.52	1.20
905.0	935.0	2.43	2.31	2.05
1005.7	1035.7	1.85	2.02	1.99
1106.4	1136.4	1.74	1.56	1.40
1207.1	1237.1	1.83	1.53	1.28
1307.8	1337.8	1.65	1.29	1.01
1408.5	1438.5	1.23	0.86	0.67
1509.2	1539.2	0.95	0.59	0.40
1609.9	1639.9	0.82	0.46	0.30
1710.6	1740.6	0.88	0.47	0.31
1831.4	1861.4	0.82	0.46	0.27
1932.1	1962.1	1.06	0.70	0.42
2053.0	2083.0	1.27	1.08	0.86
2153.7	2183.7	1.12	1.07	0.89
2274.5	2304.5	0.87	0.78	0.63
2375.2	2405.2	0.83	0.68	0.62
2496.1	2526.1	1.12	0.76	0.57
2596.8	2626.8	1.26	0.99	0.68
2717.6	2747.6	1.27	1.13	0.84
2818.3	2848.3	1.47	1.11	0.95
2939.2	2969.2	1.74	1.19	0.95
3039.9	3069.9	1.44	1.10	0.89
3160.7	3190.7	1.46	1.15	0.87
3261.4	3291.4	1.47	1.17	0.89
3382.2	3412.2	1.42	0.86	0.60
3482.9	3512.9	1.32	0.89	0.52
3603.8	3633.8	1.56	0.93	0.53
3704.5	3734.5	1.90	1.12	0.59
3825.3	3855.3	1.74	0.88	0.52
3926.0	3956.0	1.91	0.96	0.57
4046.9	4076.9	2.07	1.00	0.59
4147.6	4177.6	2.24	1.11	0.60
4268.4	4298.4	2.42	1.24	0.78
4369.1	4399.1	2.40	1.34	0.93

Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1575MHz (dB) @LO (dBm) +7
1374.9	200.1	11.81
1295.8	279.2	11.46
1216.7	358.3	10.35
1137.5	437.5	9.73
1058.4	516.6	9.11
979.3	595.7	8.17
900.2	674.8	7.54
840.8	734.2	7.34
761.7	813.3	7.18
702.3	872.7	7.12
623.2	951.8	6.92
563.9	1011.1	6.59
484.7	1090.3	6.20
425.4	1149.6	6.13
346.3	1228.7	6.25
286.9	1288.1	6.17
207.8	1367.2	6.04
148.5	1426.5	6.01
69.3	1505.7	6.01
10.0	1565.0	6.52
71.5	1646.5	5.88
133.1	1708.1	5.93
215.1	1790.1	5.94
276.6	1851.6	5.88
358.6	1933.6	5.85
420.2	1995.2	5.96
502.2	2077.2	6.01
563.7	2138.7	6.20
645.8	2220.8	6.42
707.3	2282.3	6.52
789.3	2364.3	6.83
850.9	2425.9	7.23
932.9	2507.9	7.60
994.4	2569.4	8.08
1076.5	2651.5	8.90
1138.0	2713.0	9.13
1220.0	2795.0	9.72
1281.5	2856.5	10.28
1363.6	2938.6	10.50
1425.1	3000.1	11.12

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=740MHz (dB) @LO (dBm) +7
10.1	750.1	6.21
50.8	790.8	5.72
91.6	831.6	5.90
132.3	872.3	5.99
173.1	913.1	6.00
213.8	953.8	6.04
254.5	994.5	5.95
295.3	1035.3	6.01
336.0	1076.0	6.16
376.8	1116.8	6.23
417.5	1157.5	6.41
458.2	1198.2	6.37
499.0	1239.0	6.24
539.7	1279.7	6.20
580.5	1320.5	6.12
621.2	1361.2	5.97
662.0	1402.0	5.96
702.7	1442.7	5.92
743.4	1483.4	5.92
784.2	1524.2	6.04
824.9	1564.9	6.03
865.7	1605.7	6.02
906.4	1646.4	5.98
947.1	1687.1	5.99
987.9	1727.9	6.06
1028.6	1768.6	6.07
1069.4	1809.4	6.17
1110.1	1850.1	6.04
1150.8	1890.8	6.25
1191.6	1931.6	6.38
1232.3	1972.3	6.59
1273.1	2013.1	6.79
1313.8	2053.8	6.87
1354.5	2094.5	7.06
1395.3	2135.3	7.15
1456.4	2196.4	7.70
1497.1	2237.1	8.09
1558.2	2298.2	8.77
1599.0	2339.0	9.38
1660.1	2400.1	10.33

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=2410.1MHz (dB) @LO (dBm) +7
1610.0	800.1	11.52
1569.5	840.6	11.03
1529.0	881.1	10.44
1488.5	921.6	9.81
1448.0	962.1	9.21
1407.5	1002.6	8.51
1367.0	1043.1	8.00
1326.5	1083.6	7.40
1285.9	1124.2	6.96
1245.4	1164.7	6.68
1204.9	1205.2	6.61
1164.4	1245.7	6.97
1123.9	1286.2	7.10
1083.4	1326.7	6.99
1042.9	1367.2	6.81
1002.4	1407.7	6.69
961.9	1448.2	6.84
921.4	1488.7	7.06
880.9	1529.2	7.33
840.4	1569.7	7.38
799.9	1610.2	7.30
759.4	1650.7	7.41
718.9	1691.2	7.26
678.4	1731.7	7.27
637.8	1772.3	7.27
597.3	1812.8	7.33
556.8	1853.3	7.33
516.3	1893.8	7.38
475.8	1934.3	7.20
435.3	1974.8	7.17
394.8	2015.3	7.08
354.3	2055.8	7.09
313.8	2096.3	7.14
273.3	2136.8	7.08
232.8	2177.3	7.03
192.3	2217.8	6.86
151.8	2258.3	6.92
111.3	2298.8	6.82
70.8	2339.3	6.82
10.0	2400.1	7.36

Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB) @LO (dBm)			LO-IF ISOLATION (dB) @LO (dBm)		
	+4	+7	+10	+4	+7	+10
230.1	61.72	63.94	65.70	43.33	41.13	39.51
330.8	53.76	55.94	57.72	69.53	46.23	41.43
431.5	47.76	49.69	52.10	41.43	42.62	40.51
532.2	44.07	45.46	46.78	34.07	35.17	35.16
632.9	44.48	45.65	46.73	29.81	31.70	32.71
733.6	44.54	46.77	48.32	27.65	29.89	31.37
834.3	49.11	55.79	51.75	25.65	27.72	29.41
935.0	54.47	52.29	47.26	24.37	25.92	27.58
1035.7	42.46	45.91	45.91	23.41	25.11	26.60
1136.4	38.34	41.09	44.11	22.55	24.02	25.64
1237.1	37.84	39.77	41.42	21.20	22.44	23.77
1337.8	40.01	41.50	42.71	19.48	20.31	21.23
1438.5	41.92	44.43	46.29	18.70	19.11	19.49
1539.2	42.97	47.38	50.99	18.50	18.67	18.81
1639.9	42.91	48.11	54.14	18.42	18.59	18.57
1740.6	39.17	42.72	46.57	18.74	18.72	18.81
1861.4	38.67	41.60	45.00	19.33	19.45	19.43
1962.1	38.63	41.12	42.92	19.88	20.16	20.24
2083.0	35.17	37.87	41.16	20.58	20.79	21.14
2183.7	33.57	35.53	37.16	21.31	21.62	21.80
2304.5	33.04	34.89	36.35	21.97	22.34	22.45
2405.2	32.96	34.51	36.61	22.73	22.85	23.07
2526.1	32.87	34.35	35.74	23.67	23.51	23.63
2626.8	32.89	34.41	35.16	24.86	24.60	24.14
2747.6	33.26	34.90	35.20	21.89	21.90	21.70
2848.3	32.64	33.48	34.99	21.81	21.70	21.50
2969.2	32.32	31.64	31.47	21.84	21.44	21.29
3069.9	34.07	34.01	32.88	22.17	21.95	21.57
3190.7	35.38	35.64	34.45	22.69	22.34	21.88
3291.4	35.20	35.10	33.99	24.01	23.55	23.10
3412.2	35.15	33.95	31.89	26.72	26.92	27.46
3512.9	35.63	33.97	31.72	27.53	28.58	30.43
3633.8	33.02	31.10	29.45	32.58	36.94	36.48
3734.5	32.36	31.67	30.21	30.68	29.42	26.20
3855.3	32.63	32.10	31.47	26.44	23.97	21.81
3956.0	32.44	32.92	33.06	23.55	21.71	20.22
4076.9	32.51	34.21	35.52	21.02	20.37	19.46
4177.6	32.49	34.99	37.76	19.58	19.48	19.10
4298.4	32.19	34.88	37.68	18.64	19.07	19.62
4399.1	29.48	31.63	33.76	17.32	17.99	18.70

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB) @LO (dBm)		
		+4	+7	+10
200.1	230.1	27.54	26.39	26.11
300.8	330.8	25.31	24.45	23.95
401.5	431.5	24.48	23.61	22.81
502.2	532.2	22.16	22.01	21.92
602.9	632.9	20.83	20.68	20.54
703.6	733.6	18.88	18.20	17.72
804.3	834.3	16.35	15.74	15.39
905.0	935.0	15.58	15.31	15.23
1005.7	1035.7	17.66	17.11	16.71
1106.4	1136.4	23.68	22.77	22.35
1207.1	1237.1	29.36	28.28	27.30
1307.8	1337.8	28.41	27.15	26.13
1408.5	1438.5	25.74	23.92	22.79
1509.2	1539.2	24.40	22.65	21.77
1609.9	1639.9	24.82	23.38	22.67
1710.6	1740.6	26.21	24.94	24.20
1831.4	1861.4	28.52	27.86	27.34
1932.1	1962.1	31.80	31.29	30.88
2053.0	2083.0	36.47	36.14	35.53
2153.7	2183.7	36.20	36.28	36.21
2274.5	2304.5	34.60	34.55	34.48
2375.2	2405.2	33.49	33.42	33.23
2496.1	2526.1	32.14	31.63	31.48
2596.8	2626.8	31.19	30.65	30.25
2717.6	2747.6	30.06	29.51	28.71
2818.3	2848.3	30.51	29.80	29.20
2939.2	2969.2	31.21	32.13	32.58
3039.9	3069.9	31.52	31.21	31.13
3160.7	3190.7	33.72	33.55	31.73
3261.4	3291.4	35.27	31.59	30.07
3382.2	3412.2	32.50	28.74	27.43
3482.9	3512.9	30.54	25.66	23.51
3603.8	3633.8	28.10	23.83	21.52
3704.5	3734.5	26.73	22.79	19.98
3825.3	3855.3	22.81	20.28	19.06
3926.0	3956.0	21.83	20.36	19.18
4046.9	4076.9	20.67	20.21	19.66
4147.6	4177.6	20.46	20.77	20.66
4268.4	4298.4	20.57	21.49	21.85
4369.1	4399.1	20.65	21.60	22.23

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1) @LO (dBm)		
		+4	+7	+10
200.1	230.1	15.13	14.15	13.19
300.8	330.8	9.18	8.27	7.83
401.5	431.5	5.51	5.09	4.84
502.2	532.2	3.25	2.99	2.85
602.9	632.9	2.18	2.04	2.00
703.6	733.6	1.98	1.98	2.01
804.3	834.3	2.19	2.09	2.03
905.0	935.0	2.37	2.05	1.86
1005.7	1035.7	2.68	2.31	2.07
1106.4	1136.4	2.55	2.37	2.23
1207.1	1237.1	2.77	2.63	2.54
1307.8	1337.8	2.66	2.63	2.61
1408.5	1438.5	2.45	2.45	2.44
1509.2	1539.2	2.25	2.22	2.21
1609.9	1639.9	2.10	2.03	2.02
1710.6	1740.6	2.13	1.98	1.92
1831.4	1861.4	2.20	1.99	1.87
1932.1	1962.1	2.24	1.96	1.79
2053.0	2083.0	2.84	2.49	2.29
2153.7	2183.7	3.51	3.14	2.89
2274.5	2304.5	3.67	3.32	3.07
2375.2	2405.2	3.70	3.38	3.11
2496.1	2526.1	3.82	3.52	3.32
2596.8	2626.8	3.86	3.50	3.30
2717.6	2747.6	3.87	3.43	3.13
2818.3	2848.3	3.70	3.41	3.10
2939.2	2969.2	3.25	3.01	2.92
3039.9	3069.9	3.45	3.00	2.77
3160.7	3190.7	3.72	3.13	2.84
3261.4	3291.4	3.66	3.02	2.63
3382.2	3412.2	3.29	2.69	2.52
3482.9	3512.9	3.22	2.52	2.27
3603.8	3633.8	2.68	2.17	1.96
3704.5	3734.5	2.43	1.87	1.63
3825.3	3855.3	2.44	2.00	1.79
3926.0	3956.0	2.21	1.83	1.64
4046.9	4076.9	1.93	1.66	1.50
4147.6	4177.6	1.79	1.57	1.44
4268.4	4298.4	1.78	1.58	1.48
4369.1	4399.1	1.85	1.67	1.57

LO (MHz)	LO VSWR (:1) @LO (dBm)		
	+4	+7	+10
230.1	1.88	2.49	3.27
330.8	1.76	2.37	3.11
431.5	1.72	2.29	2.97
532.2	1.70	2.21	2.81
632.9	1.71	2.14	2.66
733.6	1.73	2.05	2.48
834.3	1.77	1.99	2.34
935.0	1.78	1.91	2.20
1035.7	1.74	1.81	2.04
1136.4	1.67	1.68	1.88
1237.1	1.61	1.56	1.73
1337.8	1.58	1.49	1.64
1438.5	1.56	1.44	1.58
1539.2	1.53	1.41	1.54
1639.9	1.48	1.38	1.53
1740.6	1.46	1.38	1.55
1861.4	1.48	1.43	1.59
1962.1	1.53	1.48	1.61
2083.0	1.58	1.53	1.64
2183.7	1.62	1.53	1.63
2304.5	1.65	1.54	1.61
2405.2	1.67	1.54	1.60
2526.1	1.70	1.55	1.58
2626.8	1.74	1.57	1.59
2747.6	1.72	1.53	1.54
2848.3	1.83	1.59	1.56
2969.2	1.98	1.67	1.57
3069.9	2.13	1.76	1.59
3190.7	2.33	1.92	1.64
3291.4	2.52	2.10	1.76
3412.2	2.61	2.17	1.81
3512.9	2.69	2.24	1.86
3633.8	2.69	2.22	1.86
3734.5	2.59	2.13	1.81
3855.3	2.45	2.04	1.77
3956.0	2.30	1.96	1.77
4076.9	2.10	1.89	1.80
4177.6	1.95	1.86	1.85
4298.4	1.81	1.86	1.94
4399.1	1.76	1.90	2.03

IF (OUT) (MHz)	IF VSWR @LO=2400MHz (:1) @LO (dBm)		
	+4	+7	+10
10.0	1.44	1.13	1.09
70.0	1.47	1.15	1.09
130.0	1.47	1.19	1.15
190.0	1.41	1.19	1.24
250.0	1.38	1.18	1.25
310.0	1.37	1.25	1.35
370.0	1.27	1.22	1.39
430.0	1.23	1.21	1.37
490.0	1.20	1.26	1.45
550.0	1.11	1.25	1.47
610.0	1.07	1.22	1.43
670.0	1.06	1.25	1.47
730.0	1.12	1.31	1.51
790.0	1.15	1.29	1.47
850.0	1.22	1.36	1.53
910.0	1.29	1.40	1.54
970.0	1.31	1.38	1.49
1030.0	1.37	1.43	1.53
1090.0	1.43	1.45	1.52
1150.0	1.48	1.46	1.48
1210.0	1.56	1.51	1.50
1270.0	1.64	1.56	1.50
1330.0	1.71	1.61	1.53
1390.0	1.81	1.72	1.62
1450.0	1.90	1.79	1.68
1510.0	1.93	1.82	1.73
1570.0	2.01	1.91	1.82
1630.0	2.06	1.98	1.91
1690.0	2.04	1.98	1.94
1750.0	2.13	2.09	2.06
1810.0	2.23	2.20	2.20
1870.0	2.38	2.37	2.37
1930.0	2.55	2.54	2.54
1990.0	2.68	2.68	2.67
2050.0	2.84	2.84	2.84
2110.0	2.92	2.92	2.92
2190.0	3.03	3.03	3.03
2250.0	3.14	3.13	3.13
2330.0	3.15	3.15	3.15
2390.0	3.12	3.12	3.11

Harmonics Tables

RF HARMONICS ORDER	(-dBm)	(-dBc)										
0	-	-	+9	23	13	62	27	38	27	40	33	52
1	-	16	+0	26	17	34	40	52	35	50	44	48
2	85	53	45	63	48	55	50	>70	55	61	54	69
3	>90	69	69	63	61	>70	66	70	>70	>70	>70	>70
4	>90	>70	>70	>70	>70	>70	>70	>70	>70	>70	>70	>70
5	>90	>70	>70	>70	>70	>70	>70	>70	>70	>70	>70	>70
6	>90	>70	>70	>70	>70	>70	>70	>70	>70	>70	>70	>70
7	>90	>70	>70	>70	>70	>70	>70	>70	>70	>70	>70	>70
8	>90	>70	>70	>70	>70	>70	>70	>70	>70	>70	>70	>70
9	>90	>70	>70	>70	>70	>70	>70	>70	>70	>70	>70	>70
10	>90	>70	>70	>70	>70	>70	>70	>70	>70	>70	>70	>70
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

Test conditions: RF IN: 1575 MHz; -14.00 dBm.
LO IN: 1605 MHz; +7.00 dBm
IF OUT: 30 MHz; -20.1 dBm

RF HARMONICS ORDER	(-dBm)	(-dBc)										
0	-	-	1	31	24	63	42	50	44	61	47	67
1	-	16	+0	27	18	38	42	53	41	65	55	62
2	64	46	40	55	43	52	44	>80	50	65	51	62
3	>90	49	44	45	40	53	46	54	60	63	56	66
4	>90	80	66	60	53	61	61	62	59	>80	61	69
5	>90	>80	>80	72	73	63	65	73	68	70	76	76
6	>90	77	>80	>80	76	72	68	71	>80	70	74	>80
7	>90	>80	>80	>80	>80	>80	>80	>80	78	>80	>80	>80
8	>90	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80	78
9	>90	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80
10	>90	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 1575 MHz; -4.00 dBm.
LO IN: 1605 MHz; +7.00 dBm
IF OUT: 30 MHz; -10.21 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.