

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	CONVERSION LOSS IF FIXED @IF(OUT)=30MHz (dB)		
		@LO (dBm)		
		+1	+4	+7
10.1	40.1	7.97	6.71	6.19
49.9	79.9	8.60	7.41	6.89
89.7	119.7	8.51	7.39	6.89
129.5	159.5	8.53	7.39	6.88
169.3	199.3	8.40	7.30	6.83
209.0	239.0	8.38	7.26	6.85
248.8	278.8	8.33	7.23	6.85
308.5	338.5	8.18	7.24	6.88
348.3	378.3	8.13	7.24	6.87
408.0	438.0	8.09	7.26	6.89
447.8	477.8	8.14	7.31	6.95
507.5	537.5	8.12	7.29	6.91
547.3	577.3	8.18	7.35	6.93
606.9	636.9	8.21	7.40	6.97
646.7	676.7	8.25	7.50	7.07
706.4	736.4	8.35	7.58	7.17
746.2	776.2	8.41	7.58	7.13
805.9	835.9	8.52	7.50	7.00
845.7	875.7	8.55	7.49	6.93
905.4	935.4	8.70	7.57	6.89
945.2	975.2	8.69	7.58	6.87
1004.8	1034.8	8.67	7.66	6.95
1044.6	1074.6	8.65	7.77	7.08
1104.3	1134.3	8.53	7.79	7.23
1144.1	1174.1	8.45	7.75	7.23
1203.8	1233.8	8.22	7.59	7.16
1243.6	1273.6	8.14	7.52	7.13
1303.3	1333.3	7.97	7.40	7.07
1343.0	1373.0	7.90	7.38	7.09
1402.7	1432.7	7.85	7.40	7.22
1442.5	1472.5	7.84	7.43	7.27
1502.2	1532.2	7.95	7.55	7.38
1542.0	1572.0	8.06	7.65	7.49
1601.7	1631.7	8.35	7.90	7.73
1641.5	1671.5	8.57	8.11	7.92
1701.2	1731.2	8.92	8.42	8.22
1740.9	1770.9	9.23	8.69	8.47
1800.6	1830.6	9.63	9.04	8.80
1840.4	1870.4	9.97	9.33	9.06
1900.1	1930.1	10.49	9.77	9.46

RF (IN) (MHz)	LO (MHz)	IP-3 INPUT (dBm)		
		@LO (dBm)		
		+1	+4	+7
10.1	40.1	11.04	15.22	19.06
49.9	79.9	11.28	15.99	17.34
89.7	119.7	11.39	16.78	17.01
129.5	159.5	12.60	14.90	14.89
169.3	199.3	13.50	14.75	14.93
209.0	239.0	13.54	13.33	16.92
248.8	278.8	11.98	13.53	18.83
308.5	338.5	11.04	15.45	20.54
348.3	378.3	10.92	14.91	22.37
408.0	438.0	11.24	15.96	21.82
447.8	477.8	11.14	16.02	19.45
507.5	537.5	12.47	16.58	18.34
547.3	577.3	12.31	18.51	21.89
606.9	636.9	11.97	15.49	18.92
646.7	676.7	11.96	14.84	20.53
706.4	736.4	11.17	13.88	19.87
746.2	776.2	11.81	14.34	19.27
805.9	835.9	11.56	18.47	14.80
845.7	875.7	12.38	13.76	13.65
905.4	935.4	10.09	11.87	10.34
945.2	975.2	9.47	10.42	8.82
1004.8	1034.8	8.52	9.25	7.39
1044.6	1074.6	7.76	8.47	7.30
1104.3	1134.3	7.73	9.29	10.53
1144.1	1174.1	7.53	9.70	13.09
1203.8	1233.8	8.23	11.48	15.91
1243.6	1273.6	8.45	11.95	14.38
1303.3	1333.3	9.01	12.38	13.24
1343.0	1373.0	9.44	12.70	12.94
1402.7	1432.7	9.51	12.53	13.49
1442.5	1472.5	9.39	12.45	14.46
1502.2	1532.2	9.59	11.96	14.38
1542.0	1572.0	9.74	11.69	14.98
1601.7	1631.7	9.41	11.67	13.54
1641.5	1671.5	9.18	12.07	13.92
1701.2	1731.2	8.91	10.96	13.34
1740.9	1770.9	8.20	10.70	12.79
1800.6	1830.6	8.35	10.24	11.84
1840.4	1870.4	8.07	10.71	12.58
1900.1	1930.1	8.00	9.11	10.63

RF (IN) (MHz)	LO (MHz)	COMPRESSION @RF IN=+1dBm (dB)		
		@LO (dBm)		
		+1	+4	+7
10.1	40.1	0.61	0.32	0.19
49.9	79.9	0.69	0.44	0.28
89.7	119.7	0.72	0.42	0.31
129.5	159.5	0.72	0.48	0.35
169.3	199.3	0.73	0.50	0.33
209.0	239.0	0.73	0.48	0.32
248.8	278.8	0.76	0.52	0.34
308.5	338.5	0.77	0.44	0.30
348.3	378.3	0.82	0.46	0.35
408.0	438.0	0.80	0.47	0.36
447.8	477.8	0.79	0.46	0.32
507.5	537.5	0.80	0.49	0.35
547.3	577.3	0.81	0.51	0.41
606.9	636.9	0.85	0.56	0.49
646.7	676.7	1.06	0.72	0.59
706.4	736.4	1.11	0.75	0.66
746.2	776.2	1.18	0.91	0.75
805.9	835.9	1.25	1.07	0.95
845.7	875.7	1.34	1.25	1.12
905.4	935.4	1.39	1.40	1.30
945.2	975.2	1.40	1.44	1.37
1004.8	1034.8	1.52	1.46	1.42
1044.6	1074.6	1.52	1.40	1.34
1104.3	1134.3	1.70	1.44	1.30
1144.1	1174.1	1.84	1.58	1.38
1203.8	1233.8	2.02	1.66	1.45
1243.6	1273.6	2.08	1.76	1.46
1303.3	1333.3	2.17	1.76	1.48
1343.0	1373.0	2.16	1.67	1.39
1402.7	1432.7	2.14	1.55	1.22
1442.5	1472.5	2.11	1.49	1.18
1502.2	1532.2	2.12	1.46	1.16
1542.0	1572.0	2.03	1.38	1.15
1601.7	1631.7	1.98	1.36	1.12
1641.5	1671.5	1.94	1.31	1.06
1701.2	1731.2	1.90	1.26	1.04
1740.9	1770.9	1.84	1.22	0.99
1800.6	1830.6	1.67	1.13	0.94
1840.4	1870.4	1.65	1.16	0.96
1900.1	1930.1	1.57	1.12	0.95

Frequency Mixer

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Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=500.1MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=10.1MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1000.1MHz (dB)
		@LO (dBm)			@LO (dBm)			@LO (dBm)
		+4			+4			+4
480.0	20.1	6.82	10.0	20.1	7.12	990.0	10.1	8.30
467.9	32.2	6.85	30.0	40.1	6.98	970.0	30.1	8.20
455.9	44.2	6.83	50.0	60.1	7.03	950.0	50.1	8.13
443.8	56.3	6.79	70.0	80.1	7.01	930.0	70.1	8.06
431.8	68.3	6.80	90.0	100.1	6.99	910.0	90.1	7.97
419.7	80.4	6.79	110.0	120.1	6.99	890.0	110.1	7.86
407.7	92.4	6.76	130.0	140.1	6.96	870.0	130.1	7.80
395.6	104.5	6.73	150.0	160.1	6.97	850.0	150.1	7.79
383.6	116.5	6.69	170.0	180.1	6.97	830.0	170.1	7.73
371.5	128.6	6.64	190.0	200.1	6.95	810.0	190.1	7.68
359.5	140.6	6.63	210.0	220.1	6.95	790.0	210.1	7.64
347.4	152.7	6.64	230.0	240.1	6.92	770.0	230.1	7.62
335.4	164.7	6.64	250.0	260.1	6.96	750.0	250.1	7.56
323.3	176.8	6.63	270.0	280.1	7.02	730.0	270.1	7.55
311.3	188.8	6.63	290.0	300.1	6.97	710.0	290.1	7.52
299.2	200.9	6.62	310.0	320.1	6.99	690.0	310.1	7.49
287.2	212.9	6.62	330.0	340.1	7.05	670.0	330.1	7.45
275.1	225.0	6.59	350.0	360.1	6.99	650.0	350.1	7.44
263.1	237.0	6.58	370.0	380.1	7.11	630.0	370.1	7.41
251.0	249.1	6.57	390.0	400.1	7.11	610.0	390.1	7.38
239.0	261.1	6.61	430.0	440.1	7.51	570.0	430.1	7.36
226.9	273.2	6.61	450.0	460.1	7.26	550.0	450.1	7.36
214.9	285.2	6.61	490.0	500.1	7.29	510.0	490.1	7.36
202.8	297.3	6.59	510.0	520.1	7.30	490.0	510.1	7.38
190.8	309.3	6.60	550.0	560.1	7.40	450.0	550.1	7.36
178.7	321.4	6.59	570.0	580.1	7.47	430.0	570.1	7.44
166.7	333.4	6.59	610.0	620.1	7.63	390.0	610.1	7.40
154.6	345.5	6.58	630.0	640.1	7.68	370.0	630.1	7.42
142.6	357.5	6.59	670.0	680.1	7.90	330.0	670.1	7.51
130.5	369.6	6.62	690.0	700.1	7.94	310.0	690.1	7.48
118.5	381.6	6.65	730.0	740.1	8.02	270.0	730.1	7.45
106.4	393.7	6.64	750.0	760.1	8.04	250.0	750.1	7.43
94.4	405.7	6.61	790.0	800.1	8.00	210.0	790.1	7.33
82.3	417.8	6.61	810.0	820.1	7.96	190.0	810.1	7.28
70.3	429.8	6.64	850.0	860.1	8.03	150.0	850.1	7.24
58.2	441.9	6.66	870.0	880.1	8.03	130.0	870.1	7.19
46.2	453.9	6.62	910.0	920.1	8.08	90.0	910.1	7.18
34.1	466.0	6.65	930.0	940.1	8.15	70.0	930.1	7.30
22.1	478.0	6.68	970.0	980.1	8.27	30.0	970.1	7.41
10.0	490.1	7.07	990.0	1000.1	8.29	10.0	990.1	7.79

Frequency Mixer

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Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)		
	@LO (dBm)			@LO (dBm)		
	+1	+4	+7	+1	+4	+7
10.1	59.26	62.18	68.13	47.88	51.52	57.47
49.9	75.20	75.77	71.22	52.10	48.36	46.09
89.7	75.72	68.33	64.67	47.56	43.17	40.51
129.5	73.10	64.29	60.59	43.94	39.78	37.12
169.3	69.77	61.49	58.24	41.16	37.14	34.76
209.0	66.33	59.51	56.38	38.89	35.15	33.28
248.8	64.41	57.59	54.17	37.08	33.68	32.05
308.5	62.61	55.13	51.49	34.86	32.23	30.66
348.3	63.70	54.98	51.02	33.81	31.59	29.90
408.0	65.60	53.80	49.37	32.92	30.73	28.95
447.8	69.51	54.25	49.21	32.41	30.22	28.23
507.5	62.36	57.00	50.09	32.31	30.00	28.01
547.3	57.03	57.60	49.94	32.10	29.51	27.28
606.9	53.38	56.29	48.20	31.76	28.89	26.36
646.7	51.93	55.77	48.27	31.23	28.50	26.13
706.4	51.09	58.57	50.78	30.13	27.77	25.95
746.2	49.59	61.15	54.44	29.28	26.94	25.26
805.9	47.38	55.48	59.66	27.82	25.34	23.64
845.7	45.24	50.15	55.99	26.96	24.40	22.67
905.4	42.38	45.47	49.44	25.79	23.30	21.45
945.2	40.53	43.07	46.79	25.23	22.96	21.00
1004.8	39.00	41.38	45.31	23.97	22.15	20.30
1044.6	37.49	39.51	42.61	23.09	21.63	20.07
1104.3	35.94	38.02	40.77	21.73	20.50	19.27
1144.1	35.00	37.17	39.70	20.94	19.76	18.61
1203.8	33.90	36.31	38.66	19.86	18.74	17.59
1243.6	33.13	35.71	37.79	19.19	18.07	16.89
1303.3	32.08	34.67	36.16	18.15	17.06	15.83
1343.0	31.59	34.12	35.20	17.37	16.28	15.07
1402.7	30.42	32.26	32.32	16.28	15.28	14.22
1442.5	29.58	30.89	30.61	15.61	14.73	13.79
1502.2	28.23	28.92	28.34	14.74	14.00	13.24
1542.0	26.83	27.47	26.94	14.36	13.74	13.05
1601.7	25.28	25.84	25.38	13.87	13.35	12.73
1641.5	24.27	24.92	24.53	13.56	13.12	12.52
1701.2	22.95	23.74	23.51	13.31	12.97	12.41
1740.9	22.15	23.03	22.89	13.20	12.93	12.39
1800.6	20.97	22.05	22.11	12.98	12.93	12.45
1840.4	20.71	21.93	22.10	12.98	13.03	12.58
1900.1	19.46	20.95	21.37	12.79	13.12	12.79

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB)		
		@LO (dBm)		
		+1	+4	+7
10.1	40.1	37.75	32.75	38.23
49.9	79.9	34.84	34.94	35.44
89.7	119.7	29.63	30.04	31.22
129.5	159.5	27.35	27.98	27.79
169.3	199.3	25.38	25.93	26.13
209.0	239.0	23.87	24.58	24.67
248.8	278.8	22.76	23.35	23.78
308.5	338.5	21.60	22.34	22.72
348.3	378.3	20.97	21.77	22.25
408.0	438.0	20.31	21.23	21.83
447.8	477.8	19.82	20.74	21.31
507.5	537.5	18.99	19.92	20.60
547.3	577.3	18.58	19.62	20.42
606.9	636.9	18.27	19.45	20.42
646.7	676.7	18.14	19.26	20.10
706.4	736.4	17.65	18.45	18.91
746.2	776.2	17.04	17.49	17.71
805.9	835.9	16.01	16.15	16.22
845.7	875.7	15.54	15.60	15.61
905.4	935.4	15.04	15.12	15.12
945.2	975.2	14.87	15.01	15.11
1004.8	1034.8	14.86	15.07	15.35
1044.6	1074.6	14.95	15.21	15.65
1104.3	1134.3	15.23	15.51	15.93
1144.1	1174.1	15.46	15.66	15.87
1203.8	1233.8	15.76	15.70	15.44
1243.6	1273.6	15.78	15.47	14.92
1303.3	1333.3	15.36	14.65	13.87
1343.0	1373.0	14.79	13.93	13.16
1402.7	1432.7	13.57	12.65	11.99
1442.5	1472.5	12.70	11.81	11.19
1502.2	1532.2	11.57	10.72	10.13
1542.0	1572.0	10.78	9.97	9.40
1601.7	1631.7	9.82	9.07	8.53
1641.5	1671.5	9.22	8.53	8.01
1701.2	1731.2	8.39	7.79	7.32
1740.9	1770.9	7.90	7.37	6.94
1800.6	1830.6	7.17	6.73	6.36
1840.4	1870.4	6.79	6.40	6.07
1900.1	1930.1	6.19	5.88	5.58

Frequency Mixer

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Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1)			LO (MHz)	LO VSWR (:1)			IF (OUT) (MHz)	IF VSWR @LO=1000.1MHz (:1)		
		@LO (dBm)				@LO (dBm)				@LO (dBm)		
		+1	+4	+7		+1	+4	+7		+1	+4	+7
10.1	40.1	1.93	1.81	1.63	10.1	1.39	1.06	1.54	10.0	1.86	1.61	1.16
49.9	79.9	1.59	1.43	1.32	49.9	1.45	1.14	1.65	29.8	1.84	1.36	1.09
89.7	119.7	1.67	1.50	1.39	89.7	1.40	1.14	1.65	49.5	1.74	1.29	1.06
129.5	159.5	1.61	1.44	1.34	129.5	1.43	1.18	1.66	69.3	1.62	1.23	1.02
169.3	199.3	1.67	1.49	1.39	169.3	1.41	1.23	1.69	89.0	1.72	1.29	1.02
209.0	239.0	1.63	1.46	1.38	209.0	1.42	1.25	1.68	108.8	1.73	1.32	1.06
248.8	278.8	1.61	1.44	1.36	248.8	1.43	1.29	1.73	128.5	1.75	1.32	1.06
308.5	338.5	1.61	1.46	1.39	308.5	1.44	1.33	1.77	148.3	1.70	1.30	1.05
348.3	378.3	1.60	1.46	1.39	348.3	1.41	1.36	1.84	168.0	1.72	1.31	1.05
408.0	438.0	1.57	1.45	1.38	408.0	1.39	1.39	1.90	187.8	1.77	1.35	1.08
447.8	477.8	1.59	1.47	1.41	447.8	1.37	1.44	1.96	207.5	1.79	1.38	1.11
507.5	537.5	1.60	1.49	1.43	507.5	1.34	1.47	2.02	227.3	1.78	1.37	1.12
547.3	577.3	1.57	1.46	1.40	547.3	1.32	1.52	2.09	247.0	1.75	1.36	1.11
606.9	636.9	1.59	1.49	1.43	606.9	1.29	1.56	2.13	266.8	1.74	1.35	1.10
646.7	676.7	1.55	1.46	1.41	646.7	1.28	1.62	2.22	286.5	1.76	1.37	1.11
706.4	736.4	1.57	1.49	1.44	706.4	1.29	1.68	2.28	306.3	1.78	1.39	1.14
746.2	776.2	1.54	1.45	1.39	746.2	1.29	1.73	2.35	326.0	1.75	1.38	1.13
805.9	835.9	1.53	1.42	1.35	805.9	1.32	1.79	2.40	345.8	1.74	1.37	1.12
845.7	875.7	1.54	1.42	1.34	845.7	1.34	1.83	2.45	365.5	1.74	1.37	1.12
905.4	935.4	1.49	1.37	1.28	905.4	1.43	1.95	2.58	385.3	1.75	1.39	1.13
945.2	975.2	1.55	1.42	1.32	945.2	1.47	2.00	2.64	405.0	1.77	1.40	1.14
1004.8	1034.8	1.49	1.36	1.25	1004.8	1.56	2.14	2.80	424.8	1.76	1.39	1.14
1044.6	1074.6	1.53	1.41	1.29	1044.6	1.61	2.19	2.84	444.5	1.75	1.39	1.14
1104.3	1134.3	1.52	1.41	1.29	1104.3	1.69	2.28	2.95	464.3	1.77	1.41	1.16
1144.1	1174.1	1.49	1.39	1.28	1144.1	1.75	2.35	3.02	484.0	1.77	1.42	1.16
1203.8	1233.8	1.49	1.40	1.32	1203.8	1.81	2.38	3.02	503.8	1.75	1.40	1.15
1243.6	1273.6	1.46	1.40	1.34	1243.6	1.87	2.44	3.08	523.5	1.74	1.40	1.15
1303.3	1333.3	1.52	1.48	1.45	1303.3	1.91	2.44	3.03	543.3	1.74	1.39	1.15
1343.0	1373.0	1.57	1.56	1.55	1343.0	1.96	2.47	3.05	563.0	1.74	1.40	1.16
1402.7	1432.7	1.64	1.65	1.65	1402.7	2.01	2.48	3.04	582.8	1.75	1.41	1.17
1442.5	1472.5	1.69	1.70	1.71	1442.5	2.07	2.54	3.09	602.5	1.72	1.39	1.15
1502.2	1532.2	1.76	1.77	1.78	1502.2	2.20	2.64	3.17	622.3	1.71	1.38	1.16
1542.0	1572.0	1.73	1.73	1.74	1542.0	2.31	2.72	3.24	642.0	1.73	1.40	1.18
1601.7	1631.7	1.83	1.83	1.84	1601.7	2.48	2.85	3.33	661.8	1.74	1.41	1.19
1641.5	1671.5	1.77	1.77	1.78	1641.5	2.59	2.94	3.39	681.5	1.74	1.41	1.19
1701.2	1731.2	1.92	1.90	1.90	1701.2	2.75	3.06	3.45	701.3	1.71	1.39	1.17
1740.9	1770.9	1.85	1.84	1.85	1740.9	2.84	3.13	3.52	721.0	1.69	1.38	1.17
1800.6	1830.6	1.93	1.91	1.91	1800.6	2.96	3.21	3.56	740.8	1.69	1.39	1.19
1840.4	1870.4	1.97	1.96	1.97	1840.4	3.04	3.27	3.60	780.3	1.70	1.39	1.19
1900.1	1930.1	1.92	1.90	1.91	1900.1	3.08	3.28	3.58	800.0	1.67	1.37	1.17

Harmonics Tables

RF HARMONICS ORDER

RF CAL		Notes: 1. All Harmonics are relative to IF OUTPUT (dBm) 2. + entry denotes harmonics above IF OUTPUT (dBm)										
(-dBm)												
0	-	-	4	19	9	30	21	45	37	58	56	61
1	-	13	0	32	16	33	29	40	46	48	46	61
2	110	64	43	59	43	56	45	59	56	70	64	72
3	117	64	67	67	59	72	57	84	68	85	73	85
4	116	94	87	90	95	88	86	87	82	103	95	93
5	120	103	103	98	91	89	83	99	95	96	104	97
6	114	106	111	110	107	102	101	84	101	107	102	104
7	115	107	118	114	102	109	105	90	83	108	95	103
8	110	102	107	99	104	103	103	98	94	104	96	98
9	114	100	105	109	106	100	103	107	104	95	91	96
10	116	101	98	110	103	105	102	109	100	102	98	95
		0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 500.1 MHz; -14.00 dBm.
LO IN: 530.01 MHz; +4.00 dBm
IF OUT: 29.91 MHz; -21 dBm

RF HARMONICS ORDER

RF CAL		Notes: 1. All Harmonics are relative to IF OUTPUT (dBm) 2. + entry denotes harmonics above IF OUTPUT (dBm)										
(-dBm)												
0	-	-	13	28	21	44	34	58	50	66	66	78
1	-	13	0	31	16	37	30	45	49	54	55	71
2	95	57	36	64	35	54	38	57	51	68	68	78
3	111	43	49	47	50	58	44	53	66	58	58	66
4	110	91	59	65	56	63	60	62	56	70	67	75
5	114	70	76	66	53	69	53	65	56	69	65	80
6	114	95	84	82	80	79	69	79	66	89	69	89
7	118	98	87	90	78	83	78	77	77	81	94	79
8	114	100	102	99	93	105	86	100	82	101	82	94
9	123	109	112	109	101	100	104	90	88	91	87	90
10	112	109	125	109	109	103	101	105	102	103	100	100
		0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 500.1 MHz; -4.00 dBm.
LO IN: 530.01 MHz; +4.00 dBm
IF OUT: 29.91 MHz; -10.96 dBm