

Frequency Mixer

MBA-15MH+

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	CONVERSION LOSS IF FIXED @IF(OUT)=30MHz (dB)			RF (IN) (MHz)	LO (MHz)	IP3 INPUT (dBm)			RF (IN) (MHz)	LO (MHz)	COMPRESSION @RF IN=+8dBm (dB)		
		@LO (dBm)					@LO (dBm)					@LO (dBm)		
		+10	+13	+16			+10	+13	+16			+10	+13	+16
980.0	1010.0	17.30	10.87	9.36	980.0	1010.0	4.79	15.39	19.77	980.0	1010.0	-4.67	-0.15	0.35
1060.0	1090.0	12.04	8.83	8.11	1060.0	1090.0	9.89	17.00	28.43	1060.0	1090.0	-1.06	0.65	0.63
1140.0	1170.0	9.28	7.56	7.15	1140.0	1170.0	13.61	15.32	21.11	1140.0	1170.0	0.51	1.06	1.00
1220.0	1250.0	7.82	6.87	6.50	1220.0	1250.0	17.97	15.42	16.90	1220.0	1250.0	1.04	1.12	1.05
1300.0	1330.0	7.12	6.47	6.17	1300.0	1330.0	16.94	13.22	14.04	1300.0	1330.0	1.14	1.07	0.93
1380.0	1410.0	6.74	6.03	5.75	1380.0	1410.0	11.35	12.98	13.98	1380.0	1410.0	1.01	0.99	0.80
1460.0	1490.0	6.16	5.67	5.50	1460.0	1490.0	12.02	13.72	14.34	1460.0	1490.0	1.14	0.90	0.70
1540.0	1570.0	5.86	5.49	5.35	1540.0	1570.0	13.60	16.87	18.17	1540.0	1570.0	1.15	0.82	0.63
1620.0	1650.0	5.66	5.35	5.24	1620.0	1650.0	15.38	18.12	19.12	1620.0	1650.0	1.05	0.72	0.57
1700.0	1730.0	5.63	5.32	5.20	1700.0	1730.0	13.67	16.77	18.93	1700.0	1730.0	1.02	0.69	0.52
1780.0	1810.0	5.64	5.35	5.27	1780.0	1810.0	15.49	20.86	22.33	1780.0	1810.0	1.00	0.72	0.54
1860.0	1890.0	5.75	5.44	5.38	1860.0	1890.0	16.94	19.30	23.71	1860.0	1890.0	0.92	0.67	0.51
1940.0	1970.0	5.86	5.61	5.58	1940.0	1970.0	18.23	21.80	22.91	1940.0	1970.0	0.83	0.50	0.38
2020.0	2050.0	5.90	5.73	5.71	2020.0	2050.0	19.51	27.67	24.61	2020.0	2050.0	0.64	0.31	0.25
2100.0	2130.0	5.94	5.79	5.76	2100.0	2130.0	25.63	28.83	27.43	2100.0	2130.0	0.67	0.34	0.27
2200.0	2230.0	6.06	5.87	5.84	2200.0	2230.0	15.83	18.57	21.73	2200.0	2230.0	0.93	0.59	0.49
2280.0	2310.0	6.17	6.06	6.04	2280.0	2310.0	16.34	22.83	24.24	2280.0	2310.0	1.12	0.80	0.70
2380.0	2410.0	6.64	6.47	6.41	2380.0	2410.0	16.41	21.89	27.89	2380.0	2410.0	1.31	0.98	0.80
2460.0	2490.0	6.81	6.52	6.35	2460.0	2490.0	20.98	22.29	21.43	2460.0	2490.0	1.44	1.14	1.02
2560.0	2590.0	6.94	6.53	6.35	2560.0	2590.0	22.84	19.06	18.02	2560.0	2590.0	1.52	1.23	1.09
2640.0	2670.0	6.92	6.50	6.35	2640.0	2670.0	19.27	19.33	18.31	2640.0	2670.0	1.46	1.23	1.10
2740.0	2770.0	6.70	6.35	6.25	2740.0	2770.0	17.72	18.95	19.12	2740.0	2770.0	1.34	1.14	0.96
2820.0	2850.0	6.54	6.26	6.19	2820.0	2850.0	18.24	19.16	18.87	2820.0	2850.0	1.23	0.99	0.84
2920.0	2950.0	6.36	6.13	6.10	2920.0	2950.0	19.31	20.56	19.65	2920.0	2950.0	1.21	0.89	0.68
3000.0	3030.0	6.32	6.08	6.06	3000.0	3030.0	19.59	23.08	21.64	3000.0	3030.0	1.14	0.71	0.52
3100.0	3130.0	6.31	6.00	6.01	3100.0	3130.0	18.42	24.36	21.39	3100.0	3130.0	1.26	0.77	0.53
3180.0	3210.0	6.46	6.04	5.97	3180.0	3210.0	20.15	23.23	25.01	3180.0	3210.0	1.16	0.80	0.60
3280.0	3310.0	6.43	6.12	6.03	3280.0	3310.0	17.48	19.64	22.71	3280.0	3310.0	1.24	0.89	0.72
3360.0	3390.0	6.72	6.18	6.04	3360.0	3390.0	20.40	20.84	19.70	3360.0	3390.0	1.15	0.92	0.76
3460.0	3490.0	6.76	6.15	5.95	3460.0	3490.0	18.74	19.21	18.06	3460.0	3490.0	1.06	0.92	0.89
3540.0	3570.0	6.88	6.07	5.87	3540.0	3570.0	18.07	17.24	16.75	3540.0	3570.0	1.12	0.99	0.91
3640.0	3670.0	6.90	6.01	5.81	3640.0	3670.0	19.87	21.39	20.83	3640.0	3670.0	1.13	1.06	0.90
3720.0	3750.0	6.84	6.07	5.85	3720.0	3750.0	19.57	21.02	19.89	3720.0	3750.0	1.37	1.14	1.00
3820.0	3850.0	6.79	6.02	5.77	3820.0	3850.0	14.71	16.30	16.65	3820.0	3850.0	1.67	1.38	1.26
3900.0	3930.0	6.49	5.83	5.67	3900.0	3930.0	13.87	15.19	16.33	3900.0	3930.0	1.96	1.62	1.51
4000.0	4030.0	6.30	5.62	5.46	4000.0	4030.0	13.20	14.57	15.79	4000.0	4030.0	2.18	1.94	1.80
4080.0	4110.0	6.12	5.49	5.32	4080.0	4110.0	12.98	14.72	16.06	4080.0	4110.0	2.48	2.26	2.16
4180.0	4210.0	6.10	5.56	5.35	4180.0	4210.0	13.41	15.60	16.64	4180.0	4210.0	2.66	2.43	2.32
4260.0	4290.0	6.18	5.74	5.50	4260.0	4290.0	13.52	15.69	16.76	4260.0	4290.0	2.73	2.48	2.40
4360.0	4390.0	6.51	6.19	6.03	4360.0	4390.0	11.81	12.75	14.22	4360.0	4390.0	2.62	2.38	2.20

Frequency Mixer

MBA-15MH+

Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1900MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1389.9MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=2410.1MHz (dB)
		@LO (dBm)			@LO (dBm)			@LO (dBm)
		+13			+13			+13
970.0	930.0	10.38	10.1	1400.0	6.25	1170.1	1240.0	10.60
929.1	970.9	8.36	30.1	1420.0	5.95	1150.1	1260.0	10.00
888.3	1011.7	7.92	50.1	1440.0	5.93	1110.1	1300.0	9.15
847.4	1052.6	7.68	70.1	1460.0	5.96	1090.1	1320.0	8.92
806.6	1093.4	7.44	90.1	1480.0	5.92	1050.1	1360.0	8.28
765.7	1134.3	6.92	110.1	1500.0	5.93	1030.1	1380.0	7.93
724.9	1175.1	6.31	130.1	1520.0	6.01	990.1	1420.0	7.32
663.6	1236.4	5.97	150.1	1540.0	6.05	970.1	1440.0	7.08
622.8	1277.2	5.84	170.1	1560.0	6.04	930.1	1480.0	6.43
561.5	1338.5	5.69	190.1	1580.0	6.03	910.1	1500.0	6.14
520.6	1379.4	5.51	230.1	1620.0	6.15	870.1	1540.0	5.83
459.4	1440.6	5.49	250.1	1640.0	6.20	850.1	1560.0	5.67
418.5	1481.5	5.45	290.1	1680.0	6.23	810.1	1600.0	5.72
357.2	1542.8	5.37	310.1	1700.0	6.34	790.1	1620.0	5.79
316.4	1583.6	5.31	350.1	1740.0	6.55	750.1	1660.0	6.04
255.1	1644.9	5.22	370.1	1760.0	6.55	730.1	1680.0	6.21
214.3	1685.7	5.24	410.1	1800.0	6.62	690.1	1720.0	6.46
153.0	1747.0	5.29	430.1	1820.0	6.74	670.1	1740.0	6.57
112.1	1787.9	5.37	470.1	1860.0	6.76	630.1	1780.0	6.61
50.9	1849.1	5.34	490.1	1880.0	6.83	610.1	1800.0	6.58
10.0	1890.0	5.75	530.1	1920.0	6.99	570.1	1840.0	6.65
49.1	1949.1	5.52	550.1	1940.0	6.97	550.1	1860.0	6.57
88.3	1988.3	5.65	590.1	1980.0	6.93	510.1	1900.0	6.52
147.0	2047.0	5.81	610.1	2000.0	6.90	490.1	1920.0	6.56
186.2	2086.2	5.84	650.1	2040.0	6.85	450.1	1960.0	6.48
244.9	2144.9	5.84	670.1	2060.0	6.92	430.1	1980.0	6.44
284.0	2184.0	5.83	710.1	2100.0	6.84	390.1	2020.0	6.31
342.8	2242.8	5.84	730.1	2120.0	7.03	370.1	2040.0	6.31
381.9	2281.9	5.92	770.1	2160.0	7.15	330.1	2080.0	6.22
440.6	2340.6	6.03	790.1	2180.0	7.19	310.1	2100.0	6.14
479.8	2379.8	6.19	830.1	2220.0	7.32	270.1	2140.0	6.21
538.5	2438.5	6.31	850.1	2240.0	7.32	250.1	2160.0	6.23
577.7	2477.7	6.55	890.1	2280.0	7.64	210.1	2200.0	6.38
636.4	2536.4	6.86	910.1	2300.0	7.92	190.1	2220.0	6.44
675.5	2575.5	7.15	950.1	2340.0	8.28	150.1	2260.0	6.58
734.3	2634.3	7.68	970.1	2360.0	8.53	130.1	2280.0	6.61
773.4	2673.4	8.19	1010.1	2400.0	9.17	90.1	2320.0	6.59
832.1	2732.1	9.04	1030.1	2420.0	9.21	70.1	2340.0	6.62
871.3	2771.3	9.72	1070.1	2460.0	9.92	30.1	2380.0	6.61
930.0	2830.0	10.49	1090.1	2480.0	10.42	10.1	2400.0	6.87

Frequency Mixer

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Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)		
	@LO (dBm)			@LO (dBm)		
	+10	+13	+16	+10	+13	+16
1010.0	32.27	31.42	35.51	13.33	13.98	15.13
1090.0	29.72	31.09	35.33	13.33	14.20	14.84
1170.0	27.97	30.68	34.16	13.67	14.31	14.46
1250.0	27.62	30.96	34.82	14.37	14.73	14.58
1330.0	27.47	30.73	34.17	15.25	15.22	14.80
1410.0	27.17	30.30	34.05	16.35	15.94	15.43
1490.0	26.47	30.05	34.34	17.73	16.94	16.18
1570.0	26.07	30.53	35.05	19.27	18.14	17.32
1650.0	26.73	31.68	34.36	21.04	19.56	18.62
1730.0	28.43	32.65	33.11	23.10	21.38	20.36
1810.0	30.16	32.54	31.12	25.01	23.56	22.68
1890.0	31.88	30.07	28.14	26.97	25.91	25.40
1970.0	31.11	28.07	26.53	27.01	27.45	27.81
2050.0	29.49	26.63	25.28	25.10	26.42	27.47
2130.0	28.92	25.60	24.14	23.31	24.40	25.28
2230.0	28.00	25.25	23.85	21.69	22.15	22.55
2310.0	26.82	24.50	23.19	20.93	20.92	20.86
2410.0	26.16	24.61	23.58	19.67	19.51	19.28
2490.0	25.77	24.92	24.17	18.23	18.32	18.26
2590.0	26.01	25.77	25.31	16.70	16.54	16.81
2670.0	26.33	26.73	26.64	15.75	15.50	15.82
2770.0	25.63	26.56	26.52	14.74	14.68	14.87
2850.0	24.92	25.83	25.97	13.89	14.17	14.51
2950.0	24.47	24.50	24.19	13.11	13.54	14.00
3030.0	24.90	24.29	23.81	12.41	12.93	13.82
3130.0	26.46	25.74	24.36	11.86	12.40	13.24
3210.0	26.55	26.57	25.37	11.64	12.12	13.11
3310.0	25.56	25.67	25.18	11.41	12.06	13.00
3390.0	24.08	24.05	23.83	11.28	12.05	13.19
3490.0	22.99	23.01	22.81	10.91	11.89	13.28
3570.0	22.89	22.91	22.53	10.61	11.49	13.05
3670.0	22.19	21.68	21.90	10.60	10.98	12.65
3750.0	21.19	20.48	20.73	10.64	10.72	12.30
3850.0	20.06	19.27	19.44	10.62	10.69	12.30
3930.0	19.90	19.15	19.21	10.64	10.70	12.33
4030.0	20.04	19.58	19.42	10.54	10.65	12.27
4110.0	20.47	20.44	20.36	10.51	10.72	12.26
4210.0	20.75	21.37	21.71	10.47	10.65	12.06
4290.0	21.33	22.41	23.36	10.40	10.71	12.06
4390.0	22.36	23.88	25.31	10.38	10.78	12.07

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB)		
		@LO (dBm)		
		+10	+13	+16
980.0	1010.0	27.45	19.04	16.46
1060.0	1090.0	23.91	18.98	17.37
1140.0	1170.0	22.66	20.96	20.26
1220.0	1250.0	22.37	21.93	22.01
1300.0	1330.0	21.69	21.40	21.22
1380.0	1410.0	20.89	20.49	20.33
1460.0	1490.0	20.19	20.02	19.85
1540.0	1570.0	19.34	19.27	19.13
1620.0	1650.0	18.48	18.58	18.57
1700.0	1730.0	17.83	17.94	18.01
1780.0	1810.0	17.21	17.24	17.23
1860.0	1890.0	16.45	16.54	16.57
1940.0	1970.0	15.33	15.46	15.57
2020.0	2050.0	14.57	14.62	14.72
2100.0	2130.0	14.09	14.02	14.06
2200.0	2230.0	13.89	13.91	13.97
2280.0	2310.0	13.60	13.70	13.80
2380.0	2410.0	13.36	13.61	13.86
2460.0	2490.0	13.73	14.04	14.23
2560.0	2590.0	15.13	15.36	15.57
2640.0	2670.0	16.57	16.87	17.05
2740.0	2770.0	17.71	17.98	18.23
2820.0	2850.0	18.29	18.37	18.49
2920.0	2950.0	19.03	19.01	19.02
3000.0	3030.0	19.75	19.80	19.64
3100.0	3130.0	21.01	20.73	20.52
3180.0	3210.0	21.17	20.85	20.73
3280.0	3310.0	20.49	19.85	19.58
3360.0	3390.0	20.22	19.31	18.48
3460.0	3490.0	19.50	18.50	17.65
3540.0	3570.0	19.29	18.12	17.13
3640.0	3670.0	19.15	17.72	17.17
3720.0	3750.0	19.14	17.60	16.81
3820.0	3850.0	18.16	16.61	15.92
3900.0	3930.0	17.46	16.15	15.53
4000.0	4030.0	17.32	16.13	15.59
4080.0	4110.0	17.41	16.47	16.14
4180.0	4210.0	17.34	16.11	16.52
4260.0	4290.0	17.32	15.70	16.29
4360.0	4390.0	17.29	16.10	16.03

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Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1)		
		@LO (dBm)		
		+10	+13	+16
980.0	1010.0	11.53	7.02	5.77
1060.0	1090.0	7.53	5.16	4.54
1140.0	1170.0	5.46	4.09	3.65
1220.0	1250.0	4.44	3.55	3.07
1300.0	1330.0	3.63	3.04	2.63
1380.0	1410.0	3.09	2.47	2.15
1460.0	1490.0	2.49	2.07	1.86
1540.0	1570.0	2.10	1.76	1.61
1620.0	1650.0	1.85	1.58	1.44
1700.0	1730.0	1.75	1.50	1.37
1780.0	1810.0	1.56	1.37	1.31
1860.0	1890.0	1.47	1.31	1.29
1940.0	1970.0	1.35	1.28	1.32
2020.0	2050.0	1.29	1.32	1.38
2100.0	2130.0	1.30	1.32	1.38
2200.0	2230.0	1.32	1.31	1.35
2280.0	2310.0	1.39	1.36	1.37
2380.0	2410.0	1.70	1.61	1.56
2460.0	2490.0	2.09	1.96	1.86
2560.0	2590.0	2.52	2.28	2.13
2640.0	2670.0	2.84	2.54	2.36
2740.0	2770.0	2.88	2.59	2.39
2820.0	2850.0	2.86	2.56	2.35
2920.0	2950.0	2.80	2.48	2.26
3000.0	3030.0	2.74	2.38	2.17
3100.0	3130.0	2.80	2.33	2.10
3180.0	3210.0	2.87	2.37	2.10
3280.0	3310.0	2.68	2.31	2.09
3360.0	3390.0	2.66	2.20	1.93
3460.0	3490.0	2.51	2.06	1.79
3540.0	3570.0	2.52	1.94	1.64
3640.0	3670.0	2.40	1.80	1.54
3720.0	3750.0	2.29	1.79	1.56
3820.0	3850.0	2.05	1.62	1.41
3900.0	3930.0	1.81	1.44	1.27
4000.0	4030.0	1.54	1.22	1.07
4080.0	4110.0	1.39	1.15	1.12
4180.0	4210.0	1.36	1.28	1.38
4260.0	4290.0	1.52	1.49	1.58
4360.0	4390.0	1.72	1.72	1.87

LO (MHz)	LO VSWR (:1)		
	@LO (dBm)		
	+10	+13	+16
1010.0	15.00	8.39	5.56
1090.0	10.89	5.33	4.32
1170.0	7.02	4.03	3.74
1250.0	4.63	3.27	3.31
1330.0	3.60	2.95	3.19
1410.0	3.03	2.72	3.00
1490.0	2.57	2.37	2.77
1570.0	2.19	2.10	2.59
1650.0	1.86	1.88	2.45
1730.0	1.63	1.76	2.37
1810.0	1.48	1.66	2.31
1890.0	1.41	1.61	2.26
1970.0	1.35	1.53	2.19
2050.0	1.24	1.43	2.09
2130.0	1.17	1.36	1.98
2230.0	1.24	1.31	1.90
2310.0	1.29	1.27	1.82
2410.0	1.38	1.28	1.78
2490.0	1.43	1.28	1.74
2590.0	1.47	1.29	1.73
2670.0	1.49	1.31	1.71
2770.0	1.49	1.34	1.75
2850.0	1.47	1.36	1.78
2950.0	1.47	1.36	1.77
3030.0	1.55	1.43	1.82
3130.0	1.66	1.52	1.88
3210.0	1.76	1.62	1.94
3310.0	1.95	1.71	1.96
3390.0	2.15	1.80	1.95
3490.0	2.36	1.85	1.88
3570.0	2.57	1.92	1.82
3670.0	2.63	1.95	1.75
3750.0	2.65	1.93	1.65
3850.0	2.65	1.85	1.52
3930.0	2.49	1.69	1.37
4030.0	2.24	1.49	1.20
4110.0	2.02	1.33	1.12
4210.0	1.73	1.16	1.26
4290.0	1.50	1.18	1.45
4390.0	1.34	1.38	1.75

IF (OUT) (MHz)	IF VSWR @LO=2400MHz (:1)		
	@LO (dBm)		
	+10	+13	+16
10.0	1.15	1.35	1.50
30.0	1.15	1.34	1.50
50.0	1.16	1.32	1.47
70.0	1.20	1.34	1.48
90.0	1.24	1.37	1.51
110.0	1.25	1.37	1.50
130.0	1.27	1.35	1.46
150.0	1.32	1.37	1.47
170.0	1.39	1.44	1.52
190.0	1.43	1.47	1.54
210.0	1.41	1.44	1.50
230.0	1.45	1.45	1.50
250.0	1.55	1.53	1.56
270.0	1.59	1.56	1.58
290.0	1.60	1.57	1.60
310.0	1.63	1.58	1.59
330.0	1.69	1.61	1.59
350.0	1.74	1.66	1.64
370.0	1.82	1.74	1.71
390.0	1.83	1.73	1.69
410.0	1.83	1.71	1.65
430.0	1.91	1.78	1.72
450.0	2.02	1.88	1.80
470.0	2.05	1.90	1.82
490.0	2.02	1.86	1.76
510.0	2.10	1.93	1.82
530.0	2.22	2.03	1.90
550.0	2.26	2.06	1.92
590.0	2.34	2.12	1.96
610.0	2.40	2.17	2.00
650.0	2.63	2.37	2.18
670.0	2.60	2.34	2.14
710.0	2.78	2.51	2.31
730.0	2.96	2.68	2.46
770.0	2.95	2.68	2.46
790.0	3.09	2.82	2.60
830.0	3.33	3.04	2.83
850.0	3.36	3.09	2.89
890.0	3.50	3.26	3.09
910.0	3.68	3.45	3.29

Harmonics Tables

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	2	9	1	24	11	46	25	39	45	40
1	-	11	+0	23	15	22	25	34	52	44	47	52
2	73	53	52	45	48	54	42	56	42	61	54	58
3	>90	56	58	63	62	59	55	54	63	68	63	74
4	>90	>77	75	>77	>77	66	74	74	74	>77	71	>77
5	>90	>77	>77	>77	>77	>77	>77	>77	>77	>77	>77	>77
6	>90	>77	>77	>77	>77	>77	>77	>77	>77	>77	>77	>77
7	>90	>77	>77	>77	>77	>77	>77	>77	>77	>77	>77	>77
8	>90	>77	>77	>77	>77	>77	>77	>77	>77	>77	>77	>77
9	>90	>77	>77	>77	>77	>77	>77	>77	>77	>77	>77	>77
10	>90	>77	>77	>77	>77	>77	>77	>77	>77	>77	>77	>77
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 1900 MHz; -7.00 dBm.
 LO IN: 1930 MHz; +13.00 dBm
 IF OUT: 30 MHz; -12.6 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	11	20	12	38	25	46	39	49	55	67
1	-	11	+0	24	16	26	27	38	44	51	61	58
2	53	40	50	43	47	40	36	51	39	74	55	72
3	89	39	37	47	38	40	36	39	45	49	61	63
4	>90	62	54	53	59	48	55	55	57	64	49	73
5	>90	62	74	61	72	63	56	56	50	51	61	58
6	>90	78	68	71	63	67	68	57	65	61	69	72
7	>90	85	79	81	>87	74	78	84	64	74	62	63
8	>90	83	>87	85	84	78	77	87	82	69	79	71
9	>90	>87	>87	>87	>87	>87	>87	85	>87	>87	79	81
10	>90	>87	>87	>87	>87	>87	>87	84	>87	>87	>87	>87
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 1900 MHz; 3.00 dBm.
 LO IN: 1930 MHz; +13.00 dBm
 IF OUT: 30 MHz; -2.77 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.