

Frequency Mixer

TUF-11ALHSM

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	CONVERSION LOSS IF FIXED @IF(OUT)=40MHz (dB)			RF (IN) (MHz)	LO (MHz)	IP3 INPUT (dBm)			RF (IN) (MHz)	LO (MHz)	COMPRESSION @RF IN=+5dBm (dB)		
		@LO (dBm)					@LO (dBm)					@LO (dBm)		
		+7	+10	+13			+7	+10	+13			+7	+10	+13
800.1	840.1	10.73	10.10	9.76	800.1	840.1	20.20	23.37	24.54	800.1	840.1	0.52	0.51	0.46
880.6	920.6	8.99	8.59	8.38	880.6	920.6	19.32	20.89	20.90	880.6	920.6	1.37	1.13	0.92
961.1	1001.1	8.03	7.72	7.55	961.1	1001.1	17.40	19.24	21.09	961.1	1001.1	1.39	1.13	0.91
1041.6	1081.6	7.76	7.47	7.29	1041.6	1081.6	18.30	19.61	21.34	1041.6	1081.6	1.08	0.76	0.57
1122.1	1162.1	7.86	7.56	7.42	1122.1	1162.1	18.63	21.17	22.20	1122.1	1162.1	0.84	0.48	0.35
1202.6	1242.6	8.07	7.72	7.59	1202.6	1242.6	20.32	21.51	22.89	1202.6	1242.6	0.83	0.49	0.34
1283.1	1323.1	8.34	7.81	7.60	1283.1	1323.1	22.98	22.75	22.41	1283.1	1323.1	0.96	0.71	0.51
1363.6	1403.6	8.45	7.80	7.50	1363.6	1403.6	22.30	26.19	23.95	1363.6	1403.6	1.13	0.92	0.74
1444.1	1484.1	8.35	7.64	7.27	1444.1	1484.1	19.30	21.54	23.37	1444.1	1484.1	1.38	1.24	1.06
1524.6	1564.6	8.21	7.40	7.01	1524.6	1564.6	17.57	19.57	20.91	1524.6	1564.6	1.62	1.50	1.31
1605.1	1645.1	8.01	7.13	6.74	1605.1	1645.1	16.75	18.19	18.92	1605.1	1645.1	1.80	1.76	1.50
1685.6	1725.6	7.90	6.96	6.56	1685.6	1725.6	16.05	18.02	18.95	1685.6	1725.6	2.00	1.87	1.64
1766.1	1806.1	7.81	6.95	6.56	1766.1	1806.1	15.29	16.90	17.57	1766.1	1806.1	2.00	1.87	1.60
1846.6	1886.6	7.81	6.91	6.51	1846.6	1886.6	14.60	16.17	17.94	1846.6	1886.6	2.01	1.83	1.57
1927.1	1967.1	7.74	6.84	6.50	1927.1	1967.1	14.86	16.37	18.05	1927.1	1967.1	2.08	1.86	1.61
2007.6	2047.6	7.68	6.88	6.52	2007.6	2047.6	15.35	17.30	18.11	2007.6	2047.6	1.99	1.79	1.54
2088.2	2128.2	7.63	6.85	6.51	2088.2	2128.2	15.74	17.19	19.01	2088.2	2128.2	2.10	1.79	1.55
2168.7	2208.7	7.77	6.99	6.58	2168.7	2208.7	15.60	16.93	18.84	2168.7	2208.7	2.08	1.74	1.49
2249.2	2289.2	7.89	7.09	6.76	2249.2	2289.2	15.46	16.60	18.15	2249.2	2289.2	2.07	1.71	1.43
2329.7	2369.7	7.94	7.14	6.75	2329.7	2369.7	15.93	17.62	19.00	2329.7	2369.7	1.86	1.63	1.36
2410.2	2450.2	7.95	7.27	6.86	2410.2	2450.2	17.81	17.64	18.87	2410.2	2450.2	1.77	1.45	1.26
2490.7	2530.7	8.00	7.35	6.97	2490.7	2530.7	17.91	18.80	19.39	2490.7	2530.7	1.94	1.54	1.28
2571.2	2611.2	8.05	7.42	7.09	2571.2	2611.2	17.65	19.49	19.76	2571.2	2611.2	1.93	1.48	1.17
2651.7	2691.7	8.10	7.52	7.21	2651.7	2691.7	17.92	18.64	19.25	2651.7	2691.7	1.96	1.44	1.12
2732.2	2772.2	8.17	7.62	7.29	2732.2	2772.2	19.32	20.32	20.30	2732.2	2772.2	1.84	1.36	1.03
2812.7	2852.7	8.24	7.67	7.34	2812.7	2852.7	19.45	20.48	20.62	2812.7	2852.7	1.89	1.32	1.09
2893.2	2933.2	8.25	7.70	7.38	2893.2	2933.2	19.34	21.48	21.41	2893.2	2933.2	2.11	1.43	1.04
2973.7	3013.7	8.27	7.74	7.47	2973.7	3013.7	20.02	21.11	23.30	2973.7	3013.7	2.17	1.38	1.00
3054.2	3094.2	8.34	7.76	7.47	3054.2	3094.2	19.48	23.88	23.13	3054.2	3094.2	2.26	1.36	0.97
3134.7	3174.7	8.44	7.83	7.52	3134.7	3174.7	19.92	21.85	24.41	3134.7	3174.7	2.41	1.43	0.95
3215.2	3255.2	8.63	7.94	7.56	3215.2	3255.2	17.94	20.29	21.95	3215.2	3255.2	2.39	1.39	0.91
3295.7	3335.7	8.92	8.15	7.70	3295.7	3335.7	19.53	20.30	22.81	3295.7	3335.7	2.46	1.34	0.86
3376.2	3416.2	9.30	8.54	8.01	3376.2	3416.2	19.86	19.41	20.70	3376.2	3416.2	2.64	1.35	0.78
3456.7	3496.7	9.60	8.75	8.23	3456.7	3496.7	19.78	22.38	20.82	3456.7	3496.7	2.69	1.37	0.72
3537.2	3577.2	9.83	8.93	8.40	3537.2	3577.2	20.18	21.07	20.04	3537.2	3577.2	2.62	1.27	0.62
3637.8	3677.8	10.29	9.21	8.76	3637.8	3677.8	19.44	25.85	23.29	3637.8	3677.8	2.59	1.28	0.48
3718.3	3758.3	10.75	9.36	8.94	3718.3	3758.3	18.10	21.16	22.63	3718.3	3758.3	2.73	1.49	0.61
3819.0	3859.0	11.41	9.65	9.16	3819.0	3859.0	16.98	20.19	23.31	3819.0	3859.0	2.16	1.49	0.58
3899.5	3939.5	12.32	9.83	9.15	3899.5	3939.5	15.14	17.53	23.47	3899.5	3939.5	1.53	1.55	0.63
4000.1	4040.1	13.77	10.48	9.30	4000.1	4040.1	14.39	19.54	19.94	4000.1	4040.1	0.60	1.28	0.57



Frequency Mixer

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Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1650.1MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1400.1MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1900.1MHz (dB)
		@LO (dBm)			@LO (dBm)			@LO (dBm)
		+10			+10			+10
250.0	1400.1	6.74	40.0	1440.1	7.71	500.0	1400.1	6.20
237.4	1412.7	6.81	51.8	1451.9	7.69	488.2	1411.9	6.22
224.7	1425.4	6.82	63.6	1463.7	7.75	476.4	1423.7	6.20
212.1	1438.0	6.77	75.4	1475.5	7.70	464.6	1435.5	6.23
199.5	1450.6	6.84	87.2	1487.3	7.75	452.8	1447.3	6.22
186.8	1463.3	6.81	99.0	1499.1	7.82	441.0	1459.1	6.23
174.2	1475.9	6.82	110.8	1510.9	7.77	429.2	1470.9	6.27
161.6	1488.5	6.86	122.6	1522.7	7.76	417.4	1482.7	6.29
148.9	1501.2	6.82	134.4	1534.5	7.81	405.6	1494.5	6.28
136.3	1513.8	6.87	146.2	1546.3	7.76	393.8	1506.3	6.31
123.7	1526.4	6.90	157.9	1558.0	7.84	382.1	1518.0	6.29
111.1	1539.0	6.86	169.7	1569.8	7.90	370.3	1529.8	6.29
98.4	1551.7	6.93	181.5	1581.6	7.85	358.5	1541.6	6.34
85.8	1564.3	6.94	193.3	1593.4	7.90	346.7	1553.4	6.33
73.2	1576.9	6.91	205.1	1605.2	7.94	334.9	1565.2	6.35
60.5	1589.6	7.02	216.9	1617.0	7.88	323.1	1577.0	6.40
47.9	1602.2	7.03	228.7	1628.8	7.91	311.3	1588.8	6.39
35.3	1614.8	7.10	240.5	1640.6	7.89	299.5	1600.6	6.39
22.6	1627.5	7.32	252.3	1652.4	7.81	287.7	1612.4	6.45
10.0	1640.1	7.79	264.1	1664.2	7.86	275.9	1624.2	6.42
10.0	1660.1	7.67	275.9	1676.0	7.86	264.1	1636.0	6.42
22.6	1672.7	7.09	287.7	1687.8	7.80	252.3	1647.8	6.47
35.3	1685.4	7.08	299.5	1699.6	7.82	240.5	1659.6	6.46
47.9	1698.0	7.05	311.3	1711.4	7.80	228.7	1671.4	6.50
60.5	1710.6	7.03	323.1	1723.2	7.76	216.9	1683.2	6.58
73.2	1723.3	7.09	334.9	1735.0	7.78	205.1	1695.0	6.54
85.8	1735.9	7.04	346.7	1746.8	7.75	193.3	1706.8	6.60
98.4	1748.5	7.04	358.5	1758.6	7.73	181.5	1718.6	6.66
111.1	1761.2	7.08	370.3	1770.4	7.79	169.7	1730.4	6.59
123.7	1773.8	7.03	382.1	1782.2	7.79	157.9	1742.2	6.64
136.3	1786.4	7.06	393.8	1793.9	7.80	146.2	1753.9	6.66
148.9	1799.0	7.06	405.6	1805.7	7.82	134.4	1765.7	6.65
161.6	1811.7	6.99	417.4	1817.5	7.77	122.6	1777.5	6.73
174.2	1824.3	7.01	429.2	1829.3	7.75	110.8	1789.3	6.77
186.8	1836.9	6.97	441.0	1841.1	7.74	99.0	1801.1	6.73
199.5	1849.6	6.95	452.8	1852.9	7.68	87.2	1812.9	6.79
212.1	1862.2	6.96	464.6	1864.7	7.70	75.4	1824.7	6.82
224.7	1874.8	6.94	476.4	1876.5	7.71	63.6	1836.5	6.80
237.4	1887.5	6.96	488.2	1888.3	7.65	51.8	1848.3	6.91
250.0	1900.1	7.00	500.0	1900.1	7.64	40.0	1860.1	6.95

Frequency Mixer

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Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)		
	@LO (dBm)			@LO (dBm)		
	+7	+10	+13	+7	+10	+13
800.1	43.47	46.79	49.27	23.04	22.27	21.88
880.6	40.06	43.90	48.13	23.06	22.39	21.92
961.1	37.68	41.30	45.54	23.27	22.51	22.05
1041.6	37.22	40.58	44.01	23.59	22.66	22.18
1122.1	36.99	39.85	42.77	24.17	23.09	22.53
1202.6	36.51	39.48	42.32	24.76	23.64	22.97
1283.1	35.75	39.04	42.32	25.51	24.36	23.43
1363.6	34.79	38.35	42.20	26.29	25.00	24.06
1444.1	33.95	37.41	41.35	27.12	25.68	24.61
1524.6	32.87	36.36	39.92	28.23	26.63	25.43
1605.1	32.35	35.61	38.86	29.16	27.65	26.25
1685.6	31.97	34.98	37.81	29.96	28.77	27.36
1766.1	31.61	34.18	36.71	30.69	30.12	29.08
1846.6	31.05	33.53	35.58	31.29	32.24	31.63
1927.1	30.71	33.03	34.36	32.30	35.66	35.82
2007.6	30.40	32.61	34.04	34.03	42.68	41.71
2088.2	30.31	32.17	33.84	38.86	48.12	36.52
2168.7	30.17	31.51	33.33	45.65	34.83	31.00
2249.2	29.98	31.10	32.64	35.00	29.46	27.49
2329.7	29.75	31.27	32.56	29.51	26.41	25.04
2410.2	29.48	31.19	33.04	26.28	24.42	23.60
2490.7	29.38	31.14	32.66	23.67	23.01	22.65
2571.2	29.19	31.27	32.79	21.95	21.79	21.80
2651.7	29.29	31.18	33.00	20.75	20.79	21.21
2732.2	29.34	31.34	33.12	19.81	20.18	20.64
2812.7	29.34	31.64	33.63	19.03	19.66	20.18
2893.2	29.47	31.90	34.27	18.56	19.27	19.91
2973.7	29.70	32.15	34.57	18.14	18.93	19.56
3054.2	29.95	32.25	34.59	17.79	18.54	19.25
3134.7	30.31	32.63	34.84	17.63	18.37	18.93
3215.2	30.68	32.94	35.31	17.56	18.24	18.79
3295.7	31.16	33.32	34.89	17.46	18.14	18.59
3376.2	31.60	34.15	36.08	17.42	17.99	18.39
3456.7	32.13	34.65	36.46	17.37	17.81	18.09
3537.2	32.40	34.78	36.21	17.42	17.74	17.96
3637.8	33.18	35.97	37.08	17.54	17.77	17.79
3718.3	33.56	36.35	38.01	17.63	17.64	17.68
3819.0	34.40	36.82	38.38	17.58	17.62	17.50
3899.5	35.39	37.75	38.49	17.60	17.51	17.23
4000.1	37.22	41.23	39.55	17.54	17.31	16.90

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB)		
		@LO (dBm)		
		+7	+10	+13
800.1	840.1	22.02	21.65	21.47
880.6	920.6	22.15	21.94	21.83
961.1	1001.1	22.55	22.71	22.87
1041.6	1081.6	23.14	23.47	23.75
1122.1	1162.1	22.81	23.09	23.23
1202.6	1242.6	21.99	22.20	22.28
1283.1	1323.1	21.75	21.97	22.10
1363.6	1403.6	21.78	22.01	22.19
1444.1	1484.1	22.60	22.83	23.06
1524.6	1564.6	24.10	24.34	24.58
1605.1	1645.1	26.35	26.68	26.97
1685.6	1725.6	29.33	29.62	30.05
1766.1	1806.1	33.42	33.81	34.15
1846.6	1886.6	38.17	38.17	38.61
1927.1	1967.1	39.04	38.32	37.64
2007.6	2047.6	36.19	35.13	34.02
2088.2	2128.2	33.49	32.23	30.94
2168.7	2208.7	31.91	30.75	29.13
2249.2	2289.2	30.53	29.16	28.06
2329.7	2369.7	29.62	27.90	26.76
2410.2	2450.2	28.97	27.61	26.39
2490.7	2530.7	28.64	27.20	26.27
2571.2	2611.2	28.66	27.19	26.20
2651.7	2691.7	28.28	27.20	26.33
2732.2	2772.2	27.98	27.07	26.04
2812.7	2852.7	27.77	27.02	26.26
2893.2	2933.2	27.61	26.95	26.14
2973.7	3013.7	27.57	26.97	26.39
3054.2	3094.2	27.37	26.77	26.20
3134.7	3174.7	27.04	26.67	26.27
3215.2	3255.2	26.58	26.47	26.33
3295.7	3335.7	26.23	25.62	25.45
3376.2	3416.2	25.91	25.38	25.18
3456.7	3496.7	25.56	25.04	24.86
3537.2	3577.2	24.91	24.53	24.21
3637.8	3677.8	24.17	23.81	23.46
3718.3	3758.3	23.60	23.49	23.00
3819.0	3859.0	22.67	22.72	22.17
3899.5	3939.5	21.88	22.35	21.86
4000.1	4040.1	20.92	21.89	21.58

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Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1)		
		@LO (dBm)		
		+7	+10	+13
800.1	840.1	7.28	6.89	6.66
880.6	920.6	4.99	4.73	4.56
961.1	1001.1	3.52	3.30	3.19
1041.6	1081.6	2.83	2.69	2.63
1122.1	1162.1	2.57	2.49	2.47
1202.6	1242.6	2.41	2.37	2.37
1283.1	1323.1	2.25	2.21	2.22
1363.6	1403.6	2.01	1.95	1.94
1444.1	1484.1	1.74	1.64	1.62
1524.6	1564.6	1.55	1.43	1.39
1605.1	1645.1	1.41	1.25	1.21
1685.6	1725.6	1.30	1.12	1.06
1766.1	1806.1	1.25	1.10	1.09
1846.6	1886.6	1.31	1.22	1.23
1927.1	1967.1	1.39	1.33	1.35
2007.6	2047.6	1.46	1.42	1.44
2088.2	2128.2	1.56	1.55	1.58
2168.7	2208.7	1.71	1.71	1.73
2249.2	2289.2	1.86	1.85	1.86
2329.7	2369.7	1.93	1.90	1.89
2410.2	2450.2	1.94	1.92	1.90
2490.7	2530.7	1.99	1.97	1.97
2571.2	2611.2	2.08	2.09	2.10
2651.7	2691.7	2.15	2.15	2.17
2732.2	2772.2	2.11	2.11	2.11
2812.7	2852.7	2.05	2.04	2.04
2893.2	2933.2	2.07	2.08	2.10
2973.7	3013.7	2.18	2.23	2.27
3054.2	3094.2	2.32	2.36	2.41
3134.7	3174.7	2.38	2.41	2.43
3215.2	3255.2	2.42	2.44	2.46
3295.7	3335.7	2.54	2.55	2.57
3376.2	3416.2	2.75	2.78	2.82
3456.7	3496.7	2.95	2.98	3.02
3537.2	3577.2	3.03	3.03	3.05
3637.8	3677.8	3.07	2.99	3.02
3718.3	3758.3	3.19	3.08	3.14
3819.0	3859.0	3.50	3.28	3.37
3899.5	3939.5	3.77	3.40	3.48
4000.1	4040.1	4.05	3.48	3.45

LO (MHz)	LO VSWR (:1)		
	@LO (dBm)		
	+7	+10	+13
800.1	1.46	1.90	2.44
880.6	1.49	1.87	2.37
961.1	1.53	1.86	2.34
1041.6	1.58	1.86	2.31
1122.1	1.62	1.84	2.26
1202.6	1.68	1.82	2.21
1283.1	1.75	1.83	2.17
1363.6	1.81	1.85	2.16
1444.1	1.84	1.85	2.14
1524.6	1.90	1.83	2.08
1605.1	1.94	1.81	2.00
1685.6	1.99	1.80	1.92
1766.1	2.02	1.79	1.84
1846.6	2.09	1.77	1.75
1927.1	2.15	1.75	1.65
2007.6	2.25	1.75	1.57
2088.2	2.27	1.75	1.49
2168.7	2.28	1.74	1.44
2249.2	2.26	1.73	1.41
2329.7	2.27	1.74	1.42
2410.2	2.27	1.75	1.44
2490.7	2.23	1.76	1.48
2571.2	2.22	1.78	1.54
2651.7	2.15	1.81	1.62
2732.2	2.12	1.84	1.70
2812.7	2.09	1.88	1.79
2893.2	2.04	1.90	1.87
2973.7	1.98	1.93	1.94
3054.2	1.94	1.97	2.04
3134.7	1.90	2.00	2.11
3215.2	1.86	2.02	2.17
3295.7	1.87	2.07	2.25
3376.2	1.96	2.19	2.40
3456.7	2.05	2.30	2.52
3537.2	2.11	2.36	2.60
3637.8	2.28	2.53	2.76
3718.3	2.44	2.66	2.90
3819.0	2.66	2.82	3.05
3899.5	2.89	2.99	3.19
4000.1	3.18	3.22	3.37

IF (OUT) (MHz)	IF VSWR @LO=1900.1MHz (:1)		
	@LO (dBm)		
	+7	+10	+13
40.0	1.44	1.27	1.20
51.8	1.39	1.20	1.13
63.6	1.34	1.16	1.09
75.4	1.33	1.13	1.07
87.2	1.36	1.16	1.06
99.0	1.40	1.19	1.08
110.8	1.41	1.20	1.08
122.6	1.40	1.19	1.08
134.4	1.39	1.18	1.08
146.2	1.37	1.17	1.09
157.9	1.37	1.16	1.08
169.7	1.36	1.16	1.06
181.5	1.35	1.15	1.04
193.3	1.35	1.14	1.04
205.1	1.36	1.15	1.06
216.9	1.38	1.18	1.09
228.7	1.39	1.18	1.10
240.5	1.37	1.17	1.09
252.3	1.34	1.14	1.07
264.1	1.32	1.13	1.07
275.9	1.32	1.13	1.08
287.7	1.33	1.14	1.09
299.5	1.34	1.15	1.08
311.3	1.34	1.15	1.07
323.1	1.33	1.13	1.07
334.9	1.32	1.13	1.09
346.7	1.31	1.14	1.11
358.5	1.31	1.14	1.12
370.3	1.31	1.13	1.10
382.1	1.29	1.11	1.09
393.8	1.27	1.10	1.10
405.6	1.26	1.10	1.12
417.4	1.26	1.11	1.13
429.2	1.26	1.11	1.14
441.0	1.25	1.10	1.13
452.8	1.23	1.09	1.14
464.6	1.21	1.09	1.16
476.4	1.20	1.11	1.19
488.2	1.21	1.13	1.20
500.0	1.21	1.13	1.20

Harmonics Tables

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	12	29	19	44	31	45	55	55	57	82
1	-	23	+0	38	16	42	47	52	61	62	66	74
2	>100	48	43	41	55	61	45	60	52	63	64	69
3	>100	40	37	54	31	59	49	50	63	64	62	81
4	>100	70	65	71	53	49	67	67	67	71	71	67
5	>100	65	70	55	52	58	43	73	51	71	67	76
6	>100	75	75	78	83	71	58	60	75	70	76	78
7	>100	79	87	83	81	74	62	73	56	86	73	74
8	>100	85	84	90	85	87	86	77	67	64	90	81
9	>100	>93	84	>93	>93	85	88	76	72	74	64	87
10	>100	>93	92	91	>93	>93	>93	90	>93	82	71	73
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 1650.1 MHz; 0.00 dBm.
 LO IN: 1690.01 MHz; +10.00 dBm
 IF OUT: 39.91 MHz; -7.25 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	2	20	8	30	17	32	40	43	48	62
1	-	24	+0	39	15	33	46	43	52	53	49	55
2	>100	58	52	46	59	62	52	67	54	57	66	60
3	>100	64	57	77	49	>83	58	74	69	80	73	>83
4	>100	>83	>83	>83	80	79	>83	>83	>83	>83	81	>83
5	>100	>83	>83	>83	>83	>83	80	>83	>83	>83	>83	>83
6	>100	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83
7	>100	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83
8	>100	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83
9	>100	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83	>83
10	>100	>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: 1650.1 MHz; -10.00 dBm.
 LO IN: 1690.01 MHz; +10.00 dBm
 IF OUT: 39.91 MHz; -17.15 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.

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