

# Frequency Multiplier (Tripler)

# RMK-3-153+

## Typical Performance Data

Test Conditions: RF Input Power = 7 dBm @ +25°C

FREQUENCY (MHz)				CONVERSION LOSS (dB)	HARMONIC OUTPUT* (-dBc)		
X1 OUTPUT	X2 OUTPUT	X3 OUTPUT	X4 OUTPUT	X3 OUTPUT	X1 OUTPUT	X2 OUTPUT	X4 OUTPUT
2600.0	5200.0	7800.0	10400.0	17.31	7.69	65.02	79.54
2640.0	5280.0	7920.0	10560.0	17.87	6.95	63.97	64.45
2680.0	5360.0	8040.0	10720.0	16.34	7.90	64.02	63.58
2720.0	5440.0	8160.0	10880.0	16.32	7.40	65.58	62.37
2760.0	5520.0	8280.0	11040.0	15.96	7.38	63.74	61.31
2800.0	5600.0	8400.0	11200.0	15.37	7.69	63.63	61.46
2840.0	5680.0	8520.0	11360.0	15.75	7.22	61.76	60.66
2880.0	5760.0	8640.0	11520.0	15.45	7.53	61.39	61.76
2920.0	5840.0	8760.0	11680.0	16.30	6.60	62.14	56.91
2960.0	5920.0	8880.0	11840.0	15.78	6.82	59.91	62.57
3000.0	6000.0	9000.0	12000.0	16.26	5.98	62.44	55.66
3135.0	6270.0	9405.0	12540.0	15.72	5.75	62.31	66.60
3270.0	6540.0	9810.0	13080.0	15.77	5.33	64.63	55.54
3405.0	6810.0	10215.0	13620.0	17.16	3.02	58.80	50.49
3540.0	7080.0	10620.0	14160.0	18.21	1.58	54.83	46.70
3675.0	7350.0	11025.0	14700.0	19.02	0.14	50.57	44.43
3810.0	7620.0	11430.0	15240.0	18.68	0.11	49.19	44.39
3945.0	7890.0	11835.0	15780.0	19.85	-1.83	47.47	44.89
4080.0	8160.0	12240.0	16320.0	18.20	-0.60	47.46	50.89
4215.0	8430.0	12645.0	16860.0	19.01	-2.00	43.23	55.85
4350.0	8700.0	13050.0	17400.0	16.43	-0.42	52.42	62.37
4385.0	8770.0	13155.0	17540.0	16.64	-0.64	64.55	64.63
4420.0	8840.0	13260.0	17680.0	17.07	-1.19	49.30	74.70
4455.0	8910.0	13365.0	17820.0	17.65	-1.93	45.22	69.04
4490.0	8980.0	13470.0	17960.0	17.38	-1.99	50.90	65.34
4525.0	9050.0	13575.0	18100.0	16.42	-1.39	59.77	68.91
4560.0	9120.0	13680.0	18240.0	15.90	-1.04	54.81	66.29
4595.0	9190.0	13785.0	18380.0	16.18	-1.42	53.21	66.09
4630.0	9260.0	13890.0	18520.0	16.31	-1.44	55.84	59.48
4665.0	9330.0	13995.0	18660.0	16.65	-1.81	53.41	61.99
4700.0	9400.0	14100.0	18800.0	16.63	-2.16	52.64	59.28
4730.0	9460.0	14190.0	18920.0	16.93	-2.51	49.33	55.20
4760.0	9520.0	14280.0	19040.0	17.15	-2.98	55.22	54.62
4790.0	9580.0	14370.0	19160.0	16.87	-2.91	53.11	53.81
4820.0	9640.0	14460.0	19280.0	17.33	-3.38	50.03	51.77
4850.0	9700.0	14550.0	19400.0	17.07	-3.35	45.12	51.99
4880.0	9760.0	14640.0	19520.0	17.49	-3.65	52.38	48.51
4910.0	9820.0	14730.0	19640.0	17.38	-3.65	51.87	51.14
4940.0	9880.0	14820.0	19760.0	18.91	-5.07	45.19	46.88
4970.0	9940.0	14910.0	19880.0	18.67	-4.92	43.20	45.67
5000.0	10000.0	15000.0	20000.0	18.34	-4.96	51.27	49.86

\* Harmonic Output below power level of X3 Output.



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# Frequency Multiplier (Tripler)

# RMK-3-153+

## Typical Performance Data

Test Conditions: RF Input Power = 7 dBm @ -40°C

FREQUENCY (MHz)				CONVERSION LOSS (dB)	HARMONIC OUTPUT* (-dBc)		
X1 OUTPUT	X2 OUTPUT	X3 OUTPUT	X4 OUTPUT	X3 OUTPUT	X1 OUTPUT	X2 OUTPUT	X4 OUTPUT
2600.0	5200.0	7800.0	10400.0	17.32	7.19	63.90	67.77
2640.0	5280.0	7920.0	10560.0	18.09	6.36	63.24	73.21
2680.0	5360.0	8040.0	10720.0	16.42	7.32	62.77	70.25
2720.0	5440.0	8160.0	10880.0	16.27	6.93	64.50	66.39
2760.0	5520.0	8280.0	11040.0	15.48	7.22	63.97	62.95
2800.0	5600.0	8400.0	11200.0	14.94	7.65	63.31	60.74
2840.0	5680.0	8520.0	11360.0	15.37	7.12	61.82	58.60
2880.0	5760.0	8640.0	11520.0	15.02	7.65	60.45	60.28
2920.0	5840.0	8760.0	11680.0	16.27	6.21	58.78	55.43
2960.0	5920.0	8880.0	11840.0	15.27	6.84	57.39	61.44
3000.0	6000.0	9000.0	12000.0	16.35	5.36	57.84	54.07
3135.0	6270.0	9405.0	12540.0	15.71	5.53	56.16	60.22
3270.0	6540.0	9810.0	13080.0	15.29	5.10	59.72	54.45
3405.0	6810.0	10215.0	13620.0	17.01	2.76	54.54	47.78
3540.0	7080.0	10620.0	14160.0	17.56	1.71	53.25	46.44
3675.0	7350.0	11025.0	14700.0	18.52	0.10	47.81	43.40
3810.0	7620.0	11430.0	15240.0	18.75	-0.43	45.73	42.71
3945.0	7890.0	11835.0	15780.0	19.43	-1.77	43.34	43.17
4080.0	8160.0	12240.0	16320.0	18.07	-0.85	42.63	48.43
4215.0	8430.0	12645.0	16860.0	20.02	-3.23	36.78	50.72
4350.0	8700.0	13050.0	17400.0	16.45	-0.69	44.66	64.93
4385.0	8770.0	13155.0	17540.0	16.70	-0.98	48.26	72.76
4420.0	8840.0	13260.0	17680.0	17.57	-1.93	40.96	62.49
4455.0	8910.0	13365.0	17820.0	18.16	-2.71	37.79	60.93
4490.0	8980.0	13470.0	17960.0	17.25	-2.28	44.70	63.00
4525.0	9050.0	13575.0	18100.0	16.01	-1.42	55.62	69.10
4560.0	9120.0	13680.0	18240.0	15.45	-1.00	54.10	68.97
4595.0	9190.0	13785.0	18380.0	15.90	-1.39	52.33	64.55
4630.0	9260.0	13890.0	18520.0	15.87	-1.37	58.44	59.14
4665.0	9330.0	13995.0	18660.0	16.53	-1.91	48.34	59.59
4700.0	9400.0	14100.0	18800.0	16.41	-2.50	49.93	57.15
4730.0	9460.0	14190.0	18920.0	16.49	-2.58	48.46	54.91
4760.0	9520.0	14280.0	19040.0	16.52	-2.86	57.82	56.62
4790.0	9580.0	14370.0	19160.0	16.09	-2.77	51.93	53.14
4820.0	9640.0	14460.0	19280.0	16.90	-3.46	48.14	52.30
4850.0	9700.0	14550.0	19400.0	16.62	-3.20	44.11	49.74
4880.0	9760.0	14640.0	19520.0	17.06	-3.52	52.69	48.34
4910.0	9820.0	14730.0	19640.0	16.91	-3.55	50.41	49.90
4940.0	9880.0	14820.0	19760.0	18.59	-5.21	43.68	45.08
4970.0	9940.0	14910.0	19880.0	17.97	-4.65	44.25	45.60
5000.0	10000.0	15000.0	20000.0	18.10	-5.16	50.48	46.94

\* Harmonic Output below power level of X3 Output.



# Frequency Multiplier (Tripler)

# RMK-3-153+

## Typical Performance Data

Test Conditions: RF Input Power = 7 dBm @ +85°C

FREQUENCY (MHz)				CONVERSION LOSS (dB)	HARMONIC OUTPUT* (-dBc)		
X1 OUTPUT	X2 OUTPUT	X3 OUTPUT	X4 OUTPUT	X3 OUTPUT	X1 OUTPUT	X2 OUTPUT	X4 OUTPUT
2600.0	5200.0	7800.0	10400.0	17.36	7.83	65.68	84.47
2640.0	5280.0	7920.0	10560.0	17.94	7.07	64.19	63.09
2680.0	5360.0	8040.0	10720.0	16.34	8.02	64.56	64.38
2720.0	5440.0	8160.0	10880.0	16.23	7.62	66.44	63.65
2760.0	5520.0	8280.0	11040.0	15.82	7.55	64.08	63.35
2800.0	5600.0	8400.0	11200.0	15.20	7.97	64.41	63.22
2840.0	5680.0	8520.0	11360.0	15.72	7.36	62.75	61.62
2880.0	5760.0	8640.0	11520.0	15.58	7.65	62.27	62.12
2920.0	5840.0	8760.0	11680.0	16.18	7.01	64.12	57.32
2960.0	5920.0	8880.0	11840.0	15.88	6.95	61.79	61.61
3000.0	6000.0	9000.0	12000.0	16.23	6.19	64.11	56.33
3135.0	6270.0	9405.0	12540.0	15.60	6.14	65.38	65.11
3270.0	6540.0	9810.0	13080.0	16.30	4.87	69.28	56.88
3405.0	6810.0	10215.0	13620.0	17.45	2.92	60.86	51.08
3540.0	7080.0	10620.0	14160.0	18.97	1.05	55.51	46.33
3675.0	7350.0	11025.0	14700.0	19.03	0.28	51.87	45.25
3810.0	7620.0	11430.0	15240.0	18.58	0.39	51.11	45.45
3945.0	7890.0	11835.0	15780.0	19.34	-0.95	49.95	46.61
4080.0	8160.0	12240.0	16320.0	18.82	-1.12	48.97	50.11
4215.0	8430.0	12645.0	16860.0	18.70	-1.38	46.25	56.92
4350.0	8700.0	13050.0	17400.0	16.72	-0.25	54.15	64.71
4385.0	8770.0	13155.0	17540.0	17.06	-0.62	60.63	65.98
4420.0	8840.0	13260.0	17680.0	17.20	-0.90	52.91	70.85
4455.0	8910.0	13365.0	17820.0	17.77	-1.61	47.28	70.97
4490.0	8980.0	13470.0	17960.0	17.84	-2.14	49.53	67.09
4525.0	9050.0	13575.0	18100.0	16.72	-1.41	68.58	66.75
4560.0	9120.0	13680.0	18240.0	16.13	-0.79	55.56	68.66
4595.0	9190.0	13785.0	18380.0	16.60	-1.27	52.84	64.94
4630.0	9260.0	13890.0	18520.0	16.87	-1.63	52.22	60.14
4665.0	9330.0	13995.0	18660.0	17.04	-1.55	54.01	60.74
4700.0	9400.0	14100.0	18800.0	17.15	-2.51	52.54	59.15
4730.0	9460.0	14190.0	18920.0	17.16	-2.57	50.31	56.95
4760.0	9520.0	14280.0	19040.0	17.28	-2.93	50.62	54.60
4790.0	9580.0	14370.0	19160.0	16.97	-2.89	54.28	56.08
4820.0	9640.0	14460.0	19280.0	17.60	-3.51	51.64	51.84
4850.0	9700.0	14550.0	19400.0	17.33	-3.29	46.16	53.22
4880.0	9760.0	14640.0	19520.0	17.81	-3.50	50.05	48.78
4910.0	9820.0	14730.0	19640.0	17.53	-3.46	52.34	51.33
4940.0	9880.0	14820.0	19760.0	18.55	-4.29	47.66	48.77
4970.0	9940.0	14910.0	19880.0	18.10	-3.90	42.98	47.09
5000.0	10000.0	15000.0	20000.0	18.42	-4.60	50.56	50.43

\* Harmonic Output below power level of X3 Output.



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# Frequency Multiplier (Tripler)

# RMK-3-153+

## Typical Performance Data

Test Conditions: RF Input Power = 11dBm @ +25°C

FREQUENCY (MHz)				CONVERSION LOSS (dB)	HARMONIC OUTPUT* (-dBc)		
X1 OUTPUT	X2 OUTPUT	X3 OUTPUT	X4 OUTPUT	X3 OUTPUT	X1 OUTPUT	X2 OUTPUT	X4 OUTPUT
2600.0	5200.0	7800.0	10400.0	16.15	11.65	72.67	70.35
2640.0	5280.0	7920.0	10560.0	16.32	11.27	68.79	63.61
2680.0	5360.0	8040.0	10720.0	16.12	10.98	67.54	64.90
2720.0	5440.0	8160.0	10880.0	16.14	10.47	66.15	64.65
2760.0	5520.0	8280.0	11040.0	16.48	9.62	65.39	62.71
2800.0	5600.0	8400.0	11200.0	16.37	9.61	63.46	67.13
2840.0	5680.0	8520.0	11360.0	16.81	9.14	60.57	61.40
2880.0	5760.0	8640.0	11520.0	16.67	9.31	61.71	61.33
2920.0	5840.0	8760.0	11680.0	17.34	8.60	59.78	57.94
2960.0	5920.0	8880.0	11840.0	17.31	8.33	58.77	58.89
3000.0	6000.0	9000.0	12000.0	17.13	8.01	61.48	54.46
3135.0	6270.0	9405.0	12540.0	17.80	6.73	60.34	60.78
3270.0	6540.0	9810.0	13080.0	17.47	6.70	62.38	58.76
3405.0	6810.0	10215.0	13620.0	18.47	4.56	72.83	55.21
3540.0	7080.0	10620.0	14160.0	19.10	3.52	71.24	50.44
3675.0	7350.0	11025.0	14700.0	18.32	3.56	68.43	49.19
3810.0	7620.0	11430.0	15240.0	18.13	3.16	63.49	47.39
3945.0	7890.0	11835.0	15780.0	18.27	2.48	56.42	46.57
4080.0	8160.0	12240.0	16320.0	16.16	3.97	55.89	51.45
4215.0	8430.0	12645.0	16860.0	16.41	2.85	60.88	56.68
4350.0	8700.0	13050.0	17400.0	16.14	2.57	58.81	59.30
4385.0	8770.0	13155.0	17540.0	16.50	2.09	58.99	59.95
4420.0	8840.0	13260.0	17680.0	16.28	2.25	54.63	62.79
4455.0	8910.0	13365.0	17820.0	16.52	1.64	52.55	62.59
4490.0	8980.0	13470.0	17960.0	17.05	0.82	51.53	63.59
4525.0	9050.0	13575.0	18100.0	17.05	0.62	53.36	67.47
4560.0	9120.0	13680.0	18240.0	17.06	0.46	51.28	65.69
4595.0	9190.0	13785.0	18380.0	17.11	0.48	51.25	68.54
4630.0	9260.0	13890.0	18520.0	17.07	0.54	53.93	64.13
4665.0	9330.0	13995.0	18660.0	17.14	0.30	52.95	66.63
4700.0	9400.0	14100.0	18800.0	17.20	0.06	52.83	61.36
4730.0	9460.0	14190.0	18920.0	17.63	-0.44	49.92	57.26
4760.0	9520.0	14280.0	19040.0	17.79	-0.92	53.02	56.65
4790.0	9580.0	14370.0	19160.0	17.68	-0.97	52.54	54.66
4820.0	9640.0	14460.0	19280.0	17.53	-0.92	51.25	53.10
4850.0	9700.0	14550.0	19400.0	17.51	-0.99	46.75	53.59
4880.0	9760.0	14640.0	19520.0	17.27	-0.82	53.02	51.77
4910.0	9820.0	14730.0	19640.0	17.41	-1.00	51.93	53.47
4940.0	9880.0	14820.0	19760.0	18.05	-1.74	47.05	49.73
4970.0	9940.0	14910.0	19880.0	18.34	-2.12	45.60	47.58
5000.0	10000.0	15000.0	20000.0	18.03	-2.27	50.67	50.81

\* Harmonic Output below power level of X3 Output.



# Frequency Multiplier (Tripler)

# RMK-3-153+

## Typical Performance Data

Test Conditions: RF Input Power = 11 dBm @ -40°C

FREQUENCY (MHz)				CONVERSION LOSS (dB)	HARMONIC OUTPUT* (-dBc)		
X1 OUTPUT	X2 OUTPUT	X3 OUTPUT	X4 OUTPUT	X3 OUTPUT	X1 OUTPUT	X2 OUTPUT	X4 OUTPUT
2600.0	5200.0	7800.0	10400.0	15.66	12.06	57.75	55.17
2640.0	5280.0	7920.0	10560.0	15.87	11.66	59.84	48.41
2680.0	5360.0	8040.0	10720.0	15.54	11.50	65.88	45.00
2720.0	5440.0	8160.0	10880.0	15.57	10.94	63.02	47.03
2760.0	5520.0	8280.0	11040.0	15.58	10.62	65.32	47.72
2800.0	5600.0	8400.0	11200.0	15.52	10.33	63.05	50.36
2840.0	5680.0	8520.0	11360.0	16.03	9.74	66.80	47.84
2880.0	5760.0	8640.0	11520.0	15.87	9.97	66.42	48.55
2920.0	5840.0	8760.0	11680.0	16.79	8.87	69.66	44.87
2960.0	5920.0	8880.0	11840.0	16.66	9.03	65.60	47.74
3000.0	6000.0	9000.0	12000.0	16.81	8.22	81.26	44.25
3135.0	6270.0	9405.0	12540.0	17.70	6.66	64.40	47.04
3270.0	6540.0	9810.0	13080.0	17.10	6.96	59.72	46.17
3405.0	6810.0	10215.0	13620.0	18.18	4.72	49.00	43.07
3540.0	7080.0	10620.0	14160.0	18.22	4.26	45.15	42.05
3675.0	7350.0	11025.0	14700.0	17.45	4.22	46.07	39.97
3810.0	7620.0	11430.0	15240.0	18.03	3.17	49.42	39.29
3945.0	7890.0	11835.0	15780.0	17.95	2.79	47.78	40.62
4080.0	8160.0	12240.0	16320.0	15.75	4.41	48.26	46.44
4215.0	8430.0	12645.0	16860.0	16.23	3.12	46.47	53.00
4350.0	8700.0	13050.0	17400.0	15.55	3.44	44.16	55.87
4385.0	8770.0	13155.0	17540.0	15.73	3.01	44.60	56.91
4420.0	8840.0	13260.0	17680.0	15.65	2.93	42.11	57.61
4455.0	8910.0	13365.0	17820.0	15.93	2.39	40.95	58.35
4490.0	8980.0	13470.0	17960.0	16.37	1.51	40.89	60.86
4525.0	9050.0	13575.0	18100.0	16.15	1.49	41.49	61.71
4560.0	9120.0	13680.0	18240.0	16.02	1.54	40.48	61.05
4595.0	9190.0	13785.0	18380.0	16.42	1.07	40.75	69.40
4630.0	9260.0	13890.0	18520.0	16.45	0.95	43.51	75.23
4665.0	9330.0	13995.0	18660.0	16.65	0.71	40.91	76.41
4700.0	9400.0	14100.0	18800.0	16.68	0.59	42.04	59.21
4730.0	9460.0	14190.0	18920.0	17.05	0.16	43.82	60.08
4760.0	9520.0	14280.0	19040.0	17.05	-0.22	44.65	57.65
4790.0	9580.0	14370.0	19160.0	16.94	-0.20	42.81	55.63
4820.0	9640.0	14460.0	19280.0	17.15	-0.47	43.19	52.74
4850.0	9700.0	14550.0	19400.0	16.84	-0.18	47.18	52.94
4880.0	9760.0	14640.0	19520.0	16.83	-0.14	48.57	50.22
4910.0	9820.0	14730.0	19640.0	16.72	0.01	46.24	53.85
4940.0	9880.0	14820.0	19760.0	17.33	-0.81	45.13	48.83
4970.0	9940.0	14910.0	19880.0	16.87	-0.50	48.42	48.56
5000.0	10000.0	15000.0	20000.0	16.76	-0.79	46.83	49.55

\* Harmonic Output below power level of X3 Output.



# Frequency Multiplier (Tripler)

# RMK-3-153+

## Typical Performance Data

Test Conditions: RF Input Power = 11 dBm @ +85°C

FREQUENCY (MHz)				CONVERSION LOSS (dB)	HARMONIC OUTPUT* (-dBc)		
X1 OUTPUT	X2 OUTPUT	X3 OUTPUT	X4 OUTPUT	X3 OUTPUT	X1 OUTPUT	X2 OUTPUT	X4 OUTPUT
2600.0	5200.0	7800.0	10400.0	16.61	11.81	66.83	54.97
2640.0	5280.0	7920.0	10560.0	16.96	11.28	68.23	52.00
2680.0	5360.0	8040.0	10720.0	16.95	10.68	66.88	54.08
2720.0	5440.0	8160.0	10880.0	16.94	10.46	66.83	54.86
2760.0	5520.0	8280.0	11040.0	17.49	9.43	68.98	53.12
2800.0	5600.0	8400.0	11200.0	17.24	9.20	65.26	55.14
2840.0	5680.0	8520.0	11360.0	17.59	8.78	66.33	52.59
2880.0	5760.0	8640.0	11520.0	17.71	8.81	68.00	52.34
2920.0	5840.0	8760.0	11680.0	17.87	8.68	66.07	50.37
2960.0	5920.0	8880.0	11840.0	18.27	7.99	65.58	51.83
3000.0	6000.0	9000.0	12000.0	17.84	7.99	75.03	49.63
3135.0	6270.0	9405.0	12540.0	18.65	6.39	84.83	52.70
3270.0	6540.0	9810.0	13080.0	18.82	6.12	60.87	50.59
3405.0	6810.0	10215.0	13620.0	19.97	3.64	51.52	45.80
3540.0	7080.0	10620.0	14160.0	20.16	3.03	48.86	44.27
3675.0	7350.0	11025.0	14700.0	19.47	3.03	50.12	43.81
3810.0	7620.0	11430.0	15240.0	18.99	2.78	51.96	41.78
3945.0	7890.0	11835.0	15780.0	19.51	1.79	52.10	41.81
4080.0	8160.0	12240.0	16320.0	17.33	3.33	50.82	46.97
4215.0	8430.0	12645.0	16860.0	17.08	2.87	47.73	53.00
4350.0	8700.0	13050.0	17400.0	17.23	2.26	43.30	57.21
4385.0	8770.0	13155.0	17540.0	17.19	2.25	44.50	58.88
4420.0	8840.0	13260.0	17680.0	17.19	2.15	44.09	61.45
4455.0	8910.0	13365.0	17820.0	17.27	1.72	43.00	63.05
4490.0	8980.0	13470.0	17960.0	17.49	0.97	42.18	62.21
4525.0	9050.0	13575.0	18100.0	17.64	0.70	44.68	67.33
4560.0	9120.0	13680.0	18240.0	17.61	0.63	42.92	67.23
4595.0	9190.0	13785.0	18380.0	17.44	0.76	43.10	75.12
4630.0	9260.0	13890.0	18520.0	17.74	0.40	45.38	76.06
4665.0	9330.0	13995.0	18660.0	17.90	0.11	43.68	72.34
4700.0	9400.0	14100.0	18800.0	17.65	0.15	44.00	65.77
4730.0	9460.0	14190.0	18920.0	18.27	-0.42	44.23	60.29
4760.0	9520.0	14280.0	19040.0	18.51	-0.82	47.97	57.44
4790.0	9580.0	14370.0	19160.0	18.27	-0.86	45.04	57.64
4820.0	9640.0	14460.0	19280.0	17.94	-0.71	45.10	53.83
4850.0	9700.0	14550.0	19400.0	18.14	-0.71	45.71	55.80
4880.0	9760.0	14640.0	19520.0	18.11	-0.85	49.94	51.94
4910.0	9820.0	14730.0	19640.0	18.09	-0.78	47.24	54.33
4940.0	9880.0	14820.0	19760.0	18.45	-1.12	45.64	52.36
4970.0	9940.0	14910.0	19880.0	18.71	-1.53	45.49	49.25
5000.0	10000.0	15000.0	20000.0	18.35	-1.60	48.34	51.87

\* Harmonic Output below power level of X3 Output.

