

*FCC PART 15, SUBPART B and C
TEST REPORT**for*

MOBI 2

MODEL: MOBILETOUCH 2

Prepared for

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MOORPARK, CALIFORNIA 93021Prepared by: 

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DATE: MARCH 31, 2008

	REPORT BODY	APPENDICES					TOTAL
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GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced without the written permission of Compatible Electronics, unless done so in full.

This report must not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government.

Device Tested: Mobi 2
 Model: Mobiletouch 2
 S/N: N/A

Product Description: See Expository Statement.

Modifications: The EUT was not modified during the testing.

Manufacturer: Pentair Water Pool and Spa
 10951 West Los Angeles Avenue
 Moorpark, California 93021

Test Dates: March 12 and 27, 2008

Test Specifications: EMI requirements
 CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.207, 15.209, and
 15.247

Test Procedure: ANSI C63.4: 2003

Test Deviations: The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz – 30 MHz	Complies with the Class B limits of CFR Title 47, Part 15 Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, section 15.207
2	Spurious Radiated RF Emissions, 30 MHz – 1000 MHz	Complies with the Class B limits of CFR Title 47, Part 15 Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, section 15.209
3	Spurious Radiated RF Emissions, 10 kHz – 30 MHz and 1000 MHz – 25000 MHz	Complies with the Class B limits of CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 15, Subpart C, section 15.247(d)
4	Fundamental and Emissions produced by the intentional radiator in non-restricted bands, 10 kHz – 25 GHz	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247(d)
5	Emissions produced by the intentional radiator in restricted bands, 10 kHz – 25 GHz	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.205, 15.209, and section 15.247 (d)
6	20 dB Bandwidth	Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (a)(1) and (a)(1)(i)
7	Peak Power Output	Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (b)(2)
8	RF Conducted Antenna Test	Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (d)
9	Carrier Frequency Separation	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247 (a)(1) and 15.247 (a)(1)(i)
10	Average Time of Occupancy	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247 (a)(1)(i)
11	Peak Power Spectral Density from the Intentional Radiator to the Antenna	This test was not performed because the EUT is a frequency hopper.

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the Mobi 2 Model: Mobiletouch 2. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4: 2003. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the Class B specification limits defined by CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.207, 15.209, and 15.247.

Note: For the unintentional radiator portion of the test, the EUT was within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B.

2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Pentair Water Pool and Spa

Kevin Murphy	Senior Electronic Engineer
Darrin Swanson	NPD Engineer

Compatible Electronics, Inc.

Kyle Fujimoto	Test Engineer
Michael Christensen	Lab Manager

2.4 Date Test Sample was Received

The test sample was received on March 12, 2008.

2.5 Disposition of the Test Sample

The sample has not been returned to Pentair Water Pool and Spa as of March 31, 2008.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network
N/A	Not Applicable

3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this EMI Test Report.

SPEC	TITLE
FCC Title 47, Part 15 Subpart C	FCC Rules - Radio frequency devices (including digital devices) – Intentional Radiators
ANSI C63.4 2003	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz
FCC Title 47, Part 15 Subpart B	FCC Rules - Radio frequency devices (including digital devices) – Unintentional Radiators

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration - EMI

Setup and operation of the equipment under test.

Specifics of the EUT and Peripherals Tested

Stand Alone Mode: The Mobi 2 Model: Mobiletouch 2 (EUT) was tested as a stand alone unit. The EUT was continuously transmitting or receiving to a Transceiver Mobi2 Model: Virtual Cable Mobi 2. The EUT was tested in three orthogonal axis.

Charging Mode: The Mobi 2 Model: Mobiletouch 2 (EUT) was mounted on a charging cradle and the charging cradle was connected to a class II transformer via its power port. The EUT was continuously transmitting or receiving to a Mobi 2 Model: Virtual Cable 2 and also charging the battery inside the EUT. The EUT was tested in three orthogonal axis.

The final radiated data was taken in both modes mentioned above. The final conducted data was taken in the charging mode mentioned above. Please see Appendix E for the data sheets.

4.1.1 Cable Construction and Termination

Cable 1

(For charging mode only)

This is a 2-meter unshielded cable connecting the charging cradle to the class II transformer. The cable has a 1/8 inch power connector at the charging cradle end and is hard wired into the class II transformer.



5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT**5.1 EUT and Accessory List**

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
MOBI 2 (EUT)	PENTAIR WATER POOL AND SPA	MOBILETOUCH 2	N/A	P4HMOBILETOUCH2A
CLASS II TRANSFORMER	PENTAIR WATER POOL AND SPA	520830	N/A	N/A
CHARGING CRADLE	PENTAIR WATER POOL AND SPA	N/A	N/A	N/A
TRANSCIEVER MOBI 2 (EUT)	PENTAIR WATER POOL AND SPA	VIRTUAL CABLE MOBI 2	N/A	N/A

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CALIBRATION DUE DATE
GENERAL TEST EQUIPMENT USED FOR ALL RF EMISSIONS TESTS					
Computer	Hewlett Packard	4530	US91912319	N/A	N/A
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	3638A08784	June 4, 2007	June 4, 2008
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	3701A22279	June 4, 2007	June 4, 2008
Quasi-Peak Adapter	Hewlett Packard	85650A	2430A00424	June 4, 2007	June 4, 2008
EMI Receiver	Rohde & Schwarz	ESIB40	100172	November 27, 2006	November 27, 2008
Monitor	Hewlett Packard	D5258A	TW74500641	N/A	N/A
RF RADIATED EMISSIONS TEST EQUIPMENT					
Preamplifier	Com Power	PA-102	1017	January 11, 2008	January 11, 2009
Microwave Preamplifier	Com Power	PA-122	181921	March 3, 2008	March 3, 2009
Biconical Antenna	Com Power	AB-900	15226	February 28, 2008	February 28, 2009
Log Periodic Antenna	Com Power	AL-100	16060	July 9, 2007	July 9, 2008
Horn Antenna	Com Power	AH-118	10073	July 17, 2006	July 17, 2008
Turntable	Com Power	TT-100	N/A	N/A	N/A
Loop Antenna	Com Power	AL-130	17089	September 24, 2007	Sept. 24, 2008
Antenna Mast	Com Power	AM-100	N/A	N/A	N/A
RF CONDUCTED EMISSIONS TEST EQUIPMENT					
Emissions Program	Compatible Electronics	2.3 (SR19)	N/A	N/A	N/A
Transient Limiter	Seaward	252A910	1	September 19, 2007	September 19, 2008
LISN	Com Power	LI-215	12082	September 26, 2007	September 26, 2008
LISN	Com Power	LI-215	12078	September 26, 2007	September 26, 2008

6. TEST SITE DESCRIPTION

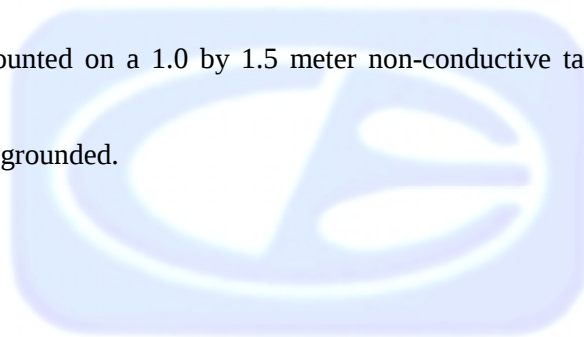
6.1 Test Facility Description

Please refer to section 2.1 and 7.1 of this report for EMI test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT was not grounded.



7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

7.1 RF Emissions

7.1.1 Conducted Emissions Test

The spectrum analyzer was used as a measuring meter. The data was collected with the spectrum analyzer in the peak detect mode with the "Max Hold" feature activated. The quasi-peak was used only where indicated in the data sheets. A transient limiter was used for the protection of the spectrum analyzer input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the spectrum analyzer. The output of the second LISN was terminated by a 50 ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4: 2003. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by the Compatible Electronics conducted emissions software in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave. The final qualification data is located in Appendix E.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15 Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, Section 15.207 for conducted emissions.

7.1.2 Radiated Emissions (Spurious and Harmonics) Test

The spectrum analyzer and EMI Receiver were used as a measuring meter along with the quasi-peak adapter. Amplifiers were used to increase the sensitivity of the instrument. The Com Power Preamplifier Model: PA-102 was used for frequencies from 30 MHz to 1 GHz, the Com Power Microwave Preamplifier Model: PA-122 was used for frequencies above 1 GHz. The spectrum analyzer was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer records the highest measured reading over all the sweeps.

The quasi-peak adapter was used only for those readings which are marked accordingly on the data sheets.

The frequencies above 1 GHz were averaged manually by narrowing the video filter down to 10 Hz and putting the sweep time on AUTO on the spectrum analyzer to keep the amplitude reading calibrated.

After the readings above 1 GHz were average manually, the reading was further adjusted by a "duty cycle correction factor", derived from $20 \log (\text{dwell time} / 100 \text{ ms})$. Since the duty cycle was below 10%, the maximum allowed 20 dB was subtracted from the peak reading. The duty cycle correction factor is explained in Appendix E.

The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
10 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 300 MHz	120 kHz	Biconical Antenna
300 MHz to 1 GHz	120 kHz	Log Periodic Antenna
1 GHz to 9.3 GHz	1 MHz	Horn Antenna

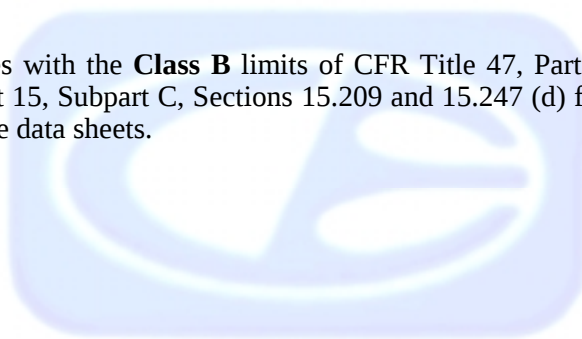
The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4: 2003. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT by the Radiated Emission Manual Test software. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gunsight method was used when measuring with the horn antenna in order to ensure accurate results.

Radiated Emissions (Spurious and Harmonics) Test (con't)

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 3 meter test distance.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, Sections 15.209 and 15.247 (d) for radiated emissions. Please see Appendix E for the data sheets.



7.2 20 dB Bandwidth

The 20 dB Bandwidth was measured using the EMI Receiver. The bandwidth was measured using a direct connection from the RF output of the EUT. The resolution bandwidth was 50 kHz and the video bandwidth was 200 kHz.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (a)(1) and (a)(1)(i). The 20 dB bandwidth is less than the separation between channels. Please see the data sheets located in Appendix E.

7.3 Peak Output Power

The Peak Output Power was measured using the EMI Receiver. The peak output power was measured using a direct connection from the RF output of the EUT. The resolution bandwidth was 10 MHz and the video bandwidth was 10 MHz. The cable loss was also added back into the reading using the reference level offset.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (b)(2). The maximum peak output power is less than 250 mW. Please see the data sheets located in Appendix E.

7.4 RF Antenna Conducted Test

The RF antenna conducted test was performed using the EMI Receiver. The RF antenna conducted test measured using a direct connection from the RF out on the EUT into the input of the EMI Receiver. The resolution bandwidth was 100 kHz, and the video bandwidth was 300 kHz. The spans were wide enough to include all the harmonics and emissions that were produced by the intentional radiator.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (d). The RF power that is produced by the intentional radiator is at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power. Please see the radiated emission data sheets located in Appendix E.

7.5 RF Band Edges

The RF band edges were taken at the edges of the ISM spectrum (902 MHz when the EUT was on the low channel and 928 MHz when the EUT was on the high channel) using the EMI Receiver. The band edges were measured using a direct connection from the RF output of the EUT. The resolution bandwidth was 100 kHz and the video bandwidth was 300 kHz

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (d). The RF power at the band edges at 902 MHz and 928 MHz meet the requirements of FCC Title 47, Part 15, Subpart C section 15.247 (d). Please see the data sheets located in Appendix E.

7.6 Carrier Frequency Separation

The Channel Hopping Separation Test was measured using the EMI Receiver. The EUT was operating in its normal operating mode. The resolution bandwidth was 100 kHz, and the video bandwidth 1 MHz. The frequency span was wide enough to include the peaks of two adjacent channels.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (a)(1) and 15.247 (a)(1)(iii). The Channel Hopping Separation is greater than the 20 dB bandwidth. Please see the data sheets located in Appendix D.

7.7 Number of Hopping Frequencies

The Channel Hopping Separation Test was measured using the EMI Receiver. The EUT was operating in its normal operating mode. The resolution bandwidth was 100 kHz, and the video bandwidth was 1 MHz. The frequency span was wide enough to include all of the peaks in the frequency band of operation.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (a)(1) and 15.247 (a)(1)(iii). The number of hopping frequencies is 26. Please see the data sheets located in Appendix E.

7.8 Average Time of Occupancy Test

The Average Time of Occupancy Test was measured using the EMI Receiver. The EUT was operating in normal operating mode. The frequency span was taken to 0 Hz with a sweep time of 100 milliseconds to determine the time for each transmission.

The EUT was put into its normal transmitting mode. The EUT frequency hops between 26 different channels during normal operation.

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 10 seconds.

The sweep time was then changed to 10 seconds and the number of pulses taken. The number of pulses in a 10 second period was then used to determine the average time of occupancy.

Test Results:

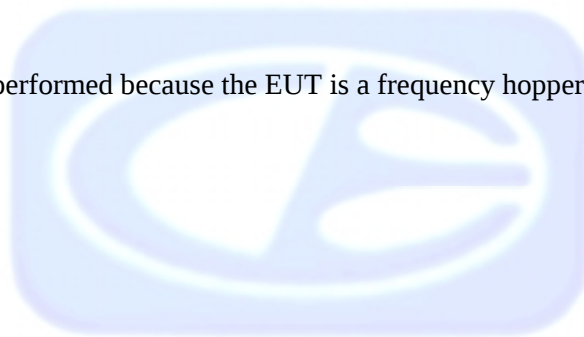
The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (a)(1)(i). The EUT does not transmit for more than 400 msec in a 10 second period on any frequency. Please see the data sheets located in Appendix E.

7.9 Spectral Density Test

The spectrum density output was measured using the EMI Receiver. The spectral density output was measured using a direct connection from the RF out on the EUT into the input of the EMI Receiver. The resolution bandwidth 3 kHz, and the video bandwidth was 10 kHz. The highest 1.5 MHz of the signal was used as the frequency span with the sweep rate being 1 second for every 3 kHz of span.

Test Results:

This test was not performed because the EUT is a frequency hopper.



8. CONCLUSIONS

The Mobi 2 Model: Mobiletouch 2, as tested, meets all of the specification limits defined in FCC Title 47, Part 15, Subpart C, sections 15.205, 15.207, 15.209, and 15.247.

Note: For the unintentional radiator portion of the test, the EUT was within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B.



APPENDIX A

LABORATORY RECOGNITIONS

LABORATORY RECOGNITIONS

Compatible Electronics has the following agency accreditations:

National Voluntary Laboratory Accreditation Program - Lab Code: 200528-0

Voluntary Control Council for Interference - Registration Numbers: R-983, C-1026, R-984 and C-1027

Bureau of Standards and Metrology Inspection - Reference Number: SL2-IN-E-1031

Conformity Assessment Body for the EMC Directive Under the US/EU MRA Appointed by NIST

Compatible Electronics is recognized or on file with the following agencies:

Federal Communications Commission

Industry Canada

Radio-Frequency Technologies (Competent Body)

APPENDIX B

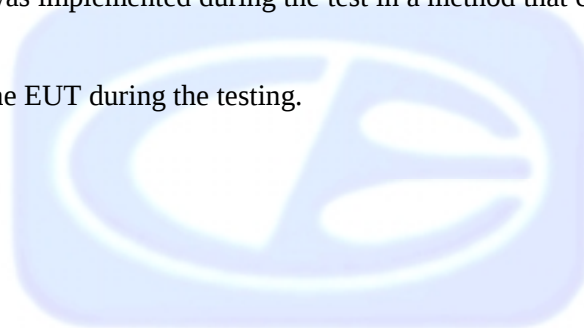
MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC Subpart B and FCC 15.247 specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

No modifications were made to the EUT during the testing.



APPENDIX C

***ADDITIONAL MODELS COVERED
UNDER THIS REPORT***

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

Mobi 2
Model: Mobiletouch 2
S/N: N/A

There were no additional models covered under this report.



APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS

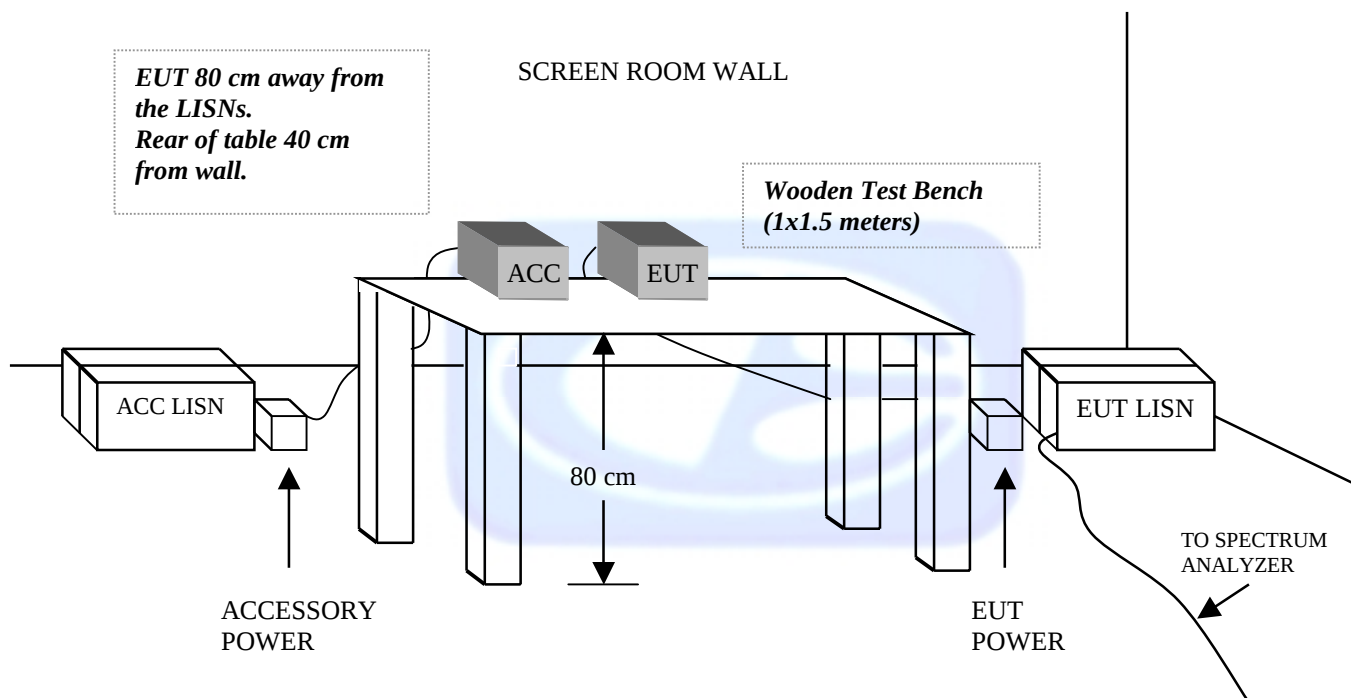
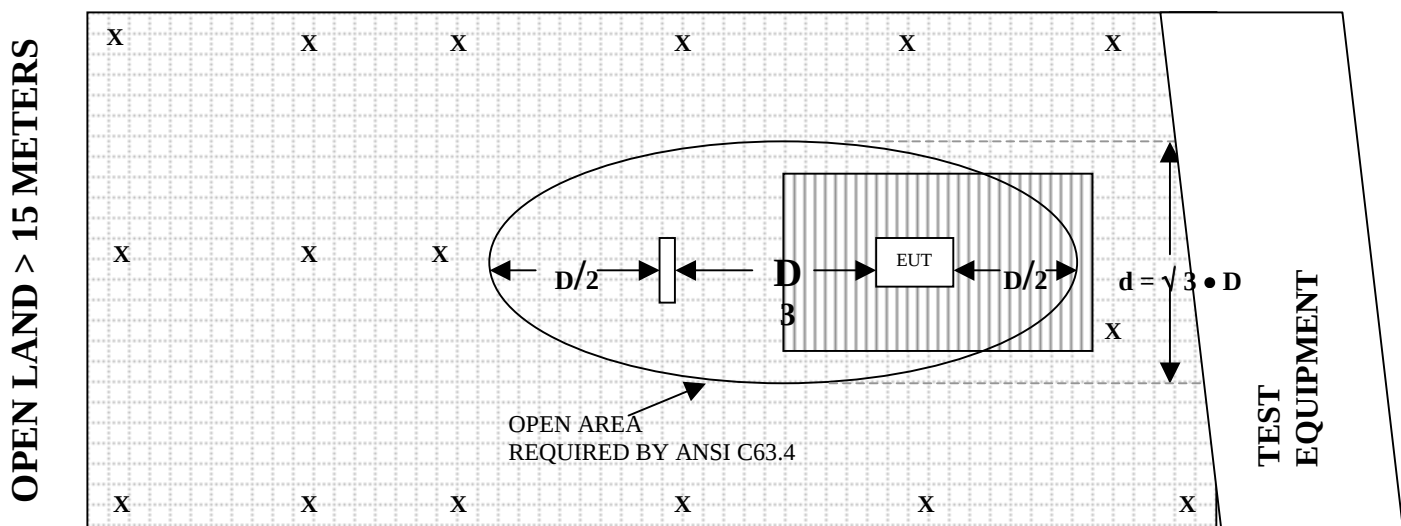
FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

FIGURE 2: PLOT MAP AND LAYOUT OF RADIATED SITE – 3 METERS

OPEN LAND > 15 METERS



OPEN LAND > 15 METERS

X	= GROUND RODS		= GROUND SCREEN
D	= TEST DISTANCE (meters)		= WOOD COVER

COM-POWER AB-900

BICONICAL ANTENNA

S/N: 15226

CALIBRATION DATE: FEBRUARY 28, 2008

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	12.1	100	10.7
35	12.2	120	13.6
40	11.7	140	12.1
45	9.9	160	12.2
50	11.3	180	15.2
60	9.4	200	16.5
70	7.6	250	16.5
80	6.0	275	18.1
90	6.8	300	21.5

COM-POWER AL-100

LOG PERIODIC ANTENNA

S/N: 16060

CALIBRATION DATE: JULY 9, 2007

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	13.5	700	20.5
400	15.8	800	21.6
500	17.0	900	21.3
600	19.2	1000	22.2

COM-POWER PA-102**PREAMPLIFIER**

S/N: 1017

CALIBRATION DATE: JANUARY 11, 2008

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	38.2	300	38.3
40	38.0	350	38.0
50	38.3	400	38.1
60	38.6	450	37.5
70	38.4	500	37.9
80	38.4	550	37.9
90	38.3	600	37.8
100	38.1	650	37.5
125	38.5	700	38.0
150	38.2	750	37.7
175	38.1	800	37.1
200	38.4	850	37.1
225	38.2	900	37.1
250	38.2	950	37.0
275	38.0	1000	36.5

COM-POWER PA-122**PREAMPLIFIER**

S/N: 181921

CALIBRATION DATE: MARCH 3, 2008

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	36.32	10.0	35.47
1.5	35.40	10.5	35.05
2.0	34.77	11.0	34.16
2.5	35.07	11.5	33.75
3.0	34.86	12.0	34.65
3.5	34.48	12.5	34.41
4.0	34.30	13.0	35.36
4.5	33.96	13.5	35.30
5.0	34.06	14.0	35.87
5.5	34.54	14.5	36.44
6.0	35.90	15.0	36.24
6.5	36.85	15.5	35.92
7.0	36.55	16.0	35.53
7.5	35.31	16.5	35.29
8.0	33.57	17.0	34.96
8.5	33.36	17.5	34.02
9.0	35.01	18.0	33.39
9.5	35.97	18.5	32.70

COM-POWER AH-118**HORN ANTENNA**

S/N: 10073

CALIBRATION DATE: JULY 17, 2006

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	25.331	10.0	42.391
1.5	27.507	10.5	39.194
2.0	31.581	11.0	38.504
2.5	30.906	11.5	40.724
3.0	30.276	12.0	41.079
3.5	30.396	12.5	41.014
4.0	30.881	13.0	41.201
4.5	32.77	13.5	42.335
5.0	34.067	14.0	43.248
5.5	33.914	14.5	45.639
6.0	34.028	15.0	43.197
6.5	35.779	15.5	41.751
7.0	38.347	16.0	42.462
7.5	39.096	16.5	41.908
8.0	39.377	17.0	40.277
8.5	38.646	17.5	48.117
9.0	37.438	18.0	54.113
9.5	38.403		

COM-POWER AL-130**LOOP ANTENNA****S/N: 17089****CALIBRATION DATE: SEPTEMBER 24, 2007**

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-41.27	10.23
0.01	-41.96	9.54
0.02	-41.73	9.77
0.03	-40.46	11.04
0.04	-40.56	10.94
0.05	-42.00	9.50
0.06	-41.30	10.20
0.1	-41.43	10.07
0.2	-43.90	7.60
0.3	-41.43	10.07
0.4	-41.40	10.10
0.5	-41.40	10.10
0.6	-40.93	10.57
1	-40.83	10.67
2	-40.3	11.20
5	-40.2	11.30
8	-40.6	10.90
9	-40.1	11.40
10	-40.4	11.10
15	-41.67	9.83
20	-41.10	10.40
25	-42.8	8.70
30	-42.8	8.70



FRONT VIEW

PENTAIR WATER POOL AND SPA

MOBI2

MODEL: MOBILETOUCH 2

FCC SUBPART B AND C – RADIATED EMISSIONS – LAB B – STAND ALONE MODE

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



REAR VIEW

PENTAIR WATER POOL AND SPA

MOBI2

MODEL: MOBILETOUCH 2

FCC SUBPART B AND C – RADIATED EMISSIONS – LAB B – STAND ALONE MODE

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



FRONT VIEW

PENTAIR WATER POOL AND SPA
MOBI2

MODEL: MOBILETOUCH 2

FCC SUBPART B AND C – RADIATED EMISSIONS – LAB D – STAND ALONE MODE

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

PENTAIR WATER POOL AND SPA

MOBI2

MODEL: MOBILETOUCH 2

FCC SUBPART B AND C – RADIATED EMISSIONS – LAB D – STAND ALONE MODE

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



FRONT VIEW

**PENTAIR WATER POOL AND SPA
MOBI2**

MODEL: MOBILETOUCH 2

FCC SUBPART B AND C – RADIATED EMISSIONS – LAB B – CHARGING MODE

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

PENTAIR WATER POOL AND SPA

MOBI2

MODEL: MOBILETOUCH 2

FCC SUBPART B AND C – RADIATED EMISSIONS – LAB B – CHARGING MODE

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



FRONT VIEW

PENTAIR WATER POOL AND SPA
MOBI2

MODEL: MOBILETOUCH 2

FCC SUBPART B AND C – RADIATED EMISSIONS – LAB D – CHARGING MODE

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

PENTAIR WATER POOL AND SPA

MOBI2

MODEL: MOBILETOUCH 2

FCC SUBPART B AND C – RADIATED EMISSIONS – LAB D – CHARGING MODE

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



FRONT VIEW

PENTAIR WATER POOL AND SPA

MOBI2

MODEL: MOBILETOUCH 2

FCC SUBPART B AND C – CONDUCTED EMISSIONS – LAB D – CHARGING MODE

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

PENTAIR WATER POOL AND SPA

MOBI2

MODEL: MOBILETOUCH 2

FCC SUBPART B AND C – CONDUCTED EMISSIONS – LAB D – CHARGING MODE

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

APPENDIX E

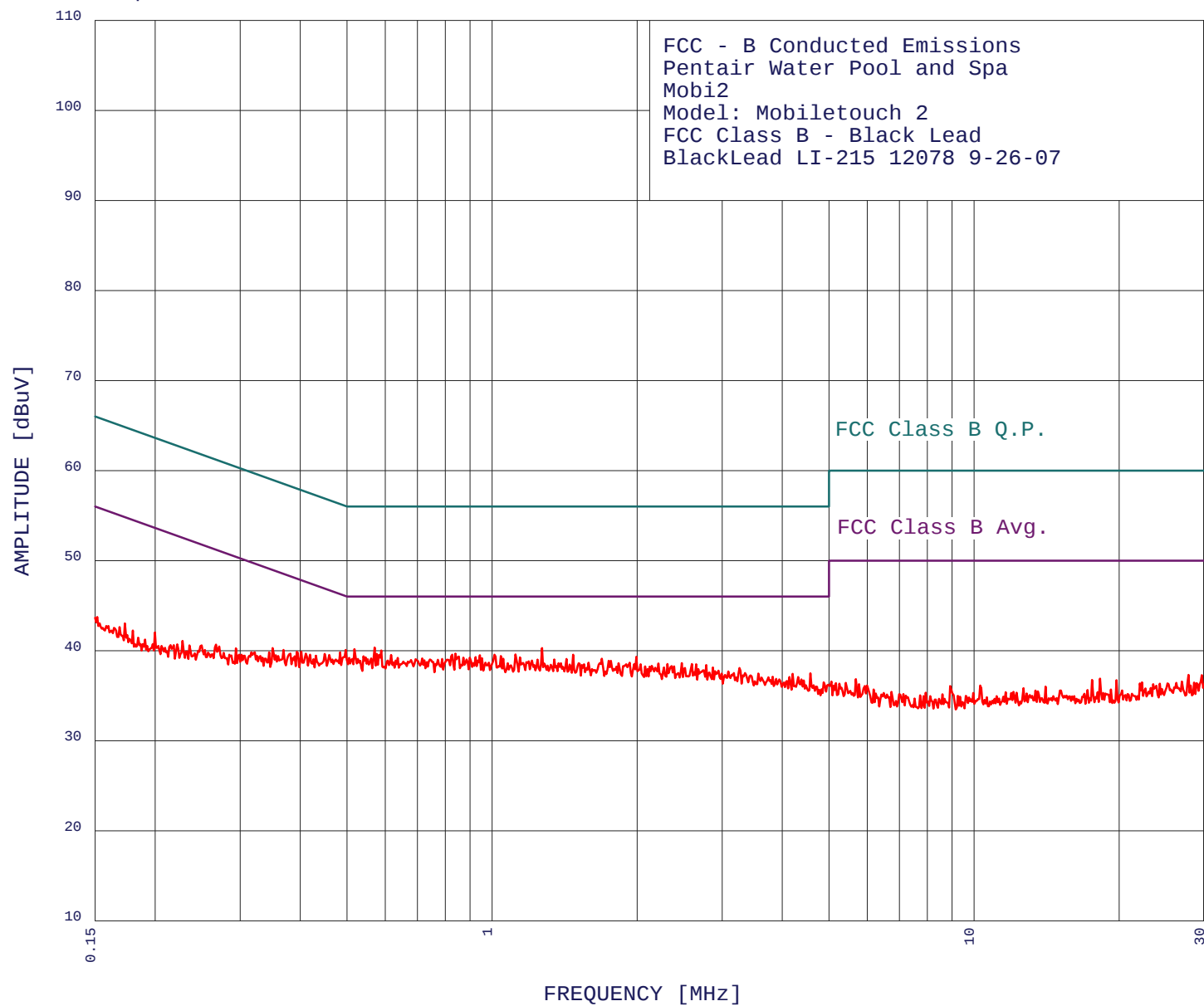
DATA SHEETS

CONDUCTED EMISIONS

DATA SHEETS

EMISSION LEVEL [dBuV] PEAK
Graph for Peak

3/27/2008 14:02:21





**COMPATIBLE
ELECTRONICS**

3/27/2008

14:02:21

FCC - B Conducted Emissions
Pentair Water Pool and Spa
Mobi2

Model: Mobiletouch 2

FCC Class B - Black Lead

BlackLead LI-215 12078 9-26-07

TEST ENGINEER : Kyle Fujimoto

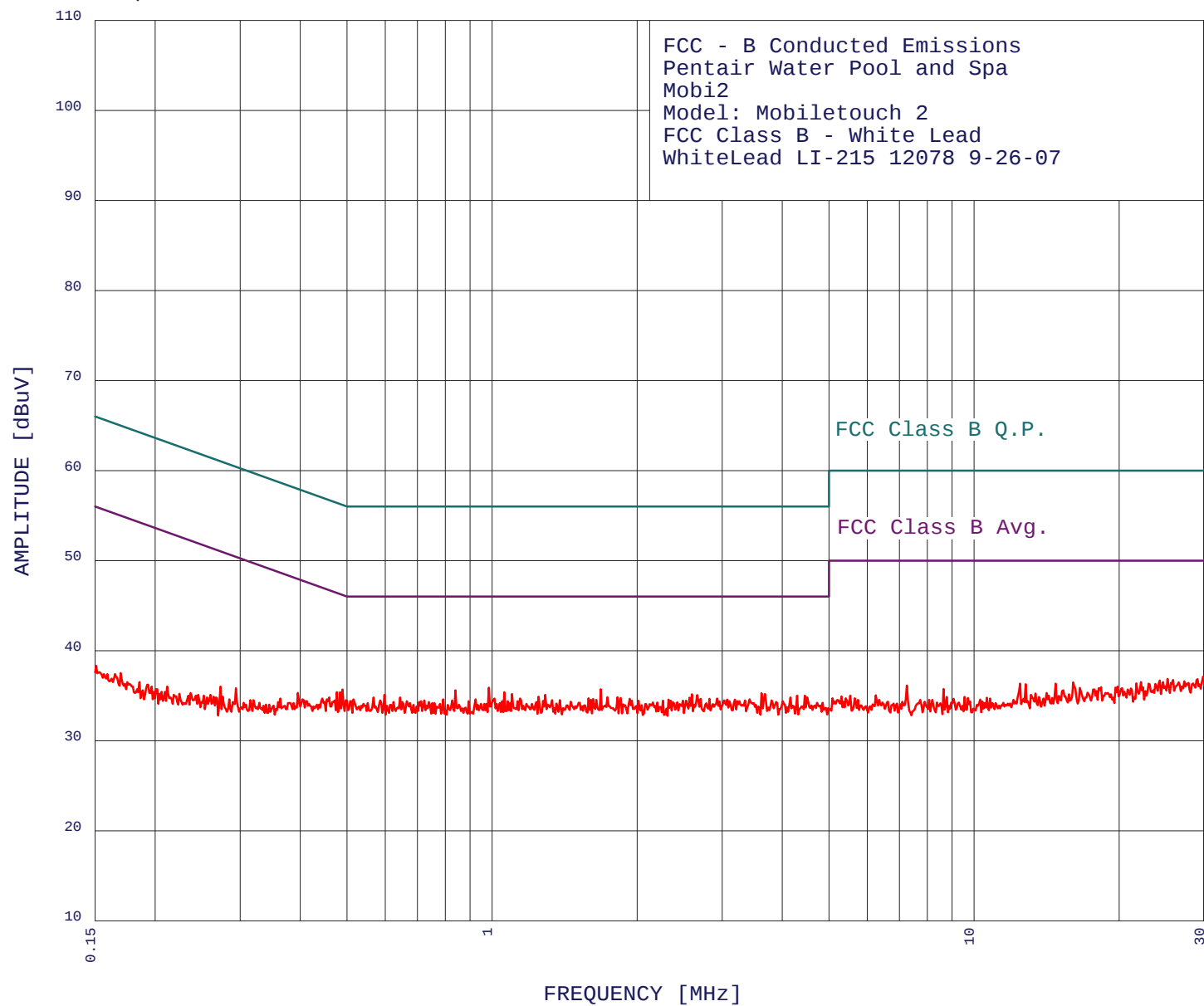
48 highest peaks above -50.00 dB of FCC Class B Avg. limit line

Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.570	40.33	46.00	-5.67
2	1.269	40.27	46.00	-5.73
3	0.518	40.17	46.00	-5.83
4	0.497	40.08	46.05	-5.97
5	0.589	40.02	46.00	-5.98
6	0.839	39.65	46.00	-6.35
7	0.577	39.63	46.00	-6.37
8	1.118	39.56	46.00	-6.44
9	0.826	39.56	46.00	-6.44
10	1.472	39.54	46.00	-6.46
11	1.011	39.53	46.00	-6.47
12	0.484	39.79	46.27	-6.48
13	0.618	39.50	46.00	-6.50
14	0.944	39.47	46.00	-6.53
15	1.043	39.41	46.00	-6.59
16	0.541	39.35	46.00	-6.65
17	1.992	39.31	46.00	-6.69
18	0.924	39.29	46.00	-6.71
19	1.142	39.25	46.00	-6.75
20	0.872	39.22	46.00	-6.78
21	0.899	39.21	46.00	-6.79
22	0.637	39.19	46.00	-6.81
23	0.953	39.17	46.00	-6.83
24	0.716	39.13	46.00	-6.87
25	1.055	39.10	46.00	-6.90
26	1.690	39.10	46.00	-6.90
27	0.788	39.08	46.00	-6.92
28	1.426	39.07	46.00	-6.93
29	1.345	39.02	46.00	-6.98
30	1.243	38.98	46.00	-7.02
31	1.210	38.90	46.00	-7.10
32	1.745	38.87	46.00	-7.13
33	0.459	39.51	46.71	-7.20
34	0.449	39.62	46.89	-7.27
35	1.586	38.67	46.00	-7.33
36	1.929	38.65	46.00	-7.35
37	1.512	38.61	46.00	-7.39
38	1.830	38.61	46.00	-7.39
39	2.475	38.59	46.00	-7.41
40	2.214	38.56	46.00	-7.44
41	2.596	38.51	46.00	-7.49
42	2.310	38.50	46.00	-7.50
43	2.651	38.47	46.00	-7.53
44	2.781	38.38	46.00	-7.62
45	2.077	38.25	46.00	-7.75
46	0.431	39.43	47.24	-7.80
47	2.870	38.12	46.00	-7.88
48	2.274	38.12	46.00	-7.88

EMISSION LEVEL [dBuV] PEAK
Graph for Peak

3/27/2008 14:06:15





**COMPATIBLE
ELECTRONICS**

3/27/2008

14:06:15

FCC - B Conducted Emissions
Pentair Water Pool and Spa
Mobi2

Model: Mobiletouch 2

FCC Class B - White Lead

WhiteLead LI-215 12078 9-26-07

TEST ENGINEER : Kyle Fujimoto

48 highest peaks above -50.00 dB of FCC Class B Avg. limit line

Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.984	35.88	46.00	-10.12
2	1.680	35.72	46.00	-10.28
3	0.839	35.58	46.00	-10.42
4	0.489	35.68	46.18	-10.50
5	1.060	35.38	46.00	-10.62
6	3.624	35.28	46.00	-10.72
7	1.100	35.19	46.00	-10.81
8	3.683	35.18	46.00	-10.82
9	2.596	35.15	46.00	-10.85
10	0.484	35.38	46.27	-10.89
11	1.290	35.10	46.00	-10.90
12	0.598	35.08	46.00	-10.92
13	2.665	35.06	46.00	-10.94
14	4.456	35.00	46.00	-11.00
15	4.294	34.99	46.00	-11.01
16	0.476	35.38	46.40	-11.02
17	1.249	34.89	46.00	-11.11
18	1.820	34.83	46.00	-11.17
19	1.735	34.82	46.00	-11.18
20	4.504	34.80	46.00	-11.20
21	4.159	34.79	46.00	-11.21
22	0.567	34.78	46.00	-11.22
23	0.644	34.78	46.00	-11.22
24	1.849	34.73	46.00	-11.27
25	1.586	34.72	46.00	-11.28
26	1.142	34.69	46.00	-11.31
27	2.932	34.66	46.00	-11.34
28	2.826	34.66	46.00	-11.34
29	1.929	34.64	46.00	-11.36
30	1.620	34.62	46.00	-11.38
31	0.516	34.58	46.00	-11.42
32	0.792	34.58	46.00	-11.42
33	0.924	34.58	46.00	-11.42
34	3.419	34.57	46.00	-11.43
35	3.192	34.57	46.00	-11.43
36	3.075	34.57	46.00	-11.43
37	2.322	34.55	46.00	-11.45
38	1.646	34.52	46.00	-11.48
39	1.603	34.52	46.00	-11.48
40	1.382	34.50	46.00	-11.50
41	1.331	34.50	46.00	-11.50
42	3.800	34.48	46.00	-11.52
43	0.586	34.48	46.00	-11.52
44	0.724	34.48	46.00	-11.52
45	0.826	34.48	46.00	-11.52
46	3.346	34.47	46.00	-11.53
47	2.488	34.45	46.00	-11.55
48	2.262	34.45	46.00	-11.55

RADIATED EMISSIONS

DATA SHEETS

Pentair Water Pool & Spa
Mobi2
Model: Mobiletouch 2

Date: 03/10/08
Labs: B and D
Tested By: Kyle Fujimoto

Low Channel - Fundamental

[illegible]

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

Low Channel - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1804.62	64.11	V	--	--	Peak	1.25	150	Not in Restricted Band
1804.62	53.96	V	--	--	Avg	1.25	150	Not in Restricted Band
2706.95	48.3	V	74	-25.7	Peak	1.52	150	
2706.95	38.15	V	54	-15.85	Avg	1.52	150	
3609.2	55.28	V	74	-18.72	Peak	1.52	150	
3690.2	45.13	V	54	-8.87	Avg	1.52	150	
4511.5	52.19	V	74	-21.81	Peak	1.52	180	
4511.5	42.04	V	54	-11.96	Avg	1.52	180	
5413.8	60.45	V	74	-13.55	Peak	1.52	90	
5413.8	50.3	V	54	-3.7	Avg	1.52	90	
6316.2	43.51	V	--	--	Peak	1.52	45	Not in Restricted Band
6316.2	33.36	V	--	--	Avg	1.52	45	Not in Restricted Band
7218.5	61.54	V	74	-12.46	Peak	1.25	150	
7218.5	51.39	V	54	-2.61	Avg	1.25	150	
8120.8								No Emission Detected
8120.8								No Emission Detected
9023.1								No Emission Detected
9023.1								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

Low Channel - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1804.62	62.36	H	--	--	Peak	1.25	150	Not in Restricted Band
1804.62	52.21	H	--	--	Avg	1.25	150	Not in Restricted Band
2706.95	61.1	H	74	-12.9	Peak	1.25	150	
2706.95	50.95	H	54	-3.05	Avg	1.25	150	
3609.2	49.68	H	74	-24.32	Peak	1.25	180	
3690.2	39.53	H	54	-14.47	Avg	1.25	180	
4511.5	55.29	H	74	-18.71	Peak	1.75	315	
4511.5	45.14	H	54	-8.86	Avg	1.75	315	
5413.8	58.85	H	74	-15.15	Peak	1.25	150	
5413.8	48.7	H	54	-5.3	Avg	1.25	135	
6316.2	59.65	H	--	--	Peak	1.25	150	Not in Restricted Band
6316.2	49.5	H	--	--	Avg	1.25	135	Not in Restricted Band
7218.5	59.18	H	74	-14.82	Peak	1.25	150	
7218.5	49.03	H	54	-4.97	Avg	1.25	135	
8120.8								No Emission Detected
8120.8								No Emission Detected
9023.1								No Emission Detected
9023.1								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

Low Channel - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1804.62	56.36	V	--	--	Peak	1.25	150	Not in Restricted Band
1804.62	46.21	V	--	--	Avg	1.25	150	Not in Restricted Band
2706.95	49.11	V	74	-24.89	Peak	1.15	135	
2706.95	38.96	V	54	-15.04	Avg	1.15	135	
3609.2	53.38	V	74	-20.62	Peak	1.05	90	
3690.2	43.23	V	54	-10.77	Avg	1.05	90	
4511.5	56.19	V	74	-17.81	Peak	1.25	225	
4511.5	46.04	V	54	-7.96	Avg	1.25	225	
5413.8	60.24	V	74	-13.76	Peak	1.65	180	
5413.8	50.09	V	54	-3.91	Avg	1.65	180	
6316.2	45.81	V	--	--	Peak	1.35	180	Not in Restricted Band
6316.2	35.66	V	--	--	Avg	1.35	180	Not in Restricted Band
7218.5	62.54	V	74	-11.46	Peak	1.55	200	
7218.5	52.39	V	54	-1.61	Avg	1.55	200	
8120.8								No Emission Detected
8120.8								No Emission Detected
9023.1								No Emission Detected
9023.1								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

Low Channel - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1804.62	59.2	H	--	--	Peak	1.15	315	Not in Restricted Band
1804.62	49.05	H	--	--	Avg	1.15	315	Not in Restricted Band
2706.95	47.1	H	74	-26.9	Peak	1.5	90	
2706.95	36.95	H	54	-17.05	Avg	1.5	90	
3609.2	55.18	H	74	-18.82	Peak	2	225	
3690.2	45.03	H	54	-8.97	Avg	2	225	
4511.5	54.29	H	74	-19.71	Peak	1.25	315	
4511.5	44.14	H	54	-9.86	Avg	1.25	315	
5413.8	58.65	H	74	-15.35	Peak	1.35	225	
5413.8	48.5	H	54	-5.5	Avg	1.35	225	
6316.2	61.09	H	--	--	Peak	1.65	225	Not in Restricted Band
6316.2	50.94	H	--	--	Avg	1.65	225	Not in Restricted Band
7218.5	60.99	H	74	-13.01	Peak	1.75	180	
7218.5	50.84	H	54	-3.16	Avg	1.75	180	
8120.8								No Emission Detected
8120.8								No Emission Detected
9023.1								No Emission Detected
9023.1								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

Low Channel - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1804.62	66.2	V	--	--	Peak	1.15	315	Not in Restricted Band
1804.62	56.05	V	--	--	Avg	1.15	315	Not in Restricted Band
2706.95	55.7	V	74	-18.3	Peak	1.6	270	
2706.95	45.55	V	54	-8.45	Avg	1.6	270	
3609.2	53.18	V	74	-20.82	Peak	1.5	135	
3690.2	43.03	V	54	-10.97	Avg	1.5	135	
4511.5	57.39	V	74	-16.61	Peak	1	315	
4511.5	47.24	V	54	-6.76	Avg	1	315	
5413.8	59.05	V	74	-14.95	Peak	90	135	
5413.8	48.9	V	54	-5.1	Avg	90	135	
6316.2	64.49	V	--	--	Peak	1.35	180	Not in Restricted Band
6316.2	54.34	V	--	--	Avg	1.35	180	Not in Restricted Band
7218.5	62.4	V	74	-11.6	Peak	1.75	180	
7218.5	52.25	V	54	-1.75	Avg	1.75	180	
8120.8								No Emission Detected
8120.8								No Emission Detected
9023.1								No Emission Detected
9023.1								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

Low Channel - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1804.62	56.73	H	--	--	Peak	1.25	180	Not in Restricted Band
1804.62	46.58	H	--	--	Avg	1.25	180	Not in Restricted Band
2706.95	49.37	H	74	-24.63	Peak	1.35	225	
2706.95	39.22	H	54	-14.78	Avg	1.35	225	
3609.2	52.7	H	74	-21.3	Peak	1.56	135	
3690.2	42.55	H	54	-11.45	Avg	1.56	135	
4511.5	55.49	H	74	-18.51	Peak	1.35	150	
4511.5	45.34	H	54	-8.66	Avg	1.35	150	
5413.8	61.05	H	74	-12.95	Peak	1.25	125	
5413.8	50.9	H	54	-3.1	Avg	1.25	125	
6316.2	43.11	H	--	--	Peak	1.55	150	Not in Restricted Band
6316.2	32.96	H	--	--	Avg	1.55	150	Not in Restricted Band
7218.5	58.49	H	74	-15.51	Peak	1.65	135	
7218.5	48.34	H	54	-5.66	Avg	1.65	135	
8120.8								No Emission Detected
8120.8								No Emission Detected
9023.1								No Emission Detected
9023.1								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

Low Channel - Charging Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1804.62	66.25	V	--	--	Peak	1.25	180	Not in Restricted Band
1804.62	56.1	V	--	--	Avg	1.25	180	Not in Restricted Band
2706.95	55.36	V	74	-18.64	Peak	1.25	90	
2706.95	45.21	V	54	-8.79	Avg	1.25	90	
3609.2	54.48	V	74	-19.52	Peak	1.35	180	
3690.2	44.33	V	54	-9.67	Avg	1.35	180	
4511.5	40.81	V	74	-33.19	Peak	1.25	315	
4511.5	30.66	V	54	-23.34	Avg	1.25	315	
5413.8	63.85	V	74	-10.15	Peak	1.25	225	
5413.8	53.7	V	54	-0.3	Avg	1.25	225	
6316.2	49.67	V	--	--	Peak	1.15	90	Not in Restricted Band
6316.2	39.52	V	--	--	Avg	1.15	90	Not in Restricted Band
7218.5	60.24	V	74	-13.76	Peak	1.25	180	
7218.5	50.09	V	54	-3.91	Avg	1.25	180	
8120.8								No Emission Detected
8120.8								No Emission Detected
9023.1								No Emission Detected
9023.1								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

Low Channel - Charging Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1804.62	61.25	H	--	--	Peak	1.25	45	Not in Restricted Band
1804.62	51.1	H	--	--	Avg	1.25	45	Not in Restricted Band
2706.95	62.6	H	74	-11.4	Peak	1.15	270	
2706.95	52.45	H	54	-1.55	Avg	1.15	270	
3609.2	52.68	H	74	-21.32	Peak	1.15	90	
3609.2	42.53	H	54	-11.47	Avg	1.15	90	
4511.5	57.19	H	74	-16.81	Peak	1.5	150	
4511.5	47.04	H	54	-6.96	Avg	1.5	150	
5413.8	61.45	H	74	-12.55	Peak	2.5	225	
5413.8	51.3	H	54	-2.7	Avg	2.5	225	
6316.2	49.7	H	--	--	Peak	1.25	180	Not in Restricted Band
6316.2	39.55	H	--	--	Avg	1.25	180	Not in Restricted Band
7218.5	46.51	H	74	-27.49	Peak	1.35	45	
7218.5	36.36	H	54	-17.64	Avg	1.35	45	
8120.8								No Emission Detected
8120.8								No Emission Detected
9023.1								No Emission Detected
9023.1								No Emission Detected

Pentair Water Pool & Spa
Mobi2
Model: Mobiletouch 2

Date: 03/10/08
Labs: B and D
Tested By: Kyle Fujimoto

Middle Channel

[illegible]

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

Middle Channel - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.1	62.55	V	--	--	Peak	1.25	180	Not in Restricted Band
1817.1	52.4	V	--	--	Avg	1.25	180	Not in Restricted Band
2725.65	44.12	V	74	-29.88	Peak	1	150	
2725.65	33.97	V	54	-20.03	Avg	1	150	
3634.21	52.94	V	74	-21.06	Peak	1.78	180	
3634.21	42.79	V	54	-11.21	Avg	1.78	180	
4542.75	53.91	V	74	-20.09	Peak	1.64	225	
4242.75	43.76	V	54	-10.24	Avg	1.64	225	
5451.31	59.17	V	74	-14.83	Peak	1.52	135	
5451.31	49.02	V	54	-4.98	Avg	1.52	135	
6359.85	51.18	V	--	--	Peak	1.15	90	Not in Restricted Band
6359.85	41.03	V	--	--	Avg	1.15	90	Not in Restricted Band
7268.41	50.12	V	74	-23.88	Peak	1.51	180	
7268.41	39.97	V	54	-14.03	Avg	1.51	180	
8176.9								No Emission Detected
8176.9								No Emission Detected
9085.5								No Emission Detected
9085.5								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

Middle Channel - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.1	64.41	H	--	--	Peak	1.47	180	Not in Restricted Band
1817.1	54.26	H	--	--	Avg	1.47	180	Not in Restricted Band
2725.65	39.72	H	74	-34.28	Peak	1	150	
2725.65	29.57	H	54	-24.43	Avg	1	150	
3634.21	52.05	H	74	-21.95	Peak	1.48	135	
3634.21	41.9	H	54	-12.1	Avg	1.48	135	
4542.75	52.82	H	74	-21.18	Peak	1.64	225	
4242.75	42.67	H	54	-11.33	Avg	1.64	225	
5451.31	57.21	H	74	-16.79	Peak	1.48	150	
5451.31	47.06	H	54	-6.94	Avg	1.48	150	
6359.85	49.71	H	--	--	Peak	1.15	90	Not in Restricted Band
6359.85	39.56	H	--	--	Avg	1.15	90	Not in Restricted Band
7268.41	52.01	H	74	-21.99	Peak	1.49	135	
7268.41	41.86	H	54	-12.14	Avg	1.49	135	
8176.9								No Emission Detected
8176.9								No Emission Detected
9085.5								No Emission Detected
9085.5								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

Middle Channel - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.1	60.76	V	--	--	Peak	1.25	180	Not in Restricted Band
1817.1	50.61	V	--	--	Avg	1.25	180	Not in Restricted Band
2725.65	45.57	V	74	-28.43	Peak	1.49	225	
2725.65	35.42	V	54	-18.58	Avg	1.49	225	
3634.21	52.15	V	74	-21.85	Peak	1.48	180	
3634.21	42	V	54	-12	Avg	1.48	180	
4542.75	52.79	V	74	-21.21	Peak	1.67	225	
4242.75	42.64	V	54	-11.36	Avg	1.67	225	
5451.31	59.67	V	74	-14.33	Peak	1.73	250	
5451.31	49.52	V	54	-4.48	Avg	1.73	250	
6359.85	50.42	V	--	--	Peak	1.92	135	Not in Restricted Band
6359.85	40.27	V	--	--	Avg	1.92	135	Not in Restricted Band
7268.41	51.32	V	74	-22.68	Peak	1.27	150	
7268.41	41.17	V	54	-12.83	Avg	1.27	150	
8176.9								No Emission Detected
8176.9								No Emission Detected
9085.5								No Emission Detected
9085.5								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

Middle Channel - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.1	68.67	H	--	--	Peak	1.25	180	Not in Restricted Band
1817.1	58.52	H	--	--	Avg	1.25	180	Not in Restricted Band
2725.65	61.27	H	74	-12.73	Peak	1	150	
2725.65	51.12	H	54	-2.88	Avg	1	150	
3634.21	53.92	H	74	-20.08	Peak	2.01	180	
3634.21	43.77	H	54	-10.23	Avg	2.01	180	
4542.75	49.85	H	74	-24.15	Peak	1.64	225	
4242.75	39.7	H	54	-14.3	Avg	1.64	225	
5451.31	60.37	H	74	-13.63	Peak	1.09	150	
5451.31	50.22	H	54	-3.78	Avg	1.09	150	
6359.85	52.93	H	--	--	Peak	1.04	135	Not in Restricted Band
6359.85	42.78	H	--	--	Avg	1.04	135	Not in Restricted Band
7268.41	51.03	H	74	-22.97	Peak	1.51	180	
7268.41	40.88	H	54	-13.12	Avg	1.51	180	
8176.9								No Emission Detected
8176.9								No Emission Detected
9085.5								No Emission Detected
9085.5								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

Middle Channel - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.1	59.68	V	--	--	Peak	1	135	Not in Restricted Band
1817.1	49.53	V	--	--	Avg	1	135	Not in Restricted Band
2725.65	54.14	V	74	-19.86	Peak	1	150	
2725.65	43.99	V	54	-10.01	Avg	1	150	
3634.21	54.51	V	74	-19.49	Peak	1.78	180	
3634.21	44.36	V	54	-9.64	Avg	1.78	180	
4542.75	50.87	V	74	-23.13	Peak	2.17	180	
4242.75	40.72	V	54	-13.28	Avg	2.17	180	
5451.31	58.81	V	74	-15.19	Peak	1.05	150	
5451.31	48.66	V	54	-5.34	Avg	1.05	150	
6359.85	50.03	V	--	--	Peak	2.47	180	Not in Restricted Band
6359.85	39.88	V	--	--	Avg	2.47	180	Not in Restricted Band
7268.41	48.98	V	74	-25.02	Peak	1.51	180	
7268.41	38.83	V	54	-15.17	Avg	1.51	180	
8176.9								No Emission Detected
8176.9								No Emission Detected
9085.5								No Emission Detected
9085.5								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

Middle Channel - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.1	53.07	H	--	--	Peak	1.61	135	Not in Restricted Band
1817.1	42.92	H	--	--	Avg	1.61	135	Not in Restricted Band
2725.65	47.15	H	74	-26.85	Peak	2.43	135	
2725.65	37	H	54	-17	Avg	2.43	135	
3634.21	53.31	H	74	-20.69	Peak	1.35	135	
3634.21	43.16	H	54	-10.84	Avg	1.35	135	
4542.75	53.66	H	74	-20.34	Peak	1.1	135	
4242.75	43.51	H	54	-10.49	Avg	1.1	135	
5451.31	54.54	H	74	-19.46	Peak	1.14	180	
5451.31	44.39	H	54	-9.61	Avg	1.14	180	
6359.85	50.82	H	--	--	Peak	1.15	90	Not in Restricted Band
6359.85	40.67	H	--	--	Avg	1.15	90	Not in Restricted Band
7268.41	49.63	H	74	-24.37	Peak	1.46	135	
7268.41	39.48	H	54	-14.52	Avg	1.46	135	
8176.9								No Emission Detected
8176.9								No Emission Detected
9085.5								No Emission Detected
9085.5								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

Middle Channel - Charging Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1804.62	62.55	V	--	--	Peak	1.25	180	Not in Restricted Band
1804.62	52.4	V	--	--	Avg	1.25	180	Not in Restricted Band
2706.95	56.1	V	74	-17.9	Peak	1.25	90	
2706.95	45.95	V	54	-8.05	Avg	1.25	90	
3633.8	55.17	V	74	-18.83	Peak	1.15	45	
3633.8	45.02	V	54	-8.98	Avg	1.15	45	
4511.5	44.91	V	74	-29.09	Peak	1.35	225	
4511.5	34.76	V	54	-19.24	Avg	1.35	225	
5413.8	52.31	V	74	-21.69	Peak	1.35	180	
5413.8	42.16	V	54	-11.84	Avg	1.35	180	
6316.2	48.91	V	--	--	Peak	1.15	90	Not in Restricted Band
6316.2	38.76	V	--	--	Avg	1.15	90	Not in Restricted Band
7218.5	57.39	V	74	-16.61	Peak	1.25	180	
7218.5	47.24	V	54	-6.76	Avg	1.25	180	
8120.8								No Emission Detected
8120.8								No Emission Detected
9023.1								No Emission Detected
9023.1								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

Middle Channel - Charging Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1804.62	59.74	H	--	--	Peak	1.25	180	Not in Restricted Band
1804.62	49.59	H	--	--	Avg	1.25	180	Not in Restricted Band
2706.95	58.91	H	74	-15.09	Peak	1.44	145	
2706.95	48.76	H	54	-5.24	Avg	1.44	145	
3633.8	50.58	H	74	-23.42	Peak	1.15	45	
3633.8	40.43	H	54	-13.57	Avg	1.15	45	
4511.5	57.19	H	74	-16.81	Peak	1.35	225	
4511.5	47.04	H	54	-6.96	Avg	1.35	225	
5413.8	53.61	H	74	-20.39	Peak	1.35	180	
5413.8	43.46	H	54	-10.54	Avg	1.35	180	
6316.2	49.03	H	--	--	Peak	1.15	90	Not in Restricted Band
6316.2	38.88	H	--	--	Avg	1.15	90	Not in Restricted Band
7218.5	52.23	H	74	-21.77	Peak	1.25	180	
7218.5	42.08	H	54	-11.92	Avg	1.25	180	
8120.8								No Emission Detected
8120.8								No Emission Detected
9023.1								No Emission Detected
9023.1								No Emission Detected

Pentair Water Pool & Spa
Mobi2
Model: Mobiletouch 2

Date: 03/10/08
Labs: B and D
Tested By: Kyle Fujimoto

High Channel

[illegible]

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

High Channel - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830.94	65.82	V	--	--	Peak	1.25	150	Not in Restricted Band
1830.94	55.67	V	--	--	Avg	1.25	150	Not in Restricted Band
2746.41	48.47	V	74	-25.53	Peak	1.09	180	
2746.41	38.32	V	54	-15.68	Avg	1.09	180	
3661.88	53.45	V	74	-20.55	Peak	1.15	180	
3661.88	43.3	V	54	-10.7	Avg	1.15	180	
4577.35	54.09	V	74	-19.91	Peak	1.87	225	
4577.35	43.94	V	54	-10.06	Avg	1.87	225	
5492.82	58.24	V	74	-15.76	Peak	1.67	150	
5492.82	48.09	V	54	-5.91	Avg	1.67	150	
6408.29	49.41	V	--	--	Peak	1.25	150	Not in Restricted Band
6408.29	39.26	V	--	--	Avg	1.25	150	Not in Restricted Band
7323.76	51.23	V	74	-22.77	Peak	1.67	150	
7323.76	41.08	V	54	-12.92	Avg	1.67	150	
8239.23								No Emission Detected
8239.23								No Emission Detected
9154.7								No Emission Detected
9154.7								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

High Channel - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830.94	61.14	H	--	--	Peak	1.25	150	Not in Restricted Band
1830.94	50.99	H	--	--	Avg	1.25	150	Not in Restricted Band
2746.41	55.98	H	74	-18.02	Peak	1.25	150	
2746.41	45.83	H	54	-8.17	Avg	1.25	150	
3661.88	59.42	H	74	-14.58	Peak	1.25	180	
3661.88	49.27	H	54	-4.73	Avg	1.25	180	
4577.35	58.84	H	74	-15.16	Peak	1.75	315	
4577.35	48.69	H	54	-5.31	Avg	1.75	315	
5492.82	59.93	H	74	-14.07	Peak	1.43	180	
5492.82	49.78	H	54	-4.22	Avg	1.43	180	
6408.29	57.46	H	--	--	Peak	1.33	150	Not in Restricted Band
6408.29	47.31	H	--	--	Avg	1.33	150	Not in Restricted Band
7323.76	53.35	H	74	-20.65	Peak	1.25	150	
7323.76	43.2	H	54	-10.8	Avg	1.25	150	
8239.23								No Emission Detected
8239.23								No Emission Detected
9154.7								No Emission Detected
9154.7								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

High Channel - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830.94	63.05	V	--	--	Peak	1.25	150	Not in Restricted Band
1830.94	52.9	V	--	--	Avg	1.25	150	Not in Restricted Band
2746.41	52.36	V	74	-21.64	Peak	1.57	150	
2746.41	42.21	V	54	-11.79	Avg	1.57	150	
3661.88	53.11	V	74	-20.89	Peak	1.54	135	
3661.88	42.96	V	54	-11.04	Avg	1.54	135	
4577.35	56.33	V	74	-17.67	Peak	1.51	125	
4577.35	46.18	V	54	-7.82	Avg	1.51	125	
5492.82	58.55	V	74	-15.45	Peak	1.36	315	
5492.82	48.4	V	54	-5.6	Avg	1.36	315	
6408.29	48.36	V	--	--	Peak	1.36	135	Not in Restricted Band
6408.29	38.21	V	--	--	Avg	1.36	135	Not in Restricted Band
7323.76	52.06	V	74	-21.94	Peak	1.08	135	
7323.76	41.91	V	54	-12.09	Avg	1.08	135	
8239.23								No Emission Detected
8239.23								No Emission Detected
9154.7								No Emission Detected
9154.7								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

High Channel - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830.94	60.29	H	--	--	Peak	1.25	150	Not in Restricted Band
1830.94	50.14	H	--	--	Avg	1.25	150	Not in Restricted Band
2746.41	56.69	H	74	-17.31	Peak	1.44	90	
2746.41	46.54	H	54	-7.46	Avg	1.44	90	
3661.88	55.89	H	74	-18.11	Peak	1.43	150	
3661.88	45.74	H	54	-8.26	Avg	1.43	150	
4577.35	58.34	H	74	-15.66	Peak	1.64	225	
4577.35	48.19	H	54	-5.81	Avg	1.64	225	
5492.82	61.39	H	74	-12.61	Peak	1.31	150	
5492.82	51.24	H	54	-2.76	Avg	1.31	150	
6408.29	55.21	H	--	--	Peak	1.91	225	Not in Restricted Band
6408.29	45.06	H	--	--	Avg	1.91	225	Not in Restricted Band
7323.76	55.79	H	74	-18.21	Peak	1.92	315	
7323.76	45.64	H	54	-8.36	Avg	1.92	315	
8239.23								No Emission Detected
8239.23								No Emission Detected
9154.7								No Emission Detected
9154.7								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

High Channel - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830.94	63.58	V	--	--	Peak	1.25	150	Not in Restricted Band
1830.94	53.43	V	--	--	Avg	1.25	150	Not in Restricted Band
2746.41	47.54	V	74	-26.46	Peak	1.05	135	
2746.41	37.39	V	54	-16.61	Avg	1.05	135	
3661.88	51.95	V	74	-22.05	Peak	1.68	180	
3661.88	41.8	V	54	-12.2	Avg	1.68	180	
4577.35	55.69	V	74	-18.31	Peak	1.75	315	
4577.35	45.54	V	54	-8.46	Avg	1.75	315	
5492.82	56.88	V	74	-17.12	Peak	1.78	90	
5492.82	46.73	V	54	-7.27	Avg	1.78	90	
6408.29	46.33	V	--	--	Peak	1.78	150	Not in Restricted Band
6408.29	36.18	V	--	--	Avg	1.78	150	Not in Restricted Band
7323.76	49.49	V	74	-24.51	Peak	1.78	150	
7323.76	39.34	V	54	-14.66	Avg	1.78	150	
8239.23								No Emission Detected
8239.23								No Emission Detected
9154.7								No Emission Detected
9154.7								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

High Channel - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830.94	61.95	H	--	--	Peak	2.04	135	Not in Restricted Band
1830.94	51.8	H	--	--	Avg	2.04	135	Not in Restricted Band
2746.41	58.46	H	74	-15.54	Peak	2.29	155	
2746.41	48.31	H	54	-5.69	Avg	2.29	155	
3661.88	53.46	H	74	-20.54	Peak	1.69	225	
3661.88	43.31	H	54	-10.69	Avg	1.69	225	
4577.35	55.88	H	74	-18.12	Peak	1.53	275	
4577.35	45.73	H	54	-8.27	Avg	1.53	275	
5492.82	57.23	H	74	-16.77	Peak	1.73	225	
5492.82	47.08	H	54	-6.92	Avg	1.73	225	
6408.29	49.43	H	--	--	Peak	1.25	180	Not in Restricted Band
6408.29	39.28	H	--	--	Avg	1.25	180	Not in Restricted Band
7323.76	51.19	H	74	-22.81	Peak	1.55	150	
7323.76	41.04	H	54	-12.96	Avg	1.55	150	
8239.23								No Emission Detected
8239.23								No Emission Detected
9154.7								No Emission Detected
9154.7								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

High Channel - Charging Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830.94	62.36	V	--	--	Peak	1.93	180	Not in Restricted Band
1830.94	52.21	V	--	--	Avg	1.93	180	Not in Restricted Band
2746.41	54.65	V	74	-19.35	Peak	1.25	150	
2746.41	44.5	V	54	-9.5	Avg	1.25	150	
3661.88	49.89	V	74	-24.11	Peak	1.92	135	
3661.88	39.74	V	54	-14.26	Avg	1.92	135	
4577.35	58.02	V	74	-15.98	Peak	1.65	225	
4577.35	47.87	V	54	-6.13	Avg	1.65	225	
5492.82	57.45	V	74	-16.55	Peak	1.89	315	
5492.82	47.3	V	54	-6.7	Avg	1.89	315	
6408.29	48.75	V	--	--	Peak	1.43	180	Not in Restricted Band
6408.29	38.6	V	--	--	Avg	1.43	180	Not in Restricted Band
7323.76	52.23	V	74	-21.77	Peak	1.78	180	
7323.76	42.08	V	54	-11.92	Avg	1.78	180	
8239.23								No Emission Detected
8239.23								No Emission Detected
9154.7								No Emission Detected
9154.7								No Emission Detected

FCC 15.247

Pentair Water Pool & Spa

Mobi2

Model: Mobiletouch 2

Date: 03/10/08

Labs: B and D

Tested By: Kyle Fujimoto

High Channel - Charging Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830.94	61.38	H	--	--	Peak	1.25	150	Not in Restricted Band
1830.94	51.23	H	--	--	Avg	1.25	150	Not in Restricted Band
2746.41	52.35	H	74	-21.65	Peak	1.91	180	
2746.41	42.2	H	54	-11.8	Avg	1.91	180	
3661.88	50.94	H	74	-23.06	Peak	1.36	150	
3661.88	40.79	H	54	-13.21	Avg	1.36	150	
4577.35	56.38	H	74	-17.62	Peak	1.21	150	
4577.35	46.23	H	54	-7.77	Avg	1.21	150	
5492.82	55.22	H	74	-18.78	Peak	1.49	90	
5492.82	45.07	H	54	-8.93	Avg	1.49	90	
6408.29	49.21	H	--	--	Peak	1.49	150	Not in Restricted Band
6408.29	39.06	H	--	--	Avg	1.49	150	Not in Restricted Band
7323.76	49.71	H	74	-24.29	Peak	1.49	150	
7323.76	39.56	H	54	-14.44	Avg	1.49	150	
8239.23								No Emission Detected
8239.23								No Emission Detected
9154.7								No Emission Detected
9154.7								No Emission Detected

Pentair Water Pool & Spa
Mobi2
Model: Mobiletouch 2

Date: 03/10/08
Labs: B and D
Tested By: Kyle Fujimoto

Digital Portion - 1 GHz to 9300 MHz - Vertical and Horizontal Polarizations
Non-Harmonic Emissions from the Tx - 1 GHz to 9300 MHz - Vertical and Horizontal Polarizations
Receiver Portion - 1 GHz to 9300 MHz - Vertical and Horizontal Polarizations

Worse Case Axis: Z-Axis

[illegible]

Test Location	: Compatible Electronics	Page	: 1/2
Customer	: Pentair Water Pool and Spa	Date	: 3/27/2008
Manufacturer	: Pentair Water Pool and Spa	Time	: 10:17:51
Eut name	: 900 MHz FHSS Transceiver	Lab	: D
Model	: Mobi II	Test Distance	: 3 Meters
Serial #	: N/A		
Specification	: FCC Class B		
Distance correction factor (20 * log(test/spec))			: 0.00
Test Mode	: Configuration Type: Stand-Alone Mode, Y-Axis (Worst Case)		
	Scan Range: 10 kHz to 1 GHz (Vertical and Horizontal)		
	Mode Type: Transmit Mode (Worst Case)		
	Tested By: Kyle Fujimoto		

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	Limit = L dBuV/m	Delta R-L dB
1H	157.770	41.10	1.43	12.19	38.17	16.56	43.50	-26.94
2V	167.420	36.20	1.47	13.35	38.13	12.90	43.50	-30.60
3V	172.370	40.30	1.49	14.10	38.11	17.78	43.50	-25.72
4V	177.366	37.80	1.51	14.82	38.13	16.00	43.50	-27.50
5V	182.342	36.70	1.53	15.36	38.19	15.40	43.50	-28.10
6V	192.358	38.30	1.57	16.02	38.31	17.58	43.50	-25.92
7H	192.492	34.50	1.57	16.03	38.31	13.79	43.50	-29.71
8H	201.365	44.10	1.61	16.50	38.39	23.82	43.50	-19.68
9V	202.345	37.50	1.61	16.50	38.38	17.23	43.50	-26.27
10V	207.347	36.30	1.63	16.50	38.34	16.09	43.50	-27.41
11H	317.592	50.00	2.14	13.96	38.11	27.98	46.00	-18.02
12V	317.608	48.60	2.14	13.96	38.11	26.58	46.00	-19.42
13H	322.595	50.40	2.15	14.08	38.14	28.49	46.00	-17.51
14H	327.589	52.30	2.16	14.20	38.17	30.49	46.00	-15.51
15H	332.599	51.00	2.17	14.32	38.20	29.29	46.00	-16.71
16V	342.604	47.70	2.19	14.56	38.26	26.19	46.00	-19.81
17H	347.591	56.40	2.20	14.68	38.29	34.99	46.00	-11.01
18V	347.609	48.60	2.20	14.68	38.29	27.19	46.00	-18.81
19H	352.608	57.20	2.21	14.79	38.28	35.91	46.00	-10.09
20H	357.584	57.30	2.22	14.90	38.25	36.17	46.00	-9.83
21H	360.102	55.70	2.22	14.96	38.24	34.65	46.00	-11.35
22H	362.611	59.50	2.23	15.02	38.22	38.52	46.00	-7.48
23H	365.107	55.90	2.23	15.07	38.21	35.00	46.00	-11.00
24H	367.615	63.50	2.24	15.13	38.19	42.67	46.00	-3.33
25H	370.133	56.00	2.24	15.18	38.17	35.25	46.00	-10.75
26H	372.616	64.40	2.25	15.23	38.16	43.72	46.00	-2.28
27H	372.616Qp	64.32	2.25	15.23	38.16	43.64	46.00	-2.36
28V	372.632	52.90	2.25	15.23	38.16	32.22	46.00	-13.78
29H	377.604	63.70	2.26	15.34	38.13	43.17	46.00	-2.83
30V	377.610	53.30	2.26	15.34	38.13	32.77	46.00	-13.23
31V	377.617	52.10	2.26	15.34	38.13	31.57	46.00	-14.43
32H	380.127	60.60	2.26	15.39	38.11	40.14	46.00	-5.86
33H	382.602	61.10	2.27	15.44	38.10	40.71	46.00	-5.29
34V	387.613	52.00	2.28	15.55	38.07	31.75	46.00	-14.25
35H	392.588	56.70	2.29	15.65	38.04	36.59	46.00	-9.41



Test Location	: Compatible Electronics	Page	: 2/2
Customer	: Pentair Water Pool and Spa	Date	: 3/27/2008
Manufacturer	: Pentair Water Pool and Spa	Time	: 10:17:51
Eut name	: 900 MHz FHSS Transceiver	Lab	: D
Model	: Mobi II	Test Distance	: 3 Meters
Serial #	: N/A		
Specification	: FCC Class B		
Distance correction factor (20 * log(test/spec))			: 0.00
Test Mode	: Configuration Type: Stand-Alone Mode, Y-Axis (Worst Case)		
	Scan Range: 10 kHz to 1 GHz (Vertical and Horizontal)		
	Mode Type: Transmit Mode (Worst Case)		
	Tested By: Kyle Fujimoto		

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	Limit = L dBuV/m	Delta R-L dB
36H	397.589	55.70	2.30	15.75	38.01	35.73	46.00	-10.27
37V	397.626	47.90	2.30	15.75	38.01	27.93	46.00	-18.07
38H	400.115	58.80	2.30	15.80	38.00	38.90	46.00	-7.10
39V	400.135	50.40	2.30	15.80	38.00	30.50	46.00	-15.50
40H	402.578	55.30	2.31	15.83	37.97	35.47	46.00	-10.53
41H	410.111	52.40	2.34	15.93	37.89	32.78	46.00	-13.22
42V	415.109	48.90	2.36	16.00	37.84	29.42	46.00	-16.58
43H	422.621	49.70	2.39	16.10	37.77	30.42	46.00	-15.58
44H	425.118	50.50	2.40	16.13	37.74	31.29	46.00	-14.71
45H	432.619	52.20	2.43	16.22	37.67	33.19	46.00	-12.81
46H	440.120	53.70	2.46	16.31	37.59	34.88	46.00	-11.12
47H	445.118	52.70	2.48	16.37	37.55	34.01	46.00	-11.99
48H	477.625	53.70	2.61	16.75	37.73	35.34	46.00	-10.66
49H	487.610	52.70	2.65	16.87	37.80	34.41	46.00	-11.59
50V	503.800	38.10	2.71	17.09	37.90	20.00	46.00	-26.00
51V	552.400	35.20	2.81	18.20	37.89	18.32	46.00	-27.68
52V	787.300	37.80	3.48	21.47	37.25	25.49	46.00	-20.51
53V	900.400	35.40	4.10	21.30	37.10	23.70	46.00	-22.30

Test Location	: Compatible Electronics	Page	: 1/2
Customer	: Pentair Water Pool and Spa	Date	: 3/27/2008
Manufacturer	: Pentair Water Pool and Spa	Time	: 10:52:55
Eut name	: 900 MHz FHSS Transceiver	Lab	: D
Model	: Mobi II	Test Distance	: 3 Meters
Serial #	: N/A		
Specification	: FCC Class B		
Distance correction factor (20 * log(test/spec))			: 0.00
Test Mode	: Configuration Type: Charging Axis		
	Scan Range: 10 kHz to 1 GHz (Vertical and Horizontal)		
	Mode Type: Receiving while Charging (Worst Case)		
	Tested By: Kyle Fujimoto		

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	Limit = L dBuV/m	Delta R-L dB
1V	84.620	43.50	0.95	6.38	38.35	12.48	40.00	-27.52
2V	109.012	36.70	1.08	12.07	38.25	11.60	43.50	-31.90
3V	117.303	52.90	1.14	13.24	38.39	28.90	43.50	-14.60
4V	147.703	41.10	1.38	12.14	38.23	16.40	43.50	-27.10
5H	167.534	44.60	1.47	13.37	38.13	21.32	43.50	-22.18
6H	172.543	34.30	1.49	14.12	38.11	11.80	43.50	-31.70
7H	177.538	39.00	1.51	14.85	38.13	17.23	43.50	-26.27
8H	182.514	40.30	1.53	15.37	38.19	19.01	43.50	-24.49
9V	206.053	36.30	1.63	16.50	38.35	16.08	43.50	-27.42
10V	207.007	39.10	1.63	16.50	38.34	18.89	43.50	-24.61
11H	207.519	35.60	1.63	16.50	38.34	15.39	43.50	-28.11
12V	241.253	35.70	1.70	16.50	38.20	15.70	46.00	-30.30
13V	310.114	49.20	2.12	13.77	38.06	27.02	46.00	-18.98
14H	315.095	55.10	2.13	13.89	38.10	33.03	46.00	-12.97
15H	320.093	54.70	2.14	14.02	38.13	32.73	46.00	-13.27
16V	337.614	52.40	2.18	14.44	38.23	30.79	46.00	-15.21
17V	342.642	55.10	2.19	14.56	38.26	33.59	46.00	-12.41
18H	345.081	51.80	2.19	14.62	38.27	30.34	46.00	-15.66
19H	347.596	48.20	2.20	14.68	38.29	26.79	46.00	-19.21
20V	347.602	57.00	2.20	14.68	38.29	35.59	46.00	-10.41
21H	352.588	52.20	2.21	14.79	38.28	30.91	46.00	-15.09
22V	352.618	55.70	2.21	14.79	38.28	34.41	46.00	-11.59
23H	357.597	53.00	2.22	14.90	38.25	31.87	46.00	-14.13
24V	357.614	53.70	2.22	14.90	38.25	32.57	46.00	-13.43
25H	362.606	55.30	2.23	15.02	38.22	34.32	46.00	-11.68
26V	365.118	56.20	2.23	15.07	38.20	35.30	46.00	-10.70
27V	367.597	55.30	2.24	15.12	38.19	34.47	46.00	-11.53
28H	367.612	57.90	2.24	15.12	38.19	37.07	46.00	-8.93
29H	372.616	59.70	2.25	15.23	38.16	39.02	46.00	-6.98
30V	377.596	56.80	2.26	15.34	38.13	36.27	46.00	-9.73
31H	377.612	59.80	2.26	15.34	38.13	39.27	46.00	-6.73
32H	382.617	58.20	2.27	15.44	38.10	37.81	46.00	-8.19
33H	387.597	57.00	2.28	15.55	38.07	36.75	46.00	-9.25
34H	392.607	55.30	2.29	15.65	38.04	35.19	46.00	-10.81
35H	402.611	52.60	2.31	15.83	37.97	32.77	46.00	-13.23



Test Location : Compatible Electronics
Customer : Pentair Water Pool and Spa
Manufacturer : Pentair Water Pool and Spa
Eut name : 900 MHz FHSS Transceiver
Model : Mobi II
Serial # : N/A
Specification : FCC Class B
Distance correction factor (20 * log(test/spec)) : 0.00
Test Mode : Configuration Type: Charging Axis
Scan Range: 10 kHz to 1 GHz (Vertical and Horizontal)
Mode Type: Receiving while Charging (Worst Case)
Tested By: Kyle Fujimoto

Page : 2/2
Date : 3/27/2008
Time : 10:52:55
Lab : D
Test Distance : 3 Meters

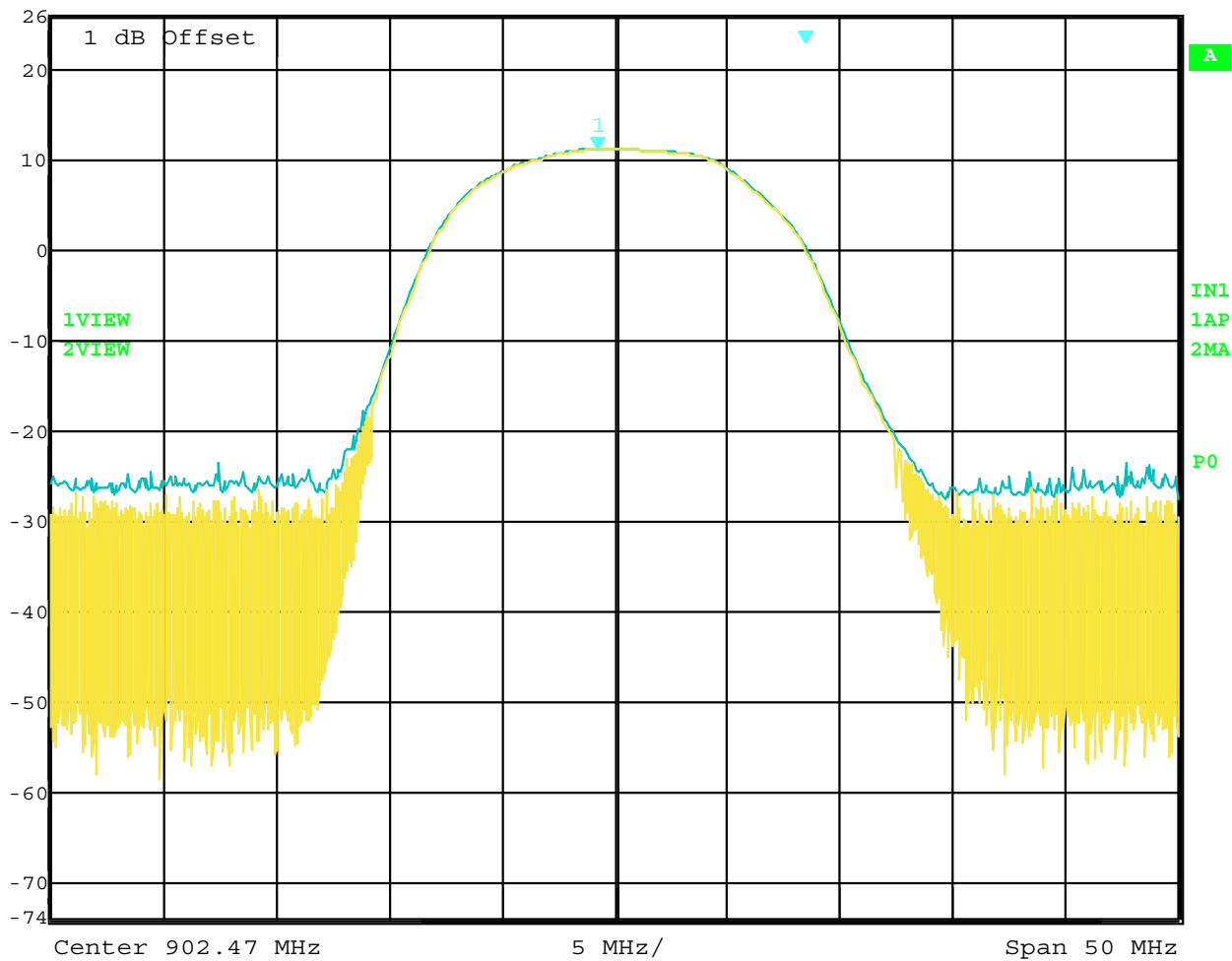
Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	Limit = L dBuV/m	Delta R-L dB
36H	427.600	47.70	2.41	16.16	37.72	28.56	46.00	-17.44
37V	435.098	46.50	2.44	16.25	37.64	27.55	46.00	-18.45
38V	440.122	50.10	2.46	16.31	37.59	31.28	46.00	-14.72
39H	450.103	50.30	2.50	16.43	37.50	31.73	46.00	-14.27
40V	462.600	47.00	2.55	16.58	37.60	28.53	46.00	-17.47
41H	500.067	43.50	2.70	17.00	37.90	25.30	46.00	-20.70

-20 dB BANDWIDTH

DATA SHEETS



Marker 1 [T2] RBW 10 MHz RF Att 40 dB
Ref Lvl 11.16 dBm VBW 10 MHz
26 dBm 901.71849699 MHz SWT 5 ms Unit dBm

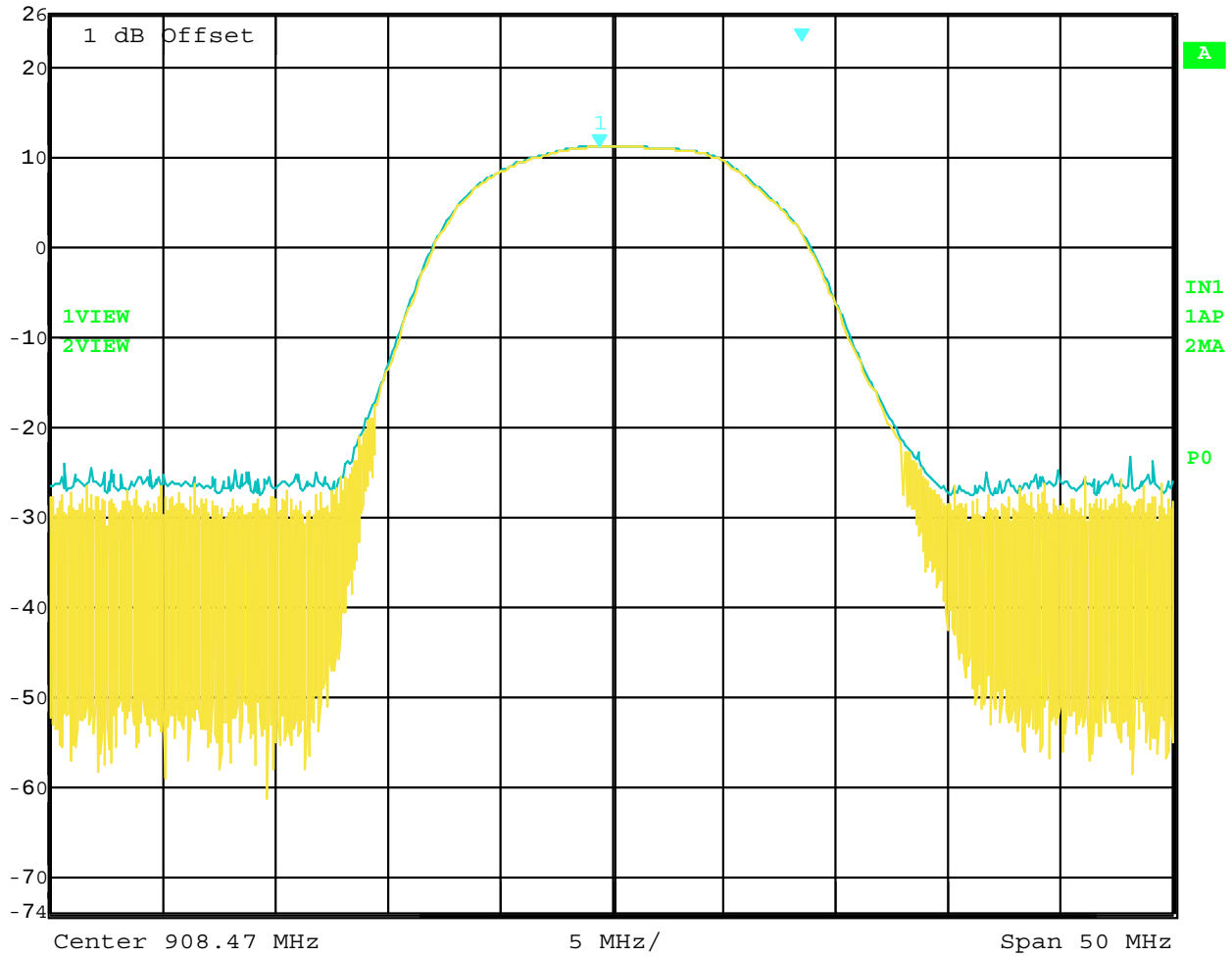


Date: 12.MAR.2008 10:29:46

Peak Power Output – Low Channel



Marker 1 [T2] RBW 10 MHz RF Att 40 dB
Ref Lvl 11.16 dBm VBW 10 MHz
26 dBm 907.91889780 MHz SWT 5 ms Unit dBm

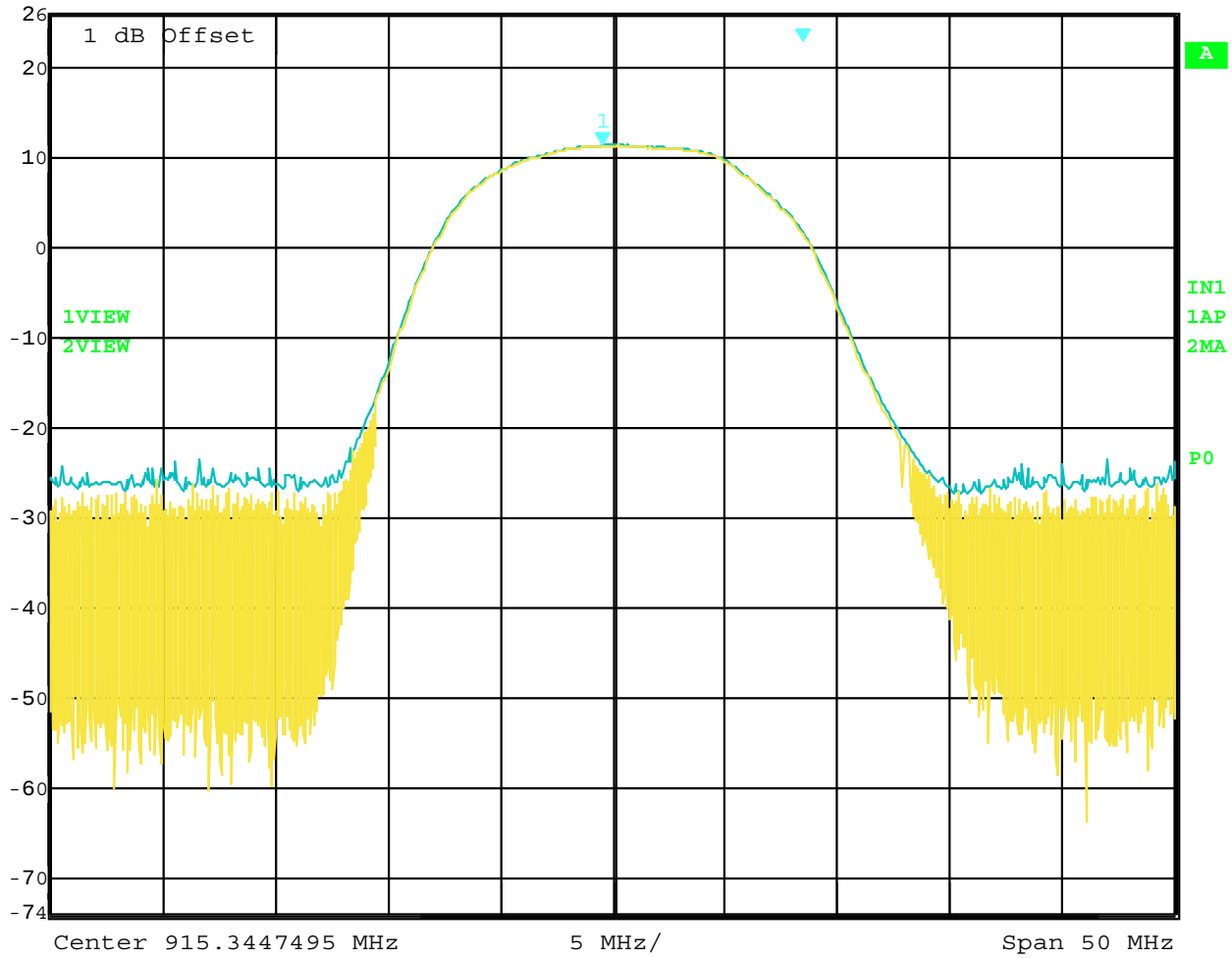


Date: 12.MAR.2008 10:29:14

Peak Power Output – Middle Channel



Marker 1 [T2] RBW 10 MHz RF Att 40 dB
Ref Lvl 11.28 dBm VBW 10 MHz
26 dBm 914.89384770 MHz SWT 5 ms Unit dBm



Date: 12.MAR.2008 10:28:31

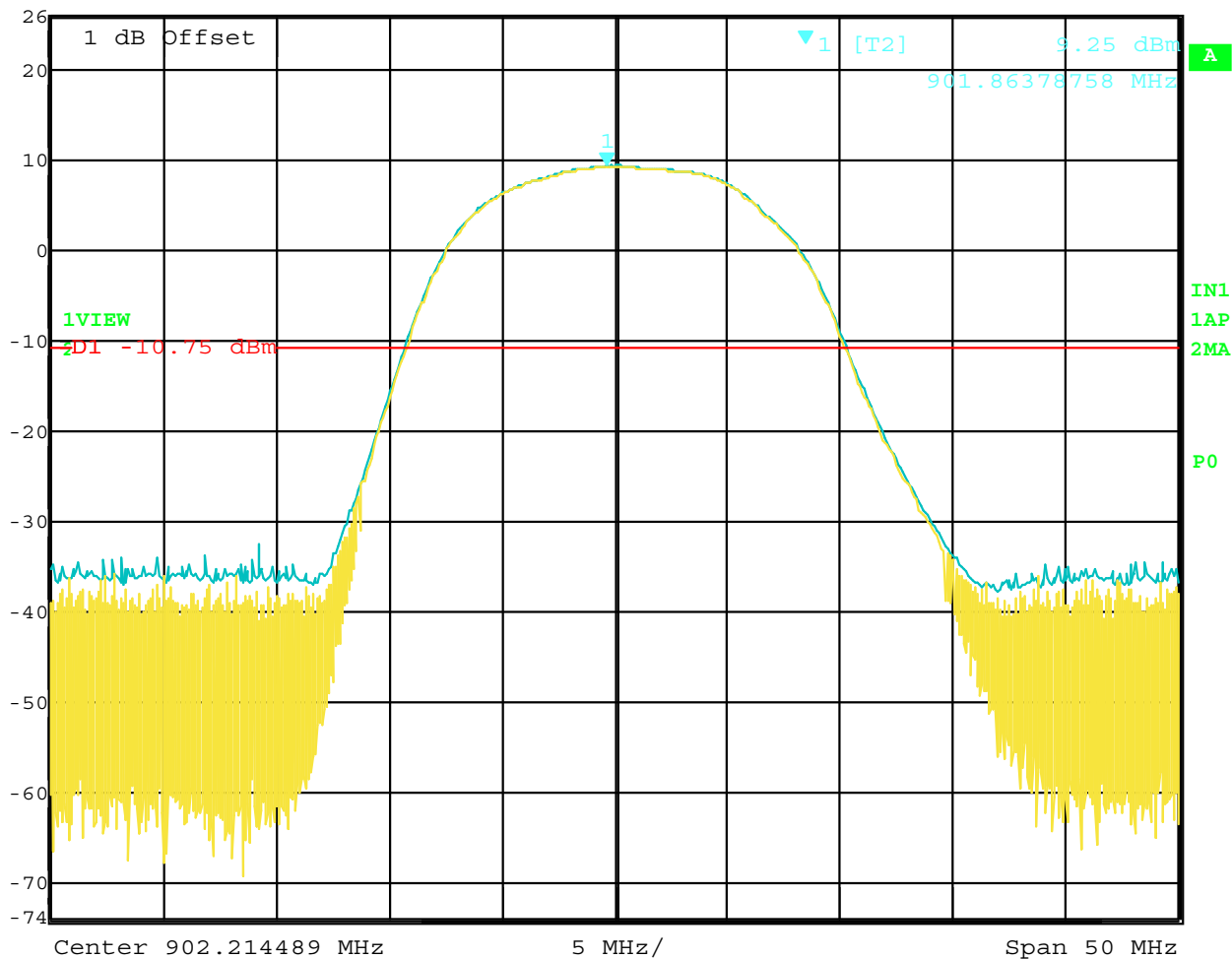
Peak Power Output – High Channel

PEAK POWER OUTPUT

DATA SHEETS



Ref Lvl 26 dBm
Marker 1 [T2] 9.25 dBm
901.86378758 MHz
RBW 10 MHz RF Att 40 dB
VBW 10 MHz
SWT 5 ms Unit dBm

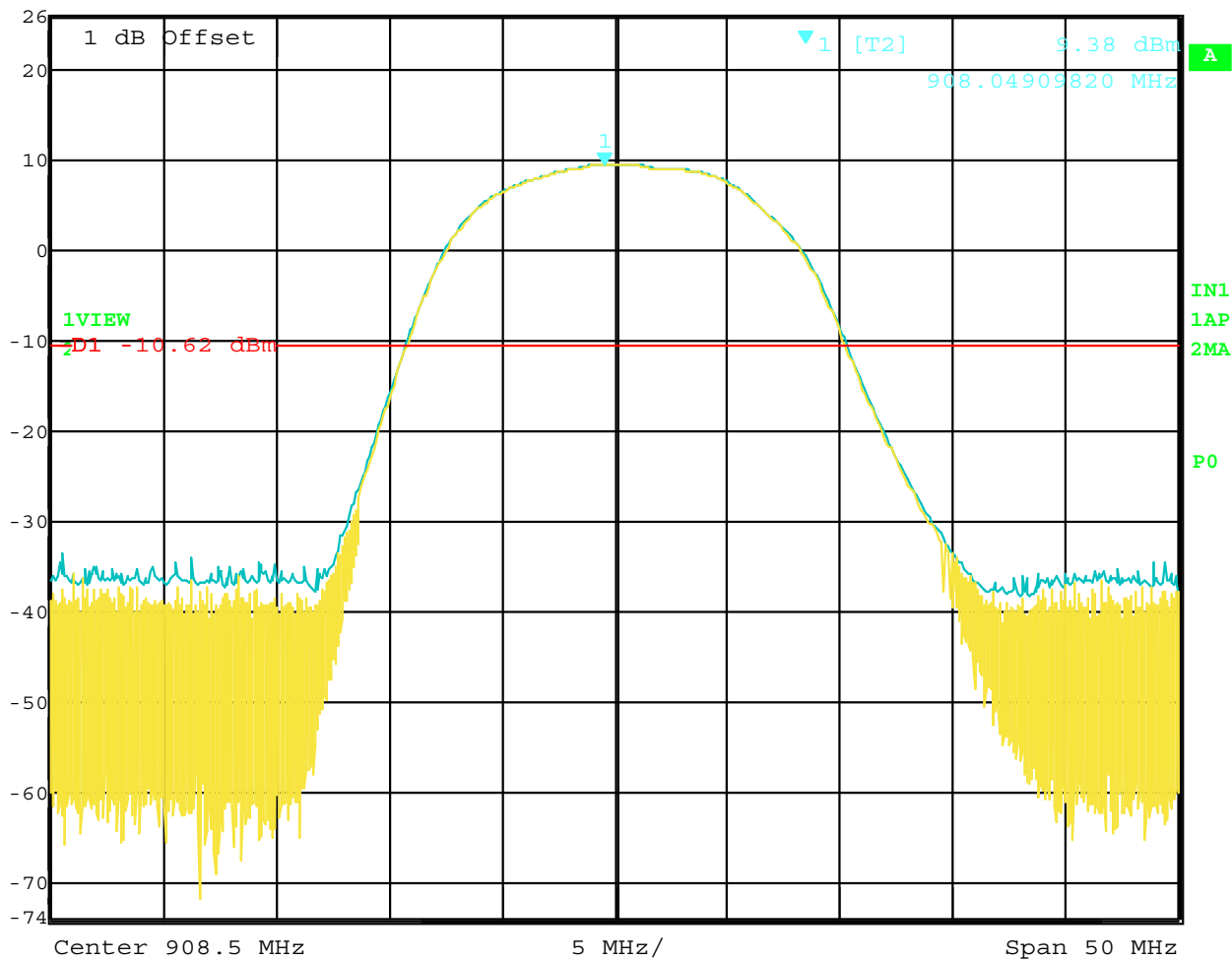


Date: 12.MAR.2008 14:30:55

Peak Power Output – Low Channel



Ref Lvl 26 dBm
Marker 1 [T2] 9.38 dBm
908.04909820 MHz
RBW 10 MHz
VBW 10 MHz
SWT 5 ms
RF Att 40 dB
Unit dBm

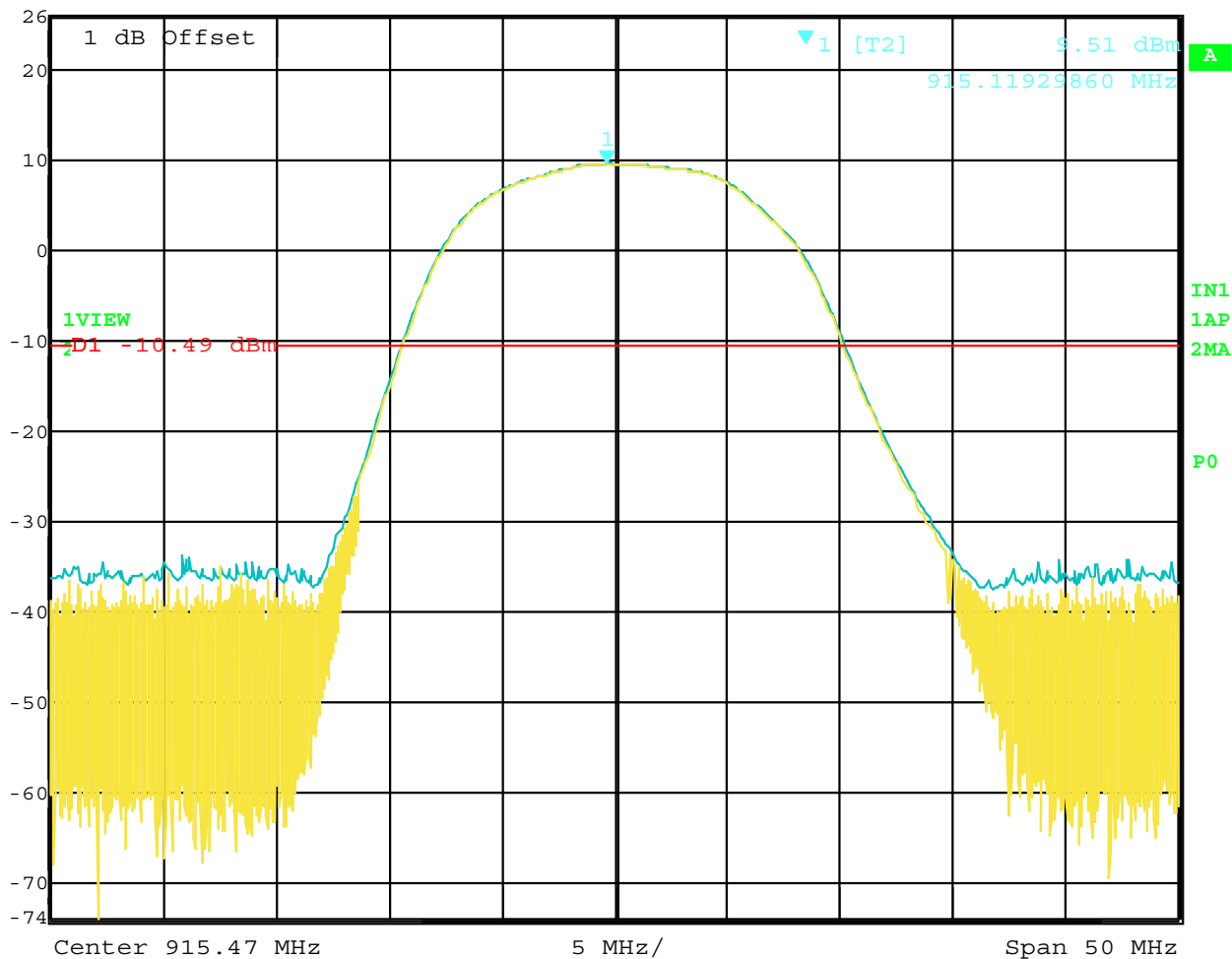


Date: 12.MAR.2008 14:48:01

Peak Power Output – Middle Channel



Ref Lvl 26 dBm
Marker 1 [T2] 9.51 dBm
915.11929860 MHz
RBW 10 MHz
VBW 10 MHz
SWT 5 ms
RF Att 40 dB
Unit dBm



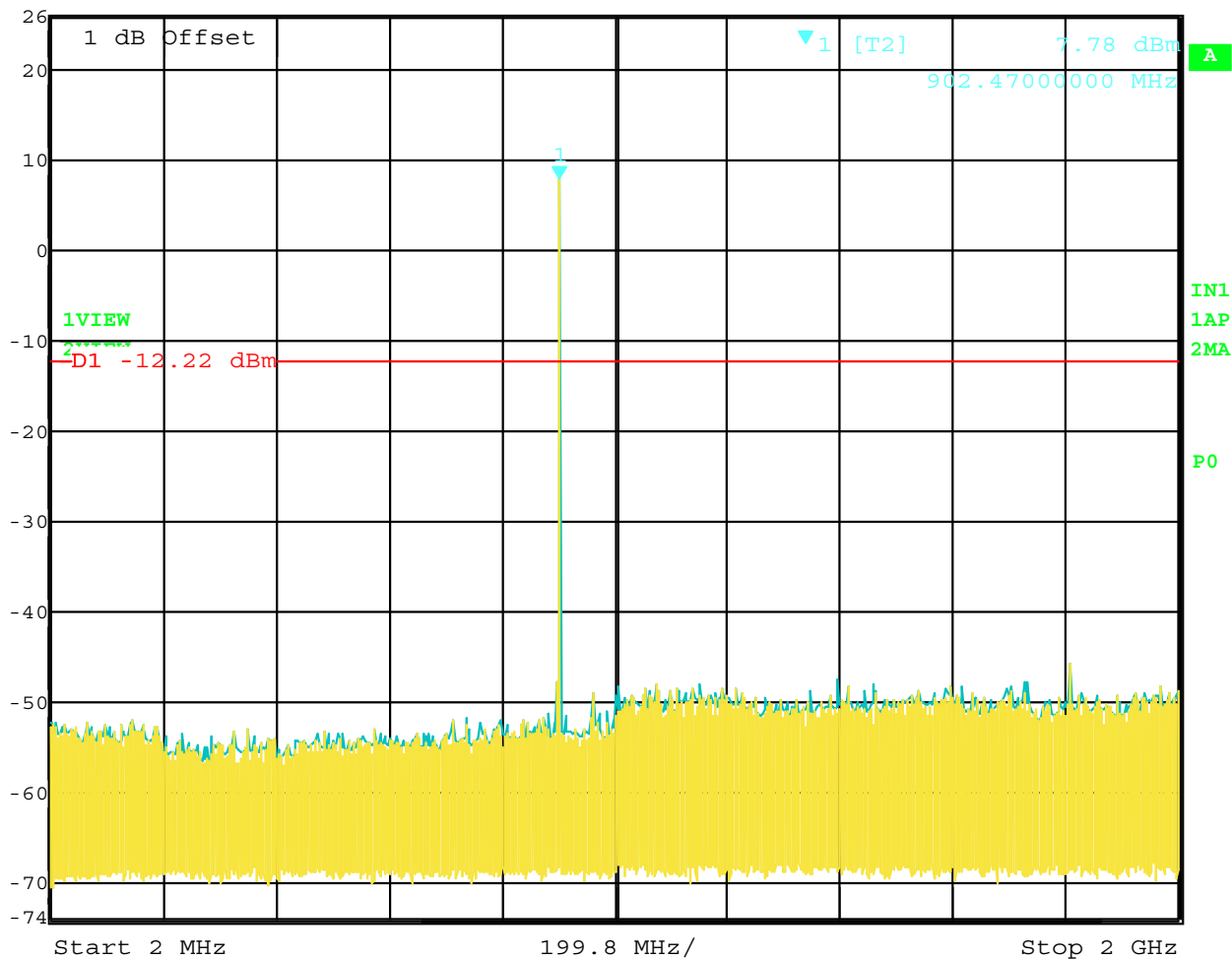
Date: 12.MAR.2008 14:59:31

Peak Power Output – High Channel

RF CONDUCTED ANTENNA TEST
DATA SHEETS



Marker 1 [T2] RBW 100 kHz RF Att 40 dB
Ref Lvl 7.78 dBm VBW 300 kHz
26 dBm 902.4700000 MHz SWT 1.15 s Unit dBm

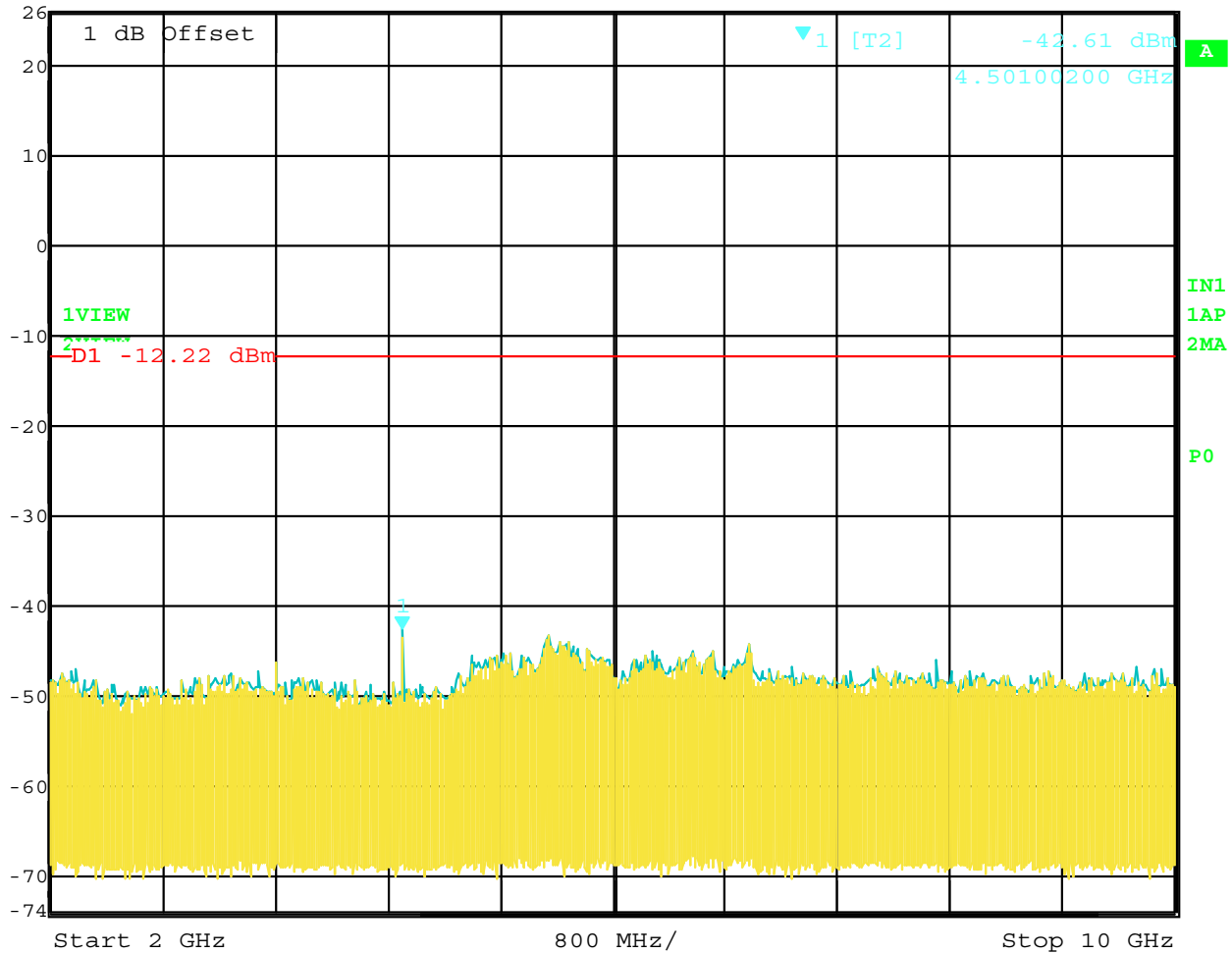


Date: 12.MAR.2008 14:06:46

RF Antenna Conducted Test – Low Channel – 2 MHz to 2 GHz



Ref Lvl 26 dBm
Marker 1 [T2] -42.61 dBm
4.50100200 GHz
RBW 100 kHz RF Att 40 dB
VBW 300 kHz
SWT 2 s Unit dBm

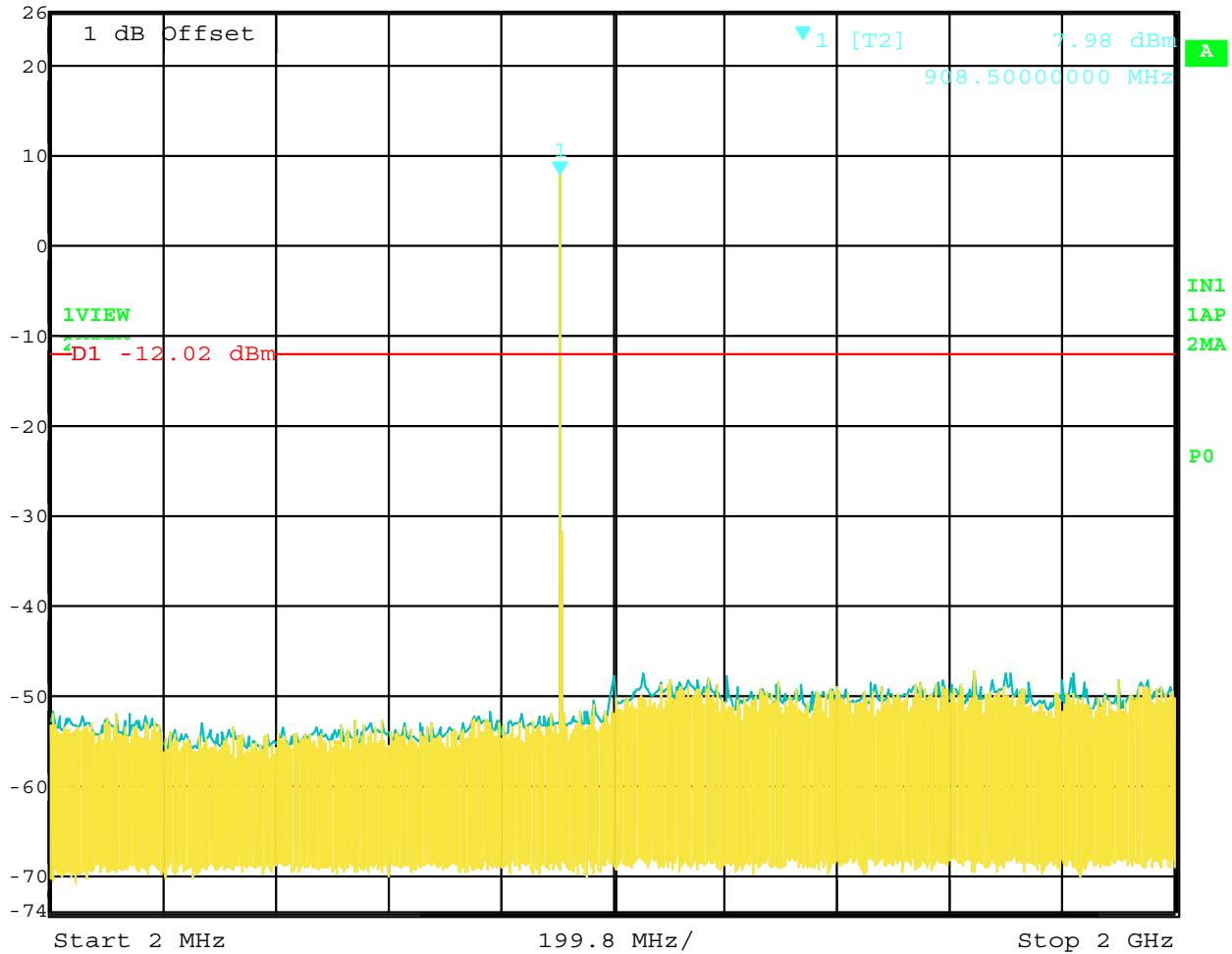


Date: 12.MAR.2008 14:07:12

RF Antenna Conducted Test – Low Channel – 2 GHz to 10 GHz



Ref Lvl 26 dBm
Marker 1 [T2] 7.98 dBm
908.50000000 MHz
RBW 100 kHz RF Att 40 dB
VBW 300 kHz
SWT 1.15 s Unit dBm

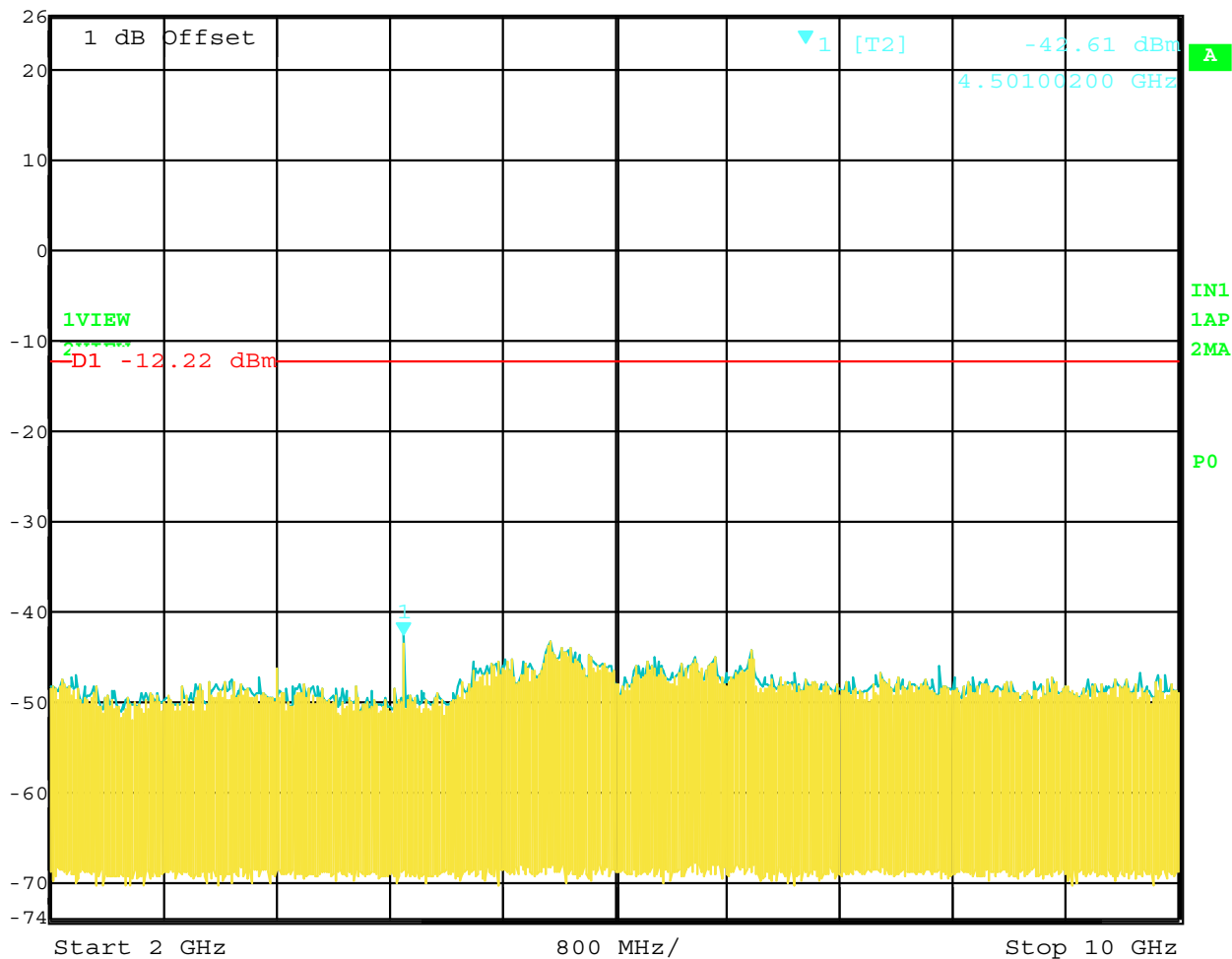


Date: 12.MAR.2008 14:14:00

RF Antenna Conducted Test – Middle Channel – 2 MHz to 2 GHz



Ref Lvl 26 dBm
Marker 1 [T2] -42.61 dBm
4.50100200 GHz
RBW 100 kHz RF Att 40 dB
VBW 300 kHz
SWT 2 s Unit dBm

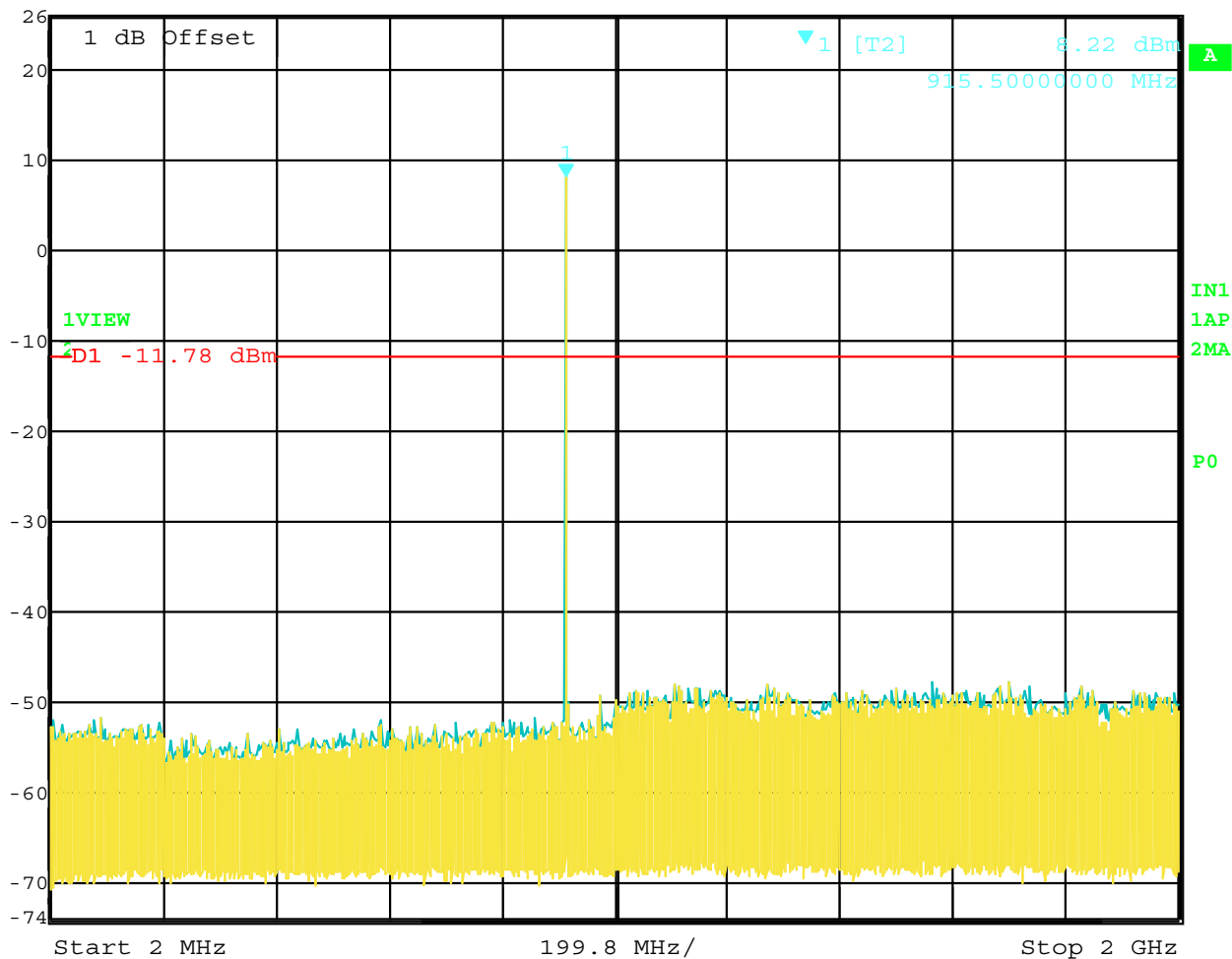


Date: 12.MAR.2008 14:07:12

RF Antenna Conducted Test – Middle Channel – 2 GHz to 10 GHz



Ref Lvl 26 dBm
Marker 1 [T2] 8.22 dBm
915.50000000 MHz
RBW 100 kHz RF Att 40 dB
VBW 300 kHz
SWT 1.15 s Unit dBm

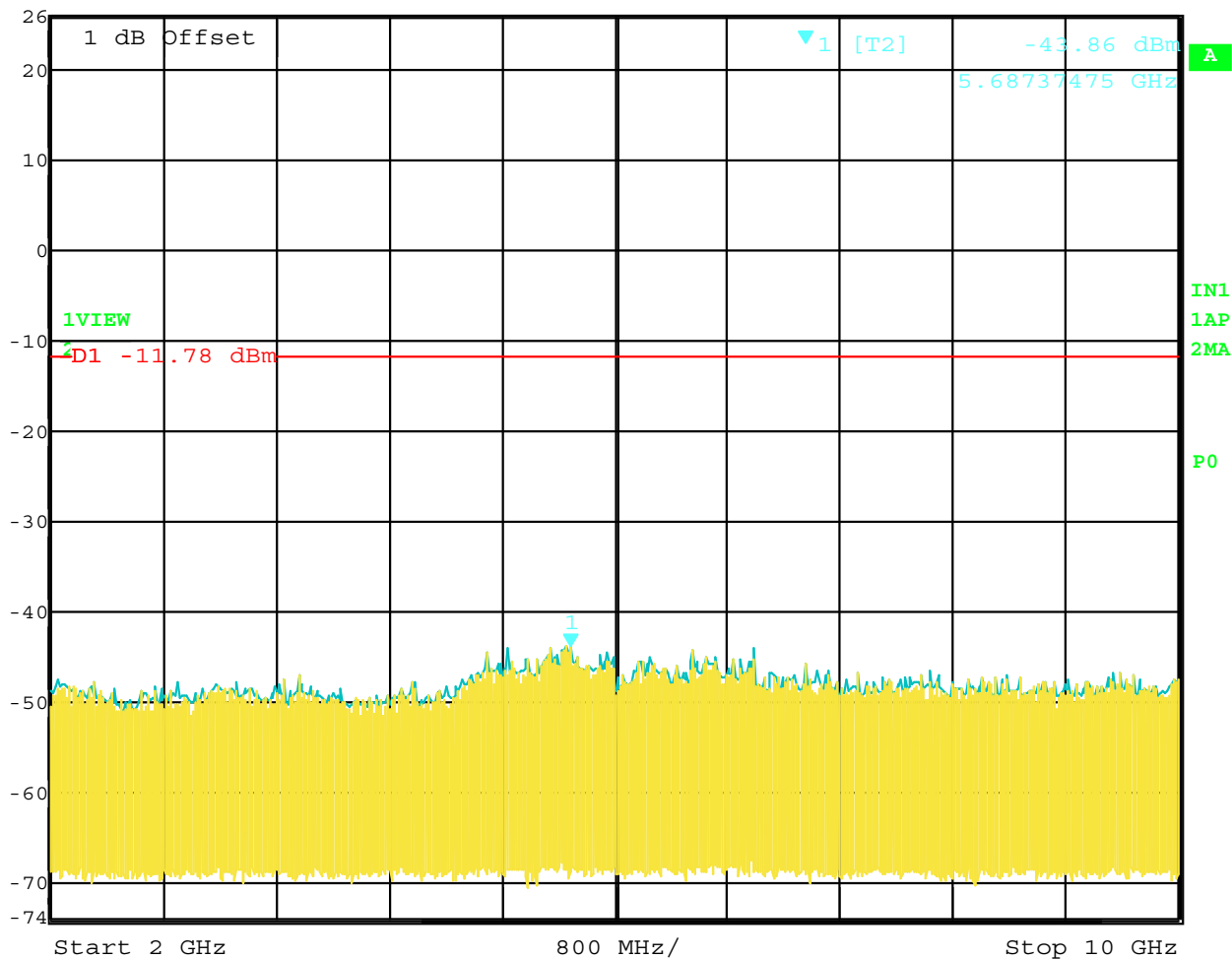


Date: 12.MAR.2008 14:23:10

RF Antenna Conducted Test – High Channel – 2 MHz to 2 GHz



Ref Lvl 26 dBm
Marker 1 [T2] -43.86 dBm
5.68737475 GHz
RBW 100 kHz
RF Att 40 dB
VBW 300 kHz
SWT 2 s
Unit dBm



Date: 12.MAR.2008 14:23:38

RF Antenna Conducted Test – High Channel – 2 GHz to 10 GHz

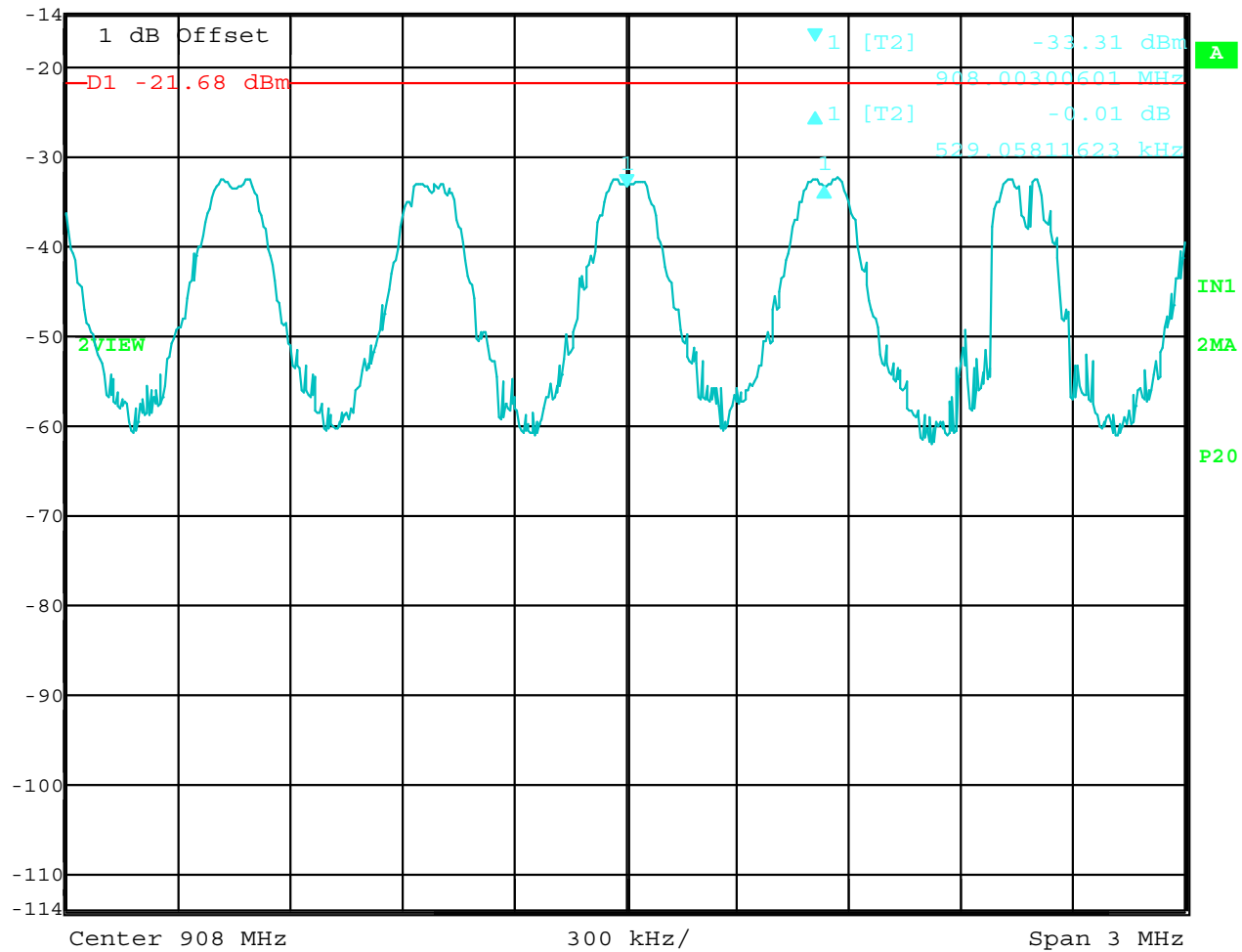


CHANNEL HOPPING SEPARATION

DATA SHEET



Ref Lvl	Delta 1 [T2]	RBW	100 kHz	RF Att	40 dB
-14 dBm	-0.01 dB	VBW	1 MHz		
	529.05811623 kHz	SWT	5 ms	Unit	dBm



Date: 12.MAR.2008 13:29:13

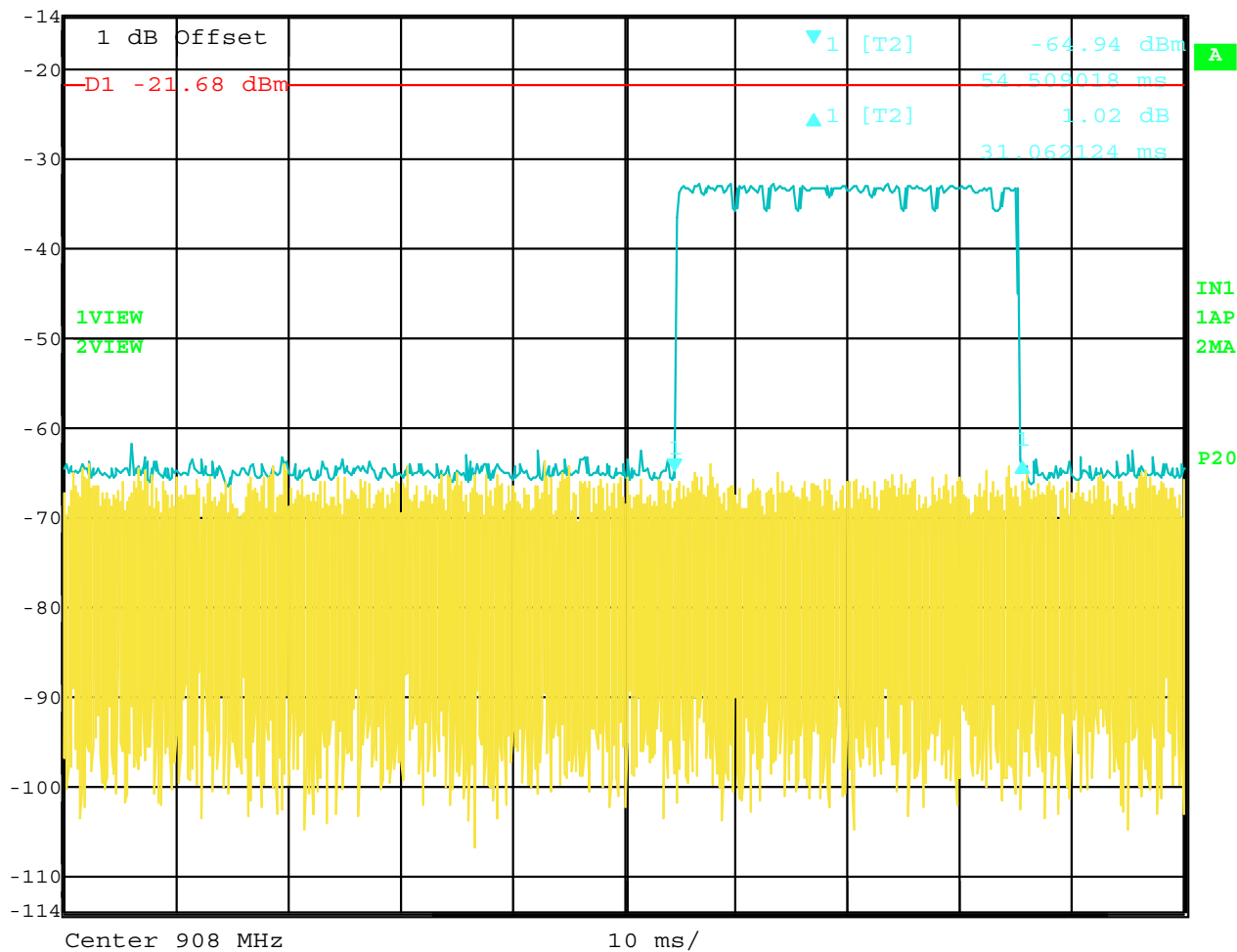
Channel Frequency Separation Test

AVERAGE TIME OF OCCUPANCY

DATA SHEETS



Delta 1 [T2] RBW 100 kHz RF Att 40 dB
Ref Lvl 1.02 dB VBW 300 kHz
-14 dBm 31.062124 ms SWT 100 ms Unit dBm



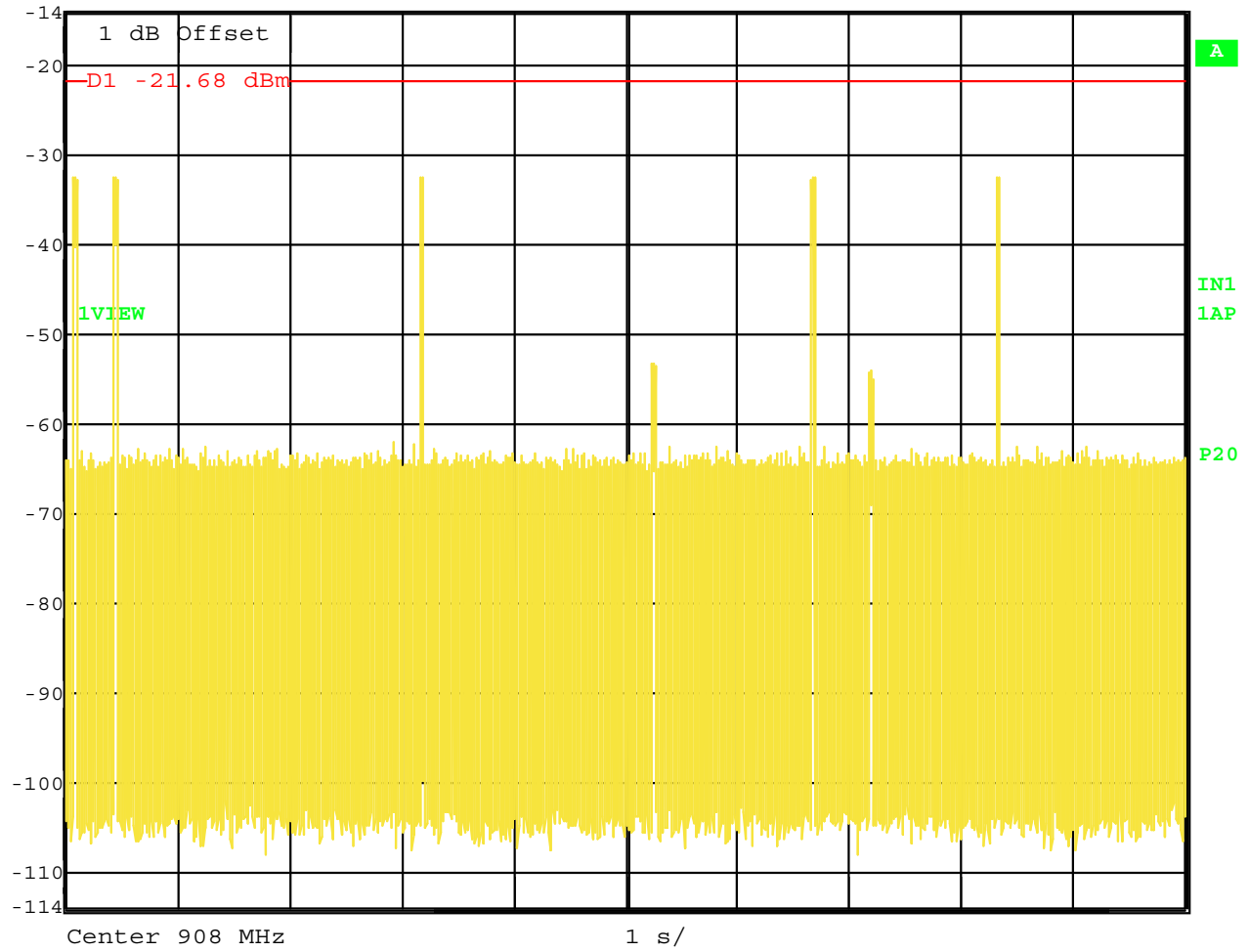
Date: 12.MAR.2008 13:18:45

Time of One Pulse = 31.062124 mS



Ref Lvl
-14 dBm

RBW 100 kHz RF Att 40 dB
VBW 300 kHz
SWT 10 s Unit dBm



Date: 12.MAR.2008 13:15:07

Number of Pulses in 10 seconds = 5
Time of One Pulse = 31.062124 mS
Total Dwell time in 10 seconds = 155.31062 mS
Limit = 400 mS / 10 second period

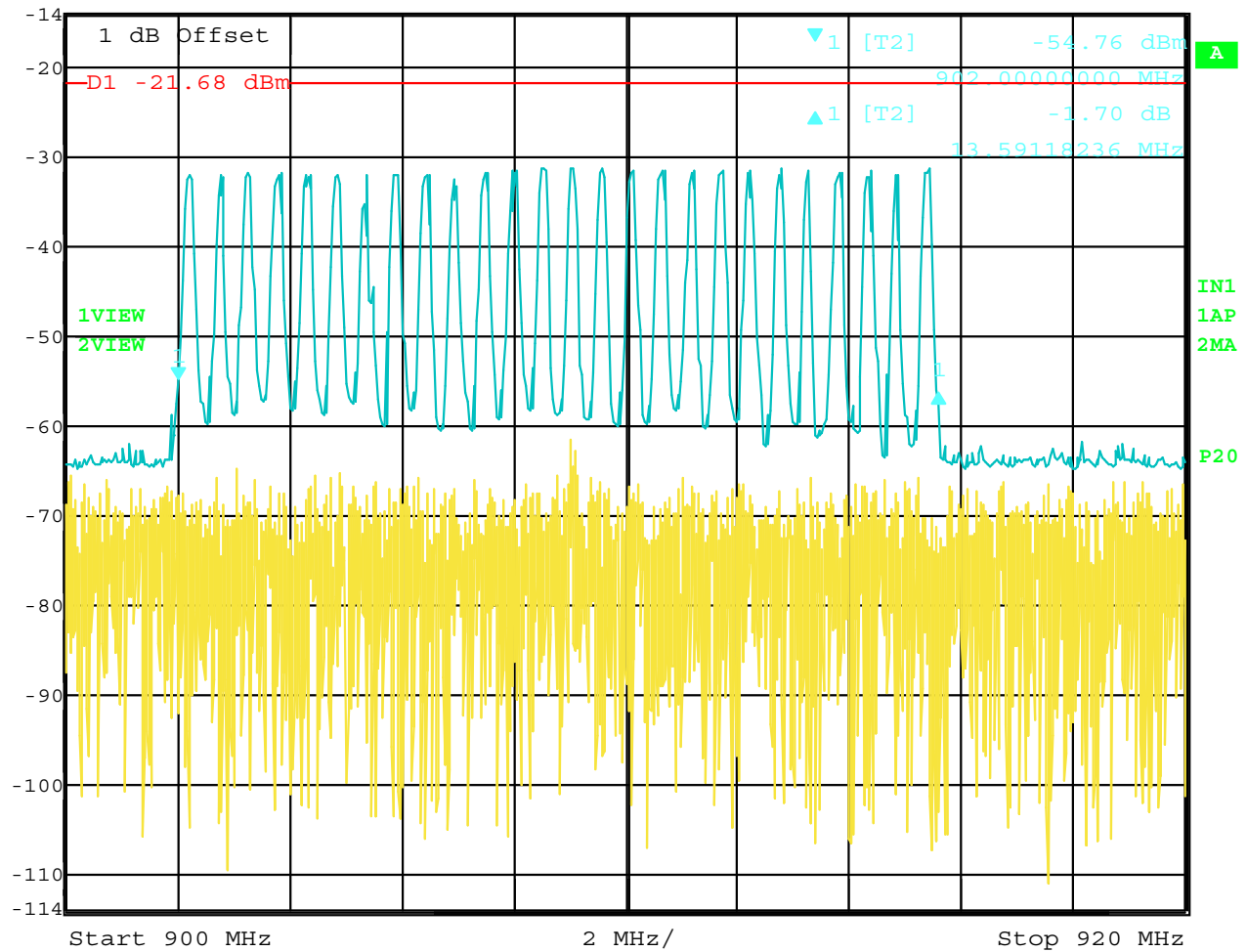


NUMBER OF HOPPING FREQUENCIES

DATA SHEET

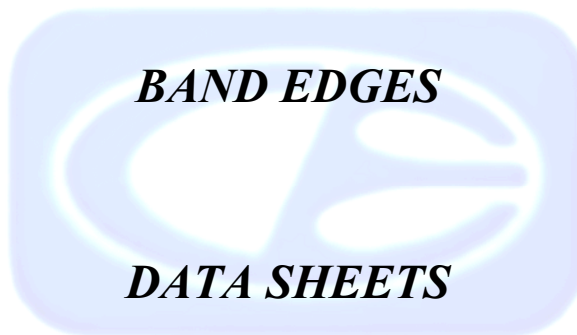


Delta 1 [T2] RBW 100 kHz RF Att 40 dB
Ref Lvl -1.70 dB VBW 1 MHz
-14 dBm 13.59118236 MHz SWT 5 ms Unit dBm



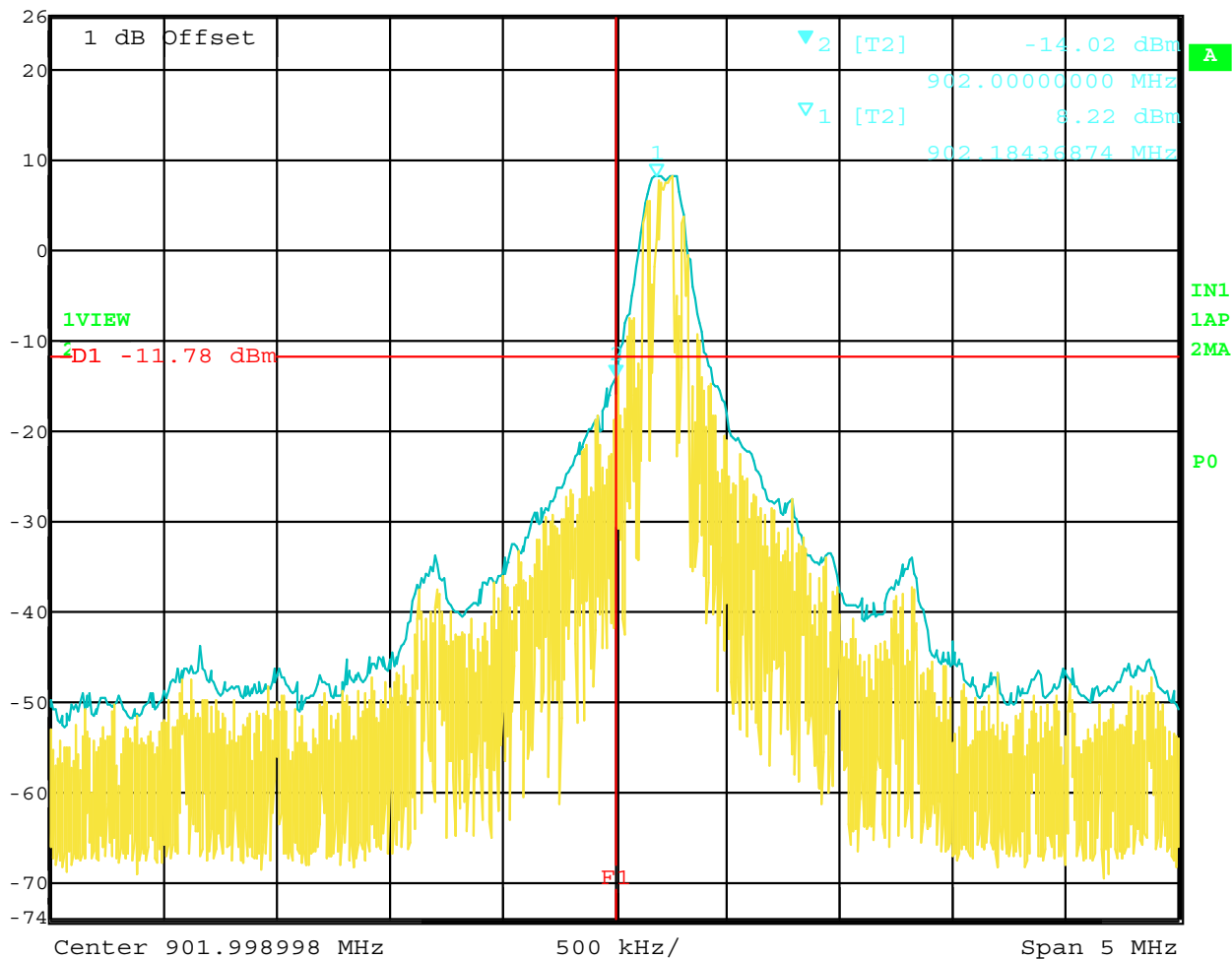
Date: 12.MAR.2008 13:25:18

Number of Frequencies – 26





Ref Lvl 26 dBm
Marker 2 [T2] -14.02 dBm
902.00000000 MHz
RBW 100 kHz RF Att 40 dB
VBW 300 kHz
SWT 5 ms Unit dBm

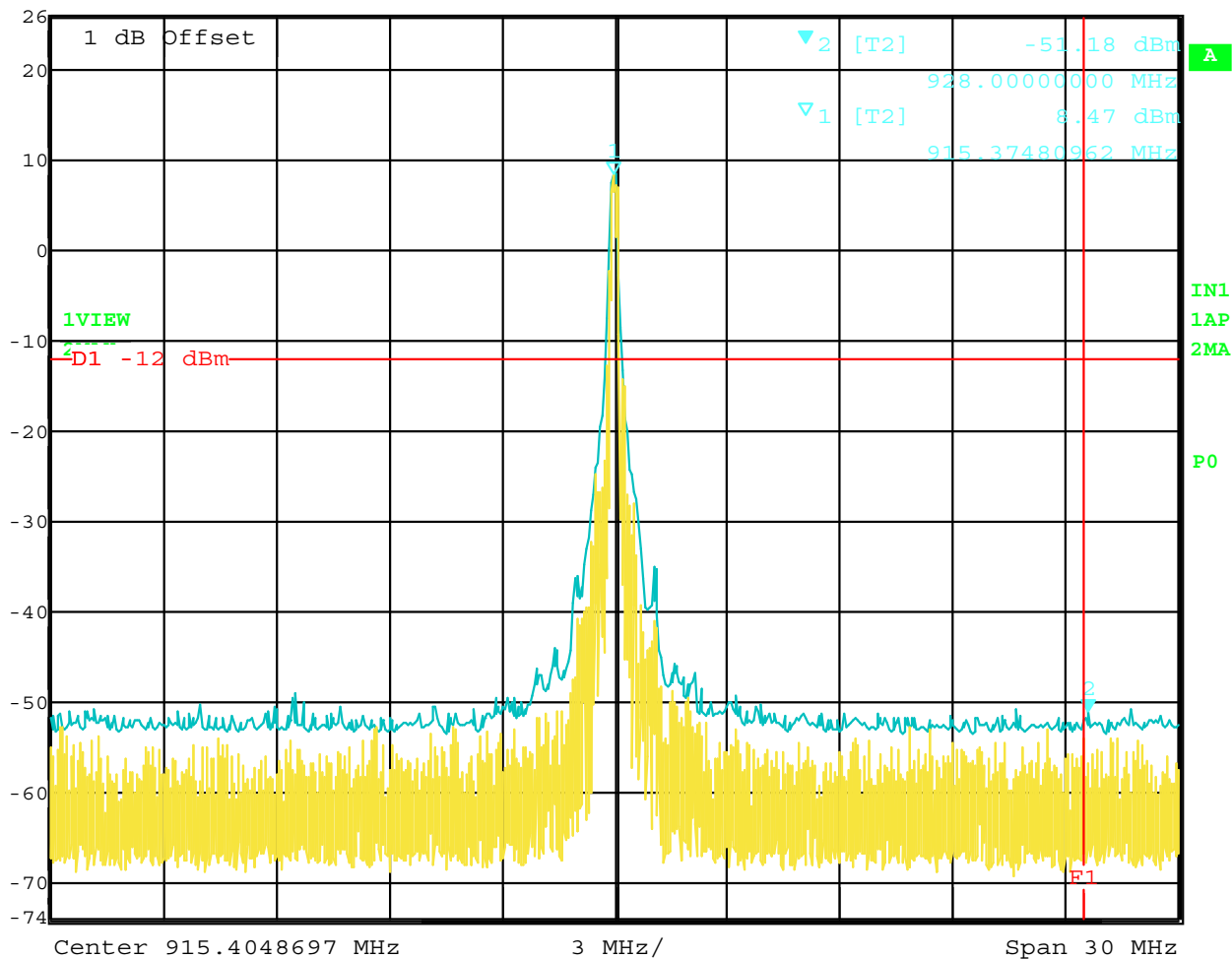


Date: 12.MAR.2008 13:48:07

Band Edge – Low Channel



Ref Lvl 26 dBm
Marker 2 [T2] -51.18 dBm
928.00000000 MHz
RBW 100 kHz RF Att 40 dB
VBW 300 kHz
SWT 7.5 ms Unit dBm



Date: 12.MAR.2008 15:21:25

Band Edge – High Channel