SGS-CSTC Standards Technical Services Ltd.

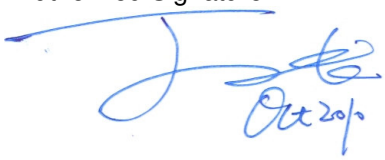
No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China 518057
Telephone: +86 (0) 755 2601 2053
Fax: +86 (0) 755 2671 0594
Email: sgs_internet_operations@sgs.com

FCC REPORT

Application No. :	SZEMO101006598RF
Applicant:	Shenzhen Fuyeda Industry Development Corp., Ltd.
Product Name:	MOUSE
Operation Frequency:	2405MHz to 2476MHz
FCC ID:	V4P-MS158RL
Standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.249: 2008
Date of Receipt	2010-03-23
Date of Test	2010-03-23 to 2010-03-29
Date of Issue	2010-10-28
Test Result :	**PASS ***

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Jack Zhang
Lab Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.
The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

2 Contents

3 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203	Passed
Field strength of the fundamental signal	15.249 (a)	Passed
Spurious emissions	15.249 (a)/15.209	Passed
Band edge (Radiated Emission)	15.249(a)/15.205	Passed
20dB Occupied Bandwidth	15.215 (c)	Passed

Remark:

Passed: The EUT complies with the essential requirements in the standard.

Failed: The EUT does not comply with the essential requirements in the standard.

This report was an additional report copied from the report SZEMO10030137801. It just changed the FCC ID, Model No. and the information of the applicant and the manufacturer, also added the 3D photos and the 4D photos of model"MS-148RL" in page 33-34 of this report. The electrical circuit design, layout, components used and internal wiring for the Items "MS-148RL" in this report was exactly the same as the Items "SW-109" in the report SZEMO10030137801, just with different model name and product size for the marketing requirement.

This report was based on the report SZEMO10050306102. just changed the FCC ID,item No. and added the photo,trade mark.

4 General Information

4.1 Client Information

Applicant:	Shenzhen Fuyeda Industry Development Corp., Ltd.
Manufacturer:	Shenzhen Fuyeda Industry Development Corp., Ltd.
Address of Applicant:	NO.1, NEWMEN ROAD, TONGSHENG VILLAGE, DALANG STREET, BAO'AN, SHENZHEN, CHINA
Address of Manufacturer:	NO.1, NEWMEN ROAD, TONGSHENG VILLAGE, DALANG STREET, BAO'AN, SHENZHEN, CHINA

4.2 General Description of E.U.T.

Product Name:	MOUSE
Trade Name:	N/A
Trade mark:	NEWMEN
Item No.:	MS-158RL
Operation Frequency:	2405MHz to 2476MHz
Channel numbers:	32 (there are 2 groups frequency and each of group has 32 channels)
Channel separation:	1MHz
Modulation type:	GFSK
Antenna Type:	Integral
Antenna gain:	-2dBi
Power supply:	DC3.0V(2*1.5V"AAA" Size Batteries)

Operation Frequency of each channel

Frequency grounp1:

2.408GHz, 2.459 GHz, 2.417 GHz, 2.442 GHz, 2.414 GHz, 2.475 GHz, 2.431 GHz, 2.472 GHz
2.436 GHz, 2.473 GHz, 2.439 GHz, 2.447 GHz, 2.428 GHz, 2.461 GHz, 2.407 GHz, 2.468 GHz
2.412 GHz, 2.451 GHz, 2.427 GHz, 2.460 GHz, 2.420 GHz, 2.469 GHz, 2.435 GHz, 2.452 GHz
2.422 GHz, 2.457 GHz, 2.437 GHz, 2.476 GHz, 2.438 GHz, 2.465 GHz, 2.421 GHz, 2.458 GHz

Frequency grounp2:

2.409GHz, 2.464 GHz, 2.416 GHz, 2.467 GHz, 2.419 GHz, 2.466 GHz, 2.430 GHz, 2.449 GHz
2.411 GHz, 2.456 GHz, 2.423 GHz, 2.453 GHz, 2.425 GHz, 2.444 GHz, 2.406 GHz, 2.474GHz
2.429 GHz, 2.446 GHz, 2.418 GHz, 2.471 GHz, 2.415 GHz, 2.448 GHz, 2.432 GHz, 2.462 GHz
2.413 GHz, 2.470 GHz, 2.434 GHz, 2.463 GHz, 2.405 GHz, 2.443 GHz, 2.410 GHz, 2.455 GHz

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The lowest channel	2405MHz
The middle channel	2439MHz
The Highest channel	2476MHz

4.3 E.U.T Operation mode

Operating Environment:

Temperature:	24.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1008 mbar

Test mode:

Normal operation mode:	Keep the EUT in communicating mode with the dongle
Transmitting mode:	Keep the EUT in transmitting mode with modulation.

4.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS (No. CNAS L2929)

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

VCCI

The 3m Semi-anechoic chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197 and C-2383 respectively.

Date of Registration: September 29, 2008. Valid until September 28, 2011.

FCC – Registration No.: 556682

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 556682, June 27, 2008.

Industry Canada (IC)

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1.

4.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch E&E Lab

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China 518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

4.6 Other Information Requested by the Customer

The whole product include one mouse and one dongle, and just the mouse was tested in this report.

4.7 Test Instruments list:

RE in Chamber						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (yyyy-mm-dd)**	**Cal.Due date (yyyy-mm-dd)**
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2010-06-17	2011-06-17
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	SEL0023	2009-11-05	2010-11-05
3	EMI Test software	AUDIX	E3	SEL0050	N/A	N/A
4	Coaxial cable	SGS	N/A	SEL0028	2008-06-18	2011-06-18
5	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0015	2009-11-05	2010-11-05
6	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEL0006	2009-11-10	2010-11-10
7	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEL0076	2009-11-10	2010-11-10
8	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	2010-06-02	2011-06-02
9	Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEL0168	2009-12-18	2010-12-18
10	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002650-30-8P-44	SEL0080	2010-06-04	2011-06-04
11	Band filter	Amindeon	82346	SEL0094	2010-06-02	2011-06-02

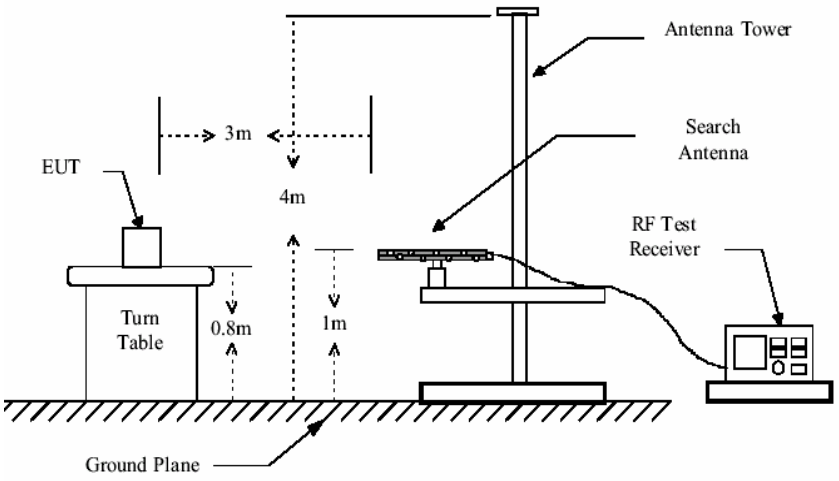
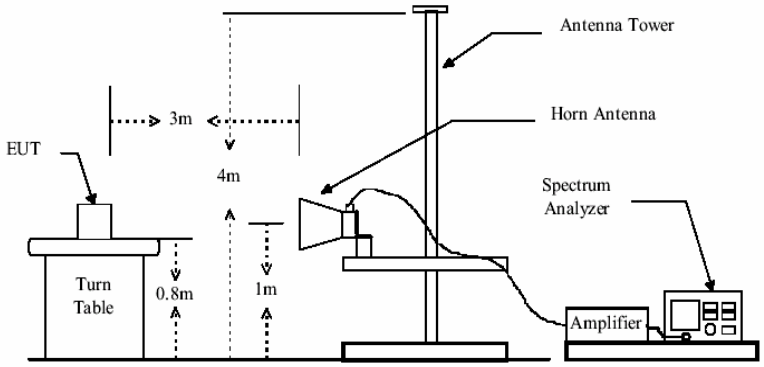
5 Test results and Measurement Data

5.1 Antenna requirement:

Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: *An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.*	
E.U.T Antenna:	
The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is -2dBi.	

5.2 Radiated Emission

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.249 and 15.209</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.4: 2003</td></tr>
<tr><td>Test Frequency Range:</td><td>30MHz to 25000MHz</td></tr>
<tr><td>Test site:</td><td>Measurement Distance: 3m (Semi-Anechoic Chamber)</td></tr>
<tr><td>Receiver setup:</td><td>
<table>
<tr><th>Frequency</th><th>Detector</th><th>RBW</th><th>VBW</th><th>Remark</th></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>100KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>Peak</td><td>1MHz</td><td>10Hz</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:
(Field strength of the fundamental signal)</td><td>
<table>
<tr><th>Frequency</th><th>Limit (dBuV/m @3m)</th><th>Remark</th></tr>
<tr><td rowspan="2">2400MHz-2483.5MHz</td><td>94.0</td><td>Average Value</td></tr>
<tr><td>114.0</td><td>Peak Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:
(Spurious Emissions)</td><td>
<table>
<tr><th>Frequency</th><th>Limit (dBuV/m @3m)</th><th>Remark</th></tr>
<tr><td>30MHz-88MHz</td><td>40.0</td><td>Quasi-peak Value</td></tr>
<tr><td>88MHz-216MHz</td><td>43.5</td><td>Quasi-peak Value</td></tr>
<tr><td>216MHz-960MHz</td><td>46.0</td><td>Quasi-peak Value</td></tr>
<tr><td>960MHz-1GHz</td><td>54.0</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>54.0</td><td>Average Value</td></tr>
<tr><td>74.0</td><td>Peak Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:
(band edge)</td><td>Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.</td></tr>
<tr><td>Test mode:</td><td>Normal operation mode</td></tr>
<tr><td>Test Procedure:</td><td>a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</td></tr>
</table>

Test Instruments:	Refer to section 4.7 for details
Test results:	Passed
Test setup:	Below 1GHz  Above 1GHz 

Note:
The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

Measurement Data

5.2.1 Field Strength Of The Fundamental Signal

Peak value:

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2405	6.25	32.25	38.83	80.02	79.69	114	-34.31	Horizontal
2405	6.25	32.25	38.83	84.69	84.36	114	-29.64	Vertical
2439	6.29	32.26	38.64	80.43	80.34	114	-33.66	Horizontal
2439	6.29	32.26	38.64	83.61	83.52	114	-30.48	Vertical
2476	6.45	32.29	39.72	76.43	75.45	114	-38.55	Horizontal
2476	6.45	32.29	39.72	81.32	80.34	114	-33.66	Vertical

Average value:

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2405	6.25	32.25	38.83	79.85	79.52	94	-14.48	Horizontal
2405	6.25	32.25	38.83	84.58	84.25	94	-9.75	Vertical
2439	6.29	32.26	38.64	80.08	79.99	94	-14.01	Horizontal
2439	6.29	32.26	38.64	83.19	83.10	94	-10.9	Vertical
2476	6.45	32.29	39.72	74.95	73.97	94	-20.03	Horizontal
2476	6.45	32.29	39.72	81.17	80.19	94	-13.81	Vertical

5.2.2 Spurious Emissions

30MHz~1GHz		
Test mode:	Transmitting	

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
60.070	0.80	7.19	28.05	34.30	14.24	40.00	-25.76	Vertical
98.870	1.19	9.06	27.89	33.63	15.99	43.50	-27.51	Vertical
125.060	1.27	7.80	27.64	40.08	21.51	43.50	-21.99	Vertical
316.150	1.96	14.50	26.85	29.94	19.55	46.00	-26.45	Vertical
796.300	3.19	22.08	26.95	36.82	35.14	46.00	-10.86	Vertical
935.980	3.64	23.30	26.43	35.44	35.95	46.00	-10.05	Vertical
90.140	1.10	8.71	27.95	30.36	12.22	43.50	-31.28	Horizontal
106.630	1.22	8.77	27.81	30.93	13.11	43.50	-30.39	Horizontal
136.700	1.29	7.98	27.55	31.64	13.36	43.50	-30.14	Horizontal
295.780	1.88	13.72	26.73	29.78	18.65	46.00	-27.35	Horizontal
536.340	2.64	18.68	27.67	32.53	26.18	46.00	-19.82	Horizontal
749.740	3.06	21.70	27.11	38.93	36.58	46.00	-9.42	Horizontal

Above 1GHz					
Test mode:	Transmitting	Test channel:	Lowest	Remark:	Peak

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4810	9.36	34.04	41.53	47.32	49.19	74	-24.81	Vertical
7215	13.30	36.29	40.88	46.23	54.94	74	-19.06	Vertical
9620	13.39	36.99	37.56	42.84	55.66	74	-18.34	Vertical
12025	16.45	38.80	39.09	45.03	61.19	74	-12.81	Vertical
4810	9.36	34.04	41.53	47.80	49.67	74	-24.33	Horizontal
7215	13.30	36.29	40.88	47.35	56.06	74	-17.94	Horizontal
9620	13.39	36.99	37.56	44.74	57.56	74	-16.44	Horizontal
12025	16.45	38.80	39.09	45.70	61.86	74	-12.14	Horizontal

Test mode:	Transmitting	Test channel:	Lowest	Remark:	Average

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4810	9.36	34.04	41.53	36.45	38.32	54	-15.68	Vertical
7215	13.30	36.29	40.88	33.95	42.66	54	-11.34	Vertical
9620	13.39	36.99	37.56	30.96	43.78	54	-10.22	Vertical
12025	16.45	38.80	39.09	31.34	47.50	54	-6.50	Vertical
4810	9.36	34.04	41.53	34.42	36.29	54	-17.71	Horizontal
7215	13.30	36.29	40.88	33.92	42.63	54	-11.37	Horizontal
9620	13.39	36.99	37.56	30.86	43.68	54	-10.32	Horizontal
12025	16.45	38.80	39.09	31.05	47.21	54	-6.79	Horizontal

Test mode:	Transmitting	Test channel:	Middle	Remark:	Peak

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4878	10.36	34.02	39.89	46.36	50.85	74	-23.15	Vertical
7317	12.91	36.10	40.4	45.63	54.24	74	-19.76	Vertical
9756	13.89	37.10	37.94	42.34	55.39	74	-18.61	Vertical
12195	18.03	38.91	39.27	42.28	59.95	74	-14.05	Vertical
4878	10.36	34.02	39.89	47.58	52.07	74	-21.93	Horizontal
7317	12.91	36.10	40.40	46.10	54.71	74	-19.29	Horizontal
9756	13.89	37.10	37.94	43.16	56.21	74	-17.79	Horizontal
12195	18.03	38.91	39.27	43.09	60.76	74	-13.24	Horizontal

Test mode:	Transmitting	Test channel:	Middle	Remark:	average

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4878	10.36	34.02	39.89	33.12	37.61	54	-16.39	Vertical
7317	12.91	36.10	40.4	33.85	42.46	54	-11.54	Vertical
9756	13.89	37.10	37.94	30.76	43.81	54	-10.19	Vertical
12195	18.03	38.91	39.27	30.61	48.28	54	-5.72	Vertical
4878	10.36	34.02	39.89	34.18	38.67	54	-15.33	Horizontal
7317	12.91	36.10	40.4	33.88	42.49	54	-11.51	Horizontal
9756	13.89	37.10	37.94	30.92	43.97	54	-10.03	Horizontal
12380	17.55	39.04	39.48	31.34	48.45	54	-5.55	Horizontal

Test mode:	Transmitting	Test channel:	Highest	Remark:	Peak

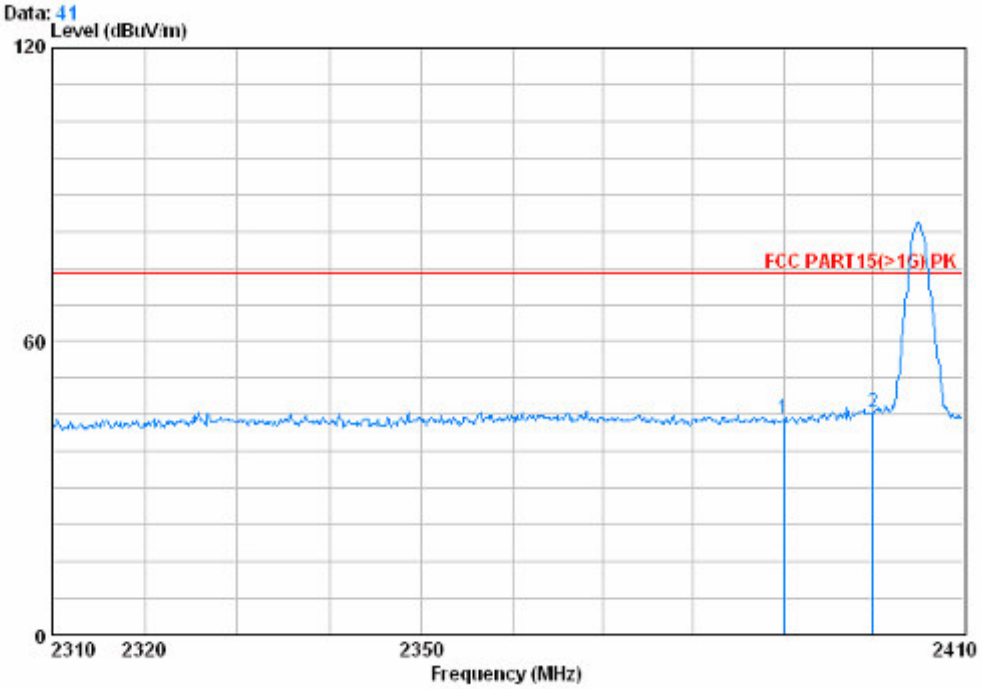
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4952	10.51	34.01	40.96	48.27	51.83	74	-22.17	Vertical
7428	12.72	35.91	40.01	45.49	54.11	74	-19.89	Vertical
9904	14.21	37.21	37.85	43.95	57.52	74	-16.48	Vertical
12380	17.55	39.04	39.48	43.97	61.08	74	-12.92	Vertical
4952	10.51	34.01	40.96	48.89	52.45	74	-21.55	Horizontal
7428	12.72	35.91	40.01	46.11	54.73	74	-19.27	Horizontal
9904	14.21	37.21	37.85	43.65	57.22	74	-16.78	Horizontal
12380	17.55	39.04	39.48	44.04	61.15	74	-12.85	Horizontal

Test mode:	Transmitting	Test channel:	Highest	Remark:	average

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4952	10.51	34.01	40.96	34.82	38.38	54	-15.62	Vertical
7428	12.72	35.91	40.01	33.01	41.63	54	-12.37	Vertical
9904	14.21	37.21	37.85	30.77	44.34	54	-9.66	Vertical
12380	17.55	39.04	39.48	31.07	48.18	54	-5.82	Vertical
4952	10.51	34.01	40.96	33.93	37.49	54	-16.51	Horizontal
7428	12.72	35.91	40.01	32.8	41.42	54	-12.58	Horizontal
9904	14.21	37.21	37.85	30.73	44.30	54	-9.70	Horizontal
12380	17.55	39.04	39.48	31.31	48.42	54	-5.58	Horizontal

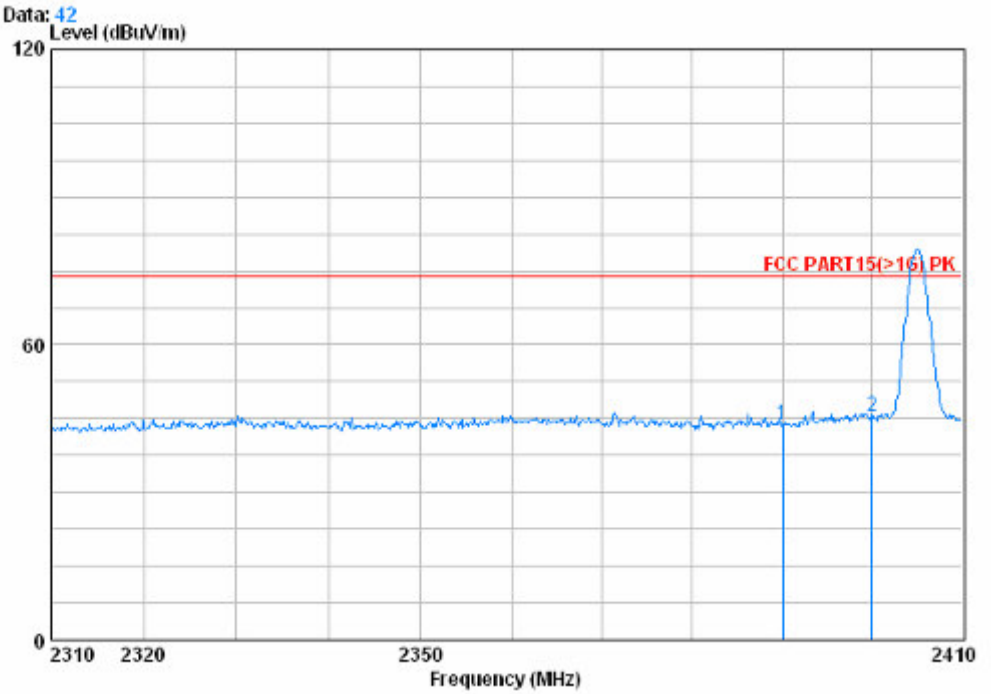
5.2.3 Band edge (Radiated Emission)					
Test mode:	Transmitting	Test channel:	Lowest	Remark:	Peak

Vertical:



	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2390.000	6.28	32.24	39.03	44.77	44.26	74.00	-29.74	Peak
2 @	2400.000	6.34	32.25	38.87	45.87	45.58	74.00	-28.42	Peak

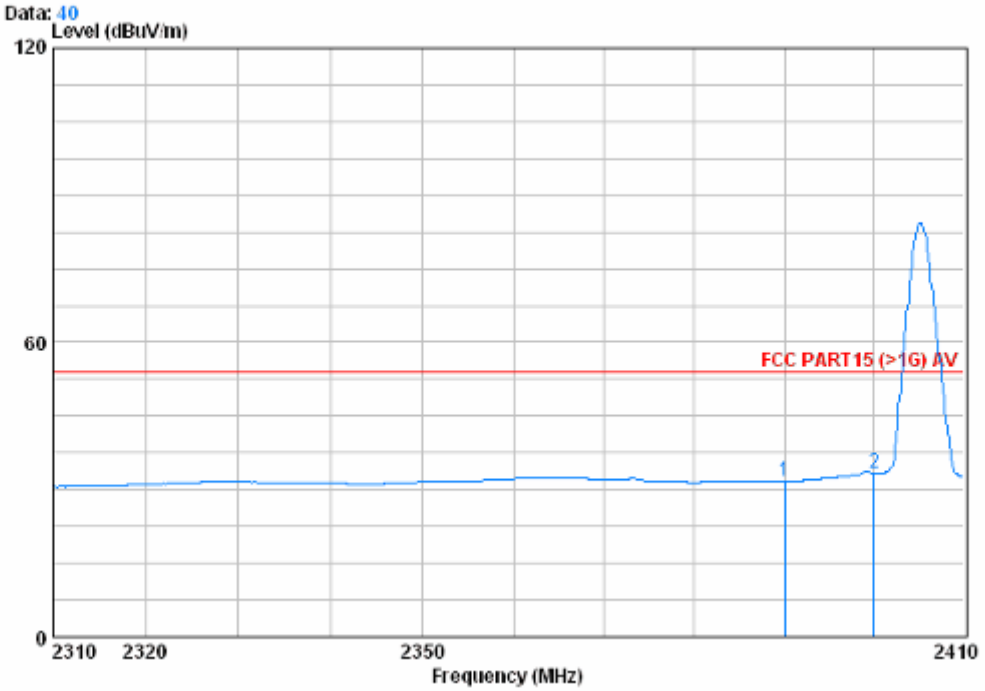
Horizontal:



	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2390.000	6.28	32.24	39.03	44.17	43.66	74.00	-30.34	Peak
2 @	2400.000	6.34	32.25	38.87	45.69	45.41	74.00	-28.59	Peak

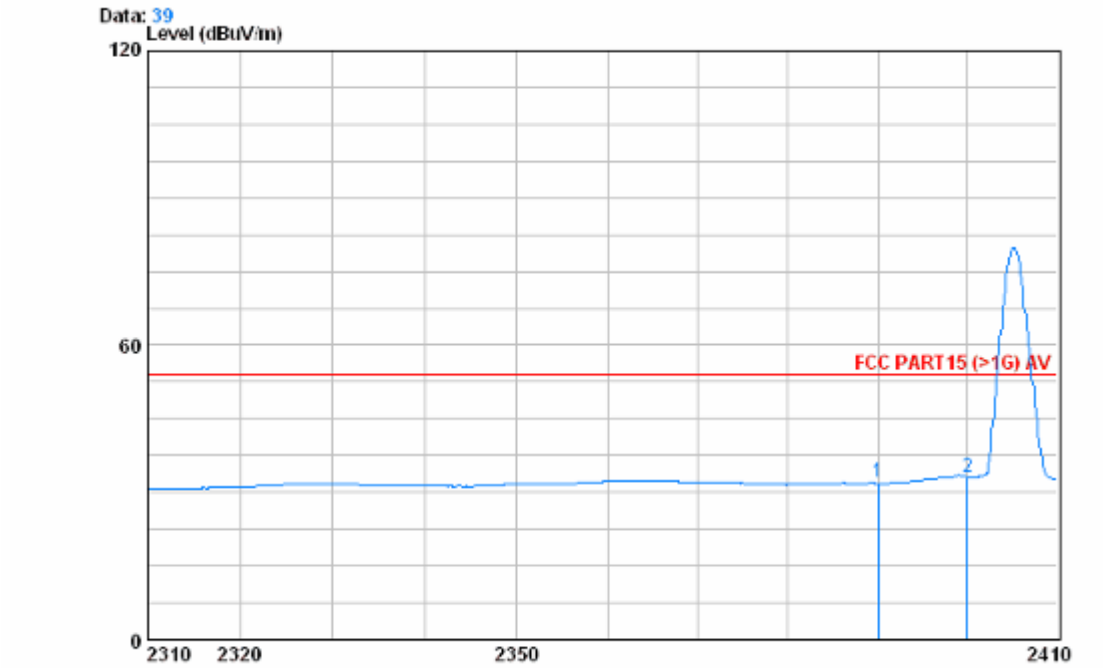
Test mode:	Transmitting	Test channel:	Lowest	Remark:	Average

Vertical:



	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 @	2390.000	6.28	32.24	39.03	32.21	31.70	54.00	-22.30	Average
2 @	2400.000	6.34	32.25	38.87	33.48	33.20	54.00	-20.80	Average

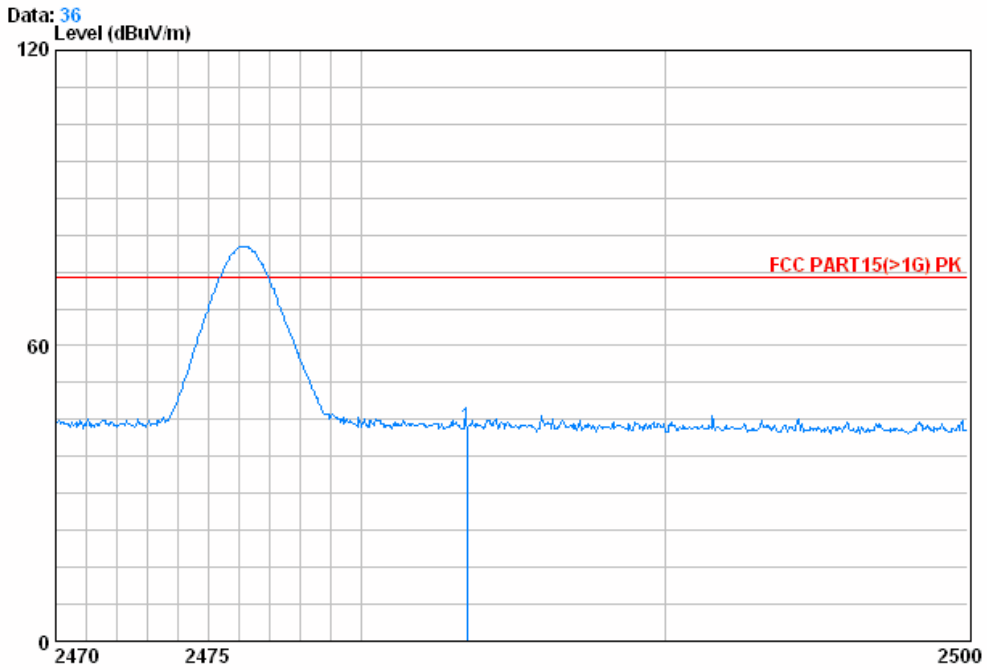
Horizontal:



	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 @	2390.000	6.28	32.24	39.03	32.71	32.20	54.00	-21.80	Average
2 @	2400.000	6.34	32.25	38.87	33.37	33.08	54.00	-20.92	Average

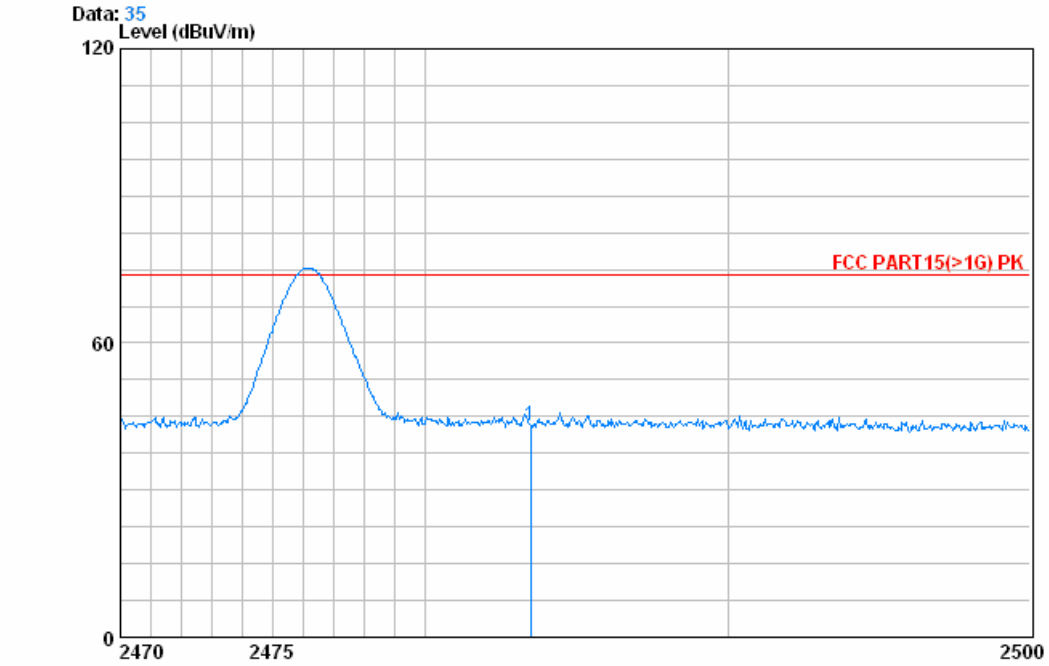
Test mode:	Transmitting	Test channel:	Highest	Remark:	Peak

Vertical:



	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2483.500	6.22	32.29	39.53	44.49	43.47	74.00	-30.53	Peak

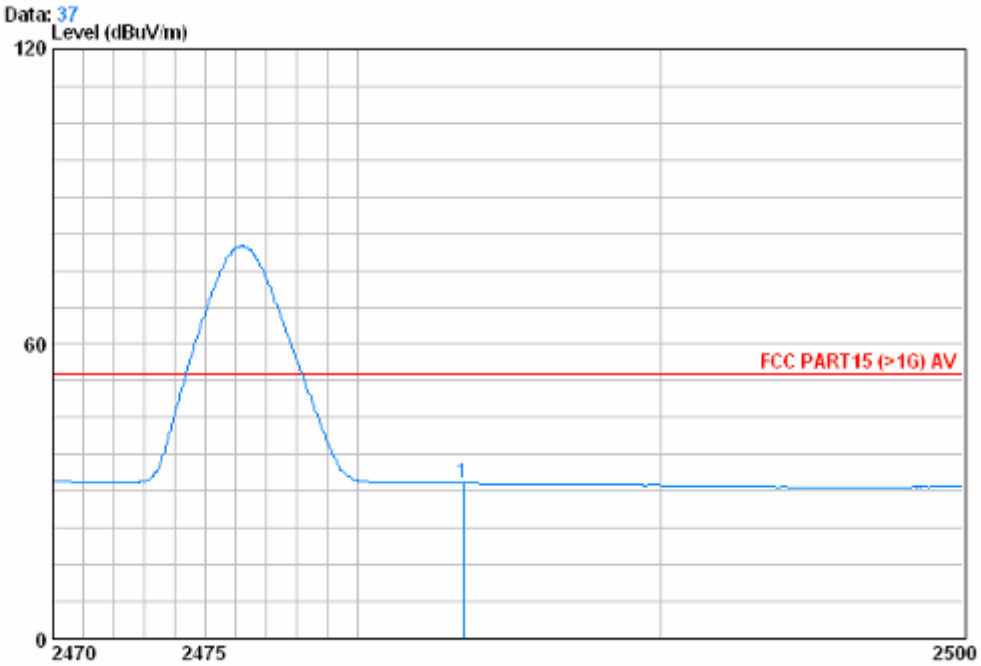
Horizontal:



	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2483.500	6.22	32.29	39.53	44.17	43.15	74.00	-30.85	Peak

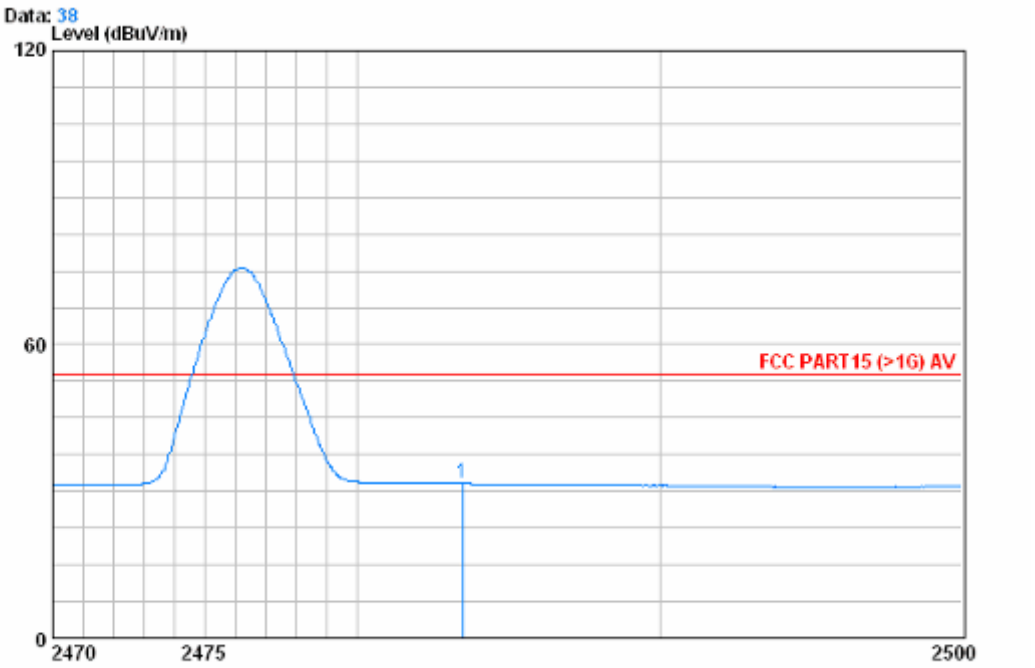
Test mode:	Transmitting	Test channel:	Highest	Remark:	Average

Vertical:



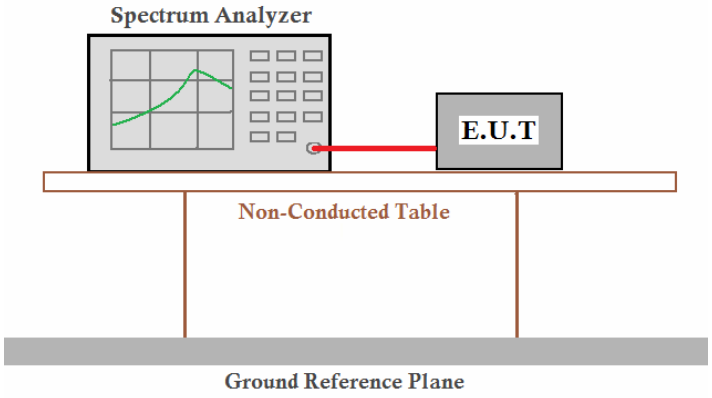
	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 @	2483.500	6.22	32.29	39.53	32.60	31.58	54.00	-22.42	Average

Horizontal:



	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 @	2483.500	6.22	32.29	39.53	32.62	31.60	54.00	-22.40	Average

5.3 20dB Bandwidth

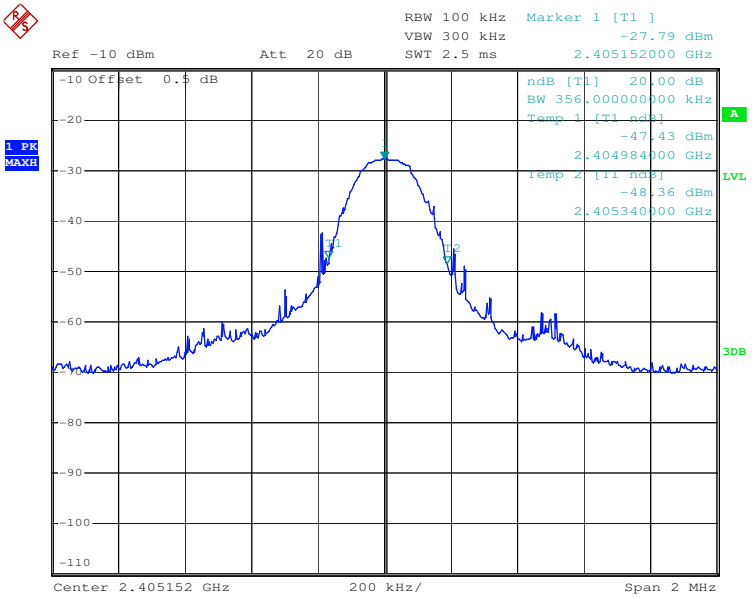
Test Requirement:	FCC Part15 C Section 15.249/15.215
Test Method:	ANSI C63.4:2003
Limit:	Operation Frequency range 2400MHz-2483.5MHz
Test Procedure:	1. According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. 2. Set the EUT to proper test channel. 3. Max hold the radiated emissions, mark the peak power frequency point and the -20dB upper and lower frequency points. 4. Read 20dB bandwidth.
Test setup:	 *Remark:* *Offset the High-Frequency cable loss 0.5dB in the spectrum analyzer.*
Test Instruments:	Refer to section 4.7 for details
Test mode:	Normal operation mode
Test results:	Passed

Measurement Data

Test channel	20dB bandwidth (MHz)	Results
Lowest	0.356	Pass
Middle	0.352	Pass
Highest	0.368	Pass

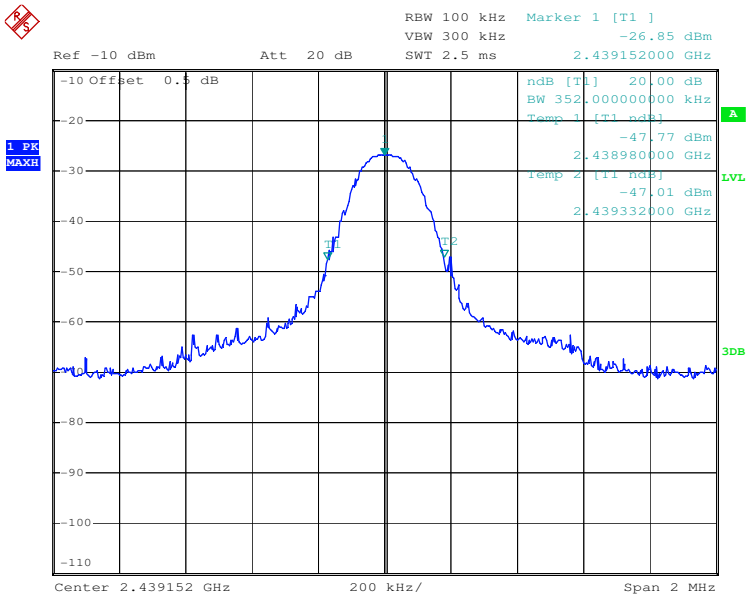
Test plot as follows:

Test channel:	Lowest	



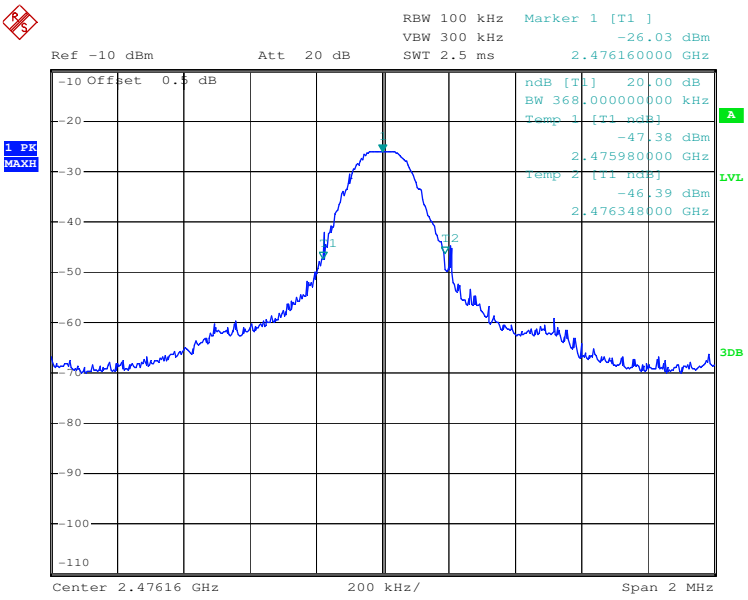
Date: 23.MAR.2010 11:34:29

Test channel:	Middle	



Date: 23.MAR.2010 11:36:08

Test channel:	Highest	



Date: 23.MAR.2010 11:37:43