APPLICATION FOR CERTIFICATION
On Behalf of

Mad Catz, Inc.

Cyborg R.A.T.9 Wireless Mouse

Model Number: 43709

FCC ID: P25D243709C2810C

Prepared for : Mad Catz, Inc.
7480 Mission Valley Road, Suite 101, San Diego,
California, 92108, USA

Prepared By : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Ke Feng Rd., 52 Block,
Shenzhen Science & Industrial Park,
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Report Number	:	ACS-F10246
Date of Test	:	May.27~Aug.26, 2010
Date of Report	:	Aug.27, 2010

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TEST REPORT CERTIFICATION

Applicant	:	Mad Catz, Inc.
EUT Description	:	Cyborg R.A.T.9 Wireless Mouse
MODEL NO.	:	43709
FCC ID	:	P25D243709C2810C
POWER SUPPLY	:	DC 3.7V
TEST VOLTAGE	:	DC 3.7V

Test Procedure Used:

FCC Rules and Regulations Part 15 Subpart C 2008

The device described above is tested by Audix Technology (Shenzhen) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits for radiated and conducted emissions.

The test results are contained in this test report and Audix Technology (Shenzhen) Co., Ltd. is assumed full responsibility for the accuracy and completeness of tests. Also, this report shows that EUT is technically compliant with FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shenzhen) Co., Ltd.

Date of Test : May.27~ Aug.26, 2010

Prepared by : Celia Feng

Celia Feng / Assistant

Reviewer : Jamy Yu

Jamy Yu / Supervisor

AUDIX® 信華科技（深圳）有限公司
Audix Technology (Shenzhen) Co., Ltd.
EMC 部門報告專用章
Stamp only for EMC Dept. Report
Signature: Ken Lu 9/8 10'

Approved & Authorized Signer :

Ken Lu / Manager

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	**Standard**	**Results**
Power Line Conducted Emission Test	FCC Part 15C: 15.207 ANSI C63.10-2009	N/A
Radiated Emission Test	FCC Part 15C: 15.209 FCC Part 15C: 15.249 ANSI C63.10-2009	PASS
Band Edge Compliance Test	FCC Part 15: 15.249 ANSI C63.10-2009	PASS
20dB Bandwidth Test	FCC Part 15: 15.215 ANSI C63.10-2009	PASS
N/A is an abbreviation for Not Applicable.		

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Product name	:	Cyborg R.A.T.9 Wireless Mouse
Model Number	:	43709
FCC ID	:	P25D243709C2810C
Operation frequency	:	2405MHz~2477MHz
Modulation	:	GFSK
Power Supply	:	DC 3.7V (Note: Batteries were full charged for all the test.)
Applicant	:	Mad Catz, Inc. 7480 Mission Valley Road, Suite 101, San Diego, California, 92108, USA
Date of Test	:	May.27~Aug.26, 2010
Date of Receipt	:	May.26, 2010
Sample Type	:	Prototype production

2.2. Test Facility

Site Description

Name of Firm	:	Audix Technology (Shenzhen) Co., Ltd. No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park,Nantou, Shenzhen, Guangdong, China
3m Anechoic Chamber	:	Mar.31, 2009 File on Federal Communication Commission Registration Number: 90454
3m & 10m Anechoic Chamber	:	Dec. 30, 2009 File on Federal Communication Commission Registration Number: 794232
EMC Lab.	:	Accredited by DATech, German Registration Number: DAT-P-091/99-01 Feb. 02, 2009 Accredited by NVLAP, USA NVLAP Code: 200372-0 Apr. 01, 2010

2.3. Test Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty
Uncertainty for Radiation Emission test in 3m chamber	4.20 dB (Polarize: V)
	4.66 dB (Polarize: H)
Uncertainty for Radiated Spurious Emission test in RF chamber	2.70 dB (Bilog antenna 30M~1000MHz)
	2.27 dB (Horn antenna 1000M~12750MHz)
Uncertainty for Temperature and humidity test	2%
	1℃
Uncertainty for Bandwidth test	$1x10^{-9}$
Uncertainty for DC power test	0.038 %
Uncertainty for test site temperature and humidity	0.3℃
	2%

3. POWER LINE CONDUCTED EMISSION TEST

According to Paragraph (c) of FCC Part 15 section 15.207, Tests to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines.

4. RADIATED EMISSION TEST

4.1. Test Equipment

Frequency rang: 30~1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Dec.05,09	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 10	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 10	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 10	1 Year
5	Bilog Antenna	Schaffner	CBL6111C	2598	Dec.14, 09	1 Year
6	RF Cable	MIYAZAKI	8D-FB	3# Chamber No.1	May.08, 10	1 Year
7	Coaxial Switch	Anritsu	MP59B	M73989	May.08, 10	1 Year

Frequency rang: above 1000MHz

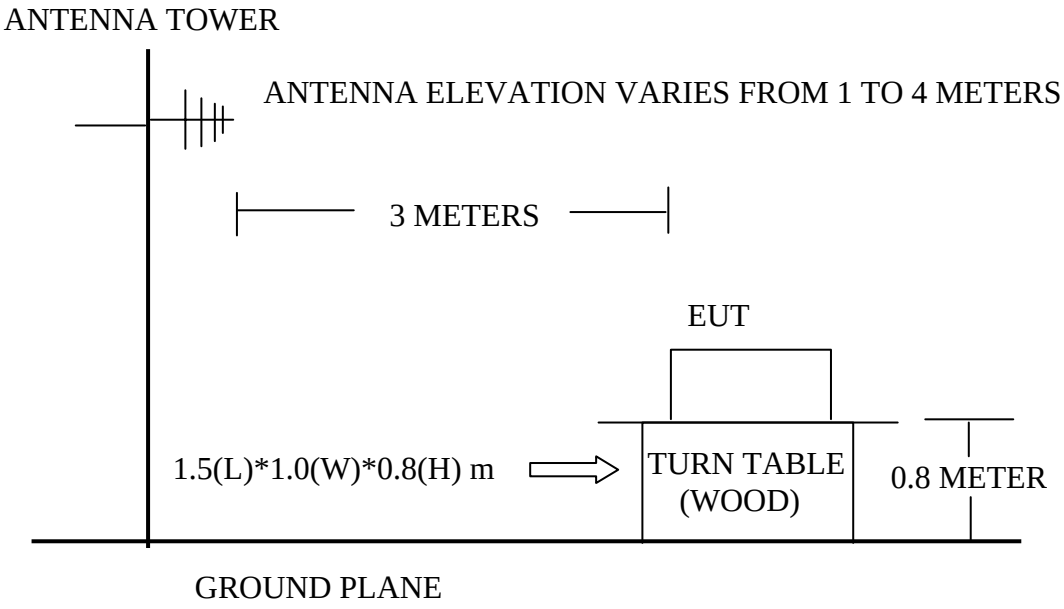
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 10	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	Nov.25, 09	1.5 Year
3	Horn Antenna	EMCO	3116	00060089	Nov.25, 09	1.5 Year
4	Amplifier	Agilent	8449B	3008A00863	May.08, 10	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08, 10	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX102	29091/2	May.08, 10	1 Year

4.2. Block Diagram of Test Setup

4.2.1. Block Diagram of connection between EUT and simulators

(EUT: Cyborg R.A.T.9 Wireless Mouse)

4.2.2. Anechoic Chamber Setup Diagram



4.3. Radiated Emission Limit Standard: FCC 15.209 and 15.249

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000MHz	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	
Field Strength of Fundamental emission for 2.4GHz-2.4835GHz	3	94.0 dB(μV)/m (Average) 114.0 dB(μV)/m(Peak)	
Field Strength of Harmonics	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Remark： (1) Emission level dBμV = 20 log Emission level μV/m

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

(4) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

4.4. EUT Configuration on Test

The following equipment are installed on Radiated Emission Test to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.4.1. Cyborg R.A.T.9 Wireless Mouse(EUT)

Model Number : 43709
Serial Number : N/A

4.5. Operating Condition of EUT

4.5.1. Setup the EUT as shown in Section 4.2..

4.5.2. Turned on the power of all equipment.

4.5.3. Let the EUT worked in test mode (Tx Mode) and tested it.

4.6. Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.10-2009 on radiated emission Test.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's RBW is set at 1MHz and VBW is set at 3MHz and PK detector for peak emissions measurement above 1GHz except fundamental emissions.

For fundamental emissions, the emissions bandwidth is around 1.5MHz, so RBW is set at 2MHz and VBW is set at 3MHz and peak detector for fundamental emissions peak measurements.

This device is pulse modulated, a duty cycle factor was used to calculate average level based measured peak level.

The frequency range from 30MHz to 10th harmonic (25GHz) are checked. and no any emissions were found from 18GHz to 25 GHz, So the radiated emissions from 18GHz to 25GHz were not record.

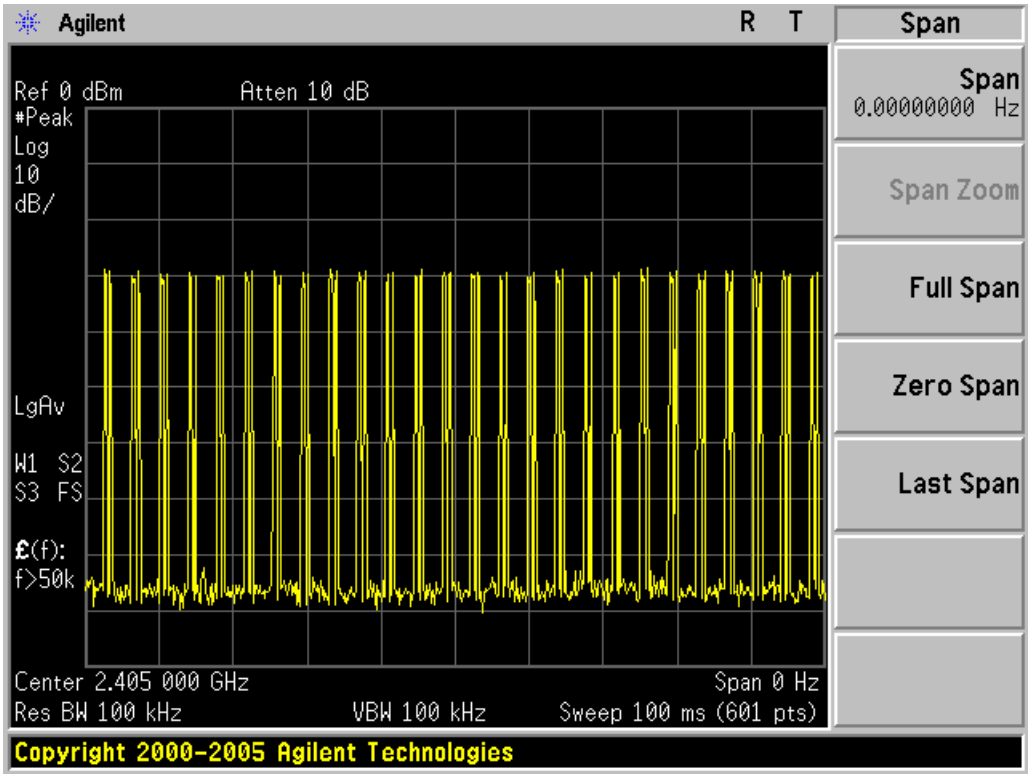
4.7. Radiated Emission Test Results

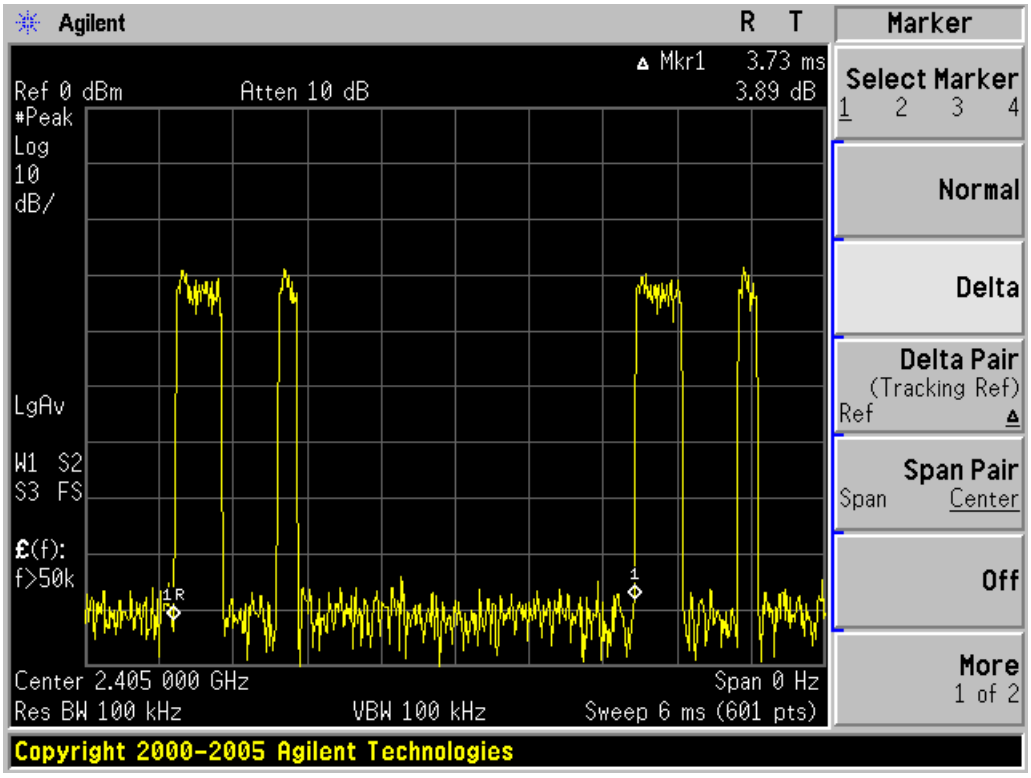
PASS

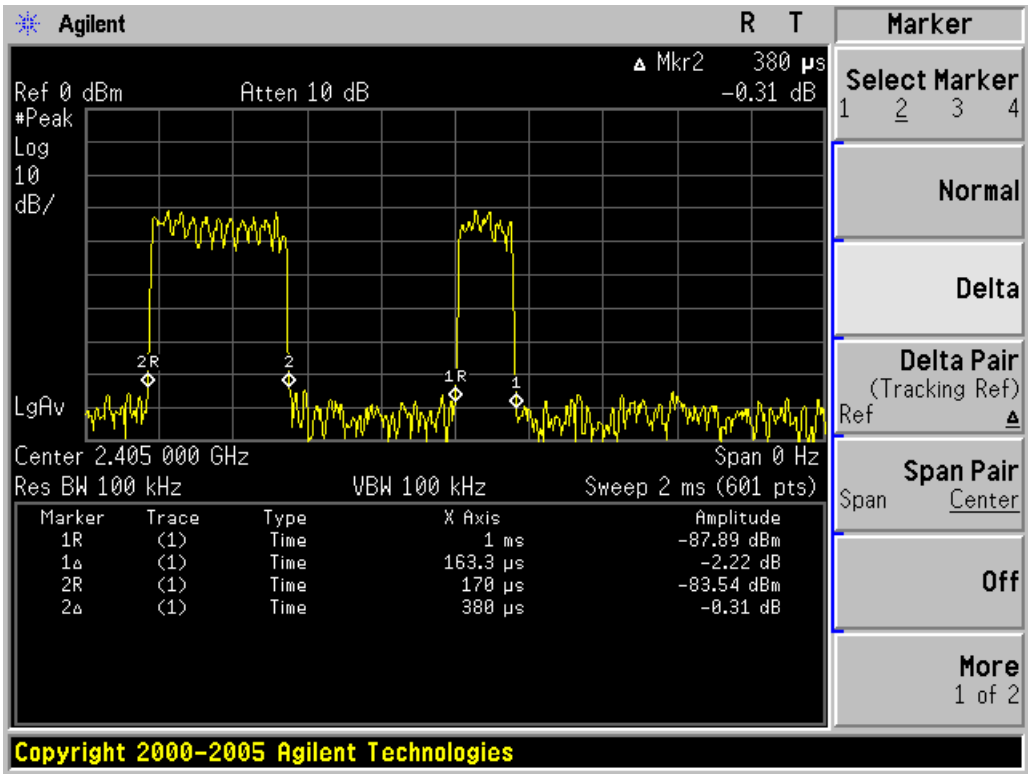
All the emissions from 30MHz to 25GHz were comply with the 15.209 and 15.249 Limit.

Note: If the PK measured levels comply with average limit, then average levels were deemed to comply with average limit.

Duty cycle: (0.1633+0.380)*26times /100ms*100% = 14.12%
Duty cycle factor = 20log（1/duty cycle）= 17.00dB






Agilent
R T
Marker
Mkr2 380 µs
Ref 0 dBm
Atten 10 dB
-0.31 dB
#Peak
Log
10
dB/
LgAv
2R
2
1R
1
Center 2.405 000 GHz
Span 0 Hz
Res BW 100 kHz
VBW 100 kHz
Sweep 2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1R (1) Time 1 ms -87.89 dBm
1Δ (1) Time 163.3 µs -2.22 dB
2R (1) Time 170 µs -83.54 dBm
2Δ (1) Time 380 µs -0.31 dB
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
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Radiated spurious emissions from 30MHz to 1GHz test result

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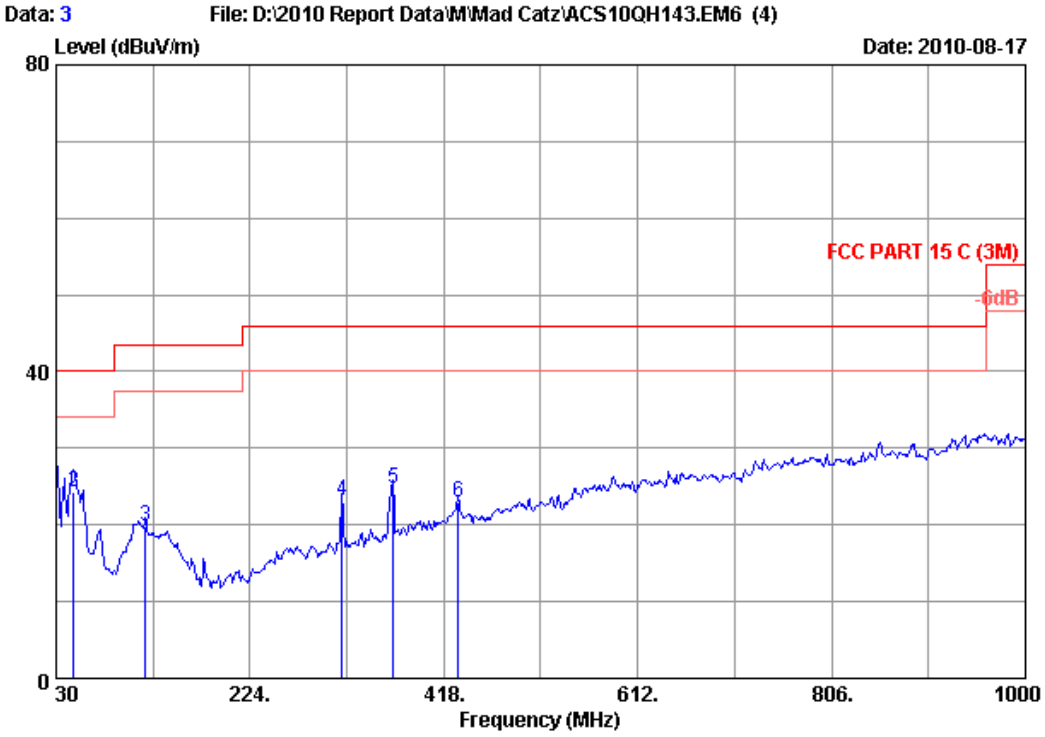

Site no. : 3m Chamber Data no. : 3
Dis. / Ant. : 3m 2010 CBL6111C Ant. pol. : HORIZONTAL
Limit : FCC PART 15 C (3M)
Env. / Ins. : 24*C/56% Engineer : Leo-Li
EUT : Cyborg R.A.T.9 Wireless Mouse M/N:4370
Power rating : DC 3.7V
Test Mode : Tx Mode
:

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.000	20.00	0.61	5.74	26.35	40.00	13.65	QP
2	47.460	10.55	0.76	12.94	24.25	40.00	15.75	QP
3	119.240	11.86	1.13	6.95	19.94	43.50	23.56	QP
4	316.150	14.12	2.55	6.47	23.14	46.00	22.86	QP
5	367.560	15.53	2.77	6.48	24.78	46.00	21.22	QP
6	432.550	17.42	3.12	2.35	22.89	46.00	23.11	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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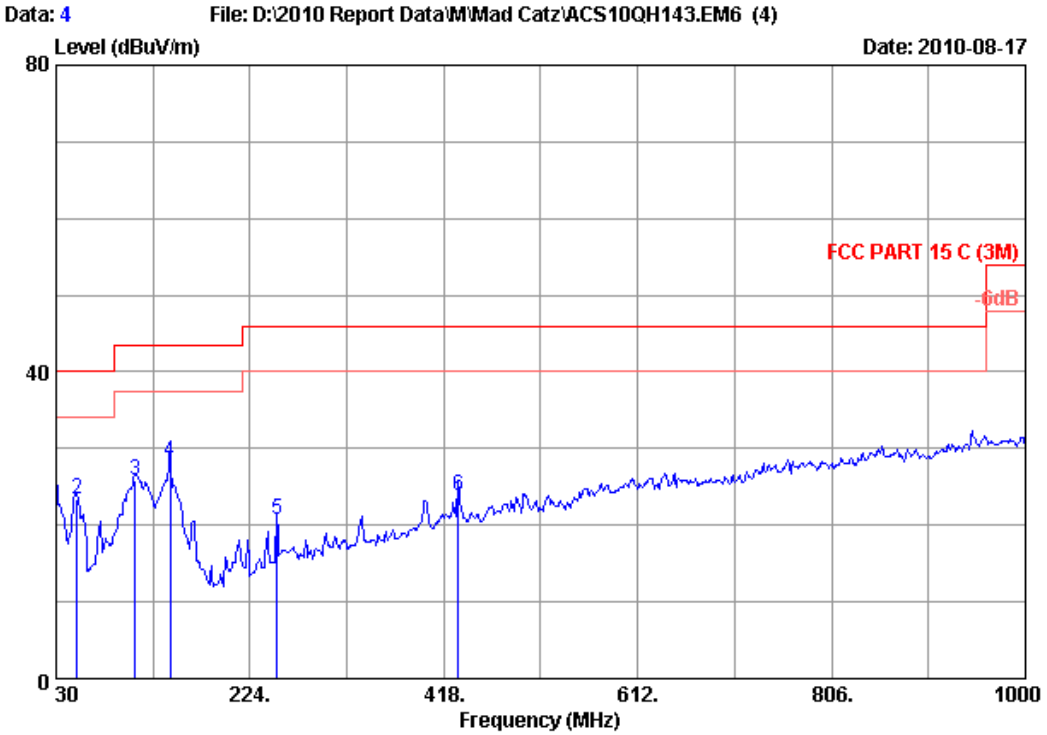

Site no. : 3m Chamber Data no. : 4
Dis. / Ant. : 3m 2010 CBL6111C Ant. pol. : VERTICAL
Limit : FCC PART 15 C (3M)
Env. / Ins. : 24*C/56% Engineer : Leo-Li
EUT : Cyborg R.A.T.9 Wireless Mouse M/N:4370
Power rating : DC 3.7V
Test Mode : Tx Mode
:

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.000	20.00	0.61	4.68	25.29	40.00	14.71	QP
2	51.340	8.86	0.79	13.67	23.32	40.00	16.68	QP
3	109.540	11.40	1.12	13.24	25.76	43.50	17.74	QP
4	144.460	11.92	1.14	15.16	28.22	43.50	15.28	QP
5	251.160	12.90	2.18	5.61	20.69	46.00	25.31	QP
6	432.550	17.42	3.12	3.21	23.75	46.00	22.25	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Radiated emissions from 1GHz to 18GHz (include fundamental) test result

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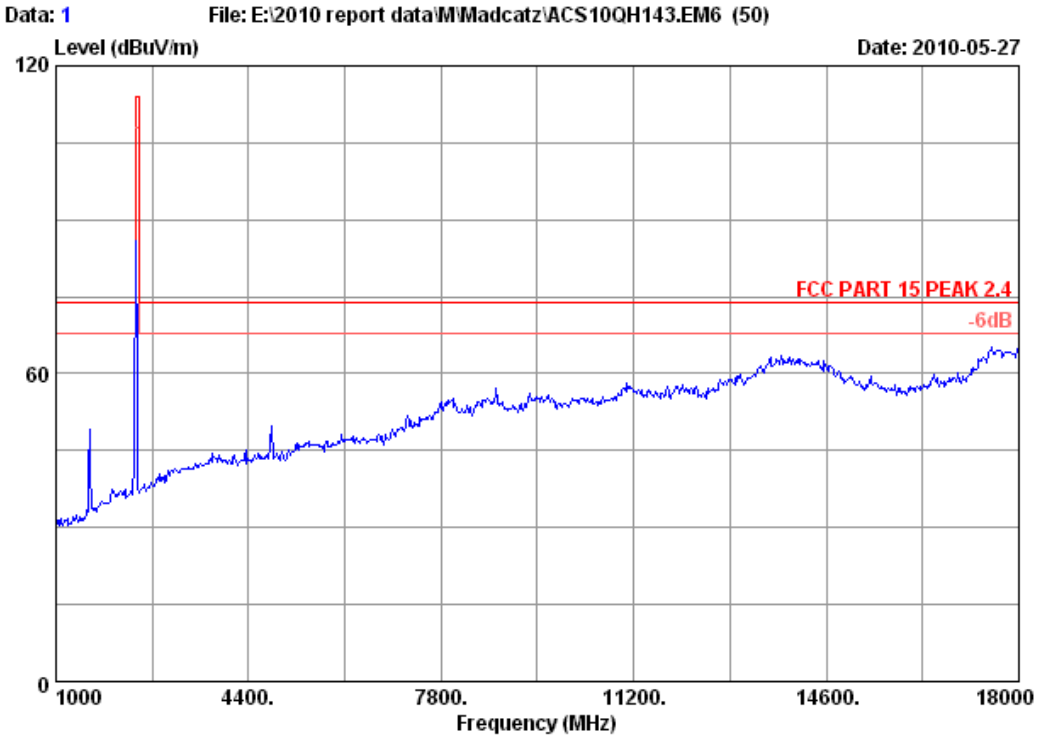

Site no.	: RF Chamber	Data no.	: 1
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23*C/54%	Engineer	: Sunny-lu
EUT	: Cyborg R.A.T.9 Wireless Mouse		
Power	: DC3.7V		
Test mode	: CH Low 2405MHz		
	: 43709		

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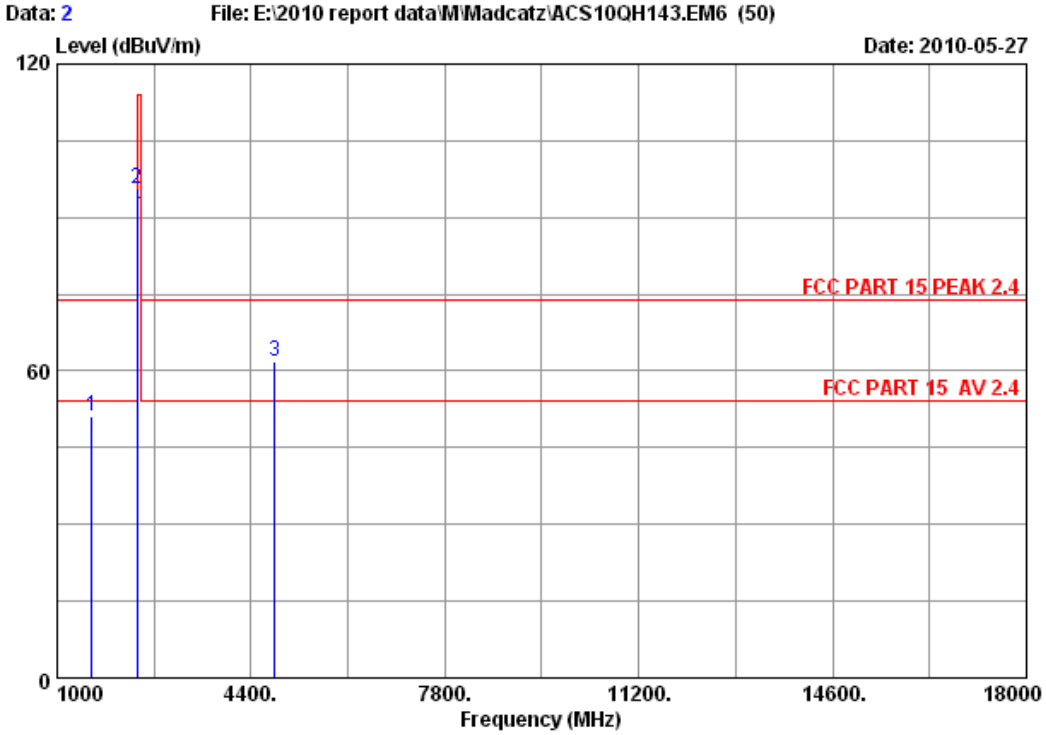

Site no. : RF Chamber Data no. : 2
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23*C/54% Engineer : Sunny-lu
EUT : Cyborg R.A.T.9 Wireless Mouse
Power : DC3.7V
Test mode : CH Low 2405MHz
: 43709

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1602.670	26.96	6.98	36.43	53.66	51.17	74.00	22.83	Peak
2	2405.000	29.45	8.72	35.95	93.23	95.45	114.00	18.55	Peak
3	4810.000	34.30	12.35	35.37	50.43	61.71	74.00	12.29	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Frequency （MHz）	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
2405	95.45	17.00	78.45	94	PASS
4810	61.71	17.00	44.71	54	PASS

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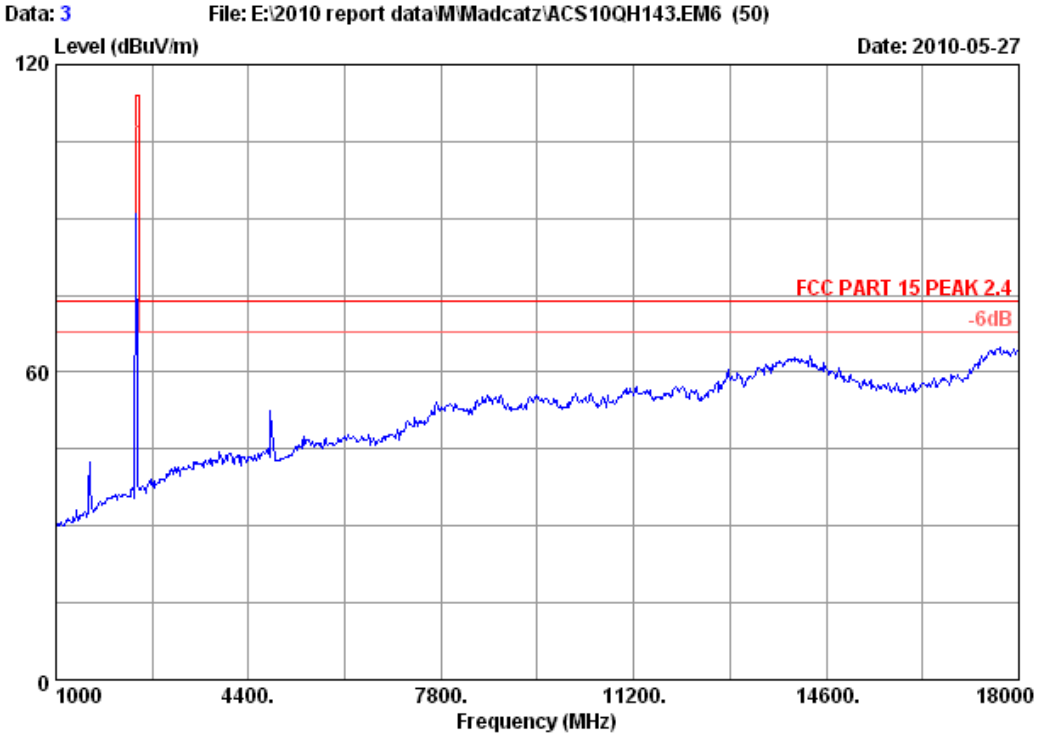

Site no.	: RF Chamber	Data no.	: 3
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23*C/54%	Engineer	: Sunny-lu
EUT	: Cyborg R.A.T.9 Wireless Mouse		
Power	: DC3.7V		
Test mode	: CH Low 2405MHz		
	: 43709		

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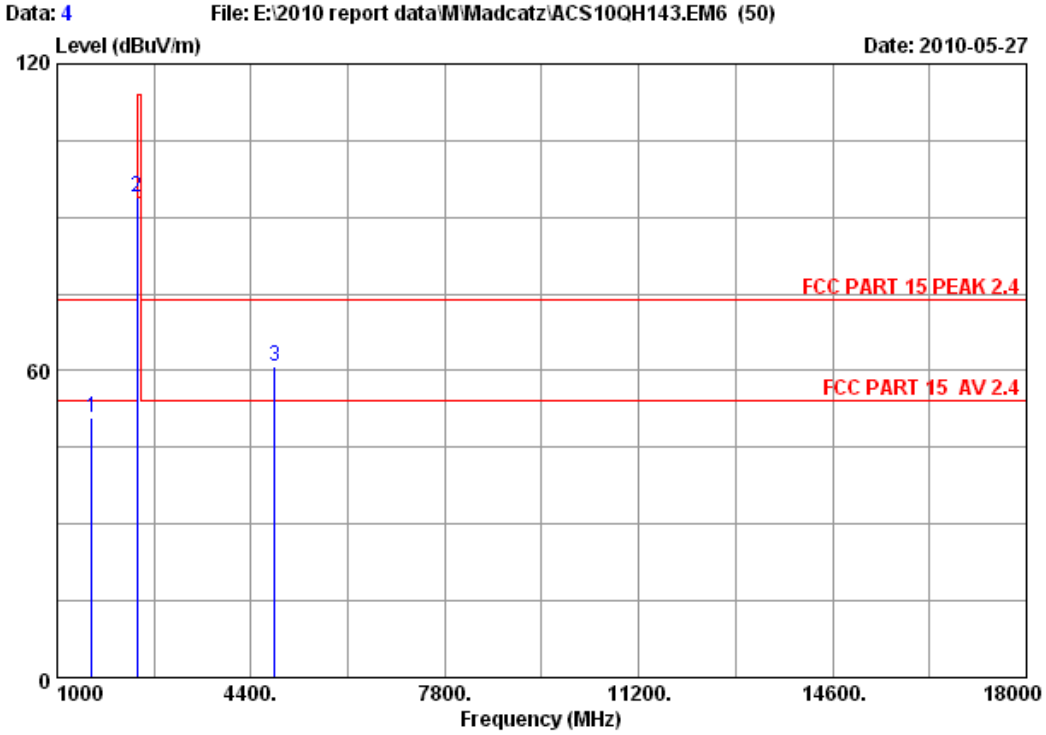

Site no. : RF Chamber Data no. : 4
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23*C/54% Engineer : Sunny-lu
EUT : Cyborg R.A.T.9 Wireless Mouse
Power : DC3.7V
Test mode : CH Low 2405MHz
: 43709

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1602.670	26.96	6.98	36.43	53.35	50.86	74.00	23.14	Peak
2	2405.000	29.45	8.72	35.95	91.81	94.03	114.00	19.97	Peak
3	4810.000	34.30	12.35	35.37	49.71	60.99	74.00	13.01	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
2405	94.03	17.00	77.03	94	PASS
4810	60.99	17.00	43.99	54	PASS

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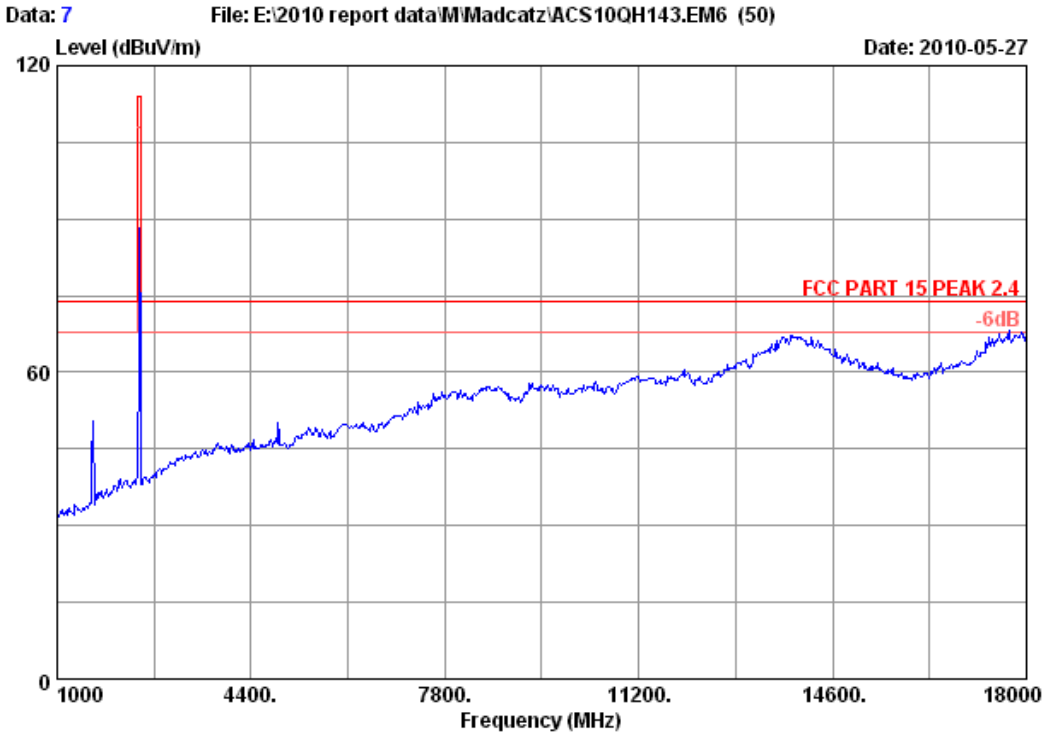

Site no.	: RF Chamber	Data no.	: 7
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23*C/54%	Engineer	: Sunny-lu
EUT	: Cyborg R.A.T.9 Wireless Mouse		
Power	: DC3.7V		
Test mode	: CH Mid 2445MHz		
	: 43709		

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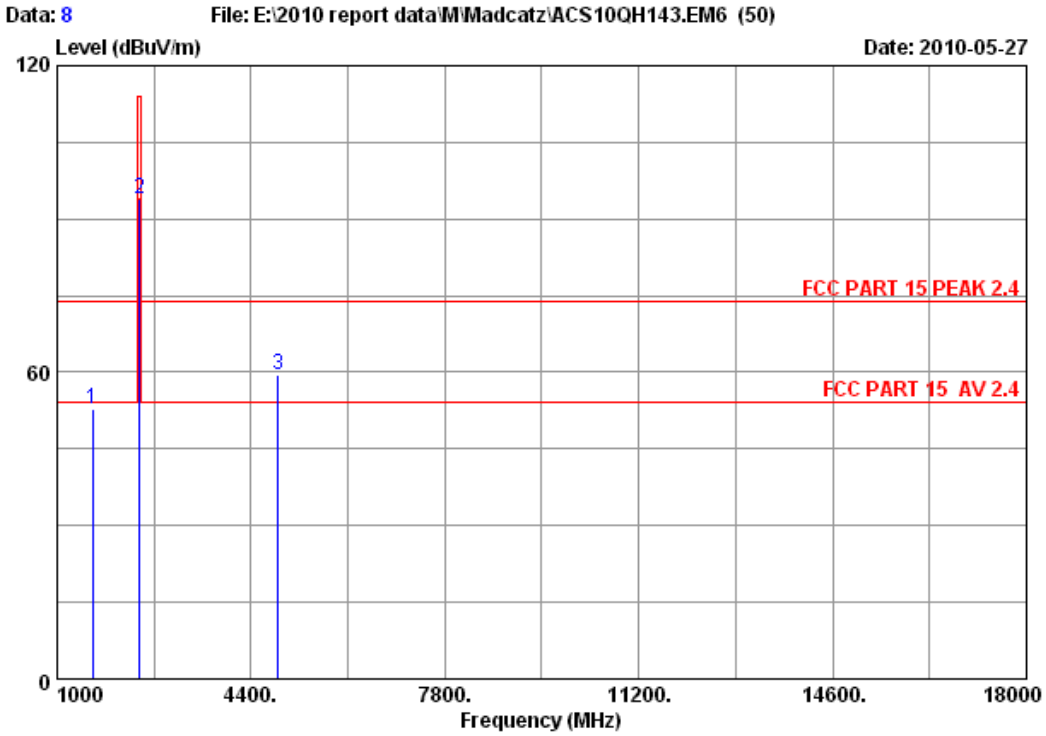

Site no. : RF Chamber Data no. : 8
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23*C/54% Engineer : Sunny-lu
EUT : Cyborg R.A.T.9 Wireless Mouse
Power : DC3.7V
Test mode : CH Mid 2445MHz
: 43709

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1629.000	27.15	7.04	36.26	54.97	52.90	74.00	21.10	Peak
2	2445.000	29.47	8.77	36.06	91.69	93.87	114.00	20.13	Peak
3	4890.000	34.41	12.44	35.36	47.95	59.44	74.00	14.56	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Frequency （MHz）	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
2445	93.87	17.00	76.87	94	PASS
4890	59.44	17.00	42.44	54	PASS

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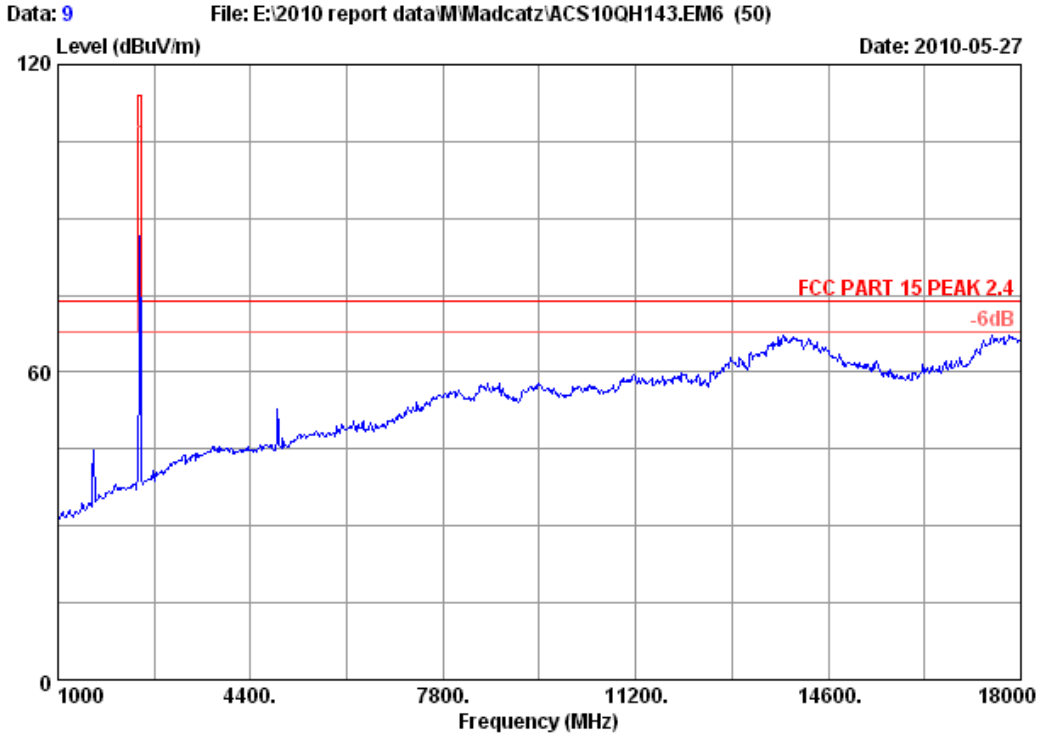

Site no.	: RF Chamber	Data no.	: 9
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23*C/54%	Engineer	: Sunny-lu
EUT	: Cyborg R.A.T.9 Wireless Mouse		
Power	: DC3.7V		
Test mode	: CH Mid 2445MHz		
	: 43709		

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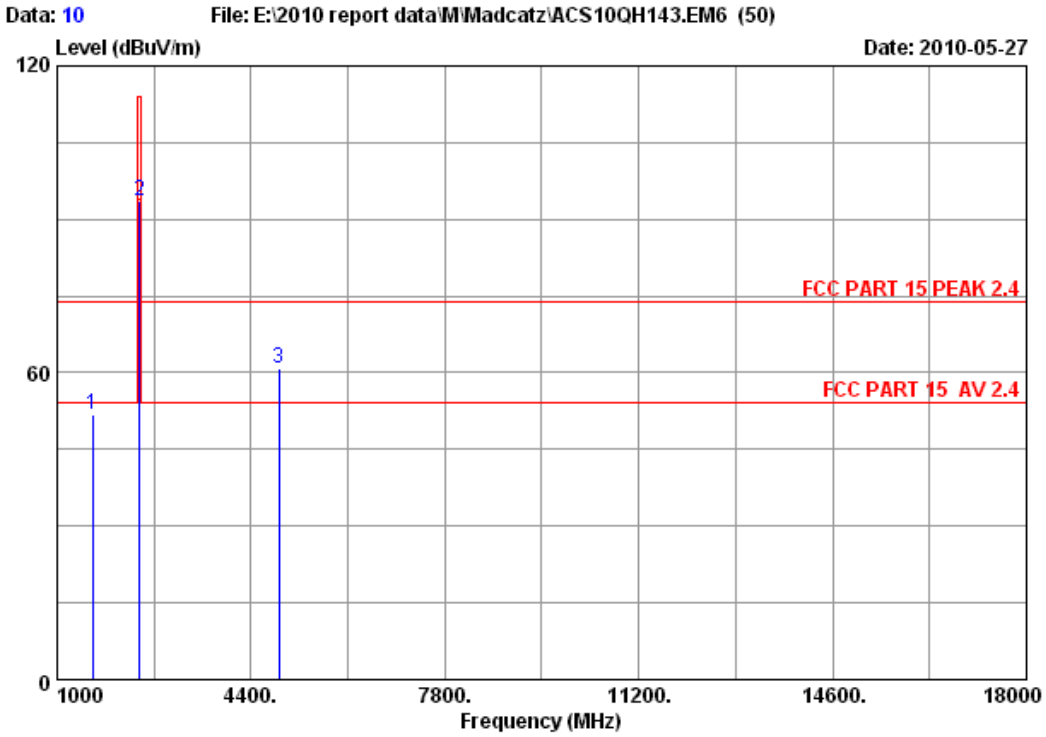

Site no. : RF Chamber Data no. : 10
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23*C/54% Engineer : Sunny-lu
EUT : Cyborg R.A.T.9 Wireless Mouse
Power : DC3.7V
Test mode : CH Mid 2445MHz
: 43709

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1629.000	27.15	7.04	36.26	53.97	51.90	74.00	22.10	Peak
2	2445.000	29.47	8.77	36.06	91.25	93.43	114.00	20.57	Peak
3	4890.000	34.43	12.44	35.32	49.43	60.98	74.00	13.02	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Frequency （MHz）	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
2445	93.43	17.00	76.43	94	PASS
4890	60.98	17.00	43.98	54	PASS

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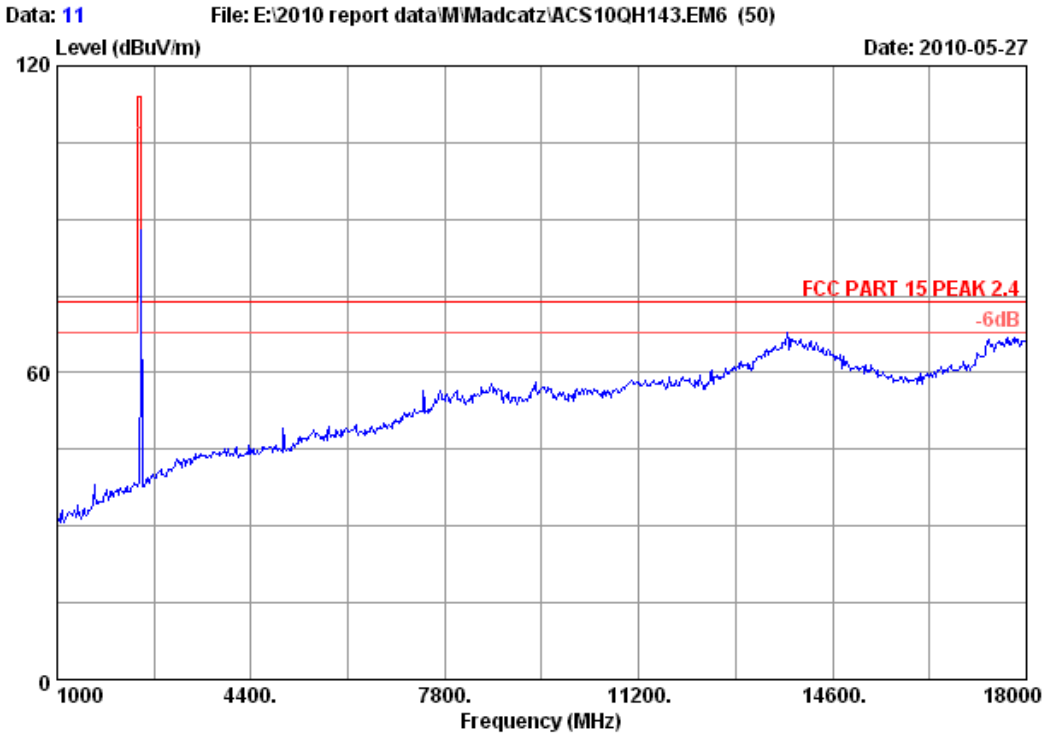

Site no.	: RF Chamber	Data no.	: 11
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23*C/54%	Engineer	: Sunny-lu
EUT	: Cyborg R.A.T.9 Wireless Mouse		
Power	: DC3.7V		
Test mode	: CH High 2477MHz		
	: 43709		

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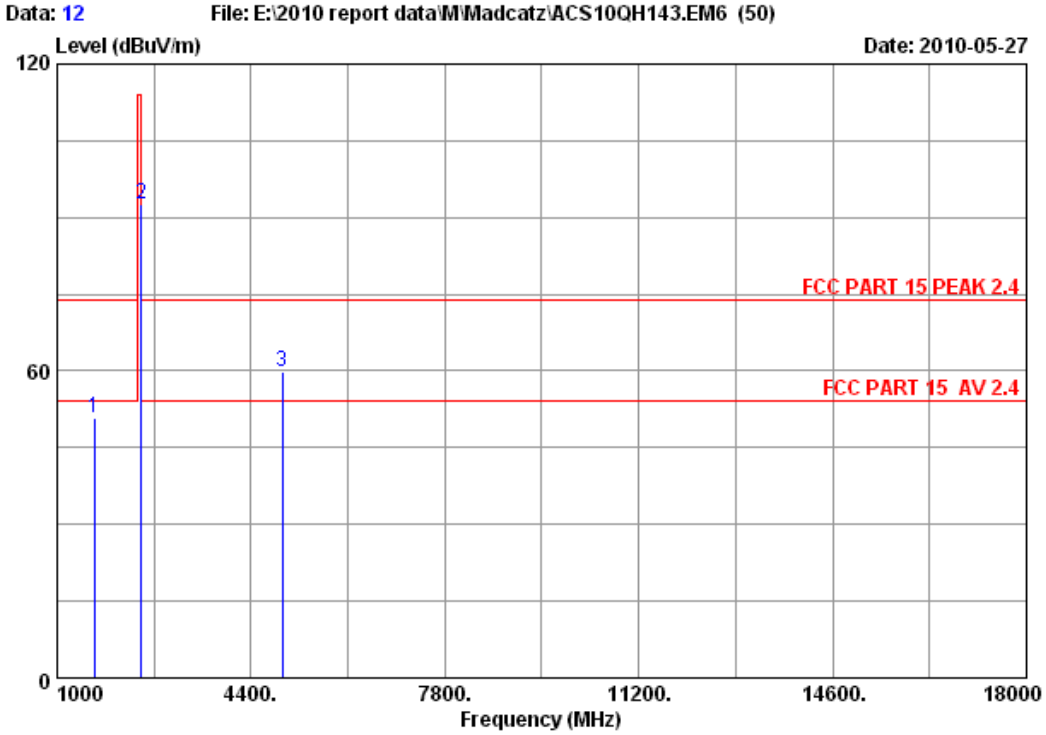

Site no. : RF Chamber Data no. : 12
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23*C/54% Engineer : Sunny-lu
EUT : Cyborg R.A.T.9 Wireless Mouse
Power : DC3.7V
Test mode : CH High 2477MHz
: 43709

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1650.000	27.24	7.10	36.33	52.75	50.76	74.00	23.24	Peak
2	2477.000	29.49	8.87	35.97	90.04	92.43	114.00	21.57	Peak
3	4954.000	34.54	12.53	35.37	48.18	59.88	74.00	14.12	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Frequency（MHz）	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
4954	59.88	17.00	42.88	54	PASS

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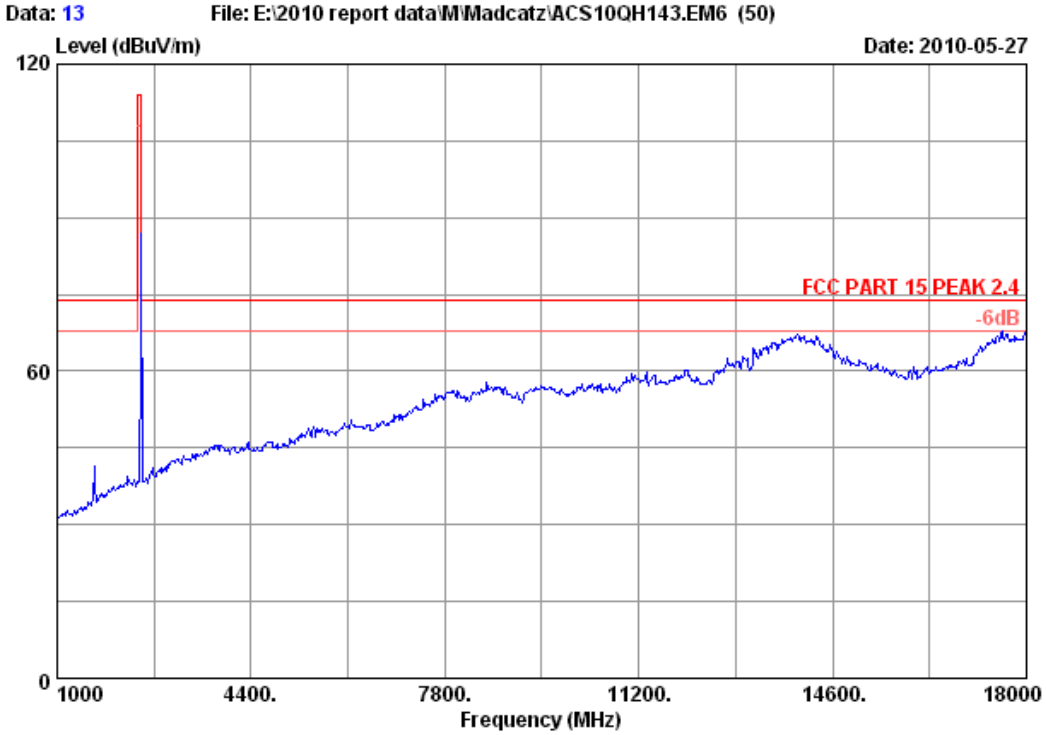

Site no.	: RF Chamber	Data no.	: 13
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23*C/54%	Engineer	: Sunny-lu
EUT	: Cyborg R.A.T.9 Wireless Mouse		
Power	: DC3.7V		
Test mode	: CH High 2477MHz		
	: 43709		

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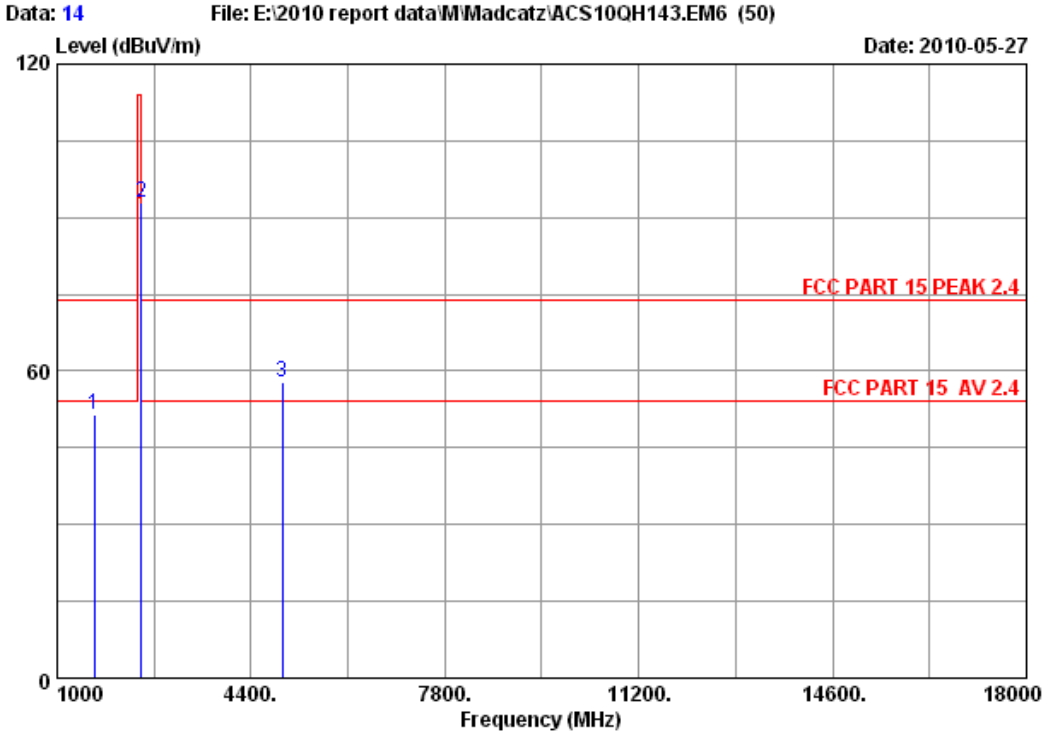

Site no. : RF Chamber Data no. : 14
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23*C/54% Engineer : Sunny-lu
EUT : Cyborg R.A.T.9 Wireless Mouse
Power : DC3.7V
Test mode : CH High 2477MHz
: 43709

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1650.000	27.24	7.10	36.33	53.39	51.40	74.00	22.60	Peak
2	2477.000	29.49	8.87	35.97	90.59	92.98	114.00	21.02	Peak
3	4954.000	34.54	12.53	35.37	46.25	57.95	74.00	16.05	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Frequency （MHz）	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
4954	57.95	17.00	40.95	54	PASS

5. BAND EDGE COMPLIANCE TEST

5.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,10	1 Year
2.	Horn Antenna	EMCO	3115	9607-4877	Nov.25, 09	1.5 Year
3.	Amplifier	Agilent	8449B	3008A02495	May.08, 10	1 Year
4.	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08,10	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1 Year
6.	RF Cable	Hubersuhner	SUCOFLEX102	28610/2	May.08,10	1 Year

5.2. Limit

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in section 15.209, which is the lesser attenuation.

5.3. Test Produce

1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.
2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upperband-edges of the emission:

   (a) PEAK: RBW=1MHz ;VBW=3MHz, PK detector, Sweep=AUTO
   (b)This device is pulse modulated, a duty cycle factor was used to calculate average level based measured peak level.

5.4. Test Results

Pass (The testing data was attached in the next pages.)

Note: If the PK measured levels comply with average limit, then average levels were deemed to comply with average limit.

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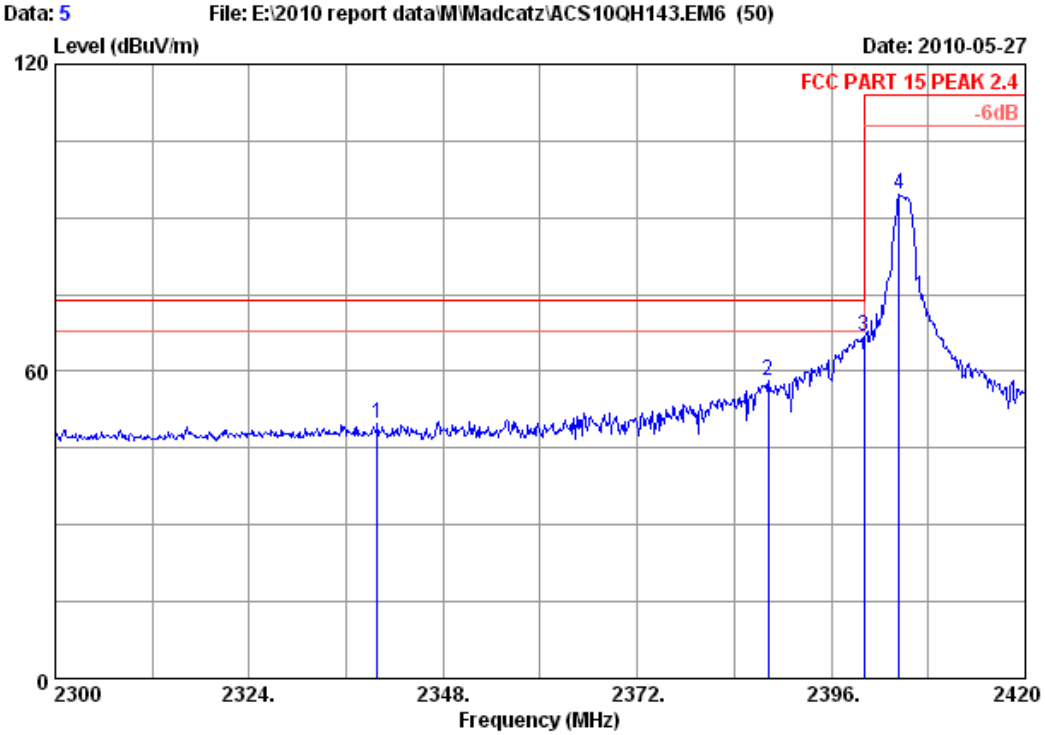

Site no. : RF Chamber Data no. : 5
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23*C/54% Engineer : Sunny-lu
EUT : Cyborg R.A.T.9 Wireless Mouse
Power : DC3.7V
Test mode : CH Low 2405MHz
: 43709

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2339.840	29.41	8.57	35.99	47.88	49.87	74.00	24.13	Peak
2	2388.200	29.44	8.67	36.09	55.98	58.00	74.00	16.00	Peak
3	2400.000	29.44	8.72	36.09	64.82	66.89	74.00	7.11	Peak
4	2404.400	29.45	8.72	35.95	92.24	94.46	114.00	19.54	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Frequency （MHz）	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
2404.4	94.46	17.00	77.46	94	PASS
2400	66.89	17.00	49.89	54	PASS
2388.2	58.00	17.00	41.00	54	PASS

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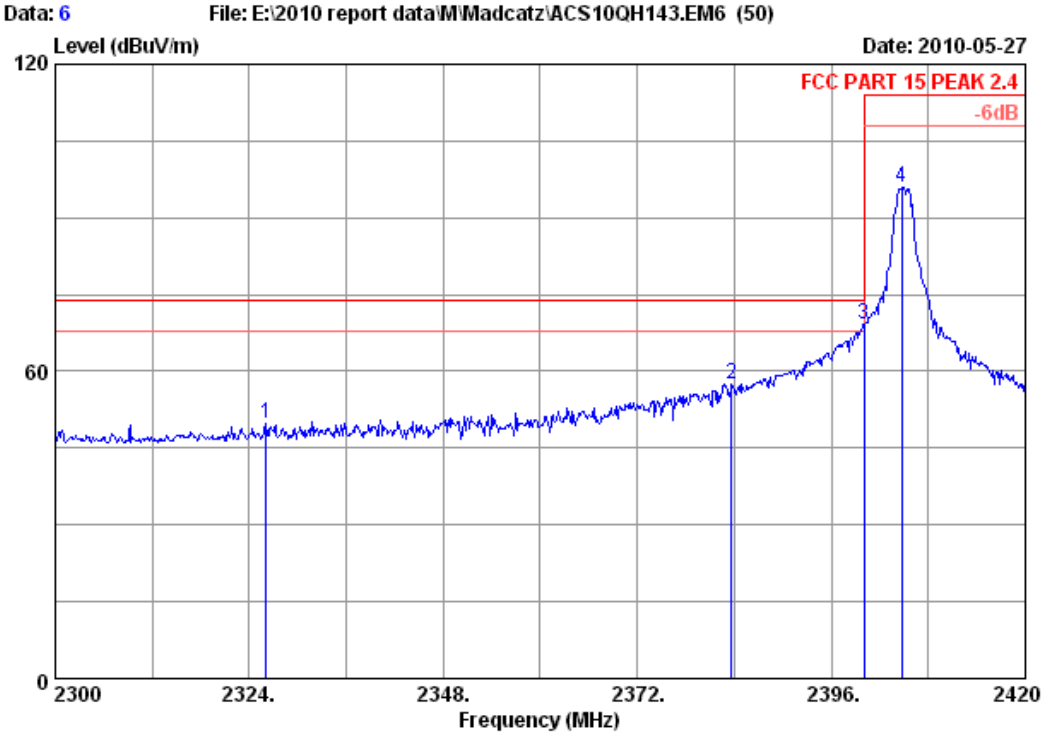

Site no. : RF Chamber Data no. : 6
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23*C/54% Engineer : Sunny-lu
EUT : Cyborg R.A.T.9 Wireless Mouse
Power : DC3.7V
Test mode : CH Low 2405MHz
: 43709

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2326.040	29.40	8.57	36.06	47.79	49.70	74.00	24.30	Peak
2	2383.640	29.43	8.67	36.00	55.47	57.57	74.00	16.43	Peak
3	2400.000	29.44	8.72	36.09	67.00	69.07	74.00	4.93	Peak
4	2404.760	29.45	8.72	35.95	93.78	96.00	114.00	18.00	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
2404.76	96.00	17.00	79.00	94	PASS
2400	69.07	17.00	52.07	54	PASS
2383.64	57.57	17.00	40.57	54	PASS

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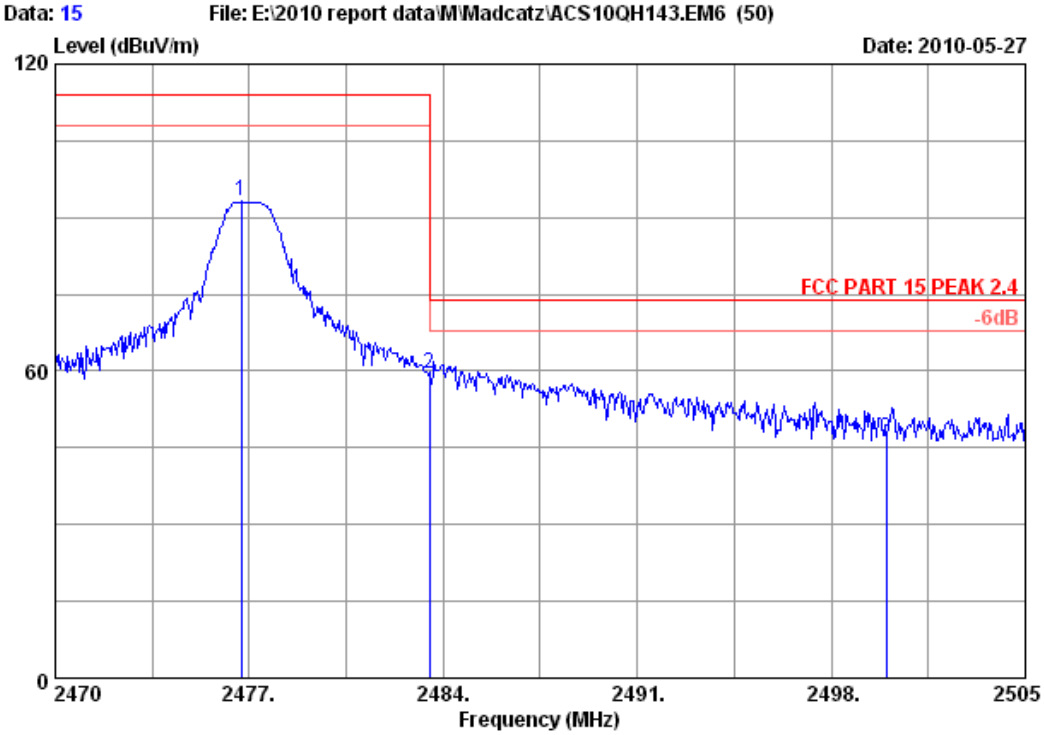

Site no. : RF Chamber Data no. : 15
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23*C/54% Engineer : Sunny-lu
EUT : Cyborg R.A.T.9 Wireless Mouse
Power : DC3.7V
Test mode : CH High 2477MHz
: 43709

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2476.720	29.49	8.87	35.97	90.70	93.09	114.00	20.91	Peak
2	2483.500	29.49	8.87	35.97	57.15	59.54	74.00	14.46	Peak
3	2500.000	29.50	8.92	36.00	44.38	46.80	74.00	27.20	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Frequency （MHz）	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
2483.5	59.54	17.00	42.54	54	PASS

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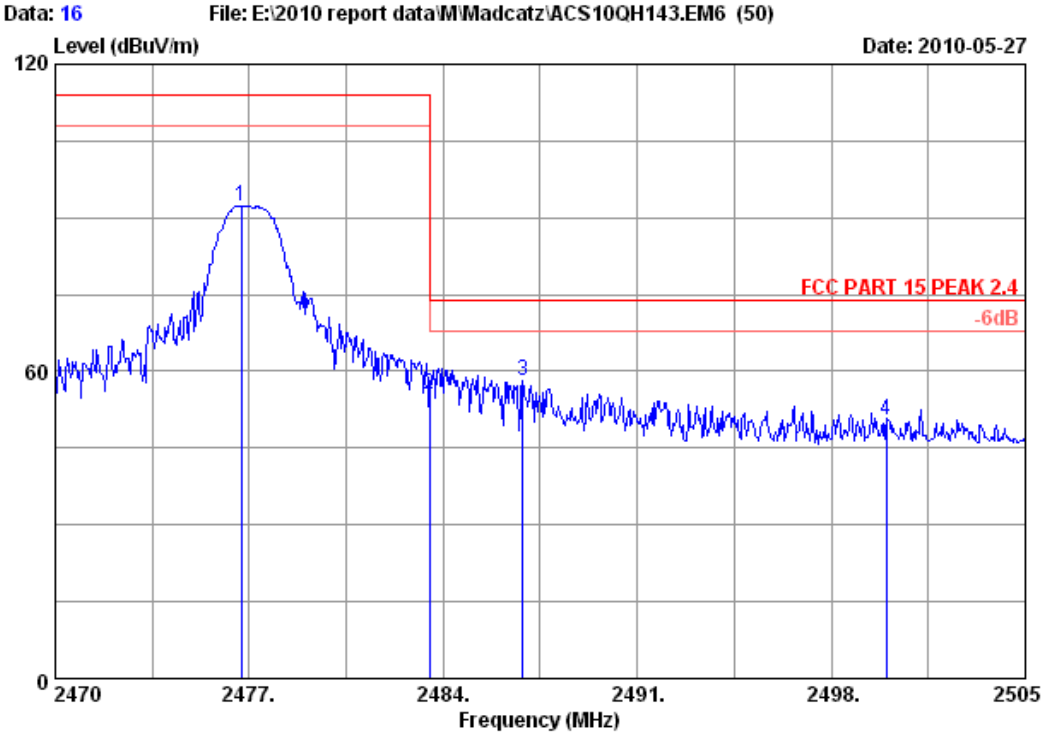


Site no. : RF Chamber Data no. : 16
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23*C/54% Engineer : Sunny-lu
EUT : Cyborg R.A.T.9 Wireless Mouse
Power : DC3.7V
Test mode : CH High 2477MHz
: 43709

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2476.720	29.49	8.87	35.97	89.93	92.32	114.00	21.68	Peak
2	2483.500	29.49	8.87	35.97	53.21	55.60	74.00	18.40	Peak
3	2486.870	29.49	8.87	35.97	55.80	58.19	74.00	15.81	Peak
4	2500.000	29.50	8.92	36.00	48.03	50.45	74.00	23.55	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Frequency（MHz）	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
2483.5	55.60	17.00	38.60	54	PASS
2486.87	58.19	17.00	41.19	54	PASS

6. 20DB BANDWIDTH TEST

6.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,10	1 Year

6.2. Limit

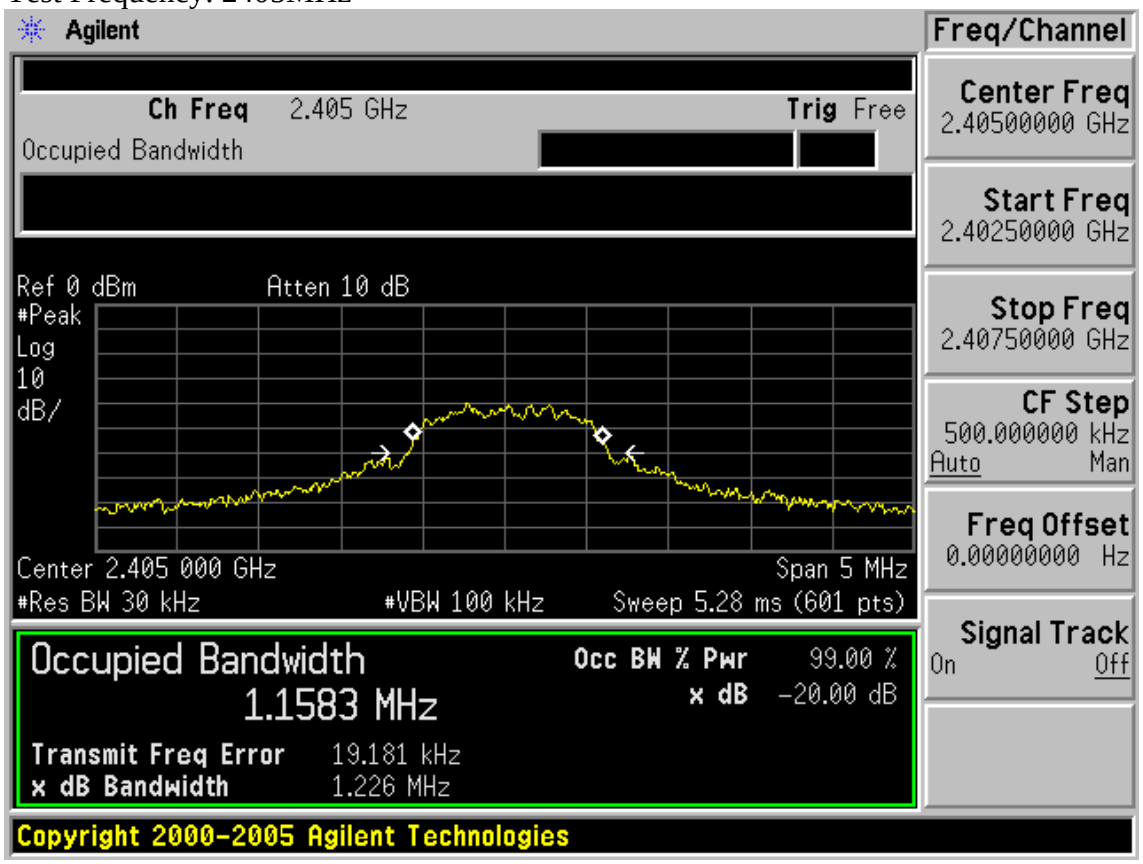
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

6.3. Test Results

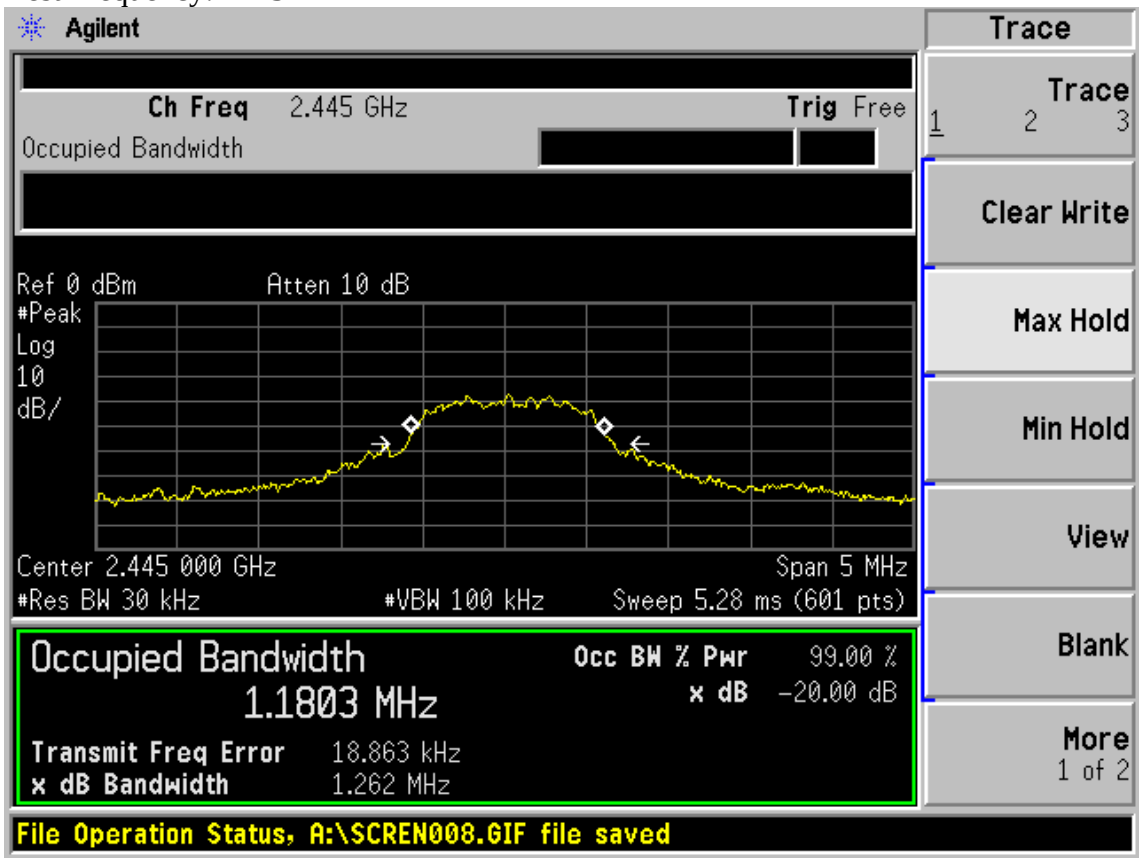
EUT: Cyborg R.A.T.9 Wireless Mouse		
M/N: 43709		
Test date:2010-08-12	Pressure:100.6 kpa	Humidity:58 %
Tested by: Leo-Li	Test site: RF site	Temperature：25 ℃

Frequency	20dB bandwidth （KHz）	Limit (KHz)
2405	1250	N/A
2445	1287	N/A
2477	1335	N/A
Conclusion：PASS		

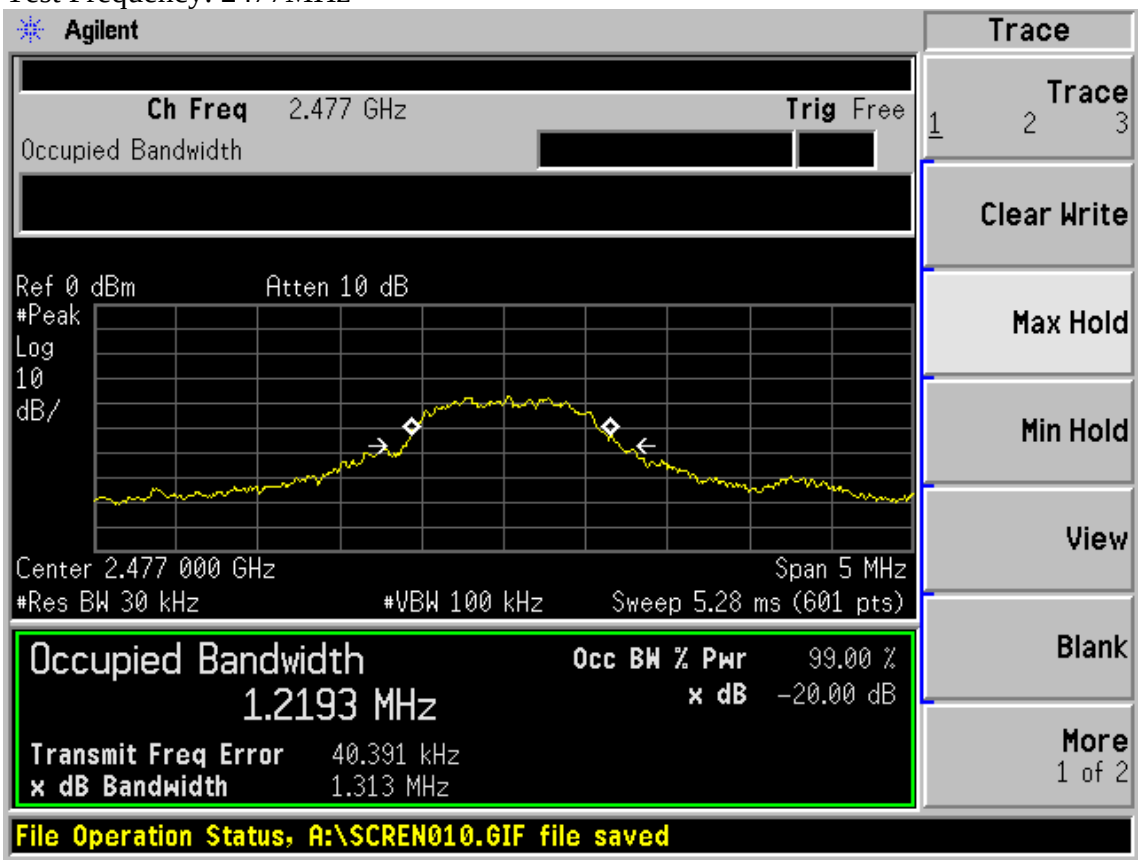
Test Frequency: 2405MHz



Test Frequency: 2445MHz



Test Frequency: 2477MHz



7. DEVIATION TO TEST SPECIFICATIONS

[NONE]