

# FCC TEST REPORT

## 47 CFR FCC Part 15 Subpart C 12.249

FCC ID.....: 2AAQT-BY-WQ02

Report Reference No.....: SKW1307016E

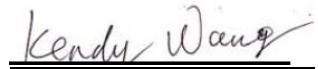
Compiled by

( position+printed name+signature)...: File administrators Lion Cai



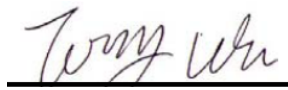
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( position+printed name+signature)...: Manager Tony Wu



Date of issue.....: Aug 05, 2013

**Representative Laboratory Name ..: Shenzhen Sinco Testing Technology Co., Ltd.**

Address .....: 4F, Block B, Famous Industry Products Center Baoyuan Rd.,  
Xixiang, Baoan, Shenzhen, China

**Testing Laboratory Name .....: Bontek Compliance Testing Laboratory Ltd**

Address .....: 1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East  
Road, Nanshan, Shenzhen, China

**Applicant's name.....: Dura Gold Ltd.**

Address .....: Unit 1313, 13/F Peninsula Square, 18 Sung On St., Hung  
Hom, Kowloon, Hongkong

### Test specification:

Standard .....: **47 CFR FCC Part 15 Subpart C - Intentional Radiators**

**ANSI C63.10: 2009**

TRF Originator.....: Shenzhen Sinco Testing Technology Co., Ltd.

Master TRF.....: Dated 2012-06

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Test item description .....: wireless car mouse

Trade Mark .....: /

Manufacturer .....: Shenzhen XinBoYing Technology Co., Ltd.

Model/Type reference.....: BY-WQ02, WCM-24/1542, CCM-12/5886, CBWM-001

Listed Models .....: /

Operation Frequency.....: From 2402MHz to 2480MHz

Modulation Type.....: GFSK

Result.....: Positive

**TEST REPORT**

<b>Test Report No. :</b> SKW1307016E	Aug 05, 2013
	Date of issue

Equipment under Test : wireless car mouse

Model /Type : BY-WQ02

Listed Models : /

**Applicant** : **Dura Gold Ltd.**

Address : Unit 1313, 13/F Peninsula Square, 18 Sung On St.,Hung  
Hom,Kowloon,Hongkong

**Manufacturer** **Shenzhen XinBoYing Technology Co.,Ltd.**

Address : 4 Floor,Building 46 xitian the Second Industrial  
Park,Shenzhen City China

<b>Test Result</b> according to the standards on page 4:	<b>Positive</b>
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The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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## **1. TEST STANDARDS**

The tests were performed according to following standards:

[47 CFR FCC Part 15 Subpart C](#) - Intentional Radiators

[ANSI C63.10: 2009](#) – American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40GHz

## 2. SUMMARY

### 2.1. General Remarks

Date of receipt of test sample	:	July 30,2013
Testing commenced on	:	July 30,2013
Testing concluded on	:	Aug 05, 2013

### 2.2. Equipment Under Test

#### Power supply system utilised

Power supply voltage	:	<input type="radio"/> 120V / 60 Hz	<input type="radio"/> 115V / 60Hz
		<input type="radio"/> 12 V DC	<input type="radio"/> 24 V DC
		<input checked="" type="radio"/> Other (specified in blank below)	

DC 3.0V

### 2.3. EUT operation mode

The EUT has been tested under typical operating condition.

### 2.4. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: 2AAQT-BY-WQ02** filing to comply with the FCC Part 15, Subpart C 15.249 Rules.

### 2.5. Modifications

No modifications were implemented to meet testing criteria.

### 2.6. Configuration of Tested System

#### Configuration of Tested System



### 2.7. NOTE

1. The EUT is a 2.4GHz car wireless mouse ,The functions of the EUT listed as below:

	Test Standards	Reference Report
Radio	FCC Part 15 Subpart C (Section15.249)	SKW1307016E

### **3. TEST ENVIRONMENT**

#### **3.1. Address of the test laboratory**

Bontek Compliance Testing Laboratory Ltd  
1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, China

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 (2003) and CISPR Publication 22.

#### **3.2. Test Facility**

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

##### **IC Registration No.: 7631A**

The 3m alternate test site of Bontek Compliance Testing Laboratory Ltd EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 7631A on March, 2008.

##### **FCC-Registration No.: 338263**

Bontek Compliance Testing Laboratory Ltd 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 338263, March 24, 2008.

##### **CNAS-Lab Code: L3923**

Bontek Compliance Testing Laboratory Ltd has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories, Date of Registration: Mar 22, 2012. Valid time is until Mar 21, 2015.

#### **3.3. Environmental conditions**

During the measurement the environmental conditions were within the listed ranges:

Temperature:	<u>15-35 ° C</u>
Humidity:	<u>30-60 %</u>
Atmospheric pressure:	<u>950-1050mbar</u>

#### **3.4. Statement of the measurement uncertainty**

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Bontek Compliance Testing Laboratory Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Bontek Compliance Testing Laboratory Ltd is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	3.40 dB	(1)
Radiated Emission	1~18GHz	3.40 dB	(1)
Conducted Disturbance	0.15~30MHz	2.30 dB	(1)

- (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .

### 3.5. Summary of standards and result

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliance
§15.207(a)	Conduction Emissions	Compliance
§15.109, §15.205(a), §15.209(a), 15.249(a), §15.249(c), §15.35	Radiated Emissions	Compliance
§15.249(d)	Out of Band Emissions	Compliance
§15.215(c)	20 dB Bandwidth	Compliance

NOTE: 1) The detailed test result please see section 4.

2) The test report merely corresponds to the test sample.

3) It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

### 3.6. Equipments Used during the Test

Radiated Emissions					
No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	TRILOG Broadband Test-Antenna	SCHWARZBECK	VULB9163	9163-324	2013-4-9
2	EMI Test Receiver	R&S	ESPI	100097	2012-7-25
3	Spectrum Analyzer	R&S	FSP	100397	2012-11-2
4	Broadband preamplifier	SCHWARZBECK	BBV9718	9718-182	2013-4-5
5	EMI TEST SOFTWARE	R&S	ESK1	N/A	N/A
6	Horn Antenna	SCHWARZBECK	BBHA9120D	0499	2012-11-27
7	Loop Antenna	Rohde&Schwarz	HFH2-Z2	100020	2012-11-27
8	Horn Antenna	SCHWARZBECK	BBHA9170	25841	2012-11-27
9	EMI TEST SOFTWARE	Audix	E3	N/A	N/A

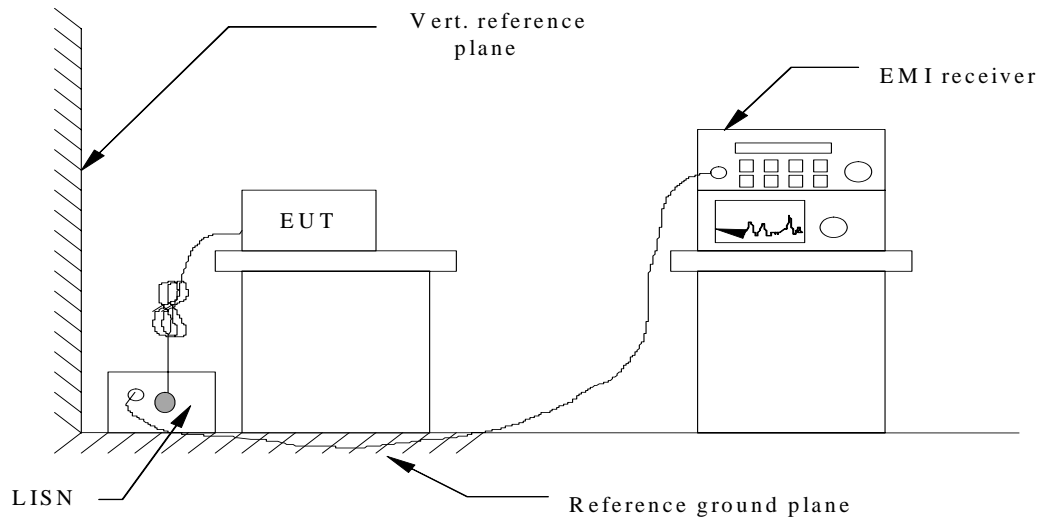
20dB Bandwidth & Deactivation Time & Duty Cycle					
No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	R&S	ESPI	100097	2012-7-25
2	Spectrum Analyzer	AGILENT	E4407B	MY44210775	2012-7-25

The calibration interval was one year.

## 4. TEST CONDITIONS AND RESULTS

### 4.1. Conducted Emissions Test (Not Applicable)

#### TEST CONFIGURATION



#### TEST PROCEDURE

- 1 The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4-2009.
- 2 Support equipment, if needed, was placed as per ANSI C63.4-2009.
- 3 All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4-2009.
- 4 The EUT received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5 All support equipments received AC power from a second LISN, if any.
- 6 The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7 Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
- 8 During the above scans, the emissions were maximized by cable manipulation.

#### CONDUCTED POWER LINE EMISSION LIMIT

For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following :

Frequency (MHz)	Maximum RF Line Voltage (dB $\mu$ V)			
	CLASS A		CLASS B	
	QP	Ave	QP	Ave
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

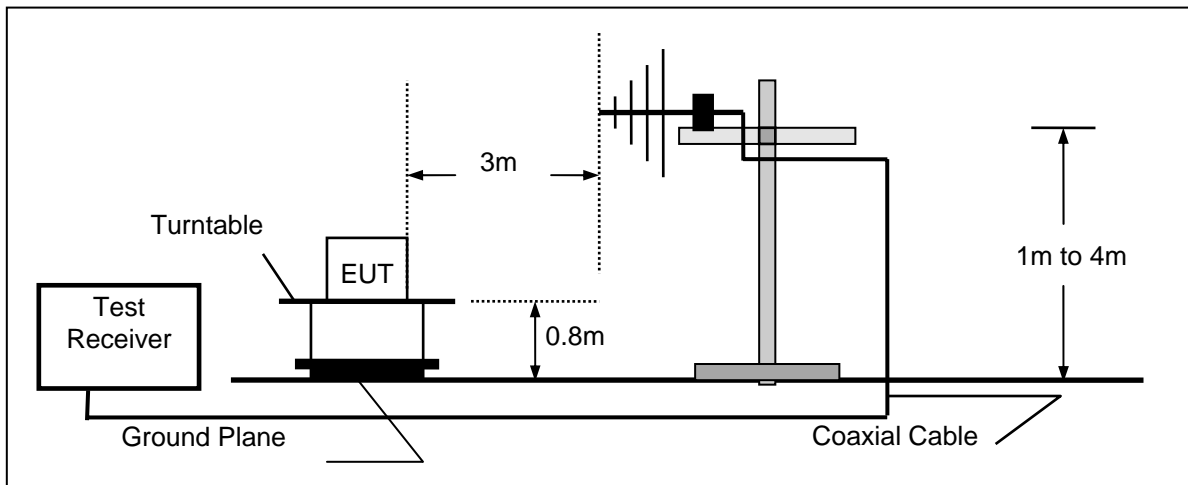
#### TEST RESULTS

Not Applicable (The product powered by battery)

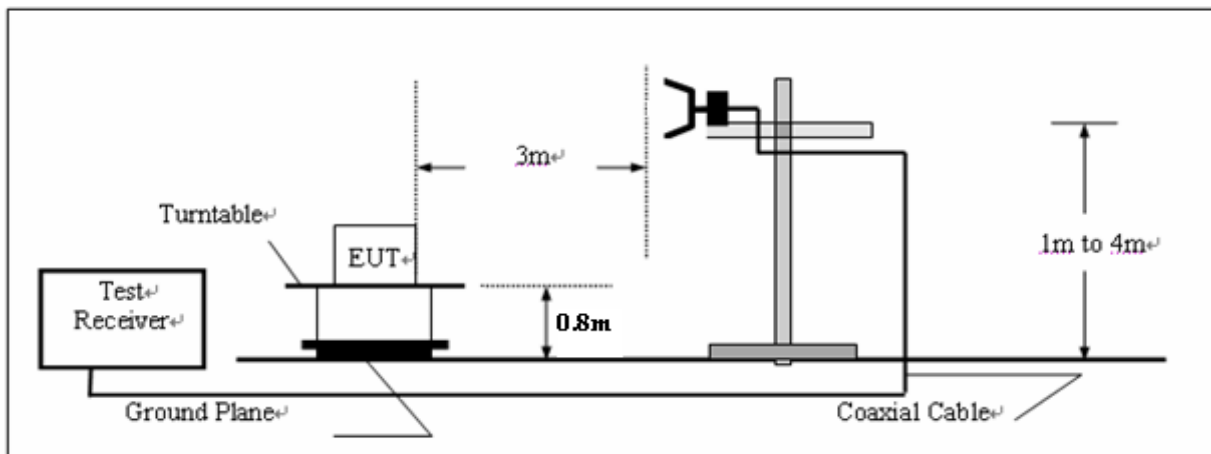
## 4.2. Radiated Emission Test

### TEST CONFIGURATION

#### a) Radiated Emission Test Set-Up, Frequency below 1000MHz



#### b) Radiated Emission Test Set-Up, Frequency above 1000MHz



### TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be 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 emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The Highest frequency generated or used in the device or on which the device operates or tunes was 2480MHz and the minimum operation frequency was 34.8KHz, so radiated emissions test frequency from 9KHz to 25GHz.

**FIELD STRENGTH CALCULATION**

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

For example

Frequency (MHz)	FS (dBμV/m)	RA (dBμV/m)	AF (dB)	CL (dB)	AG (dB)	Transd (dB)
300.00	40	58.1	12.2	1.6	31.90	-18.1

$$\text{Transd} = \text{AF} + \text{CL} - \text{AG}$$

**RADIATION LIMIT**

according to § 15.209, the field strength of radiated emissions limits comply with the following:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009–0.490 .....	2400/F(kHz)	300
0.490–1.705 .....	24000/F(kHz)	30
1.705–30.0 .....	30	30

For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

As per §15.249 (a), except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0–24.25 GHz	250	2500

As per §15.249 (c), Field strength limits are specified at a distance of 3 meters.

Note: We tested three (High, Middle, Low) channels' Radiated emission and recorded worst case data below 1G

## TEST RESULTS

Remark: 1. The radiated emission measurement are for each channel (low, middle, high), and recorded worst case at middle channel.

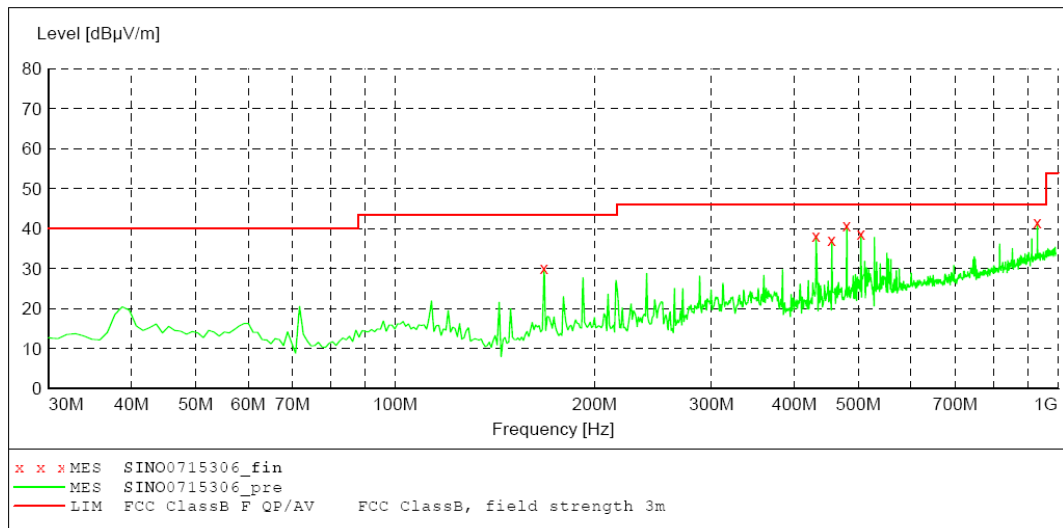
### From 9KHz to 30MHz

Frequency (MHz)	Corrected Reading (dBμV/m)@3m	FCC Limit (dBμV/m) @3m	Margin (dB)	Detector	Result
0.58	48.89	73.11	24.22	QP	PASS
1.21	42.63	65.87	23.24	QP	PASS
16.06	40.89	69.54	28.65	QP	PASS

### For 30MHz to 1GHz

#### SCAN TABLE: "test (30M-1G)"

Short Description: Field Strength  
 Start Stop Detector Meas. IF Transducer  
 Frequency Frequency Time Bandw.  
 30.0 MHz 1.1 GHz MaxPeak Coupled 100 kHz VULB9163



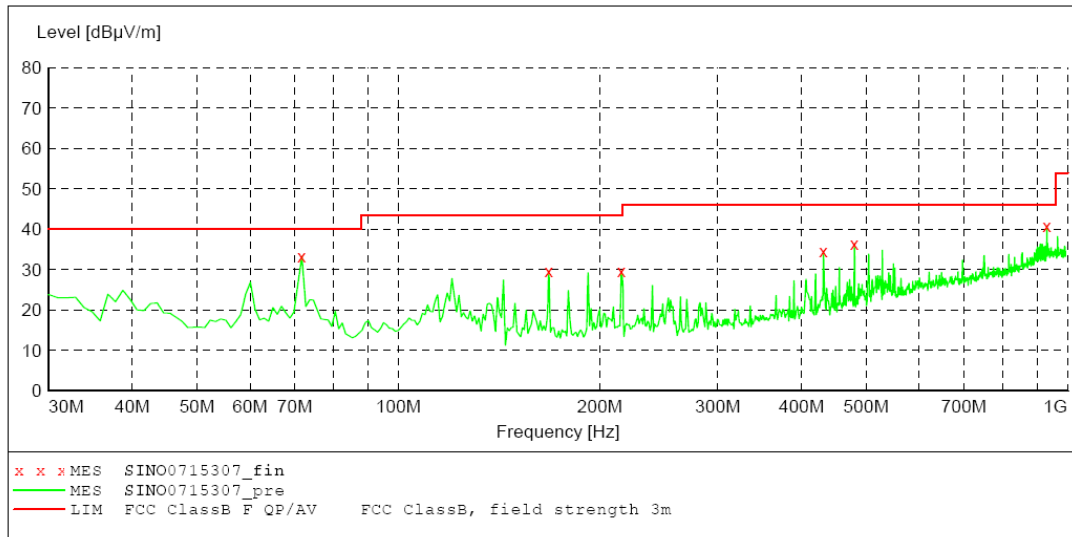
#### MEASUREMENT RESULT: "HTW0715306\_fin"

7/15/2013 7:13PM

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
167.740000	30.10	-17.0	43.5	13.4	QP	300.0	245.00	HORIZONTAL
431.580000	38.20	-9.6	46.0	7.8	QP	100.0	211.00	HORIZONTAL
455.830000	37.20	-9.0	46.0	8.8	QP	100.0	199.00	HORIZONTAL
480.080000	40.90	-8.0	46.0	5.1	QP	100.0	199.00	HORIZONTAL
504.330000	38.70	-6.9	46.0	7.3	QP	100.0	188.00	HORIZONTAL
931.130000	41.60	3.2	46.0	4.4	QP	100.0	29.00	HORIZONTAL

**SCAN TABLE: "test (30M-1G)"**

Short Description:		Field Strength			
Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
30.0 MHz	1.1 GHz	MaxPeak	Coupled	100 kHz	VULB9163

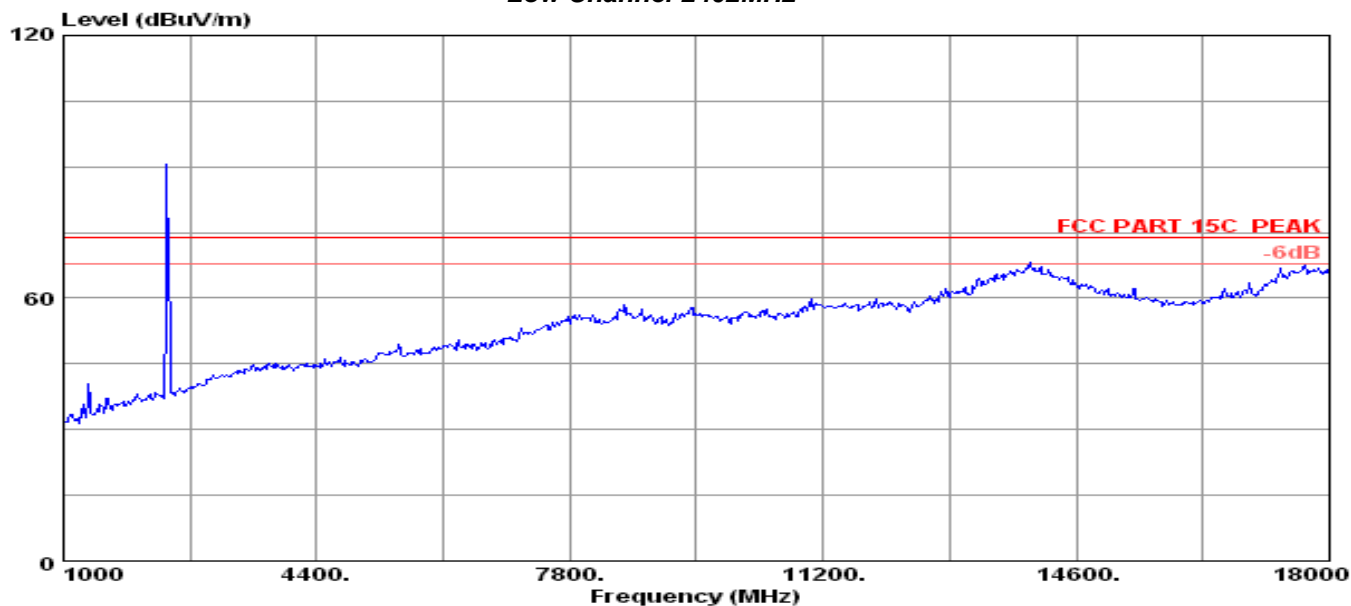
**MEASUREMENT RESULT: "HTW0715307\_fin"**

7/15/2013 7:32PM

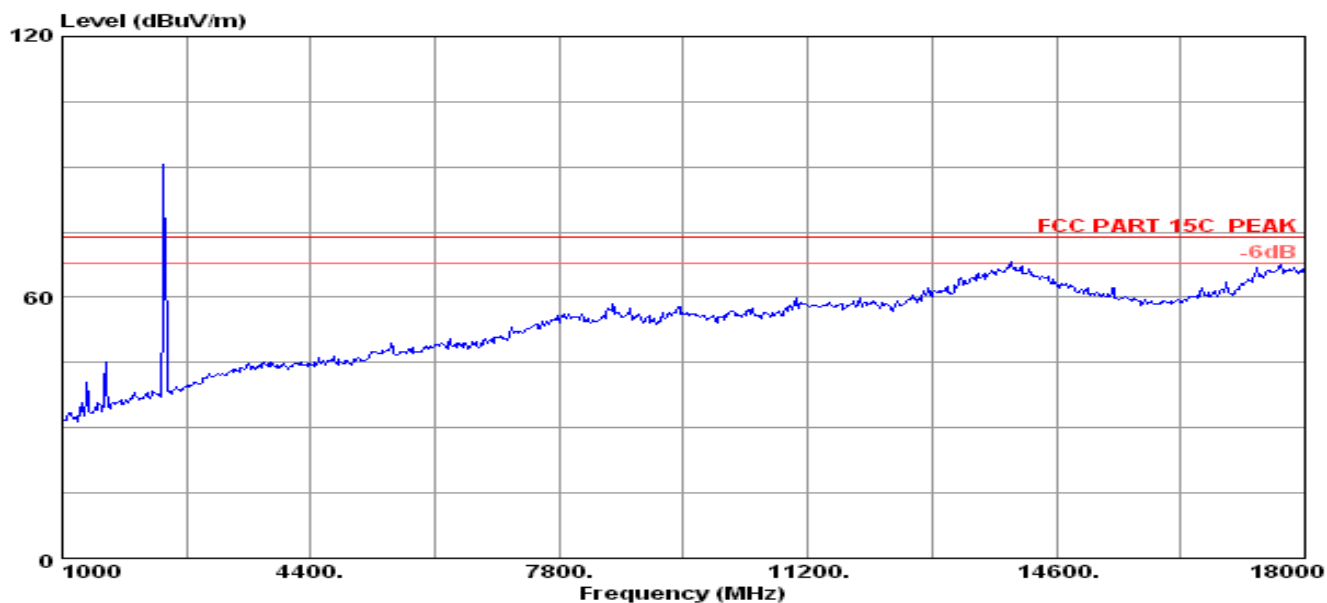
Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
71.710000	33.30	-19.6	40.0	6.7	QP	100.0	183.00	VERTICAL
167.740000	29.70	-17.0	43.5	13.8	QP	100.0	90.00	VERTICAL
215.270000	29.70	-15.0	43.5	13.8	QP	100.0	77.00	VERTICAL
431.580000	34.60	-9.6	46.0	11.4	QP	100.0	264.00	VERTICAL
480.080000	36.50	-8.0	46.0	9.5	QP	100.0	274.00	VERTICAL
931.130000	40.80	3.2	46.0	5.2	QP	100.0	341.00	VERTICAL

**For 1GHz to 25GHz**

The frequency spectrum above 1 GHz for Transmitter was investigated. All emission not reported are much lower than the prescribed limits. Set the RBW=1MHz,VBW=3MHz for Peak Detector while the RBW=1MHz,VBW=10Hz for Average Detector,Readings are both peak and average values. The pre-test have done for the EUT in three axes and found the worst emission at position shown in test setup photos.

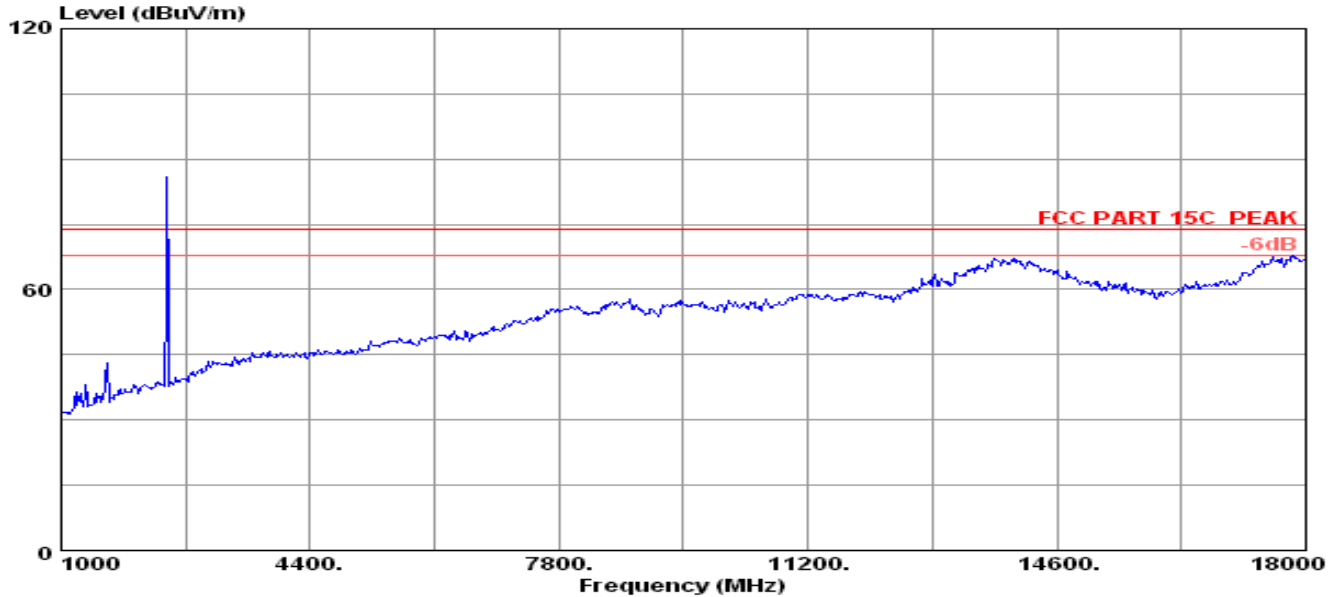
**Low Channel-2402MHz****ANTENNA POLARITY & TEST DISTANCE: VERTICAL 3 M**

No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)
1	*2402.00	91.14 PK	114.00	22.86	1.00	25	89.07	29.44	8.72	36.09
1	*2402.00	79.86 AV	94.00	14.14	1.00	25	77.79	29.44	8.72	36.09
2	4804.00	46.48 PK	74.00	27.52	1.00	111	35.20	34.30	12.35	35.37
2	4804.00	38.00 AV	54.00	16.00	1.00	111	26.72	34.30	12.35	35.37

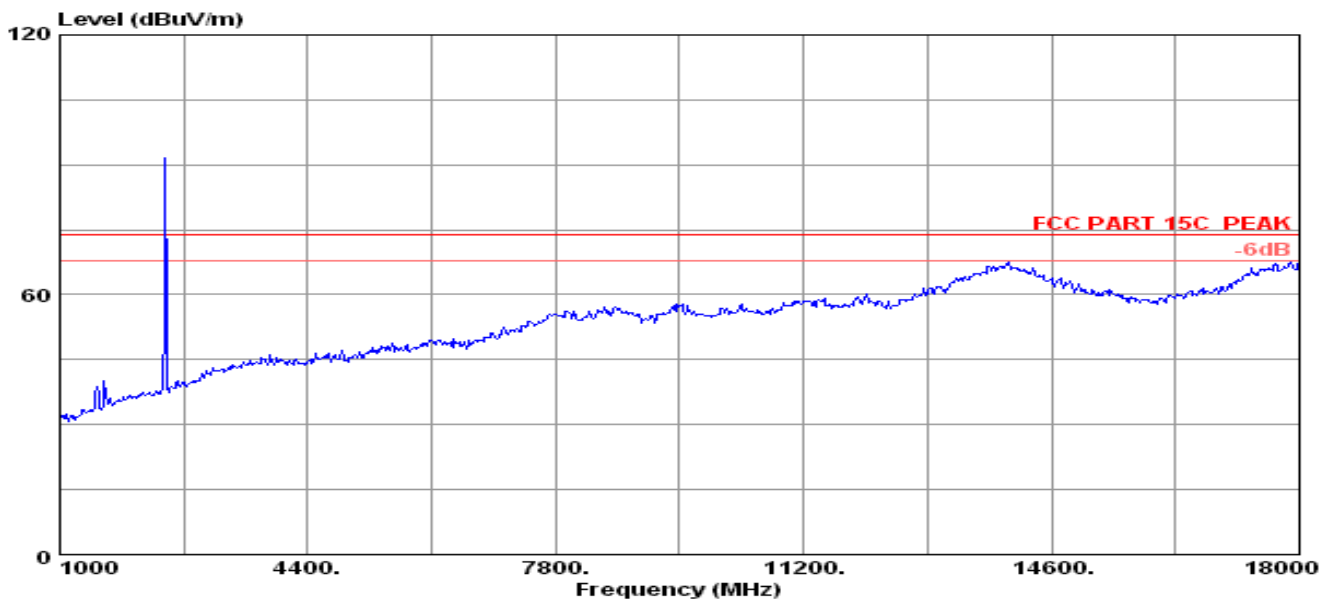


**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

No.	Frequency (MHz)	Emssion Level (dBUV/m)		Limit (dBUV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBUV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)
1	*2402.00	92.63	PK	114.00	21.37	1.00	330	90.56	29.44	8.72	36.09
1	*2402.00	81.23	AV	94.00	12.77	1.00	330	79.16	29.44	8.72	36.09
2	4804.00	45.19	PK	74.00	28.81	1.00	154	33.91	34.30	12.35	35.37
2	4804.00	38.82	AV	54.00	15.18	1.00	154	27.54	34.30	12.35	35.37

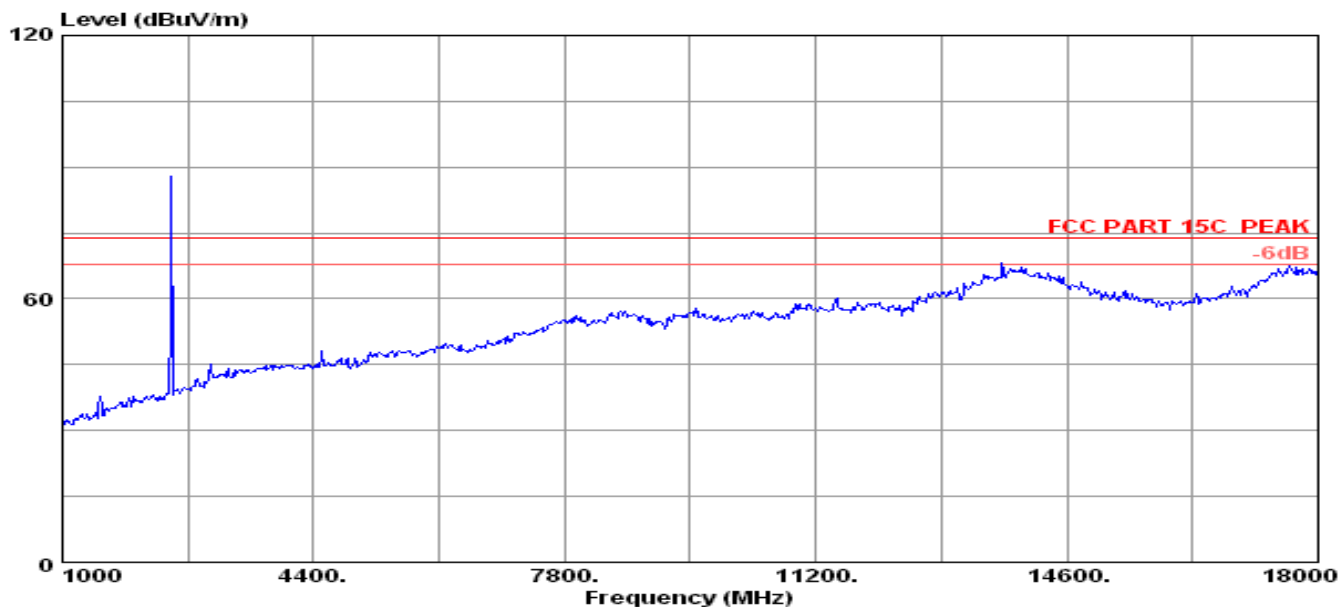
**Middle Channel-2441MHz****ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

No.	Frequency (MHz)	Emssion Level (dBUV/m)		Limit (dBUV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBUV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)
1	*2441.00	93.99	PK	114.00	20.01	1.00	38	91.81	29.47	8.77	36.06
1	*2441.00	80.82	AV	94.00	13.18	1.00	38	78.64	29.47	8.77	36.06
2	4882.00	45.08	PK	74.00	28.92	1.00	285	33.59	34.41	12.44	35.36
2	4882.00	36.10	AV	54.00	17.90	1.00	285	24.61	34.41	12.44	35.36

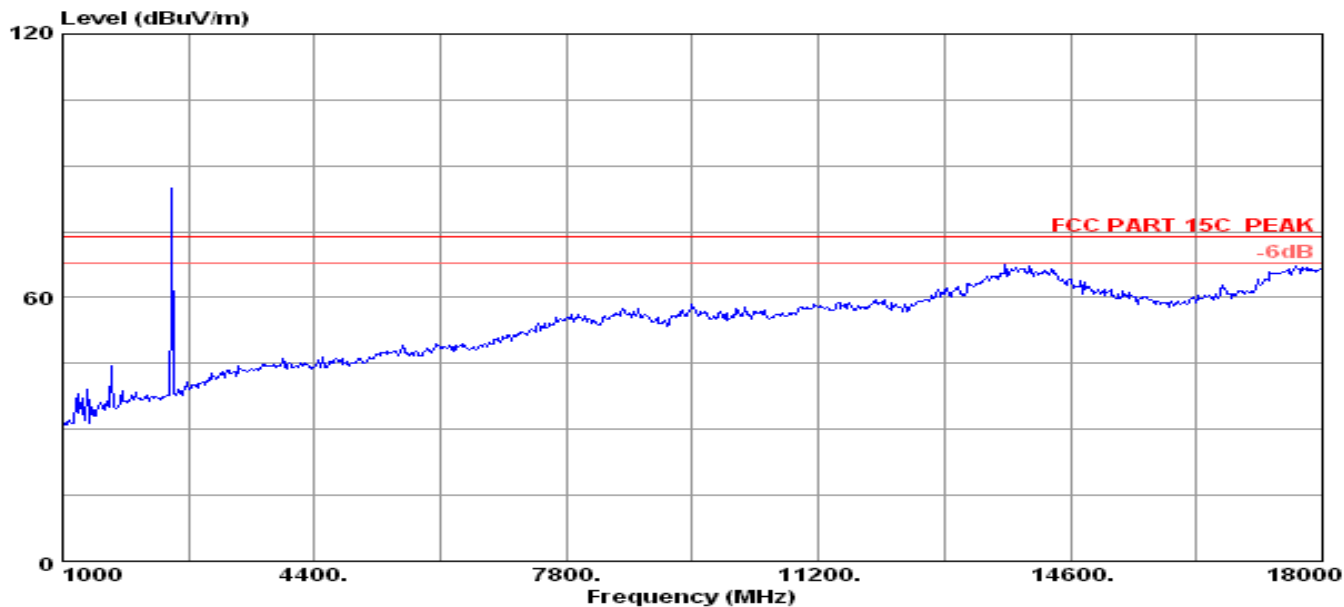


**ANTENNA POLARITY & TEST DISTANCE: VERTICAL 3 M**

No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)
1	*2441.00	93.74	PK	114.00	20.26	1.00	278	91.56	29.47	8.77	36.06
1	*2441.00	82.37	AV	94.00	11.63	1.00	278	80.19	29.47	8.77	36.06
2	4882.00	47.08	PK	74.00	26.92	1.00	165	35.59	34.41	12.44	35.36
2	4882.00	34.33	AV	54.00	19.67	1.00	165	22.84	34.41	12.44	35.36

**High Channel-2480MHz****ANTENNA POLARITY & TEST DISTANCE: VERTICAL 3 M**

No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)
1	*2480.00	91.97	PK	114.00	22.03	1.00	333	89.58	29.49	8.87	35.97
1	*2480.00	79.02	AV	94.00	14.98	1.00	258	76.63	29.49	8.87	35.97
2	4960.00	46.55	PK	74.00	27.45	1.00	147	34.85	34.54	12.53	35.37
2	4960.00	35.77	AV	54.00	18.23	1.00	147	24.07	34.54	12.53	35.37



ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)
1	*2480.00	90.31	PK	114.00	23.69	1.00	222	87.92	29.49	8.87	35.97
1	*2480.00	78.35	AV	94.00	15.65	1.00	222	75.96	29.49	8.87	35.97
2	4960.00	45.49	PK	74.00	28.51	1.00	15	33.79	34.54	12.53	35.37
2	4960.00	35.00	AV	54.00	19.00	1.00	15	23.30	34.54	12.53	35.37

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Antenna Factor (dB/m) + Cable Factor (dB) - Pre-amplifier Factor
  2. The other emission levels were very low against the limit.
  3. Margin value = Limit value - Emission level.
  4. The limit value is defined as per 15.249
  5. " \* " : Fundamental frequency
  6. The average measurement was not performed when the peak measured data under the limit of average detection.

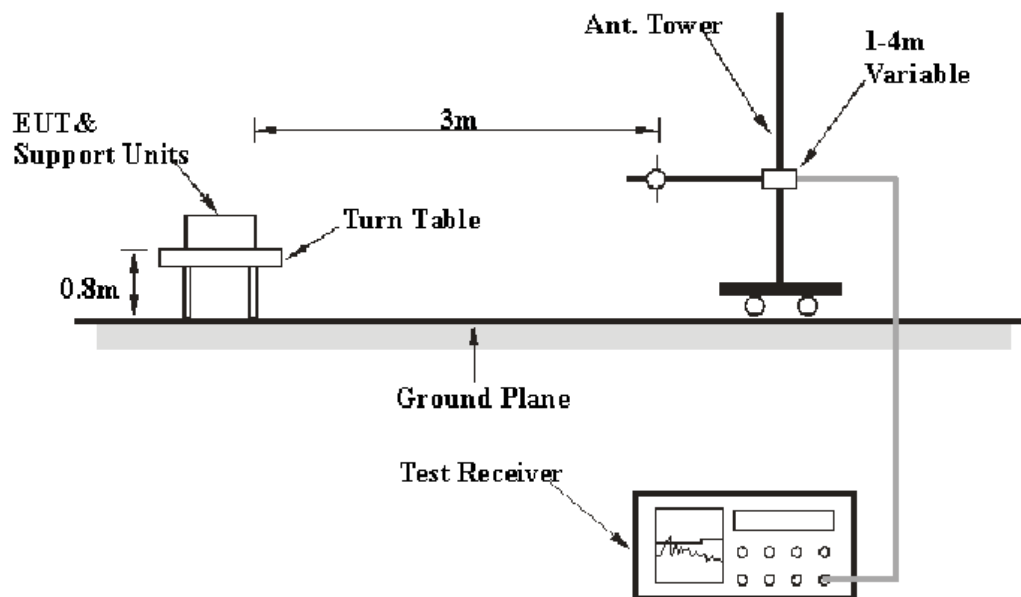
### 4.3. Out of band emissions

#### TEST PROCEDURE

The band edge compliance of RF radiated emission should be measured by following the guidance in ANSI C63.4 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW to 1MHz and VBM to 3MHz to measure the peak field strength and set RBW to 1MHz and VBW to 10Hz to measure the average radiated field strength.

The conducted RF band edge was measured by using a spectrum analyzer. Set span wide enough to capture the highest in-band emission and the emission at the band edge. Set RBW to 100 KHz and VBM to 300 KHz, to measure the conducted peak band edge.

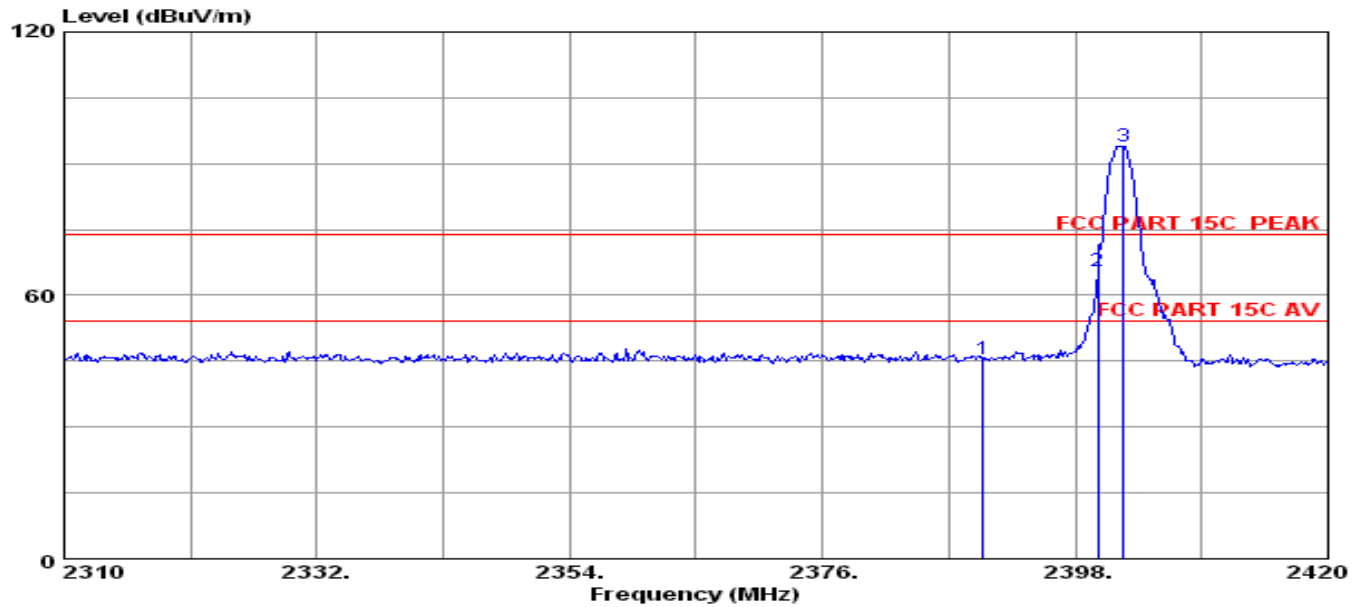
#### TEST CONFIGURATION



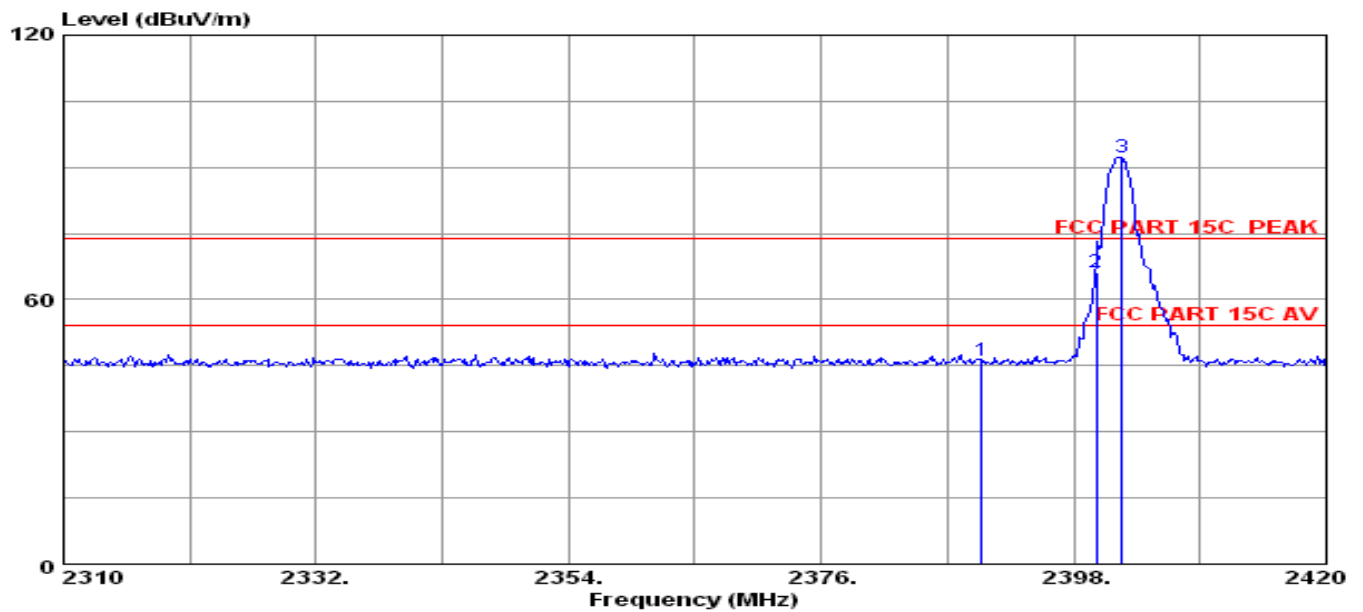
#### LIMIT

FCC PART 15.249(d) 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 §15.209, whichever is the lesser attenuation.

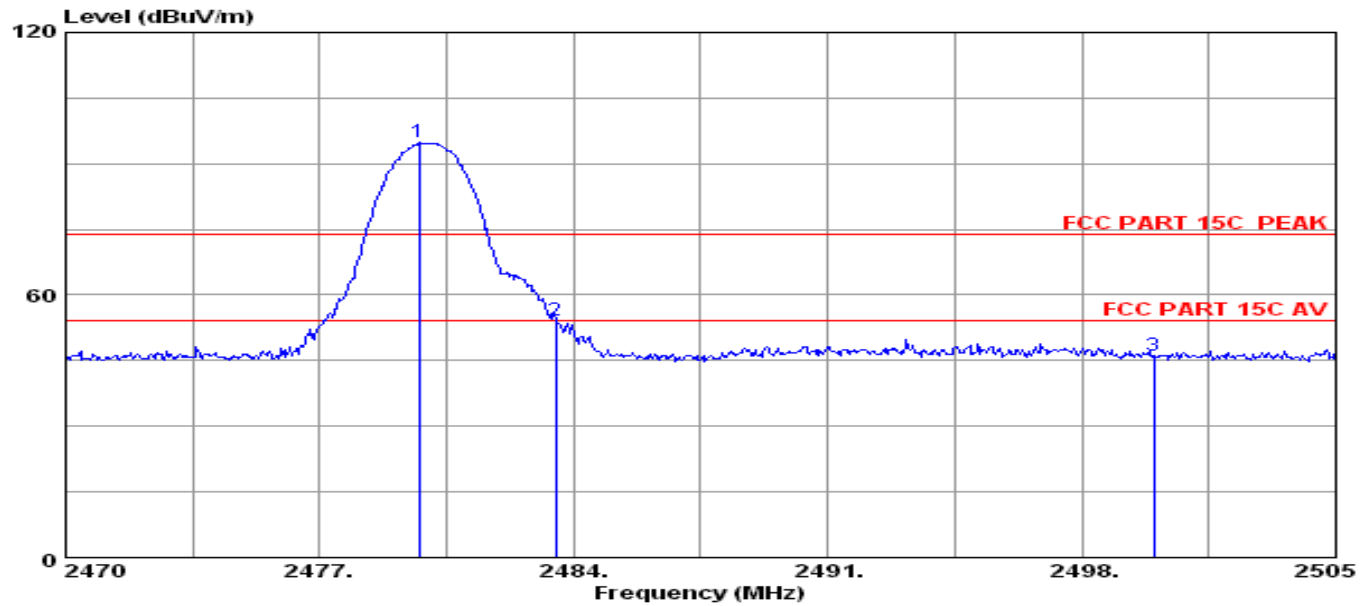
#### TEST RESULTS



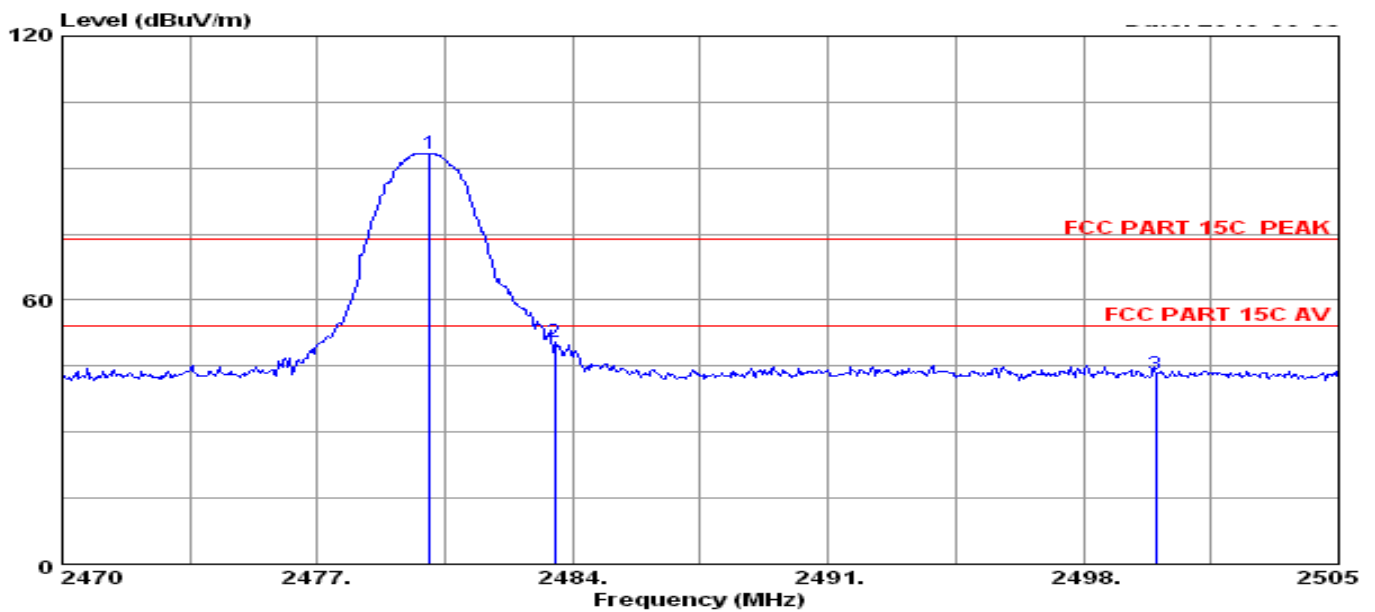
Frequency (MHz)	Corrected Reading (dBUV/m)@3m	FCC Limit (dBUV/m) @3m	Margin (dB)	Detector	Polarization	Results
2390.00	45.45	74.00	28.55	PK	Horizontal	PASS
2400.00	65.63	74.00	8.37	PK	Horizontal	PASS



Frequency (MHz)	Corrected Reading (dBUV/m)@3m	FCC Limit (dBUV/m) @3m	Margin (dB)	Detector	Polarization	Results
2390.00	46.27	74.00	27.73	PK	Vertical	PASS
2400.00	66.26	74.00	7.74	PK	Vertical	PASS



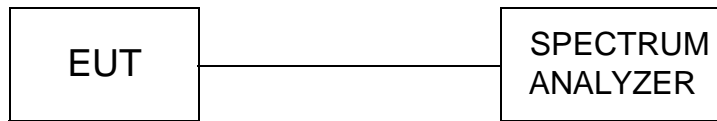
Frequency (MHz)	Corrected Reading (dBUV/m)@3m	FCC Limit (dBUV/m) @3m	Margin (dB)	Detector	Polarization	Results
2483.50	54.06	74.00	19.94	PK	Horizontal	PASS
2483.50	46.28	54.00	7.72	AV	Horizontal	PASS
2500.00	46.28	74.00	27.72	PK	Horizontal	PASS



Frequency (MHz)	Corrected Reading (dBUV/m)@3m	FCC Limit (dBUV/m) @3m	Margin (dB)	Detector	Polarization	Results
2483.50	50.39	74.00	23.61	PK	Vertical	PASS
2500.00	43.20	74.00	30.80	PK	Vertical	PASS

#### 4.4. 20dB Bandwidth Measurement

##### TEST CONFIGURATION



##### TEST PROCEDURE

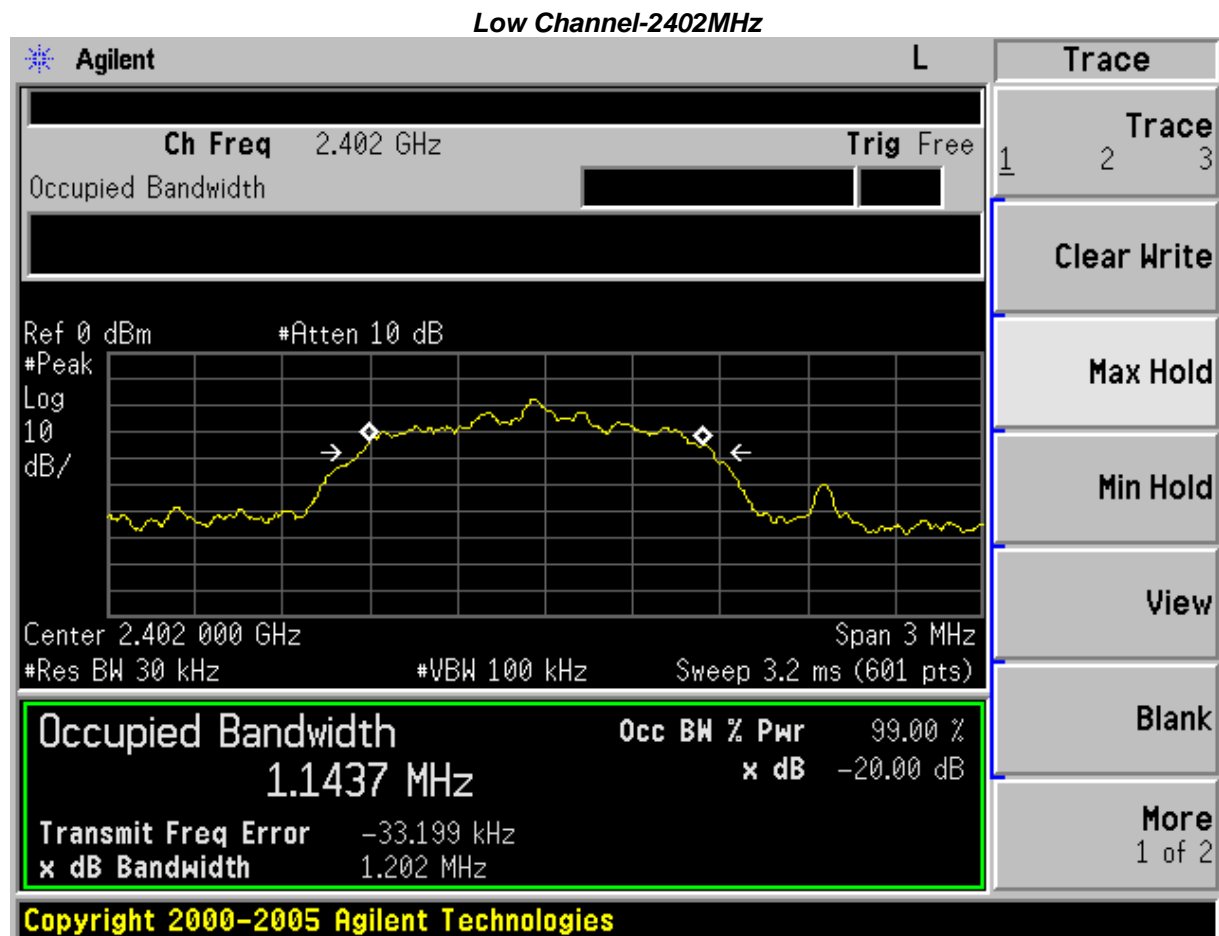
The transmitter output is connected to the spectrum analyzer. The spectrum analyzer center frequency is set to the transmitter frequency. The RBW is set to 100 KHz and VBW is set 300 KHz.

##### LIMIT

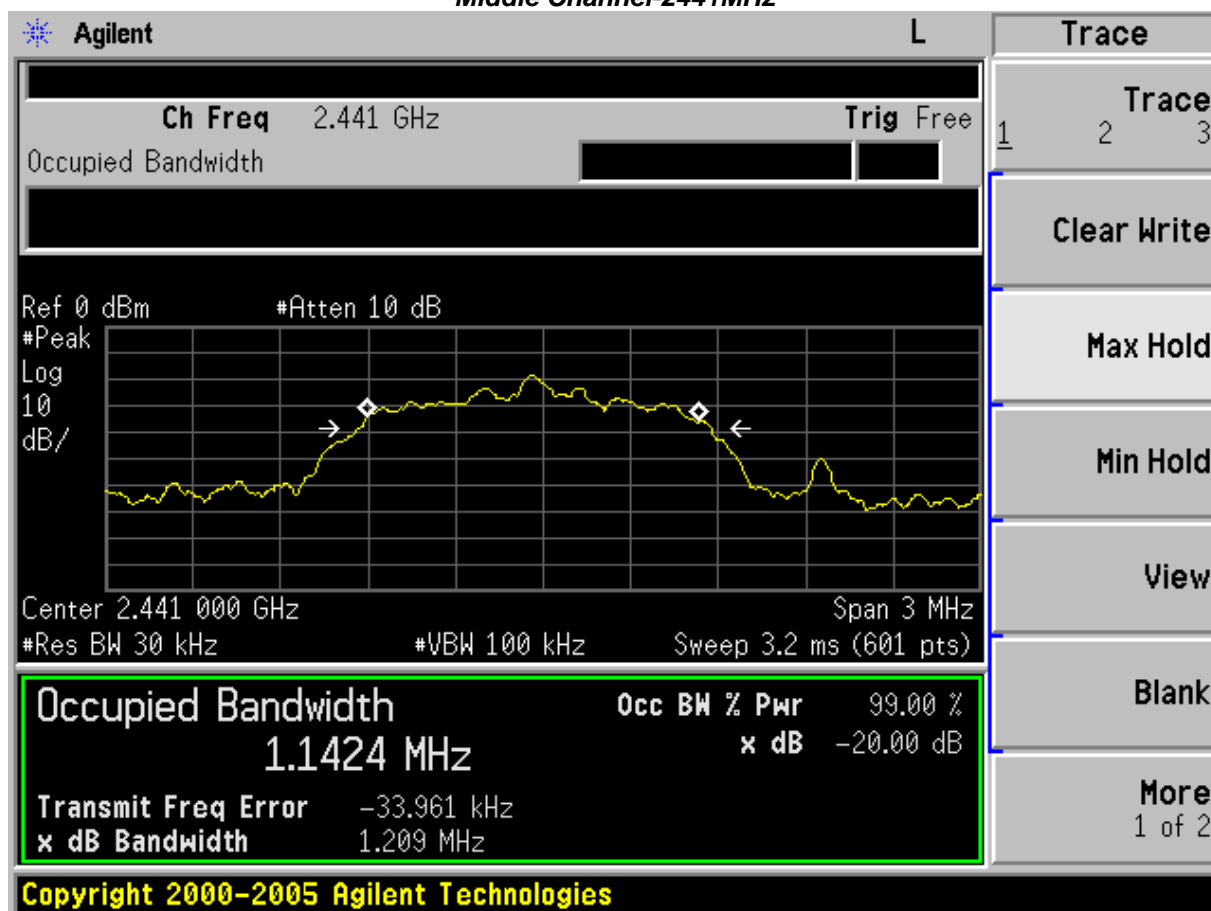
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific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

##### TEST RESULTS

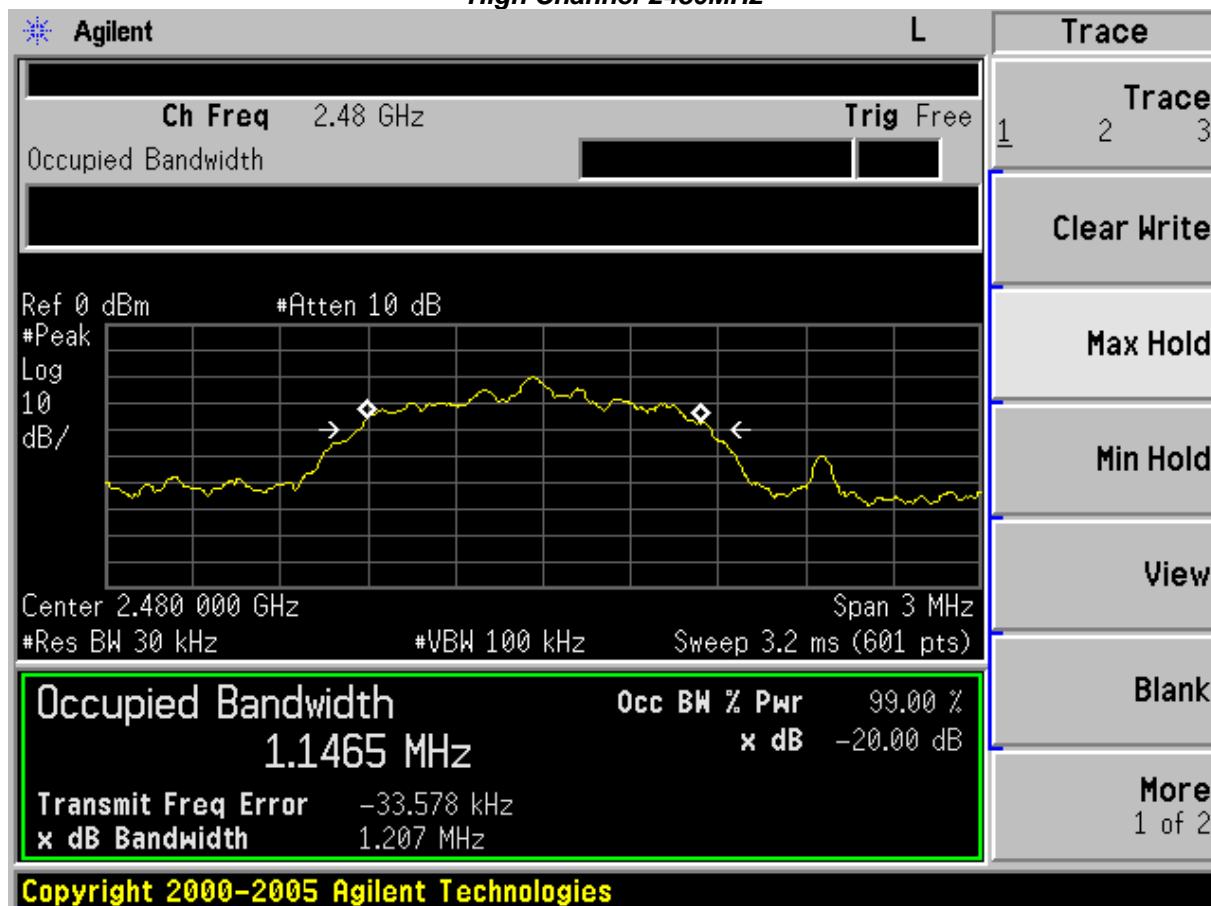
Test Channel	Test Frequency (MHz)	20dB Bandwidth (MHz)	Test Results
Low	2402	1.1437	PASS
Middle	2441	1.1424	PASS
High	2480	1.1465	PASS



## Middle Channel-2441MHz



## High Channel-2480MHz

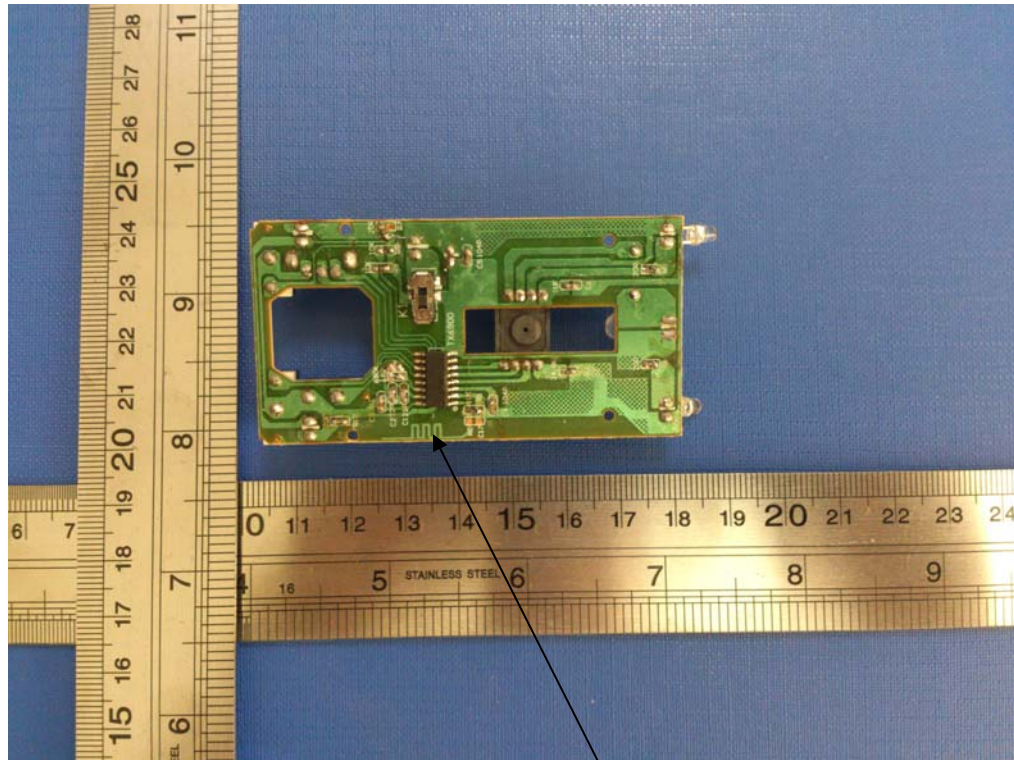


#### 4.5. ANTENNA REQUIREMENT

According to FCC Part 15C § 15.203,

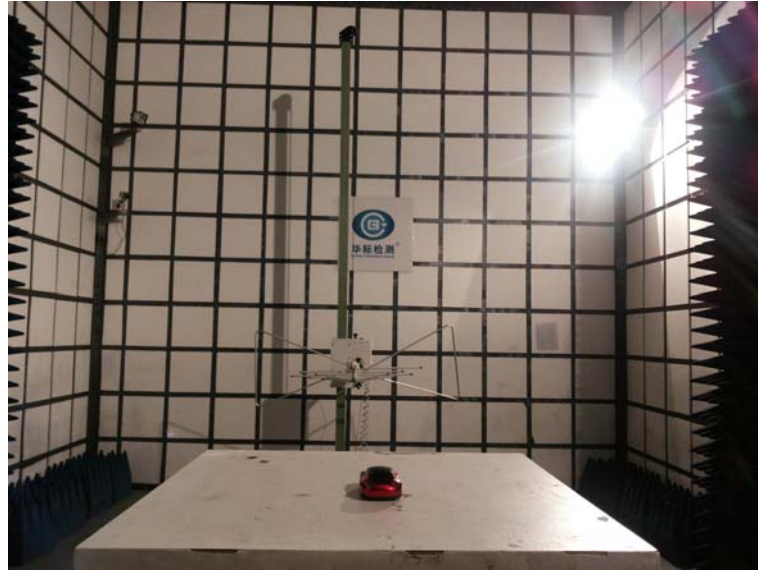
- a), An intentional radiator shall be de-signed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.
- b), The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

The EUT complied the antenna requirement., Please refer to the EUT Internal photos.



Antenna

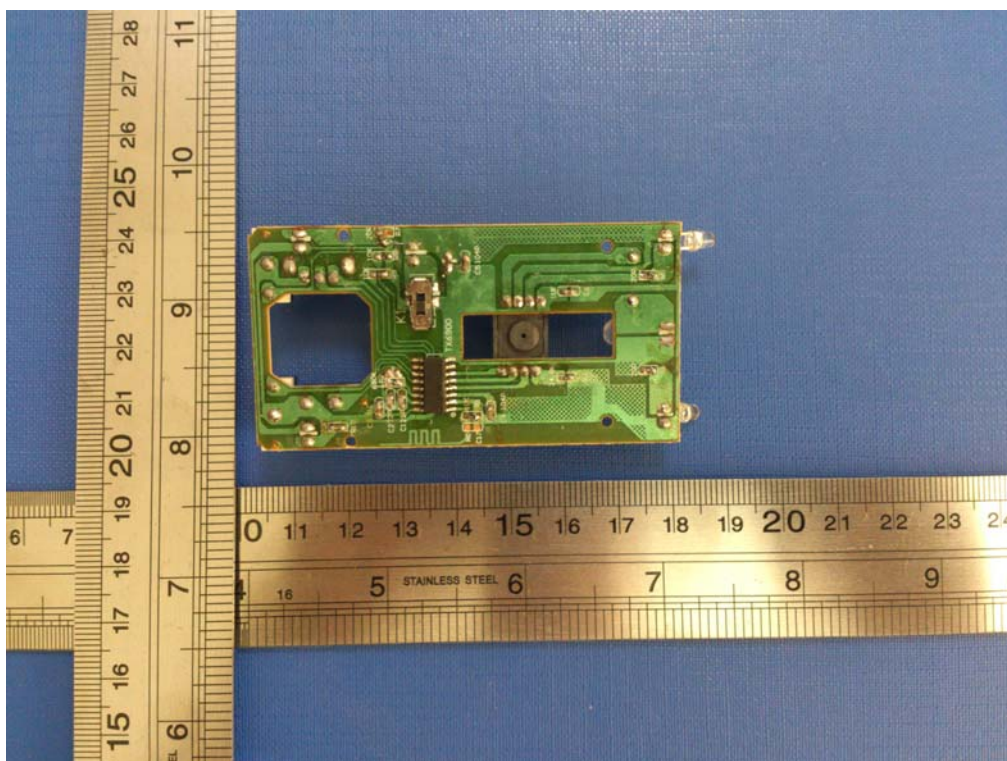
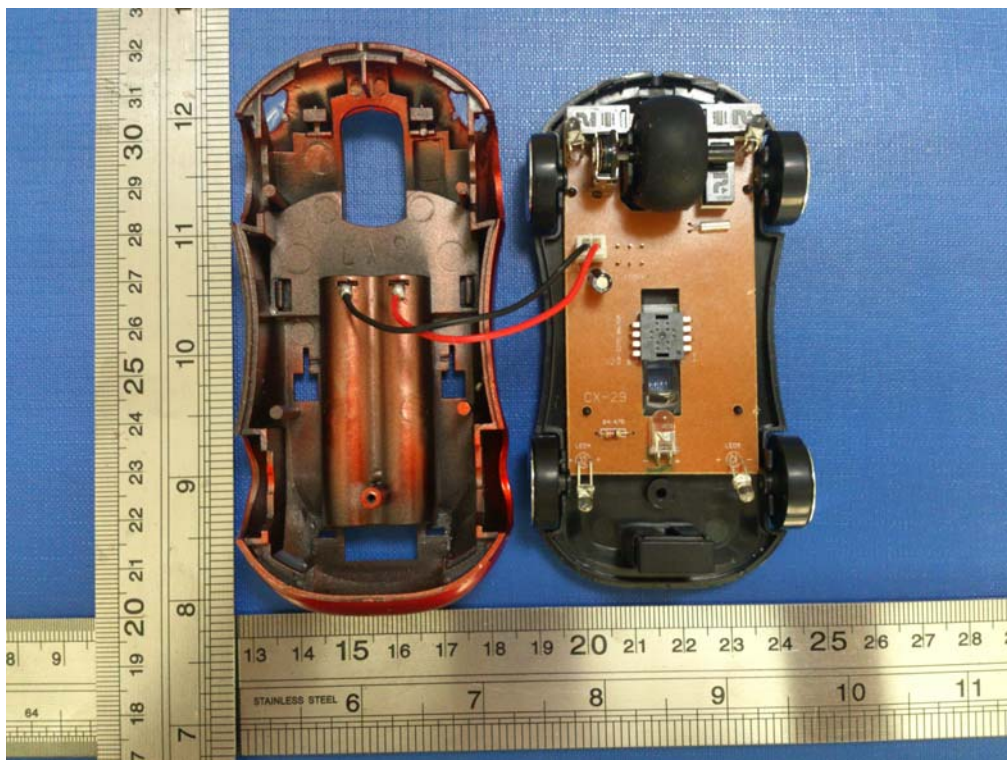
## 5. Test Setup Photos of the EUT



## **6. External and Internal Photos of the EUT**

### **External Photos**



Internal Photos

.....End of Report.....