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# FCC Test Report

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Report No.: AGC02303140901FE02

**FCC ID** : ZZX672D  
**APPLICATION PURPOSE** : Original Equipment  
**PRODUCT DESIGNATION** : BP MOUSE GLV WHT  
**BRAND NAME** : Disney  
**MODEL NAME** : 760672  
**CLIENT** : Camino International Limited  
**DATE OF ISSUE** : Sep.11, 2014  
**STANDARD(S)** : FCC Part 15 Rules  
**REPORT VERSION** : V1.0

**Attestation of Global Compliance (Shenzhen) Co., Ltd**

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### Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Sep.11, 2014	Valid	Original Report

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## 1. VERIFICATION OF CONFORMITY

<b>Applicant</b>	Camino International Limited
<b>Address</b>	Flat A, 3rd Floor, International Industrial Building, 501-503 Castle Peak Road, Cheung Sha Wan, Kowloon, Hong Kong
<b>Manufacturer</b>	Camino Industrial (Huizhou)Co.Ltd
<b>Address</b>	Lidong Industrial Estate, Jiutan, Yuanzhou, Boluo, Huizhou, Guangdong, China
<b>Product Designation</b>	BP MOUSE GLV WHT (Dongle)
<b>Brand Name</b>	Disney
<b>Test Model</b>	760672
<b>Date of test</b>	Aug. 28, 2014 to Sep. 11, 2014
<b>Deviation</b>	None
<b>Condition of Test Sample</b>	Normal
<b>Report Template</b>	AGCRT-US-BR/RF (2013-03-01)

We hereby certify that:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2009) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC Rules Part 15.249.

Prepared By

*Matt Zhang*

Matt Zhang Sep.11, 2014

Checked By

*Kidd Yang*

Kidd Yang Sep.11, 2014

Authorized By

*Solger Zhang*

Solger Zhang Sep.11, 2014

## 2. GENERAL INFORMATION

### 2.1. PRODUCT DESCRIPTION

The EUT is "BP MOUSE GLV WHT" designed as a "RF Product". It is designed by way of utilizing the FHSS technology to achieve the system operation.

A major technical description of EUT is described as following

<b>Operation Frequency</b>	2.403 GHz to 2.477GHz
<b>RF Output Power</b>	0dBm(Max)
<b>Modulation</b>	GFSK
<b>Number of channels</b>	16
<b>Hardware Version</b>	N/A
<b>Software Version</b>	N/A
<b>Antenna Designation</b>	PCB Antenna
<b>Antenna Gain</b>	2 dBi
<b>Power Supply</b>	DC5V

### 2.2. TABLE OF CARRIER FREQUENCYS

Channel	Frequency	Channel	Frequency
1	2403	9	2442
2	2407	10	2447
3	2412	11	2452
4	2417	12	2457
5	2422	13	2462
6	2427	14	2467
7	2432	15	2472
8	2437	16	2477

### 2.3. SUPPORT EQUIPMENT

Device Type	Manufacturer	Model Name	Serial No.	Data Cable	Power Cable
PC	APPLE	Macbook Air	A1465	/	/

**Note:**

1 All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

2 "/" means no any support device during testing.

### 3. MEASUREMENT UNCERTAINTY

Conducted measurement: +/- 2.75dB

Radiated measurement: +/- 3.2dB

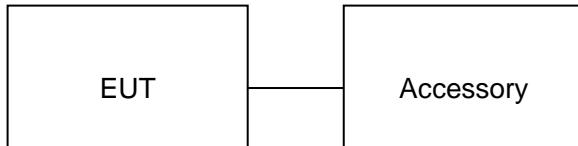
### 4. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION
1	Low channel TX
2	Middle channel TX
3	High channel TX

### 5. SYSTEM TEST CONFIGURATION

#### 5.1. CONFIGURATION OF EUT SYSTEM

Configuration:



#### 5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.203	Antenna Requirement	Compliant
§15.215(c)	20 dB Bandwidth	Compliant
§15.205	Restricted Band of Operation	Compliant
§15.209 §15.249(a)	Radiated Emission	Compliant
§15.249(d)	Out of Band Emission	Compliant
§15.207(a)	Conducted Emission	Compliant

## 6. TEST FACILITY

<b>Site</b>	Attestation of Global Compliance (Shenzhen) Co., Ltd
<b>Location</b>	2/F., Building 2, No.1-No.4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Bao'an District, Shenzhen, Guangdong, China
<b>Description</b>	The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2003.

## ALL TEST EQUIPMENT LIST

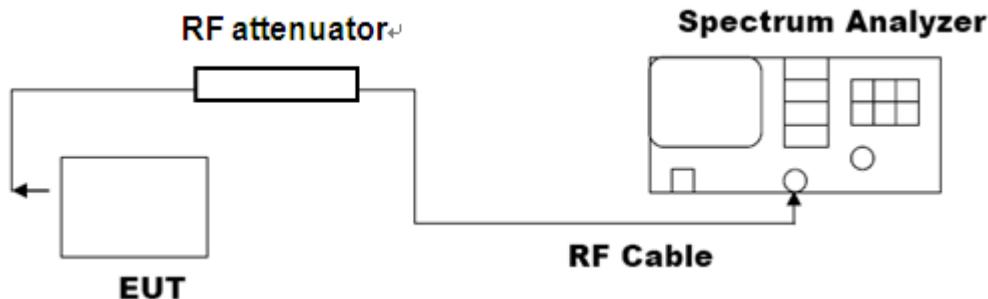
<b>Description</b>	<b>Manufacturer</b>	<b>Model</b>	<b>S/N</b>	<b>Cal. Date</b>	<b>Cal. Due</b>
Power Probe	R&S	NRP-Z23	100323	07/25/2014	07/24/2015
RF attenuator	N/A	RFA20db	68	N/A	N/A
Spectrum Analyzer	Agilent	E4440A	US41421290	07/25/2014	07/24/2015
Amplifier	EM	EM30180	0607030	02/27/2014	02/26/2015
Horn Antenna	EM	EM-AH-10180	67	04/19/2014	04/18/2015
Horn Antenna	A.H. Systems Inc.	SAS-574	--	07/25/2014	07/24/2015
EMI Test Receiver	Rohde & Schwarz	ESCI	100694	07/25/2014	07/24/2015
Biological Antenna	A.H. Systems Inc.	SAS-521-4	26	06/06/2014	06/05/2015
LISN	R&S	ESH3-Z5	8389791009	07/25/2014	07/24/2015
Loop Antenna	Daze	ZN30900N	SEL0097	07/25/2014	07/24/2015
Isolation Transformer	LETEAC	LTBK	--	07/25/2014	07/24/2015
Radiation Cable 1	Sat	RE1	R003	06/04/2014	06/03/2015
Radiation Cable 2	Sat	RE2	R002	06/04/2014	06/03/2015
Conduction Cable	Sat	CE1	C001	06/04/2014	06/03/2015

## 7. 20DB BANDWIDTH

### 7.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. RBW=100kHz, VBW  $\geq$  RBW; Sweep = auto; Detector function = peak
4. Set SPA Trace 1 Max hold, then View.

### 7.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

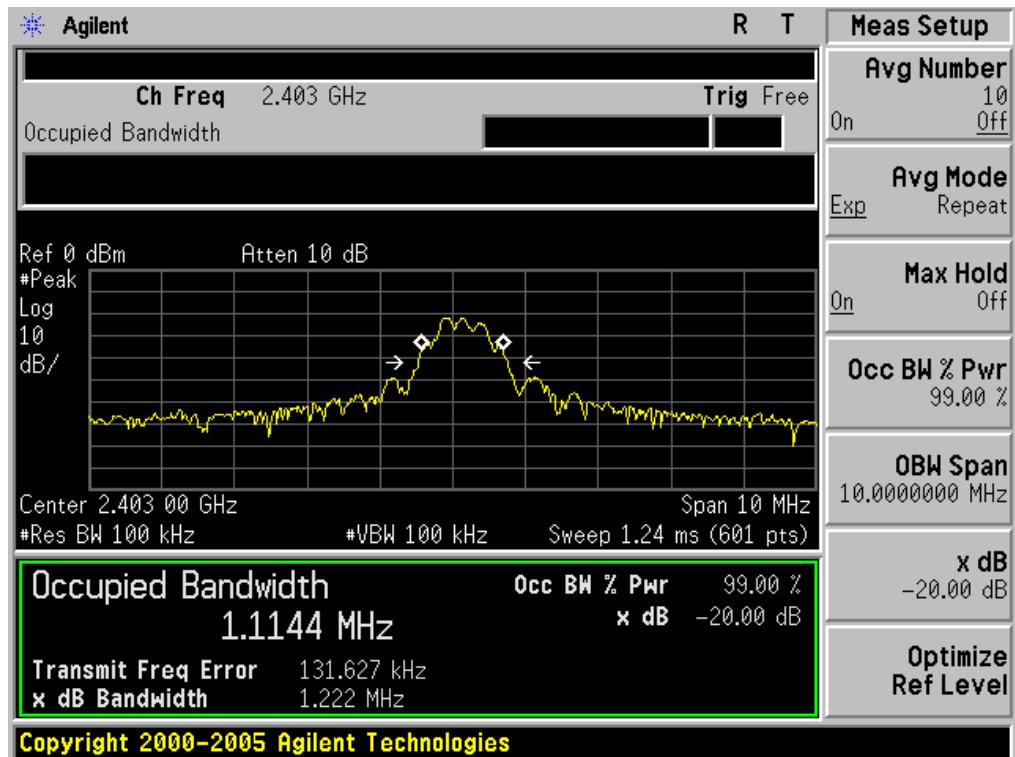


### 7.3. LIMITS AND MEASUREMENT RESULTS

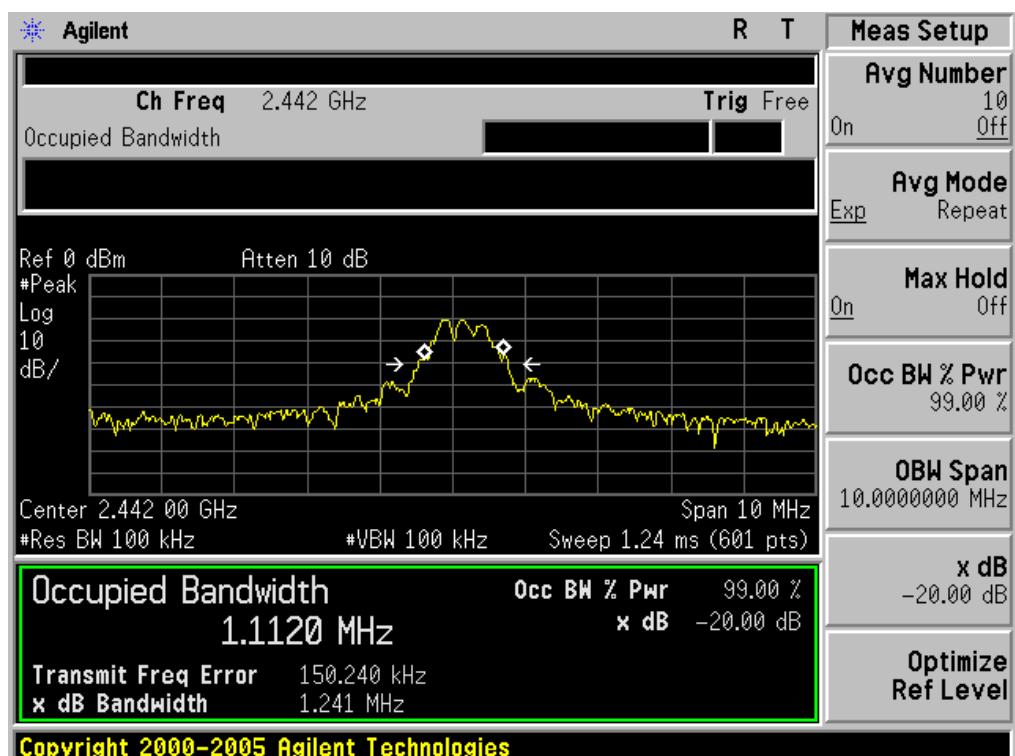
Channel	Channel Frequency(MHz)	20dB Bandwidth(MHz)
Low	2403	1.222
Middle	2442	1.241
High	2477	1.251

According to FCC 15.215(c), must be designed to ensure that the 20dB 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 .

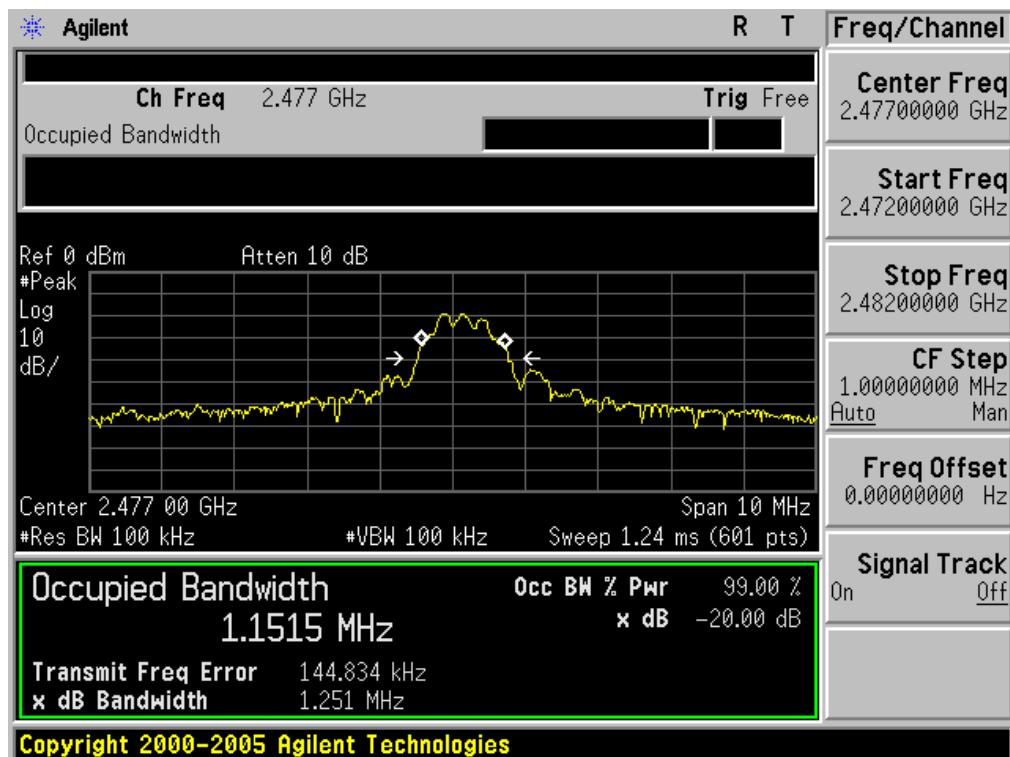
TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL



TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



## 8. RADIATED EMISSION

### 8.1. MEASUREMENT PROCEDURE

1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

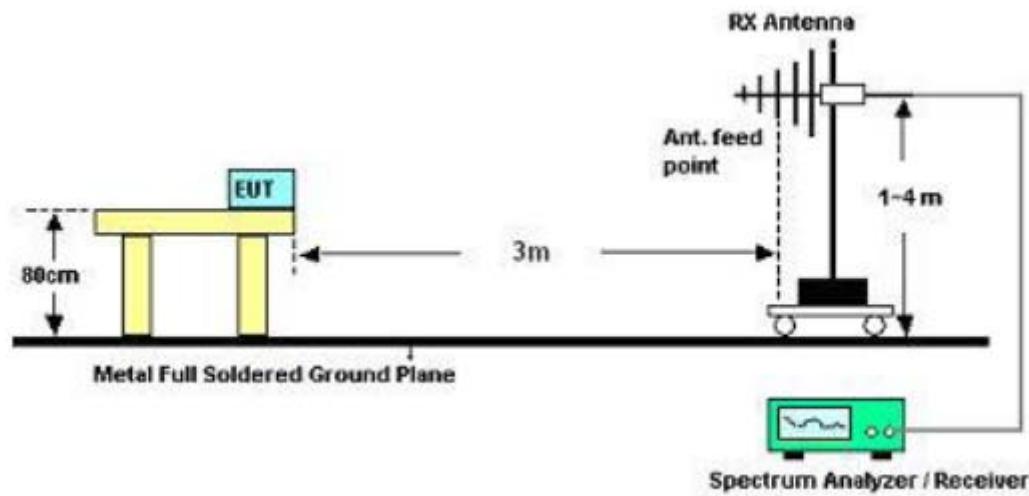
The following table is the setting of spectrum analyzer and receiver.

<b>Spectrum Parameter</b>	<b>Setting</b>
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP
Start ~Stop Frequency	1GHz~26.5GHz 1MHz/1MHz for Peak, 1MHz/10Hz for Average

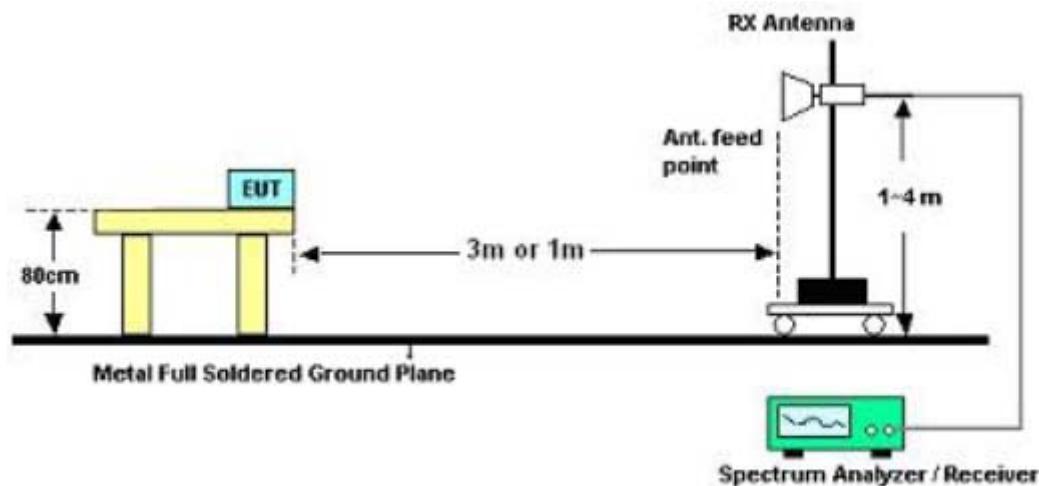
<b>Receiver Parameter</b>	<b>Setting</b>
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP

## 8.2. TEST SETUP

### RADIATED EMISSION TEST SETUP 30MHz-1000MHz



### RADIATED EMISSION TEST SETUP ABOVE 1000MHz

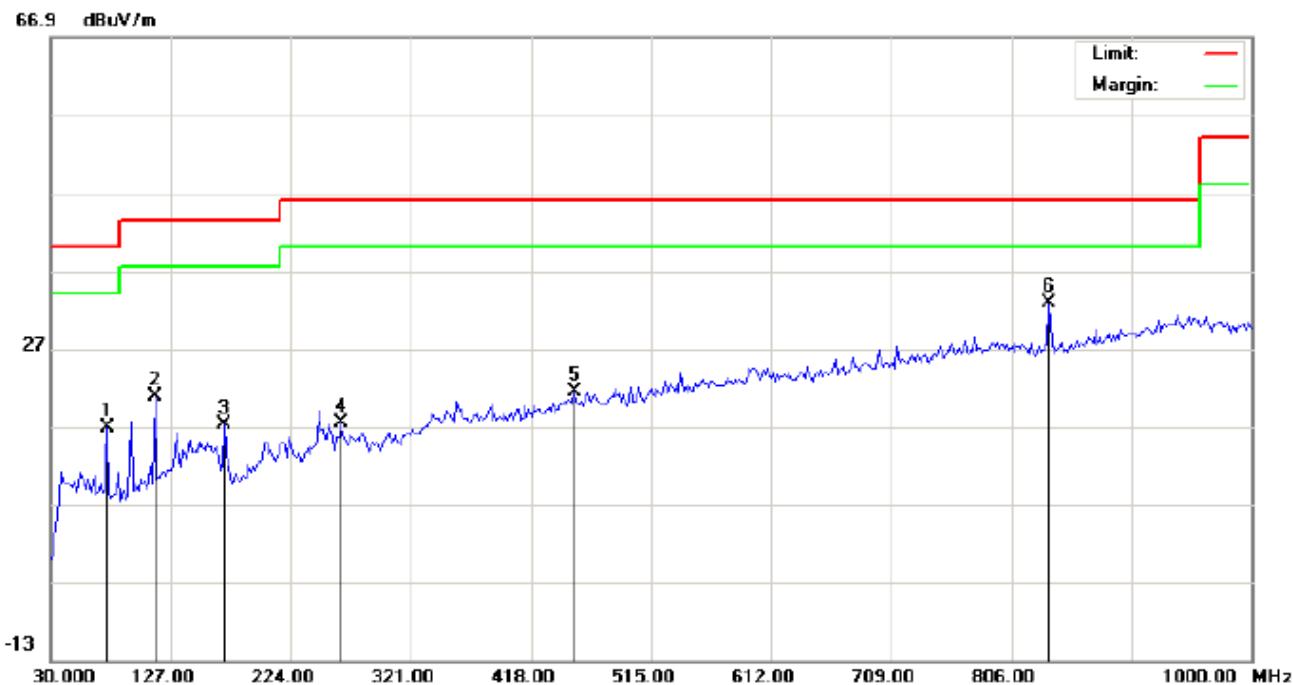


### 8.3. TEST RESULT

#### RADIATED EMISSION BELOW 30MHZ

No emission found between lowest internal used/generated frequencies to 30MHz.

#### RADIATED EMISSION BELOW 1GHZ-Horizontal



Site: site #1

Limit: FCC Class B 3M Radiation

EUT: BP MOUSE GLV WHT

M/N: 760672

Mode: Low Channel TX

Note: Dongle

Polarization: *Horizontal*

Temperature: 26

Power:

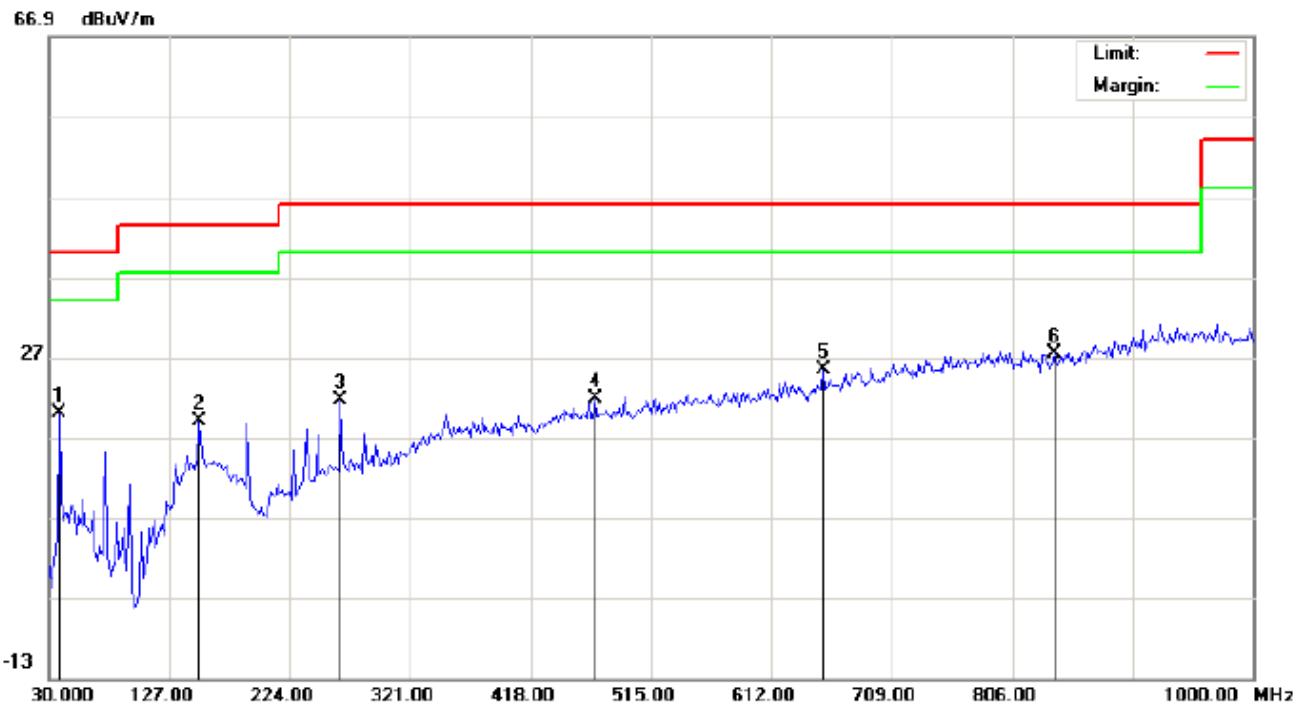
Humidity: 60 %

Distance: 3m

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		75.2667	6.88	10.02	16.90	40.00	-23.10	peak			
2		114.0667	9.33	11.45	20.78	43.50	-22.72	peak			
3		170.6500	4.06	13.06	17.12	43.50	-26.38	peak			
4		264.4166	2.99	14.34	17.33	46.00	-28.67	peak			
5		453.5667	0.70	20.63	21.33	46.00	-24.67	peak			
6	*	836.7167	5.47	27.31	32.78	46.00	-13.22	peak			

**RESULT: PASS**

RADIATED EMISSION BELOW 1GHZ-Vertical

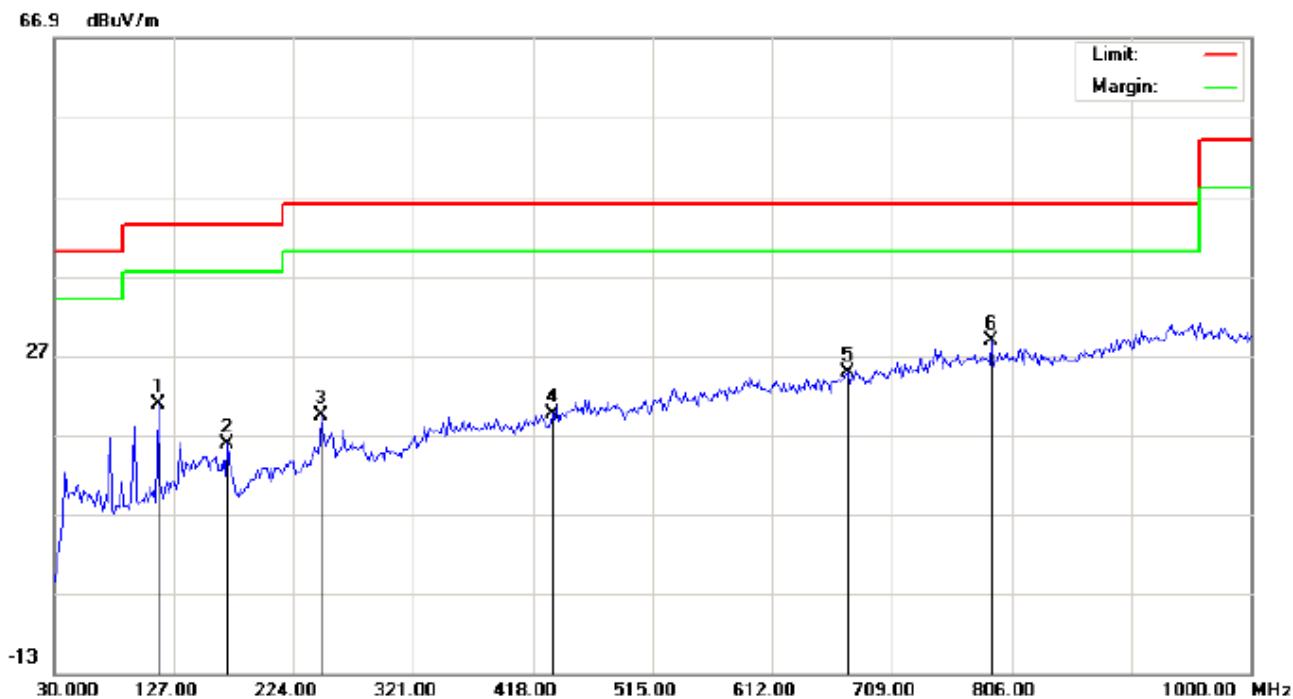


Site: site #1 Polarization: *Vertical* Temperature: 26  
 Limit: FCC Class B 3M Radiation Power: Humidity: 60 %  
 EUT: BP MOUSE GLV WHT Distance: 3m  
 M/N: 760672  
 Mode: Low Channel TX  
 Note: Dongle

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		38.0833	13.54	6.39	19.93	40.00	-20.07	peak			
2		151.2500	3.78	15.27	19.05	43.50	-24.45	peak			
3		264.4166	7.22	14.34	21.56	46.00	-24.44	peak			
4		469.7333	1.00	20.80	21.80	46.00	-24.20	peak			
5		654.0333	1.38	23.96	25.34	46.00	-20.66	peak			
6	*	839.9500	0.12	27.31	27.43	46.00	-18.57	peak			

**RESULT: PASS**

RADIATED EMISSION BELOW 1GHZ-Horizontal



Site: site #1  
Limit: FCC Class B 3M Radiation  
EUT: BP MOUSE GLV WHT  
M/N: 760672  
Mode: Middle Channel TX  
Note: Dongle

Polarization: **Horizontal**

Temperature: 26

Power:

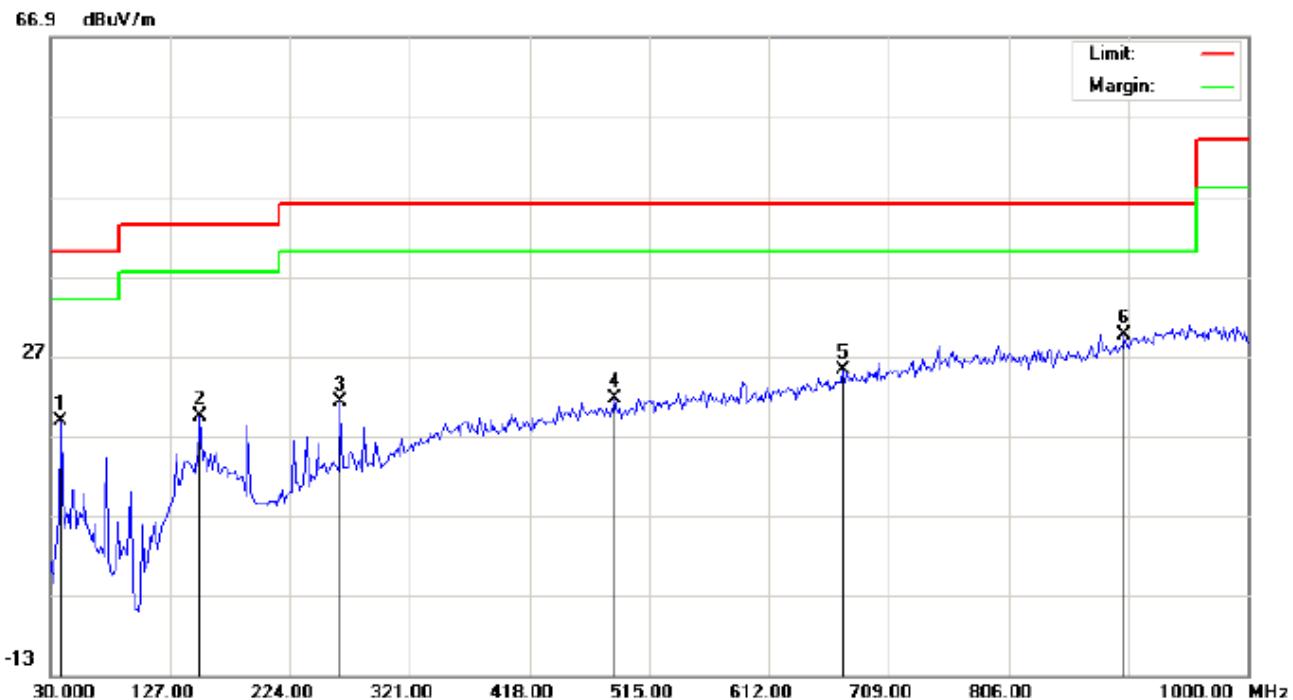
Humidity: 60 %

Distance: 3m

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		114.0667	9.34	11.45	20.79	43.50	-22.71	peak			
2		170.6500	2.73	13.06	15.79	43.50	-27.71	peak			
3		246.6333	5.72	13.77	19.49	46.00	-26.51	peak			
4		434.1667	-0.56	20.11	19.55	46.00	-26.45	peak			
5		673.4333	0.30	24.48	24.78	46.00	-21.22	peak			
6	*	789.8333	1.61	27.18	28.79	46.00	-17.21	peak			

**RESULT: PASS**

RADIATED EMISSION BELOW 1GHZ-Vertical



Site: site #1

Polarization: **Vertical**

Temperature: 26

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT: BP MOUSE GLV WHT

Distance: 3m

M/N: 760672

Mode: Middle Channel TX

Note: Dongle

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		38.0833	12.43	6.39	18.82	40.00	-21.18	peak			
2		151.2500	4.09	15.27	19.36	43.50	-24.14	peak			
3		264.4166	6.92	14.34	21.26	46.00	-24.74	peak			
4		487.5167	0.56	21.00	21.56	46.00	-24.44	peak			
5		671.8167	0.70	24.43	25.13	46.00	-20.87	peak			
6	*	899.7667	0.98	28.60	29.58	46.00	-16.42	peak			

**RESULT: PASS**

RADIATED EMISSION BELOW 1GHZ-Horizontal

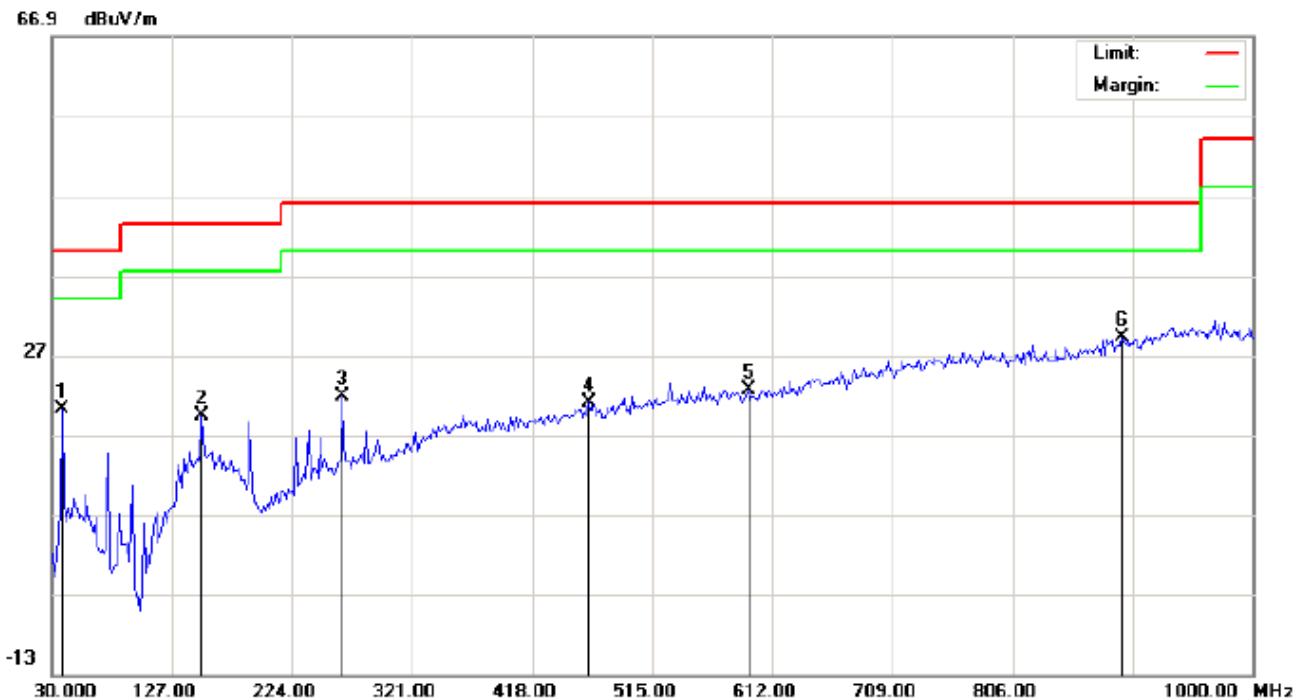


Site: site #1 Polarization: *Horizontal* Temperature: 26  
 Limit: FCC Class B 3M Radiation Power: Humidity: 60 %  
 EUT: BP MOUSE GLV WHT Distance: 3m  
 M/N: 760672  
 Mode: High Channel TX  
 Note: Dongle

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		94.6667	8.78	9.89	18.67	43.50	-24.83	peak			
2		170.6500	4.14	13.06	17.20	43.50	-26.30	peak			
3	*	314.5333	12.30	16.38	28.68	46.00	-17.32	peak			
4		493.9833	0.16	21.06	21.22	46.00	-24.78	peak			
5		594.2167	2.54	23.59	26.13	46.00	-19.87	peak			
6		883.6000	0.42	28.18	28.60	46.00	-17.40	peak			

**RESULT: PASS**

## RADIATED EMISSION BELOW 1GHZ-Vertical



Site: site #1 Polarization: **Vertical** Temperature: 26  
Limit: FCC Class B 3M Radiation Power: Humidity: 60 %  
EUT: BP MOUSE GLV WHT Distance: 3m  
M/N: 760672  
Mode: High Channel TX  
Note: Dongle

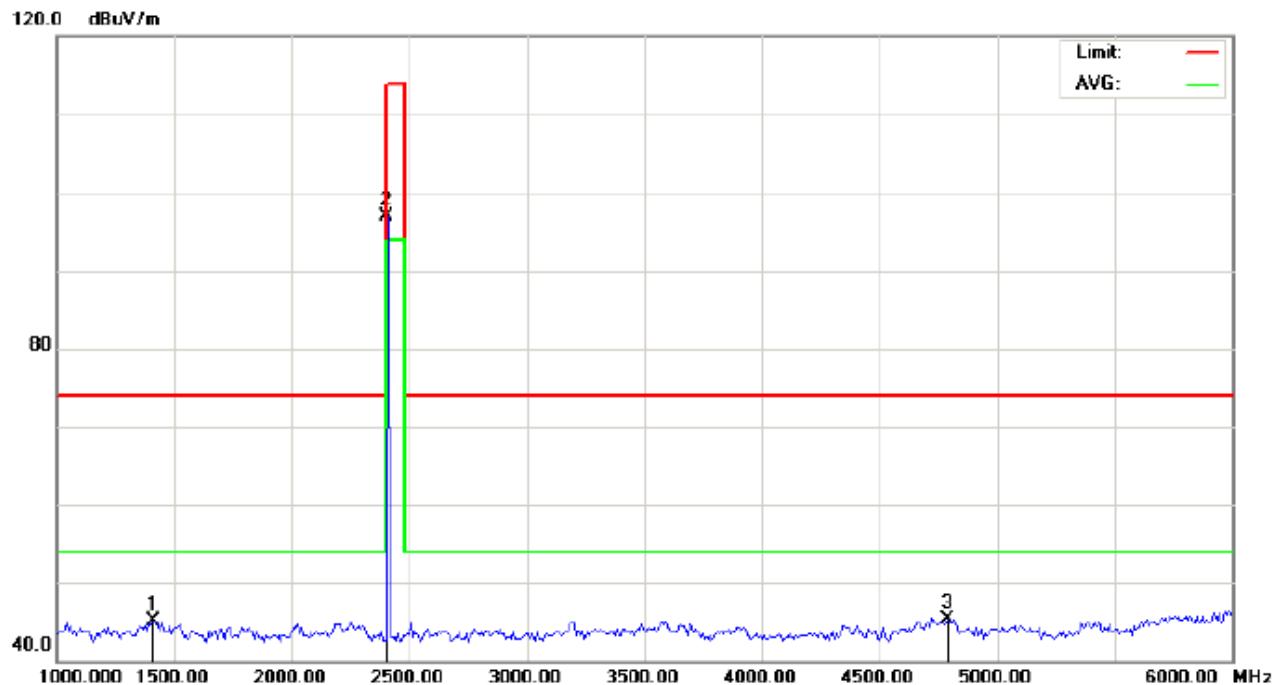
No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		38.0833	13.84	6.39	20.23	40.00	-19.77	peak			
2		151.2500	4.14	15.27	19.41	43.50	-24.09	peak			
3		264.4166	7.43	14.34	21.77	46.00	-24.23	peak			
4		463.2667	0.22	20.73	20.95	46.00	-25.05	peak			
5		592.6000	-0.02	22.69	22.67	46.00	-23.33	peak			
6	*	894.9167	0.69	28.48	29.17	46.00	-16.83	peak			

**RESULT: PASS**

**Note:** 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

2. The “Factor” value can be calculated automatically by software of measurement system.

RADIATED EMISSION ABOVE 1GHZ (1-10<sup>th</sup> Harmonics) -Horizontal



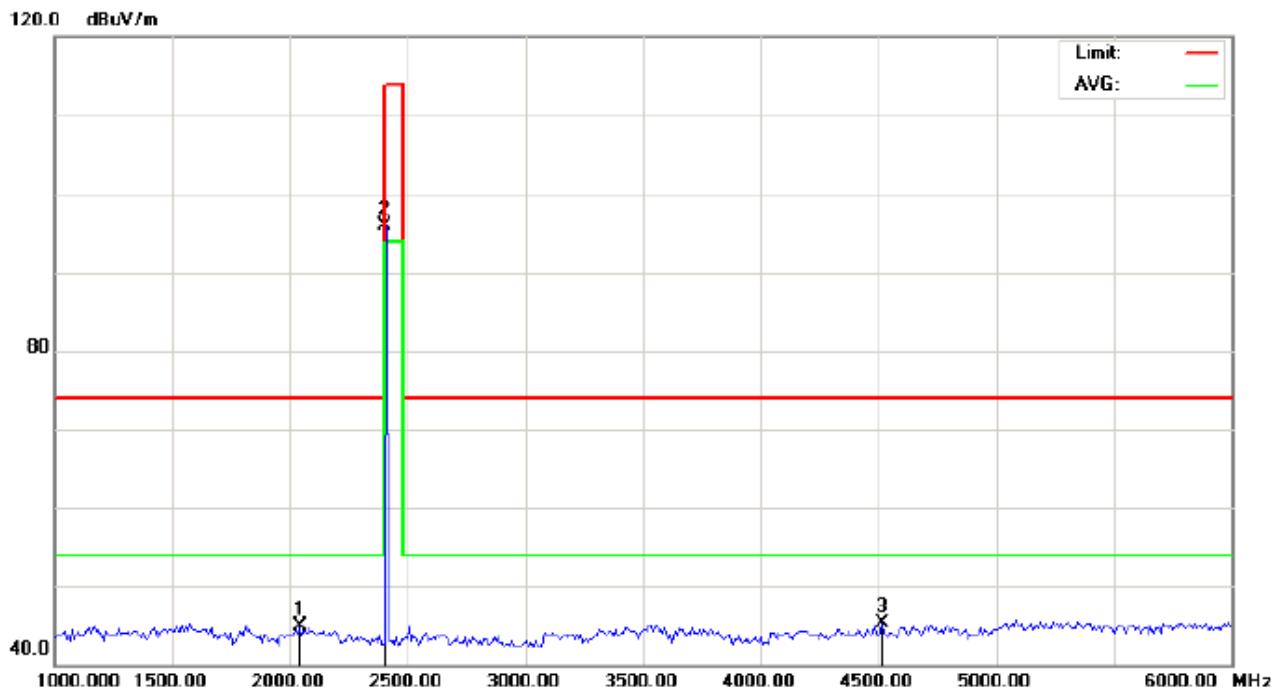
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Site: site #1 Polarization: *Horizontal* Temperature: 26  
Limit: FCC part 15.249 ClassB 3M Radiation Power: Humidity: 60 %  
EUT: BP MOUSE GLV WHT Distance: 3m  
M/N: 760672  
Mode: Low Channel TX  
Note: Dongle

No.	Freq.	Reading	Factor	Measurement(PK)	Measurement(AV)	Limit(PK)	Limit(AV)	Over(PK)	Over(AV)
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dBuV/m	dBuV/m	dB	dB
1	1408.333	13.27	31.89	45.16	34.22	74	54	-28.84	-19.78
2	2403.000	59.72	37.23	96.95	83.75	114	94	-17.05	-10.25
3	4791.667	45.38	1.10	46.48	35.48	74	54	-27.52	-18.52

**RESULT: PASS**

RADIATED EMISSION ABOVE 1GHZ (1-10<sup>th</sup> Harmonics) -Vertical

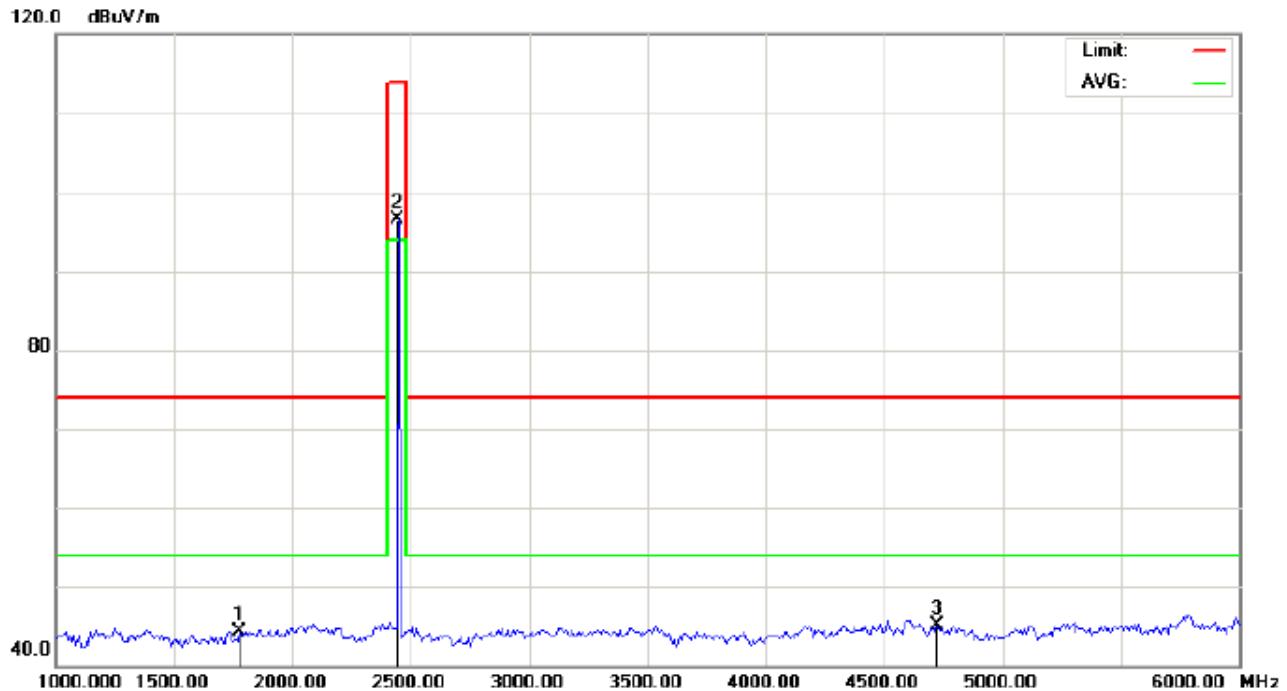


Site: site #1 Polarization: **Vertical** Temperature: 26  
Limit: FCC part 15.249 ClassB 3M Radiation Power: Humidity: 60 %  
EUT: BP MOUSE GLV WHT Distance: 3m  
M/N: 760672  
Mode: Low Channel TX  
Note: Dongle

No.	Freq.	Reading	Factor	Measurement(PK)	Measurement(AV)	Limit(PK)	Limit(AV)	Over(PK)	Over(AV)
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dBuV/m	dBuV/m	dB	dB
1	2401.667	9.84	35.04	44.88	33.73	74	54	-29.12	-20.27
2	2403.000	58.72	37.23	95.95	82.79	114	94	-18.05	-11.21
3	4516.667	45.23	1.15	46.38	34.42	74	54	-27.62	-19.58

**RESULT: PASS**

RADIATED EMISSION ABOVE 1GHZ (1-10<sup>th</sup> Harmonics) –Horizontal

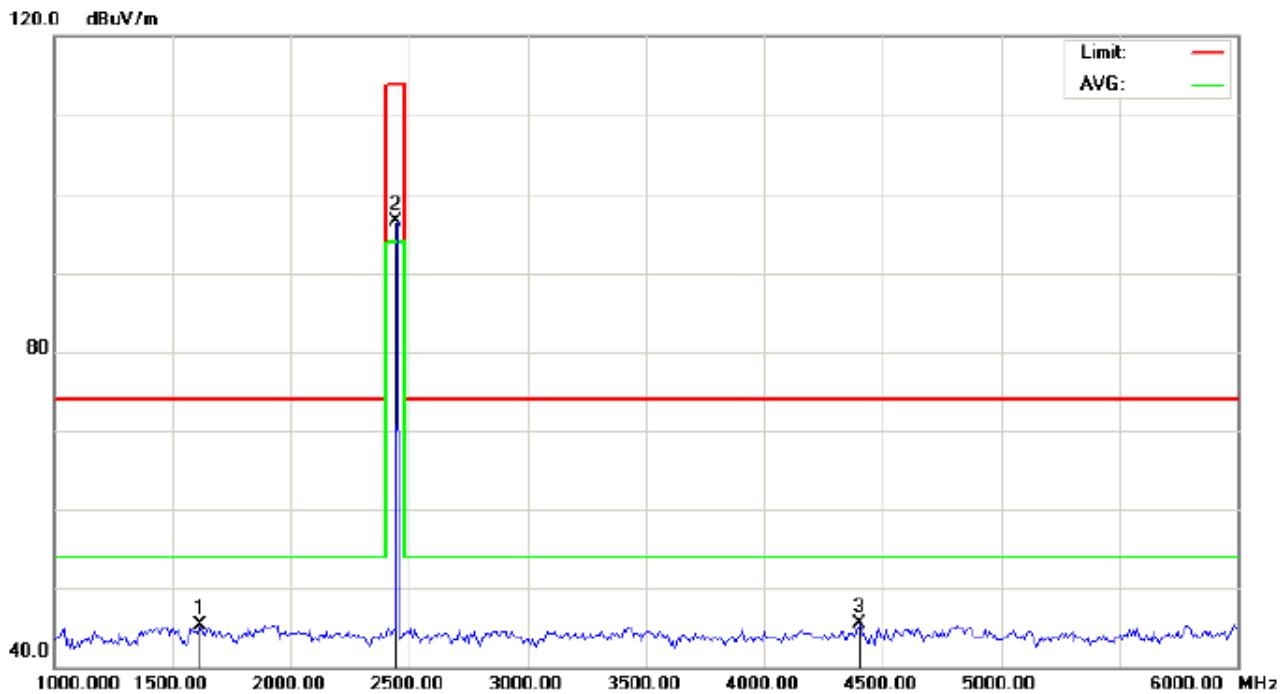


Site: site #1 Polarization: *Horizontal* Temperature: 26  
Limit: FCC part 15.249 ClassB 3M Radiation Power: Humidity: 60 %  
EUT: BP MOUSE GLV WHT Distance: 3m  
M/N: 760672  
Mode: Middle Channel TX  
Note: Dongle

No.	Freq.	Reading	Factor	Measurement(PK)	Measurement(AV)	Limit(PK)	Limit(AV)	Over(PK)	Over(AV)
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dBuV/m	dBuV/m	dB	dB
1	1775.000	10.19	34.09	44.28	33.78	74	54	-29.72	-20.22
2	2442.000	59.18	37.39	96.57	84.42	114	94	-17.43	-9.58
3	4725.000	45.01	1.14	46.15	34.21	74	54	-27.85	-19.79

**RESULT: PASS**

## RADIATED EMISSION ABOVE 1GHZ (1-10<sup>th</sup> Harmonics) -Vertical

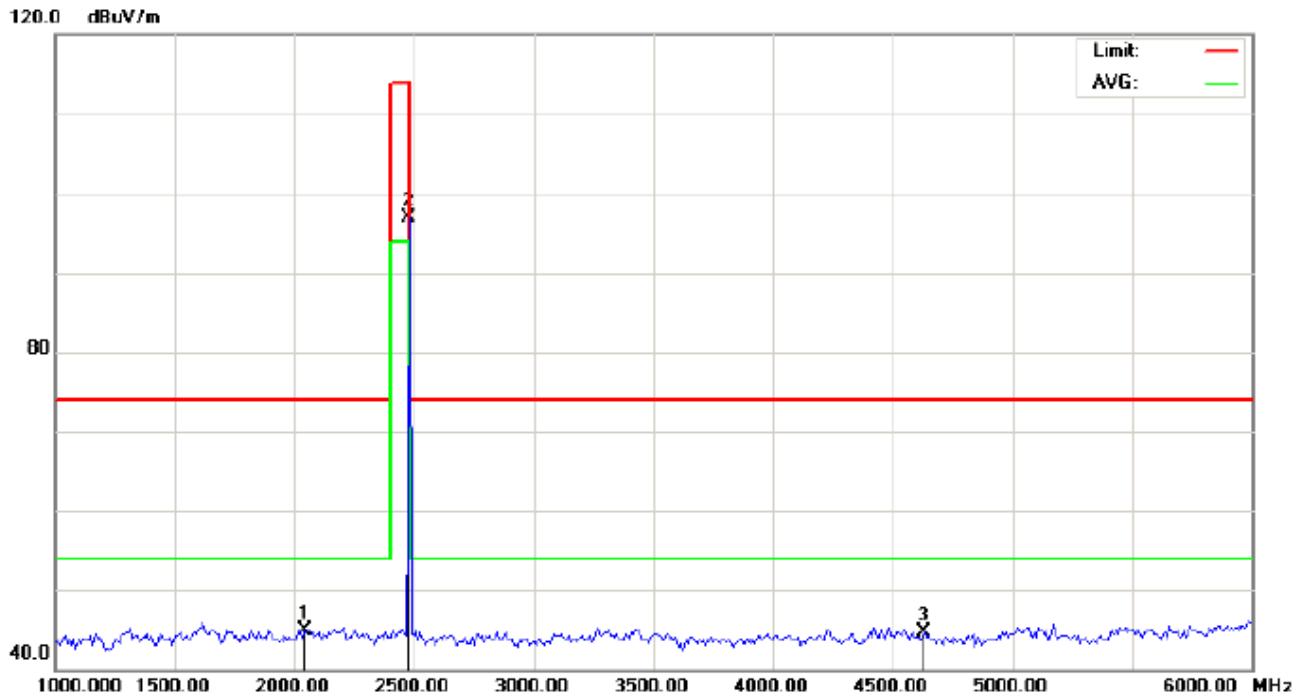


Site: site #1 Polarization: **Vertical** Temperature: 26  
Limit: FCC part 15.249 ClassB 3M Radiation Power: Humidity: 60 %  
EUT: BP MOUSE GLV WHT Distance: 3m  
M/N: 760672  
Mode: Middle Channel TX  
Note: Dongle

No.	Freq.	Reading	Factor	Measurement(PK)	Measurement(AV)	Limit(PK)	Limit(AV)	Over(PK)	Over(AV)
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dBuV/m	dBuV/m	dB	dB
1	1616.667	11.90	33.44	45.34	34.46	74	54	-28.66	-19.54
2	2442.000	59.18	37.39	96.57	84.11	114	94	-17.43	-9.89
3	4400.000	45.48	1.17	46.65	34.19	74	54	-27.35	-19.81

## RESULT: PASS

## RADIATED EMISSION ABOVE 1GHZ (1-10<sup>th</sup> Harmonics) –Horizontal

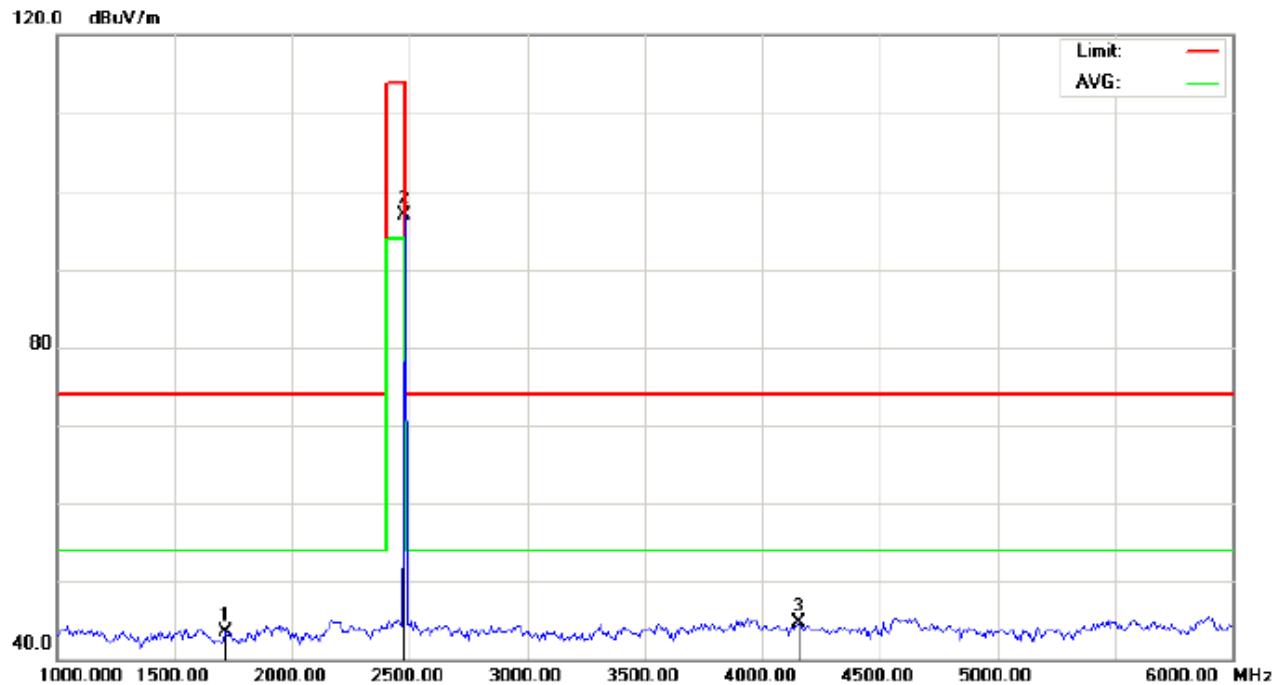


Site: site #1 Polarization: *Horizontal* Temperature: 26  
Limit: FCC part 15.249 ClassB 3M Radiation Power: Humidity: 60 %  
EUT: BP MOUSE GLV WHT Distance: 3m  
M/N: 760672  
Mode: High Channel TX  
Note: Dongle

No.	Freq.	Reading	Factor	Measurement(PK)	Measurement(AV)	Limit(PK)	Limit(AV)	Over(PK)	Over(AV)
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dBuV/m	dBuV/m	dB	dB
1	2041.667	9.84	35.04	44.88	33.72	74	54	-29.12	-20.28
2	2477.000	59.33	37.53	96.86	84.52	114	94	-17.14	-9.48
3	4633.333	44.68	1.16	45.84	33.47	74	54	-28.16	-20.53

## RESULT: PASS

## RADIATED EMISSION ABOVE 1GHZ (1-10<sup>th</sup> Harmonics) -Vertical



Site: site #1 Polarization: **Vertical** Temperature: 26  
Limit: FCC part 15.249 ClassB 3M Radiation Power: Humidity: 60 %  
EUT: BP MOUSE GLV WHT Distance: 3m  
M/N: 760672  
Mode: High Channel TX  
Note: Dongle

No.	Freq.	Reading	Factor	Measurement(PK)	Measurement(AV)	Limit(PK)	Limit(AV)	Over(PK)	Over(AV)
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dBuV/m	dBuV/m	dB	dB
1	1716.667	9.46	34.04	43.50	32.13	74	54	-30.50	-21.87
2	2477.000	59.33	37.53	96.86	84.63	114	94	-17.14	-9.37
3	4158.333	44.65	1.19	45.84	34.27	74	54	-28.16	-19.73

## RESULT: PASS

**Note:** 6~25GHz at least have 20dB margin. No recording in the test report.

Factor=Antenna Factor + Cable loss - Amplifier gain, Margin=Measurement-Limit.

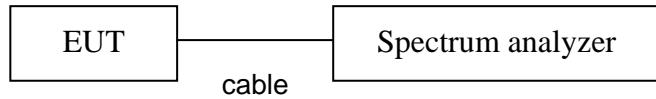
The “Factor” value can be calculated automatically by software of measurement system.

## 9. BAND EDGE EMISSION

### 9.1. MEASUREMENT PROCEDURE

As the conducted emission test, set the Lowest and Highest Transmitting Channel, observed the outside band of 2400MHz to 2483.5MHz, than mark the higher-level emission for comparing with the FCC rules.

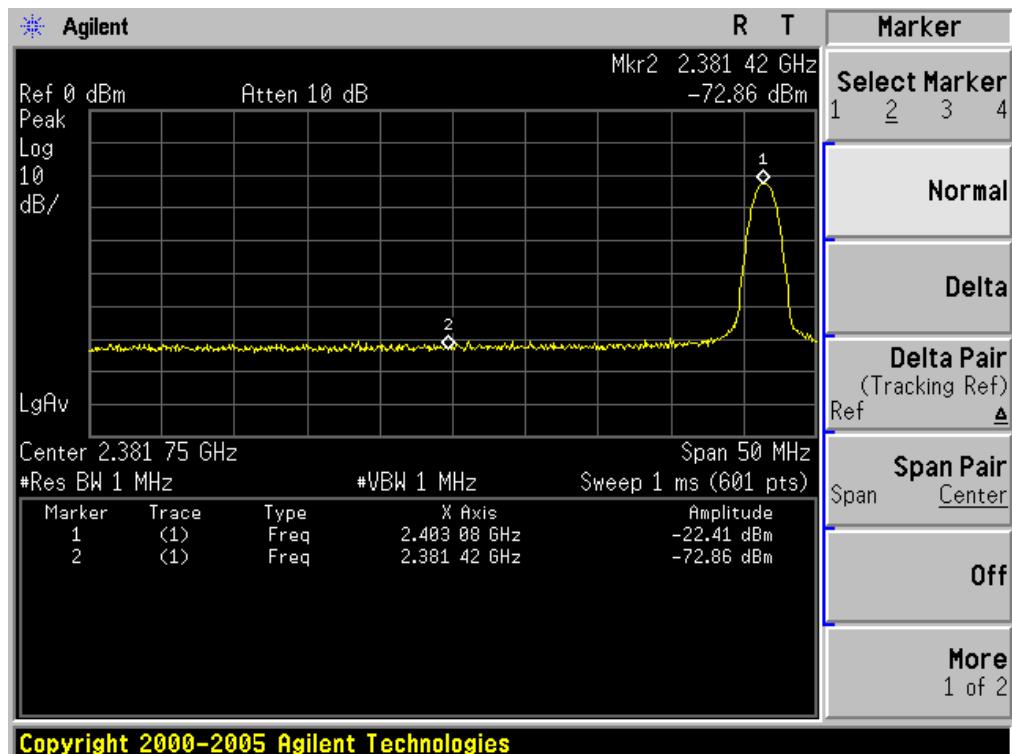
### 9.2. TEST SET-UP



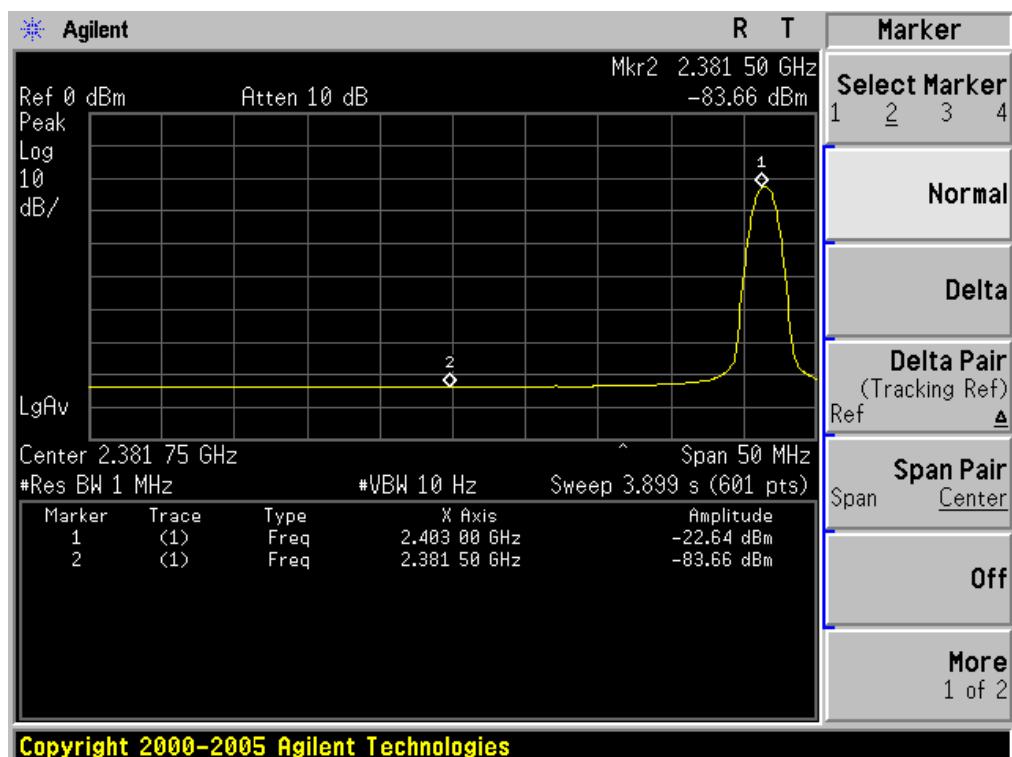
### 9.3 TEST RESULT

According to part 15.249(d). The conducted edge emissions are shall be attenuated by at least 50 dB below the level of the fundamental. Please refer to the test plots below.

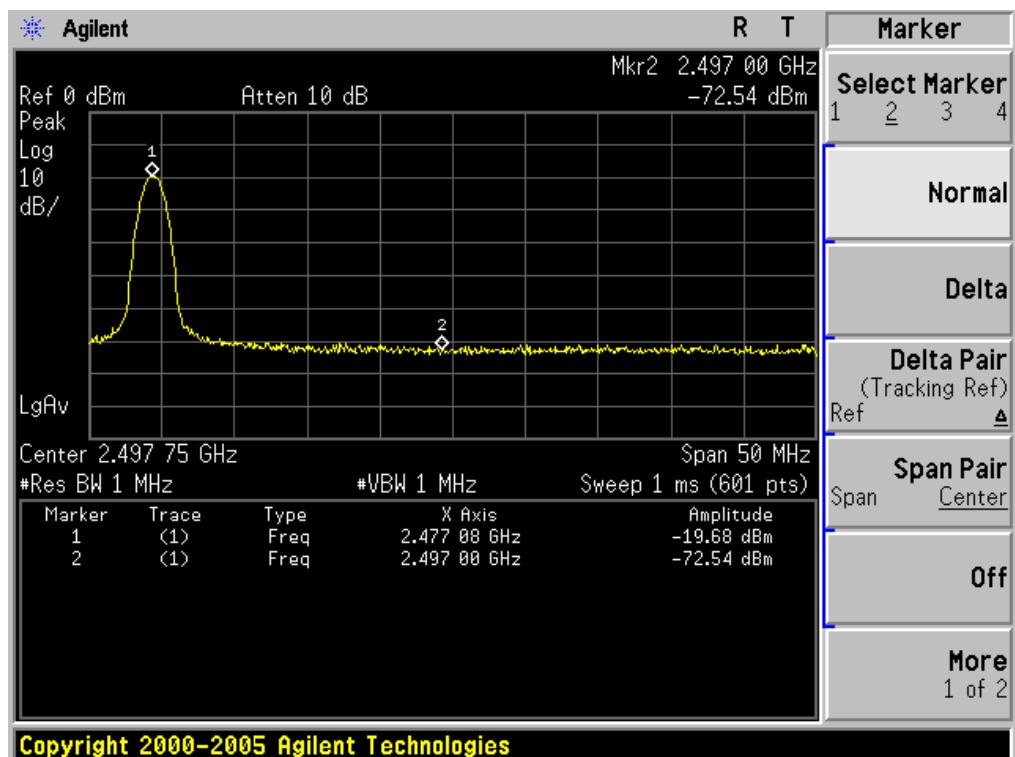
Low band edge-PK



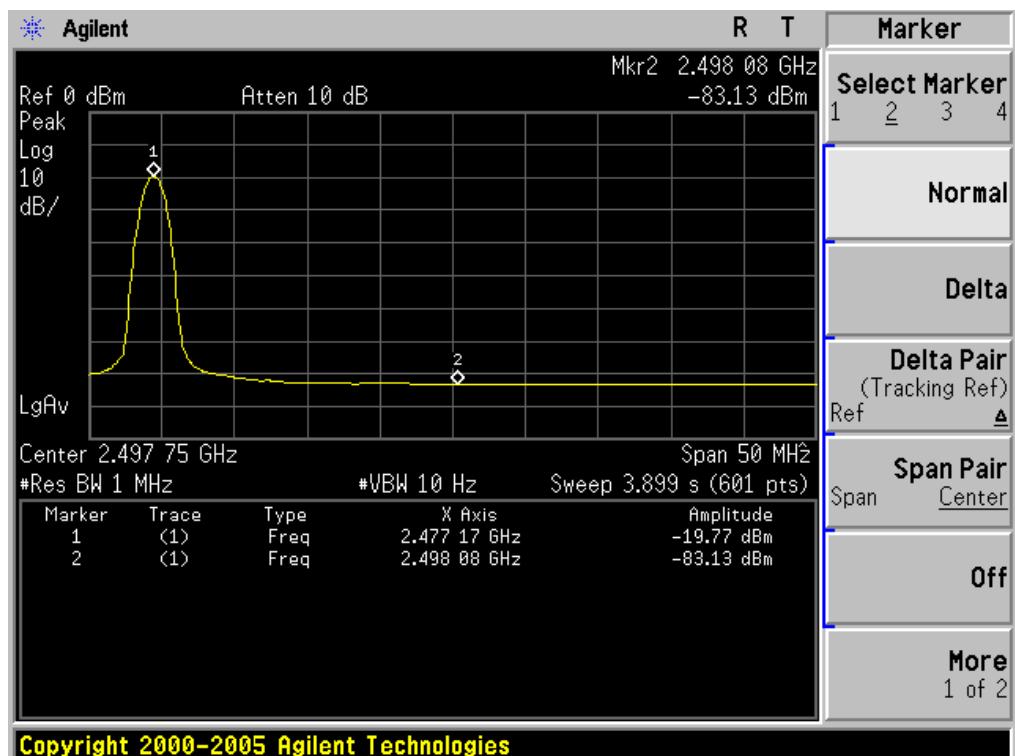
Low band edge-AV



High band edge-PK



High band edge-AV



## 10. FCC LINE CONDUCTED EMISSION TEST

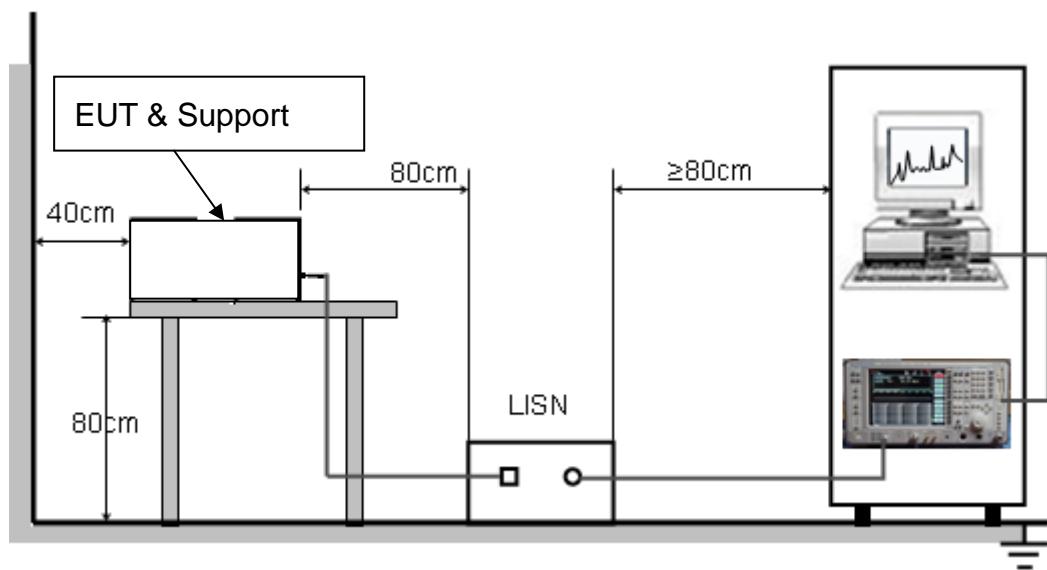
### 10.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P. (dBuV)	Average (dBuV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Note:

1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

### 10.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



### **10.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST**

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When 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 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2. Support equipment, if needed, was placed as per ANSI C63.4.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
4. All support equipments received AC120V/60Hz power from a LISN, if any.
5. The EUT received DC 5V by support computer.
6. The 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.
9. The test mode(s) were scanned during the preliminary test.

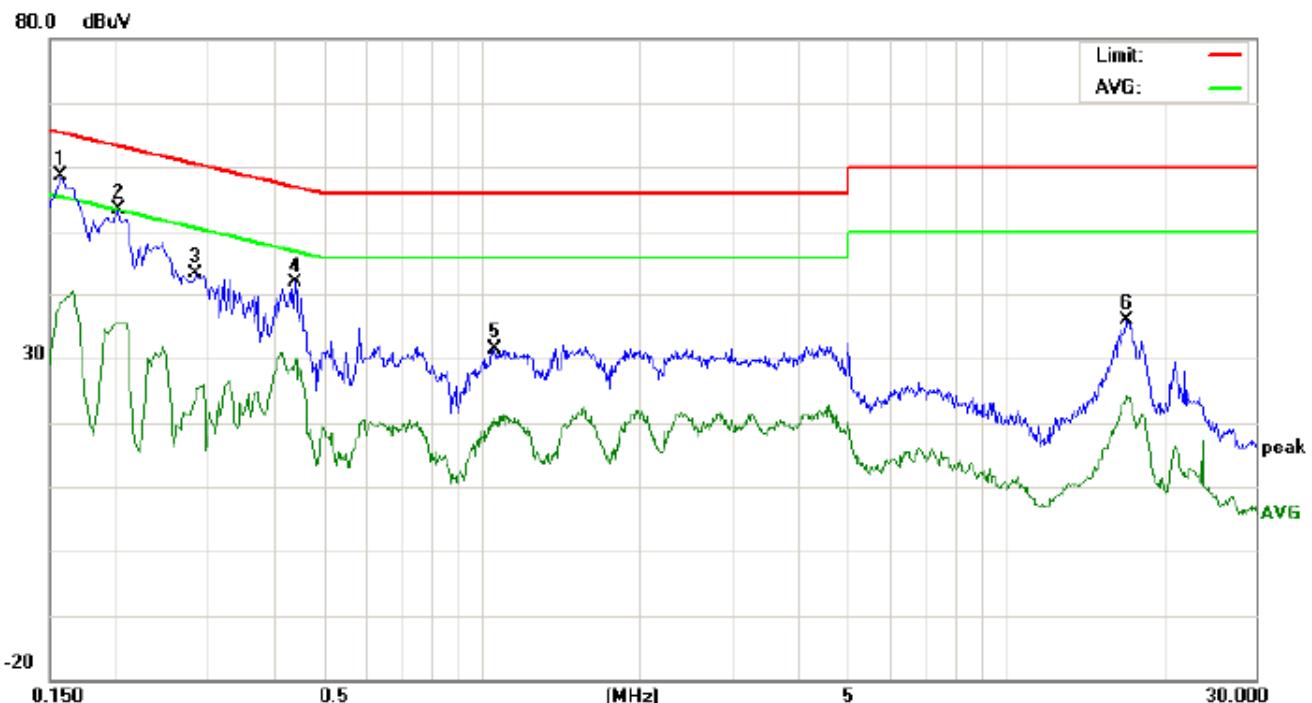
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

### **10.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST**

1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less -2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
3. The test data of the worst case condition(s) was reported on the Summary Data page.

## 10.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

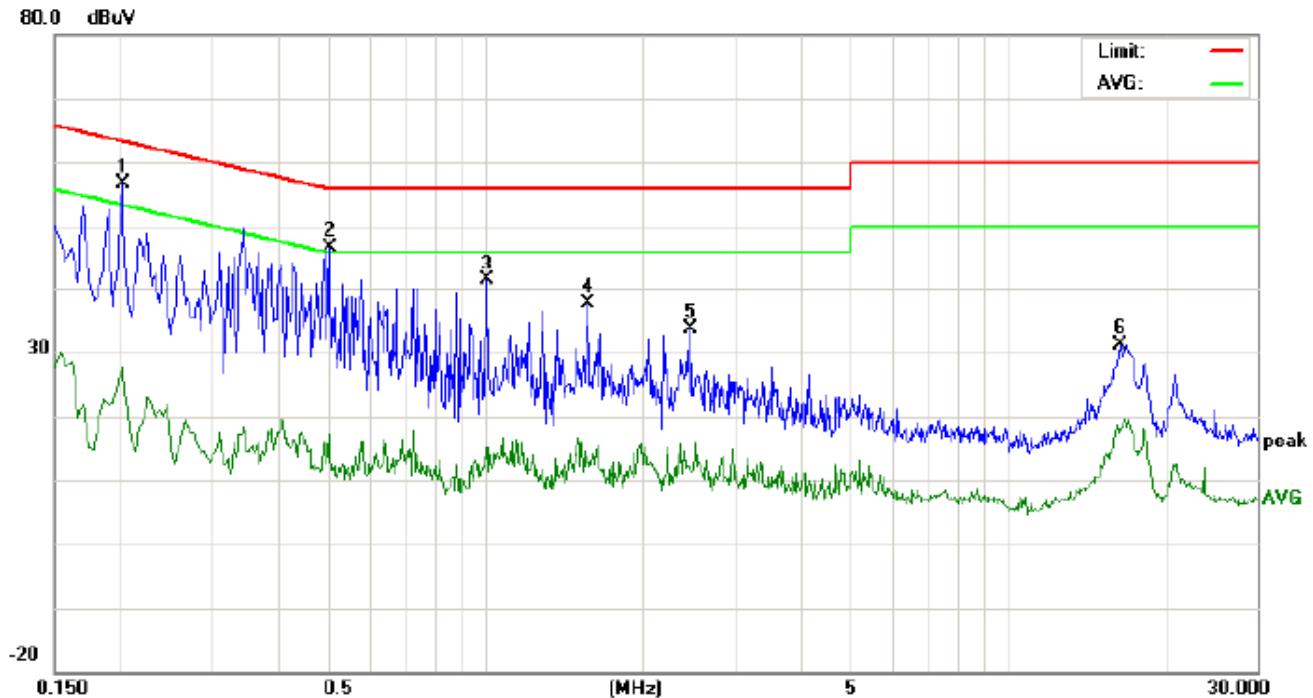
Line Conducted Emission Test Line 1-L



Site: Conduction Phase: **L1** Temperature: 26  
 Limit: FCC Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 60 %  
 EUT: BP MOUSE GLV WHT  
 M/N: 760672  
 Mode: Transmitting  
 Note: Dongle

No.	Freq. (MHz)	Reading Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		dB	Peak	QP	AVG	QP	AVG	QP	AVG	
1	0.1580	48.40		28.50	10.17	58.57		38.67	65.56	55.56	-6.99	-16.89	P	
2	0.2020	43.26		25.18	10.22	53.48		35.40	63.52	53.52	-10.04	-18.12	P	
3	0.2860	33.09		15.00	10.28	43.37		25.28	60.64	50.64	-17.27	-25.36	P	
4	0.4420	31.49		19.49	10.36	41.85		29.85	57.02	47.02	-15.17	-17.17	P	
5	1.0620	21.09		9.83	10.37	31.46		20.20	56.00	46.00	-24.54	-25.80	P	
6	17.0260	25.80		13.60	10.13	35.93		23.73	60.00	50.00	-24.07	-26.27	P	

Line Conducted Emission Test Line 2-N



Site: Conduction Phase: **N** Temperature: 26  
 Limit: FCC Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 60 %  
 EUT: BP MOUSE GLV WHT  
 M/N: 760672  
 Mode: Transmitting  
 Note: Dongle

No.	Freq. (MHz)	Reading Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	Avg		dB	Peak	QP	Avg	QP	Avg	QP	Avg	
1	0.2020	46.50		17.31	10.22	56.72		27.53	63.52	53.52	-6.80	-25.99	P	
2	0.5020	36.32		6.84	10.40	46.72		17.24	56.00	46.00	-9.28	-28.76	P	
3	1.0100	30.92		4.73	10.37	41.29		15.10	56.00	46.00	-14.71	-30.90	P	
4	1.5740	27.31		2.55	10.36	37.67		12.91	56.00	46.00	-18.33	-33.09	P	
5	2.4860	23.25		1.57	10.42	33.67		11.99	56.00	46.00	-22.33	-34.01	P	
6	16.4100	21.08		8.01	10.12	31.20		18.13	60.00	50.00	-28.80	-31.87	P	

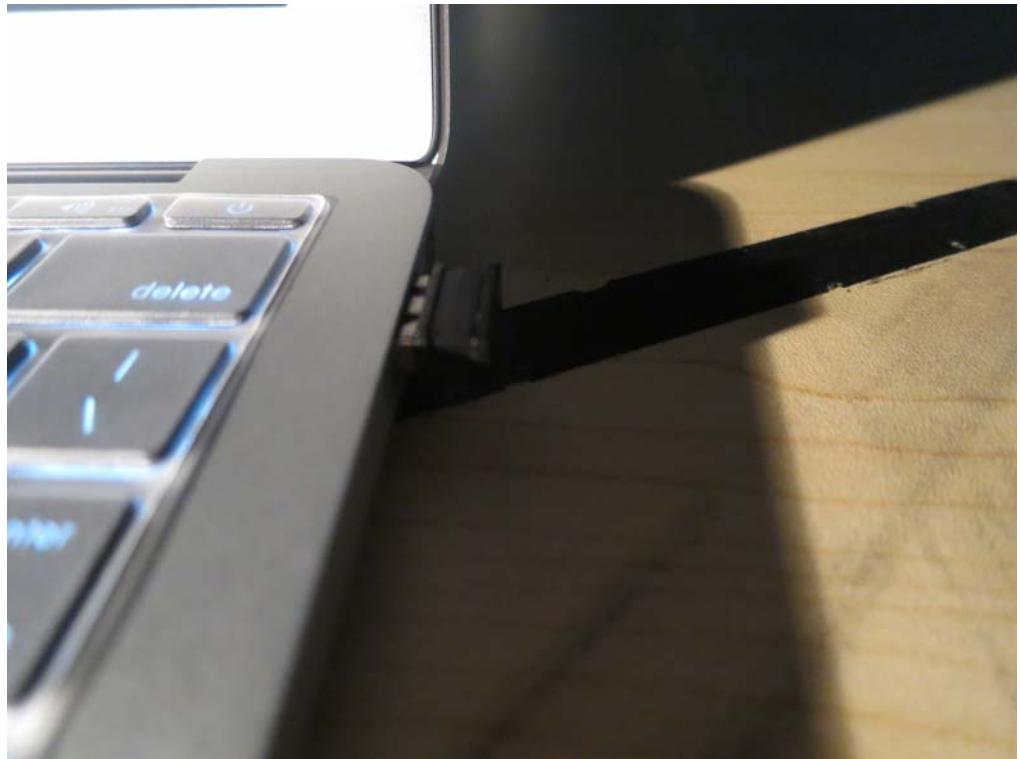
## APPENDIX A: PHOTOGRAPHS OF TEST SETUP

### FCC LINE CONDUCTED EMISSION TEST SETUP



### FCC RADIATED EMISSION TEST SETUP

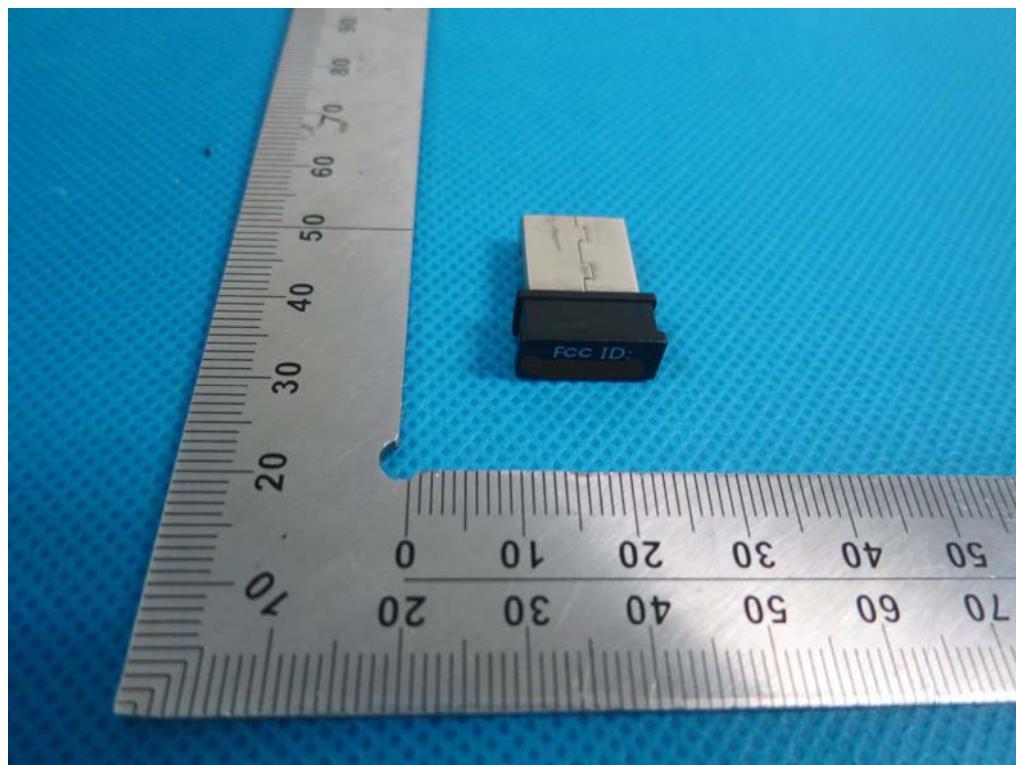




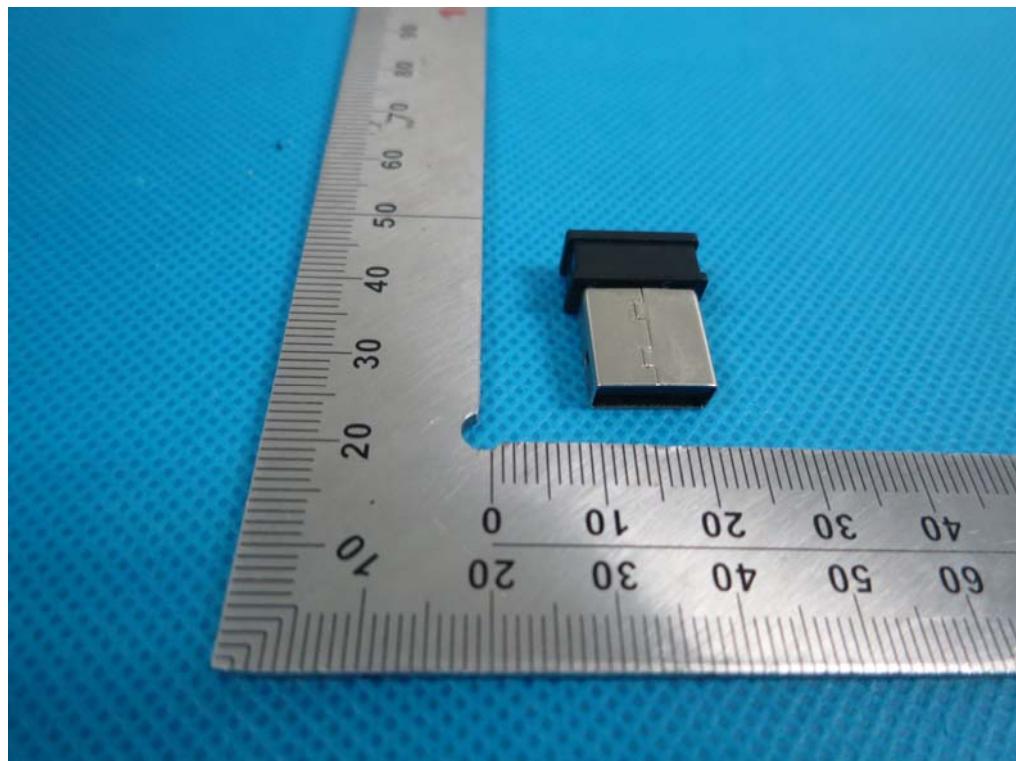
**APPENDIX B: PHOTOGRAPHS OF EUT**  
**TOTAL VIEW OF EUT**



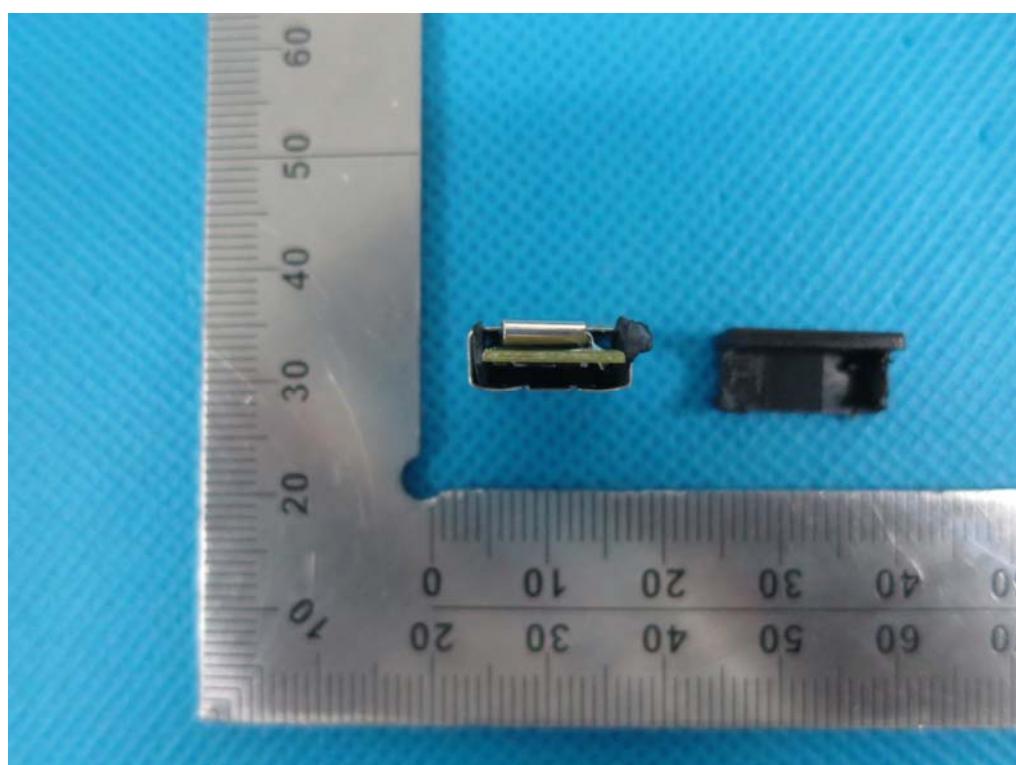
**TOP VIEW OF EUT**



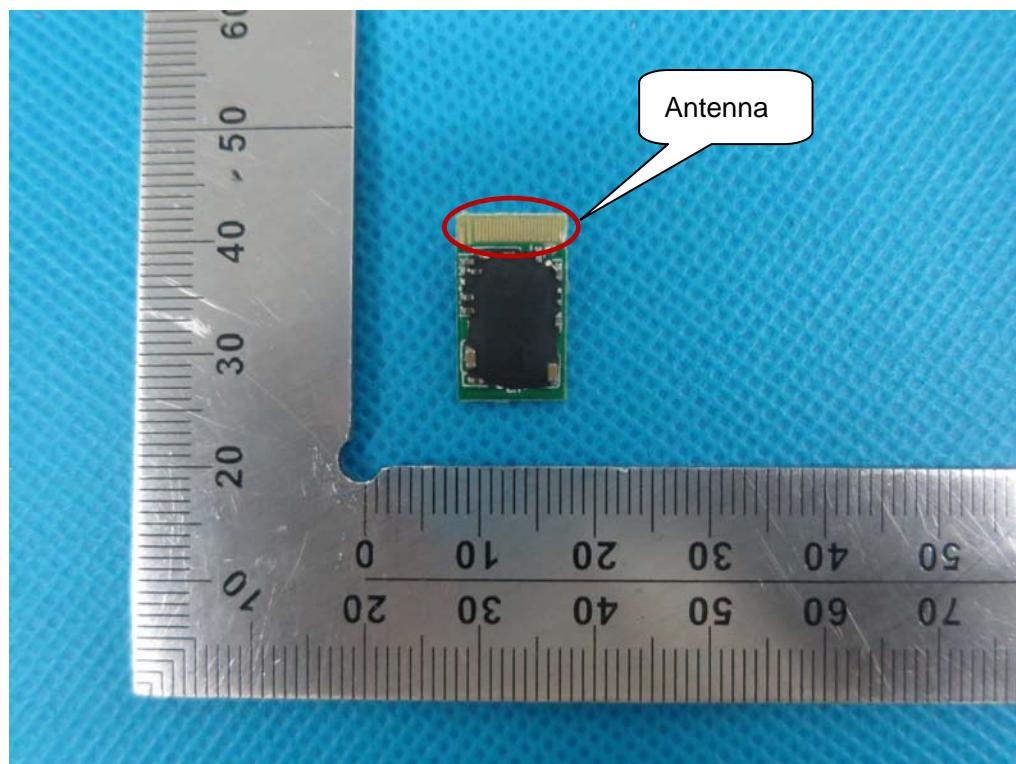
BOTTOM VIEW OF EUT



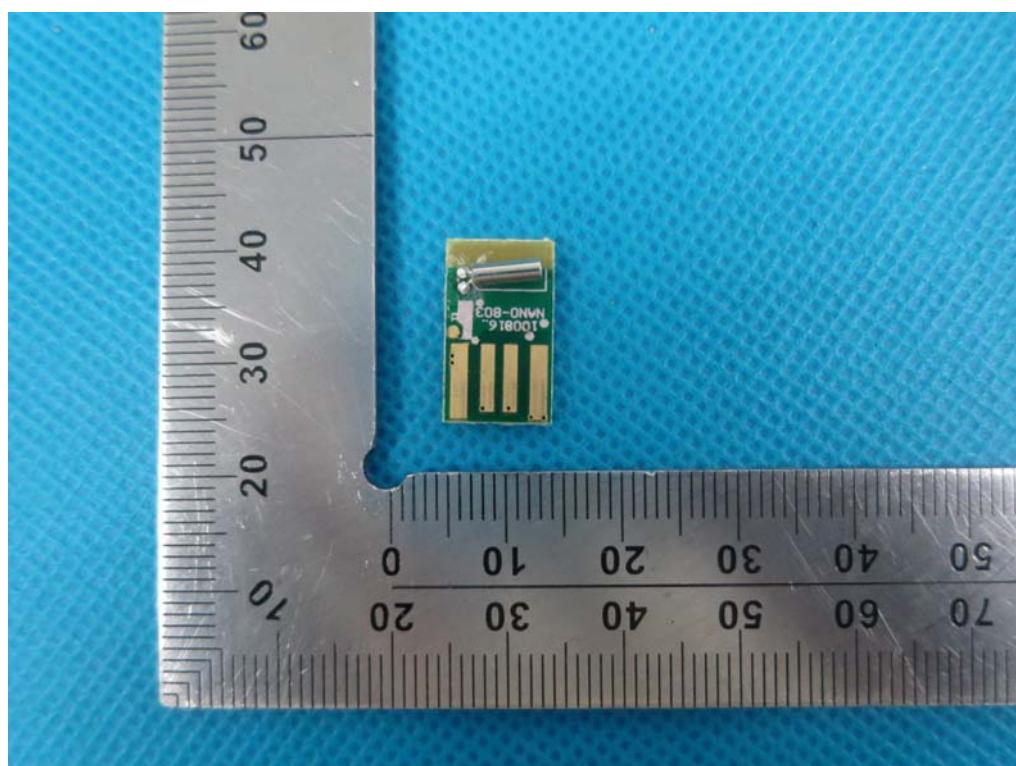
OPEN VIEW OF EUT-1



INTERNAL VIEW OF EUT-1



INTERNAL VIEW OF EUT-2



----END OF REPORT----