

# FCC Radio TEST Report

**FCC ID: GV3 M01119-M****IC ID: 6128A- M01119M**

This report concerns (check one) : ☒ Original Grant ☐ Class II Change

**Report No. :** NTEK-2010NT1115346E  
**Product :** Pro Fit™ 2.4G Wireless Full-size Mouse  
**Model No. :** M01119-M  
**Applicant :** Kensington Computer Products Group  
**Address :** 333 Twin Dolphin Drive, Redwood shore, CA

**Issued by :** NTEK Testing Technology Co., Ltd  
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**Lab Location :** Xin 'an 6 Road, Bao an Center District, Shenzhen,  
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**Date of Test:**

Nov. 19-20, 2010

**Date of Issue:**

Nov. 22, 2010

**Test Result :** Pass**Standards:** FCC Part 15 subpart C(15.249)  
RSS-210 Issue 8

Testing Engineer : Jake Wang  
(Jake Wang)  
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(Ada Li)  
Authorized Signatory : Can Liu  
(Can Liu)

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## 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15, Subpart C (15.249) & RSS-Gen Issue 3 & RSS-210 Issue 8			
Standard Section	Test Item	Judgment	Remark
15.207&RSS-gen 7.2.4	Conducted Emission	N/A	Note(1)
15.203	Antenna Requirement	Pass	
15.249&RSS-210 A2.9	Radiated Spurious Emission	Pass	
15.249&RSS Gen 4.6.1	Occupied Bandwidth	Pass	

NOTE:

(1) "N/A" denotes test is not applicable in this Test Report.

## 1.1 TEST FACILITY

Asia Institute Technology (Dongguan) Limited

Add. : No.6 Binhe Road, Tianxin Village, Huangjiang, Dongguan, Guangdong, China.

FCC Registered No.: 248337 IC Registered No.: IC6819A-1 & IC6819A-2

## 1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately **95 %**.

### A. Conducted Measurement :


Test Site	Method	Measurement Frequency Range	U , (dB)
C01	ANSI C63.4-2003	150 KHz ~ 30MHz	1.94

### B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U , (dB)
OS-01	ANSI C63.4-2003	30MHz ~ 200MHz	V	2.93
		30MHz ~ 200MHz	H	2.86
		200MHz ~ 1,000MHz	V	3.86
		200MHz ~ 1,000MHz	H	3.94

## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

Equipment	Pro Fit™ 2.4G Wireless Full-size Mouse	
Brand Name	 Kensington®	
Model Name.	M01119-M	
OEM Brand/Model Name	N/A	
Model Difference	N/A	
Manufacturer	Dongguan Torgan Electronics Co.,Ltd	
Manufacturer Address	262 Shidan Rd., 3 <sup>rd</sup> Industrial Area, Juzhou, Shijie, Dongguan, Guangdong	
Product Description	The EUT is Pro Fit™ 2.4G Wireless Full-size Mouse	
	Product Type	Low Power Communication Device
	Operation Frequency:	2402~2479 MHz
	Modulation Type:	GFSK
	Number Of Channel	16CH .Please see below
	Antenna Designation:	Printed ANT
	Antenna Gain(Peak)	2.42dBi
	EIRP Power:	75.96 dBuV/m (AV Max.)
Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.		
Channel List	Refer to below	
Power Source	DC Voltage supplied from 2*AAA size Battery	
Power Rating	DC 3.0V (Mouse)	
Connecting I/O Port(s)	Please refer to the User's Manual	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

Channel List							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2402	05	2425	09	2447	13	2468
02	2405	06	2433	10	2450	14	2471
03	2408	07	2435	11	2462	15	2476
04	2411	08	2439	12	2465	16	2479

## 2.2 DESCRIPTION OF TEST CONDITIONS

(1) EUT was tested in normal configuration (Please See following Block diagram)

### 1. Block diagram of EUT configuration

**EUT**

(2) E.U.T. test conditions:

15.31(e) :For intentional radiators, measurements of the variation of the input power or the adiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. For battery operated equipment, the equipment tests shall be performed using a new battery.

(3) Test frequencies:

According to the 15.31(m) Measurements on intentional radiators or receivers, other than TV broadcast receivers, shall be performed and, if required, reported for each band in which the device can be operated with the device operating at the number of frequencies in each band specified in the following table:

Frequency range over which device operates	Number of frequencies	Location in the range of operation
1 MHz or less	1	Middle
1 to 10 MHz	2	1 near top and 1 near bottom
More than 10 MHz	3	1 near top, 1 near middle and 1 near bottom

(4) Frequency range of radiated measurements:

According to the 15.33, The test range will be up to the tenth harmonic of the highest fundamental frequency,

### 2.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	EUT	N/A	M01119-M	GV3 M01119-M	N/A	

Item	Shielded Type	Ferrite Core	Length	Note

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

## 2.4 EQUIPMENTS LIST FOR ALL TEST ITEMS

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Due Date
1	Spectrum Analyzer	ADVANTEST	R3182	150900201	2011.04.16
2	EMI Measuring Receiver	Schaffner	SCR3501	235	2011.04.06
3	Low Noise Pre Amplifier	Tsj	MLA-10K01-B01-27	1205323	2011.09.06
4	Low Noise Pre Amplifier	Tsj	MLA-0120-A02-34	2648A04738	2011.04.07
5	TRILOG Super Broadband test Antenna	SCHWARZBECK	VULB9160	9160-3206	2011.07.01
6	Broadband Horn Antenna	SCHWARZBECK	BBHA9120D	451	2011.07.14
7	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2011.09.06
8	EMI Test Receiver	R&S	ESCI	100124	2010.12.27
9	LISN	Kyoritsu	KNW-242	8-837-4	2011.04.06
10	LISN	Kyoritsu	KNW-407	8-1789-3	2011.04.06
11	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2011.09.06
12	Loop Antenna	ARA	PLA-1030/B	1029	2011.03.19



### 3. TEST RESULT

#### 3.1 ANTENNA REQUIREMENT

##### 3.1.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: 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.

##### 3.1.2 EUT ANTENNA

The EUT antenna is integral Antenna. It comply with the standard requirement.

## 3.2 CONDUCTED EMISSION MEASUREMENT

### 3.2.1 POWER LINE CONDUCTED EMISSION LIMITS (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	73.00	60.00	56.00	46.00	CISPR
5.0 -30.0	73.00	60.00	60.00	50.00	CISPR

0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

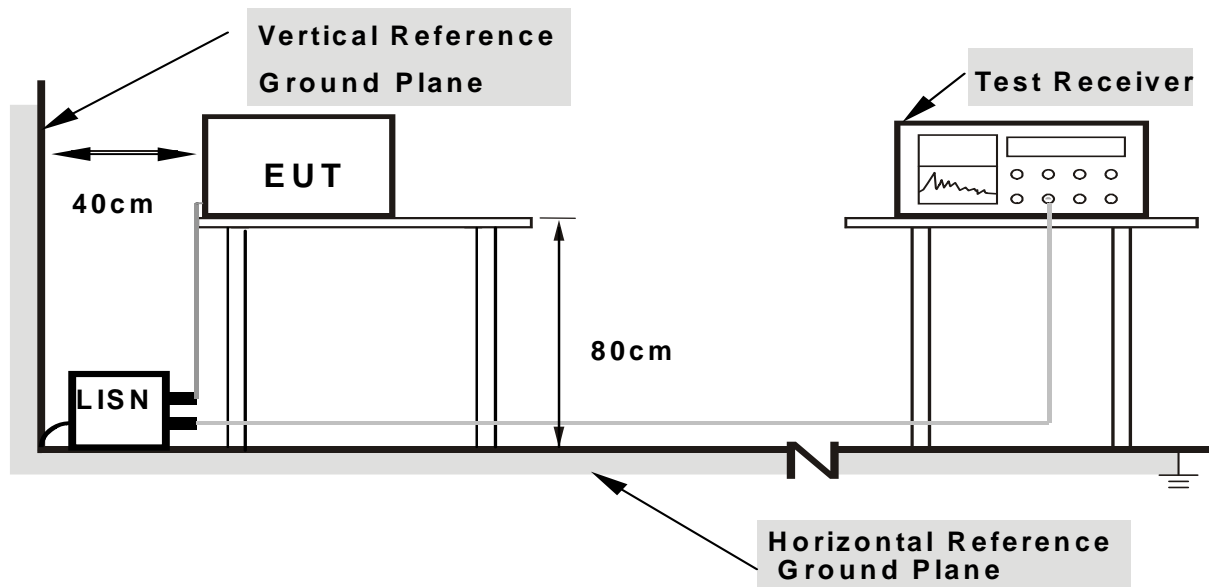
### 3.2.2 TEST PROCEDURE

- The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

### 3.2.3 DEVIATION FROM TEST STANDARD

No deviation

### 3.2.4 TEST SETUP



**Note: 1.**Support units were connected to second LISN.

**2.**Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

### 3.2.5 TEST RESULTS

EUT :	Pro Fit™ 2.4G Wireless Full-size Mouse	Model Name :	M01119-M
Temperature :	26 °C	Relative Humidity :	53%
Pressure :	1010 hPa	Test Power :	DC 3V
Test Mode :	N/A - denotes test is not applicable in this test report		

#### Remark

- (1) All readings are QP Mode value unless otherwise stated AVG in column of Note 1. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform. In this case, a " \* " marked in AVG Mode column of Interference Voltage Measured.
- (2) Measuring frequency range from 150KHz to 30MHz.
- (3) N/A - denotes test is not applicable in this test report

### 3.3 RADIATED EMISSION MEASUREMENT

#### 3.3.1 RADIATED EMISSION LIMITS ( FCC 15.209 )

Frequencies (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
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).

#### LIMITS OF RADIATED EMISSION MEASUREMENT ( FCC 15.249)

Frequency of Emission (MHz)	Field Strength of fundamental (microvolts/meter)	Field Strength of Harmonics (microvolts/meter)
2400 - 2483.5	50	500

Notes:

- (1) 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.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak

Receiver Parameter	Setting
Attenuation	Auto
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

### 3.3.2 TEST PROCEDURE

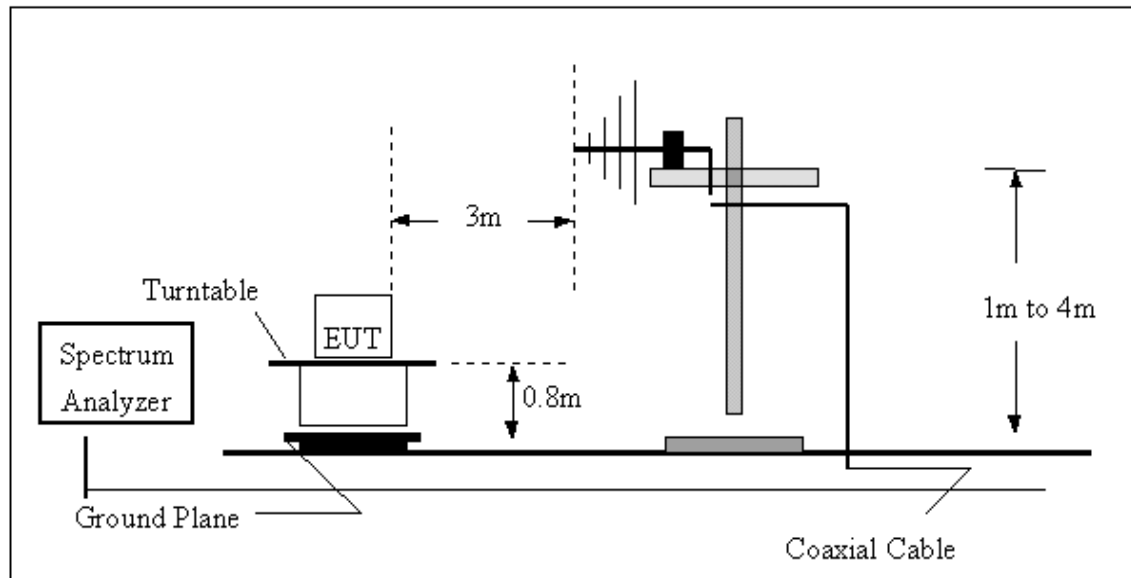
- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement. performed pretest to three orthogonal axis.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

### 3.3.3 DEVIATION FROM TEST STANDARD

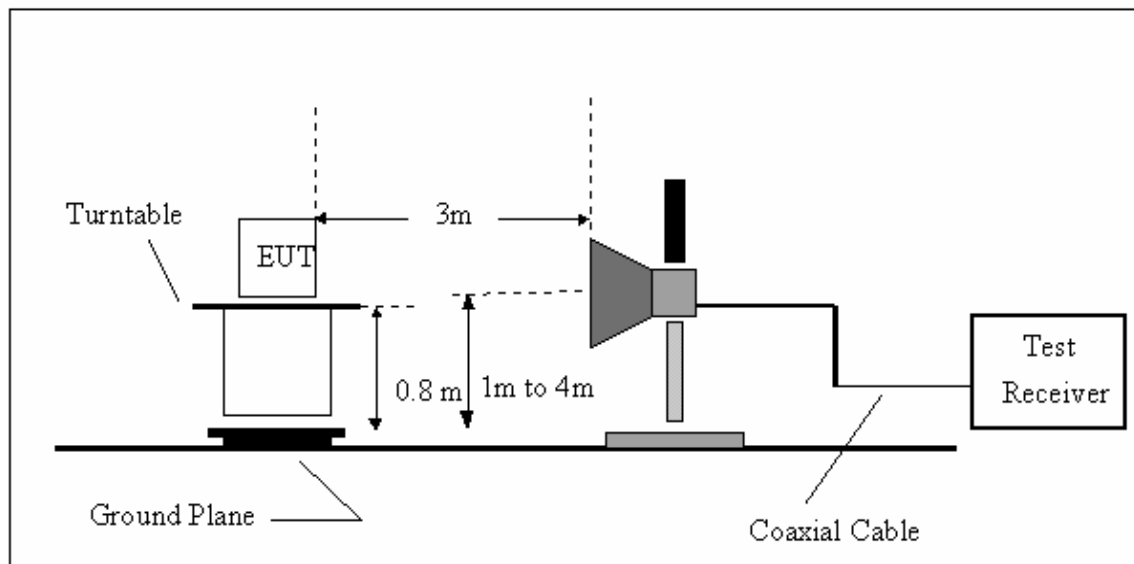
No deviation

### 3.3.4 TEST SETUP

#### (A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



#### (B) Radiated Emission Test Set-Up Frequency Above 1 GHz

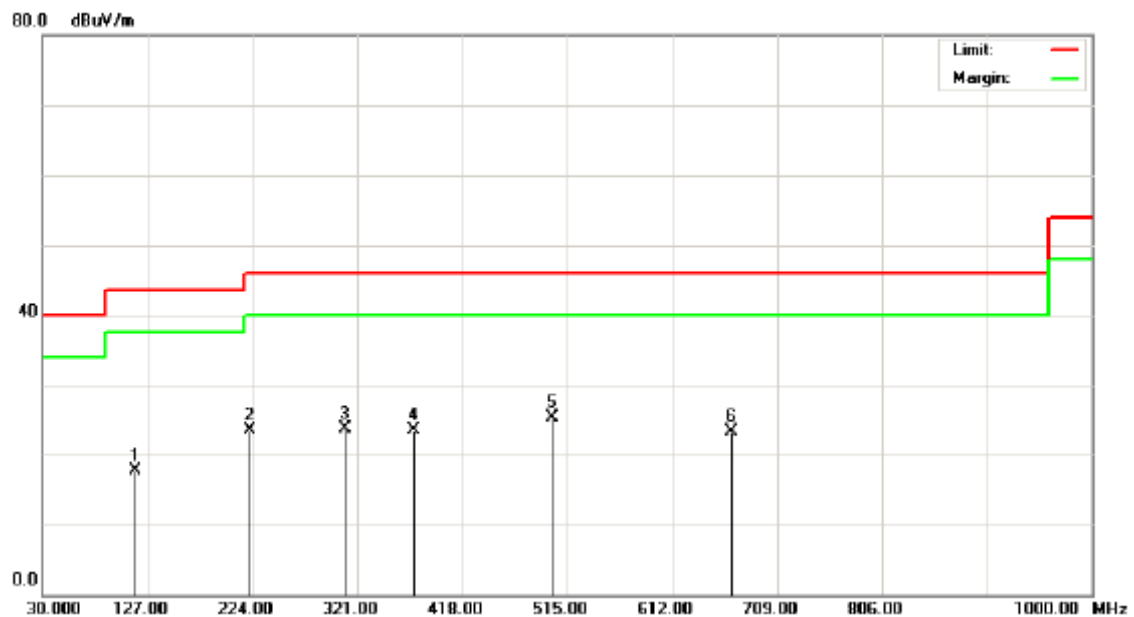


### 3.3.5 TEST RESULTS (BETWEEN 9KHz – 1000 MHz)

EUT :	Pro Fit™ 2.4G Wireless Full-size Mouse	Model Name :	M01119-M
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2010-11-20
Test Mode :	TX CH 2439MHz	Polarization :	Vertical& Horizontal
Test Power :	DC 3V		

(a) Antenna polarization: Horizontal

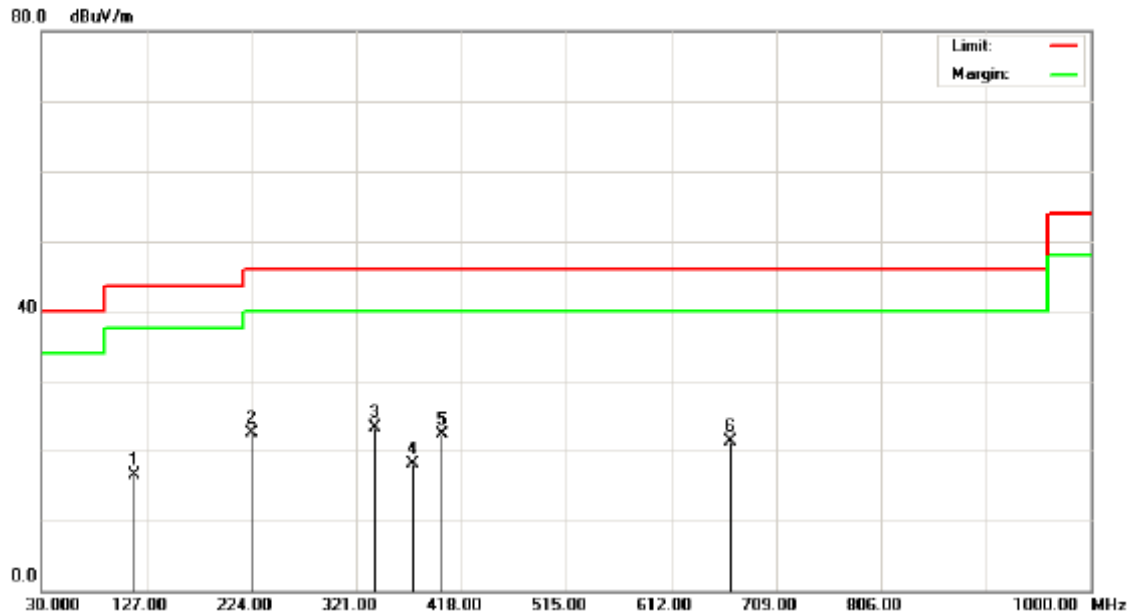
Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
115.36	H	47.77	-31.22	16.55	43.50	- 26.95	
224.97	H	48.12	-25.60	22.52	46.00	- 23.48	
338.46	H	45.32	-21.95	23.37	46.00	- 22.63	
373.38	H	39.29	-21.22	18.07	46.00	- 27.93	
400.54	H	43.55	-21.32	22.23	46.00	- 23.77	
666.32	H	35.51	-14.15	21.36	46.00	- 24.64	





## (b) Antenna polarization: vertical

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
115.36	V	49.00	-31.22	17.78	43.50	- 25.72	
221.97	V	49.31	-25.79	23.52	46.00	- 22.48	
308.46	V	46.45	-22.74	23.71	46.00	- 22.29	
373.38	V	44.76	-21.22	23.54	46.00	- 22.46	
500.54	V	44.25	-19.02	25.23	46.00	- 20.77	
666.32	V	37.51	-14.15	23.36	46.00	- 22.64	



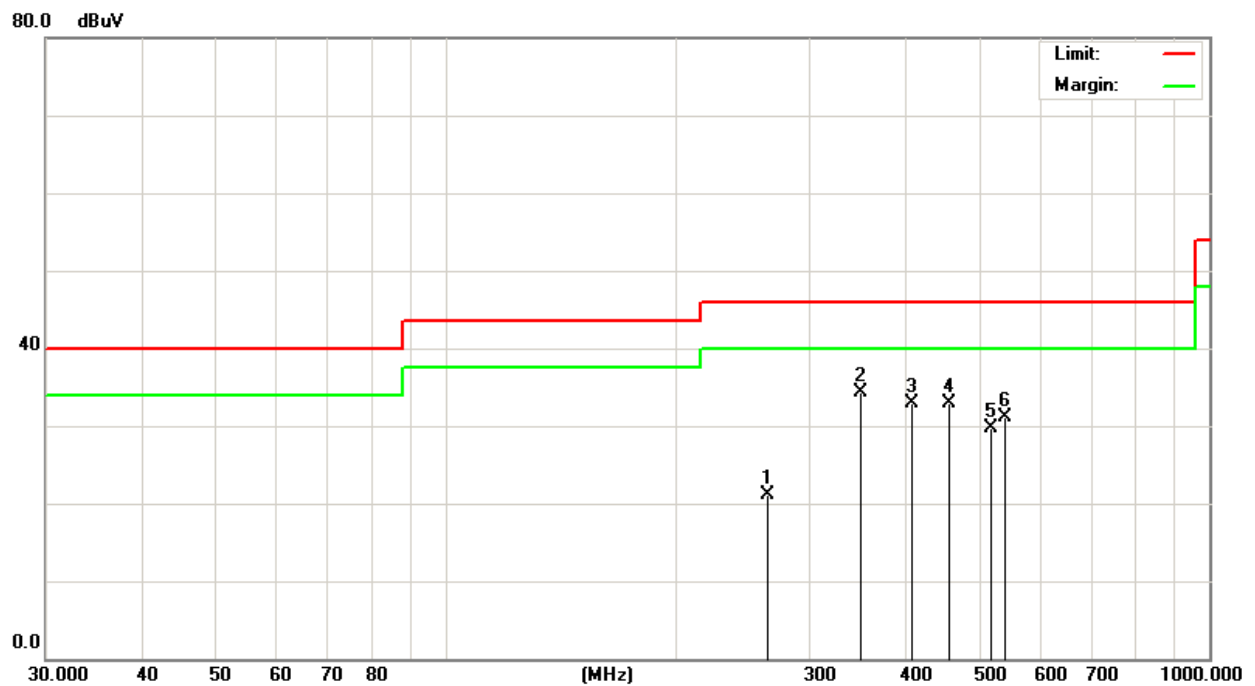
Remark :

- (1) '\*' means the worst case  
Measurement Level = Reading Level + Factor  
Factor=Ant Factor + Cable Loss
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission .
- (3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

EUT :	Pro Fit™ 2.4G Wireless Full-size Mouse	Model Name :	M01119-M
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2010-11-20
Test Mode :	RX mode	Polarization :	Vertical& Horizontal
Test Power :	DC 3V		

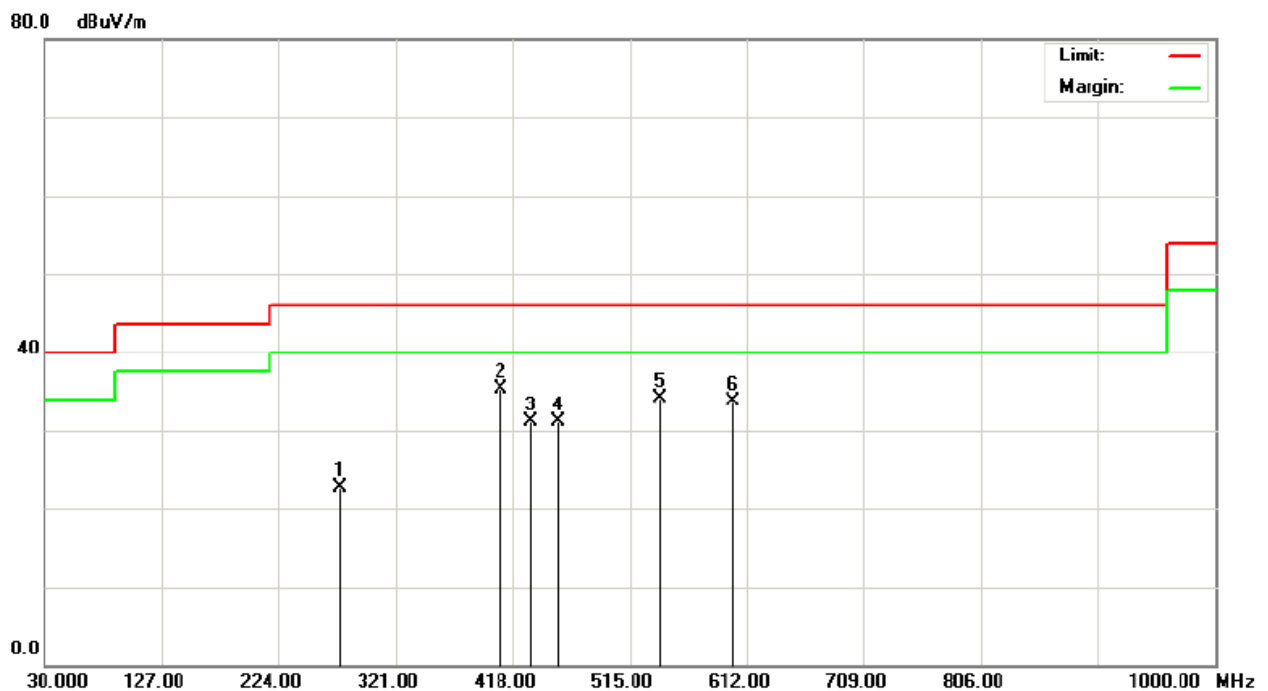
(a) Antenna polarization: Horizontal

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
263.77	H	45.67	-24.53	21.14	46.00	- 24.86	
348.16	H	53.83	-19.56	34.27	46.00	- 11.73	
408.30	H	54.32	-21.44	32.88	46.00	- 13.12	
455.83	H	51.56	-18.63	32.93	46.00	- 13.07	
515.97	H	48.14	-18.35	29.79	46.00	- 16.21	
540.22	H	48.85	-17.65	31.20	46.00	- 14.80	



## (b) Antenna polarization: vertical

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
275.41	V	49.64	-26.35	23.29	46.00	- 23.29	
408.30	V	30.99	-20.34	10.65	46.00	- 10.65	
432.55	V	34.31	-19.32	14.99	46.00	- 14.99	
455.83	V	34.64	-19.65	14.99	46.00	- 14.99	
540.22	V	30.48	-18.65	11.83	46.00	- 11.83	
600.36	V	28.02	-15.68	12.34	46.00	- 12.34	



Remark :

- (1) '\*' means the worst case  
Measurement Level = Reading Level + Factor  
Factor=Ant Factor + Cable Loss
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission .
- (3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

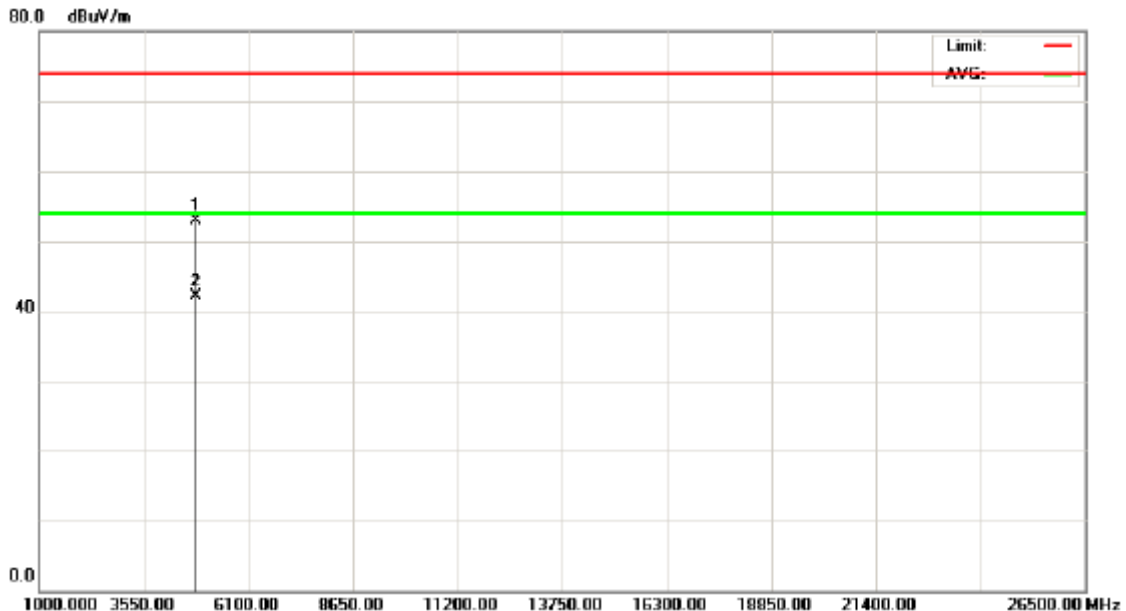
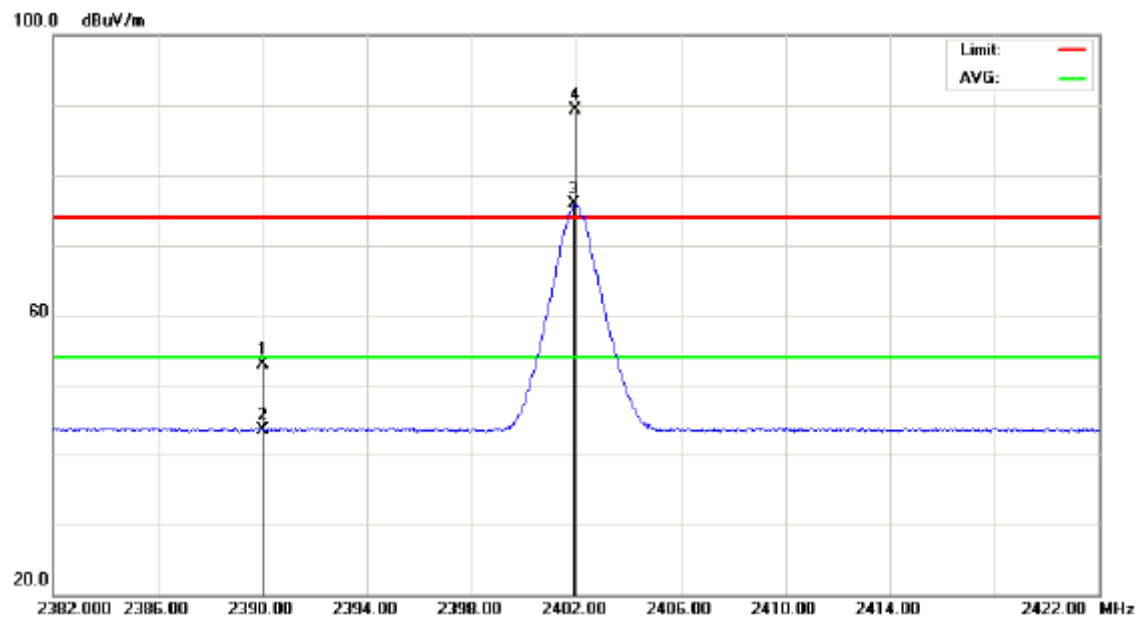
### 3.3.6 TEST RESULTS (Above 1000 MHz)

EUT :	Pro Fit™ 2.4G Wireless Full-size Mouse	Model Name :	M01119-M
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2010-11-20
Test Mode :	TX 2402MHz	Polarization :	Vertical& Horizontal
Test Power :	DC 3V		

(a) Antenna polarization: Horizontal

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2390.00	H	18.19	8.75	34.77	52.96	43.52	74.00	54.00	X/E
<b>2401.92</b>	<b>H</b>	<b>54.46</b>	<b>41.07</b>	<b>34.81</b>	<b>89.27</b>	<b>75.88</b>	<b>114.00</b>	<b>94.00</b>	<b>X/F</b>
4803.85	H	45.24	34.40	7.71	52.95	42.11	74.00	54.00	X/H

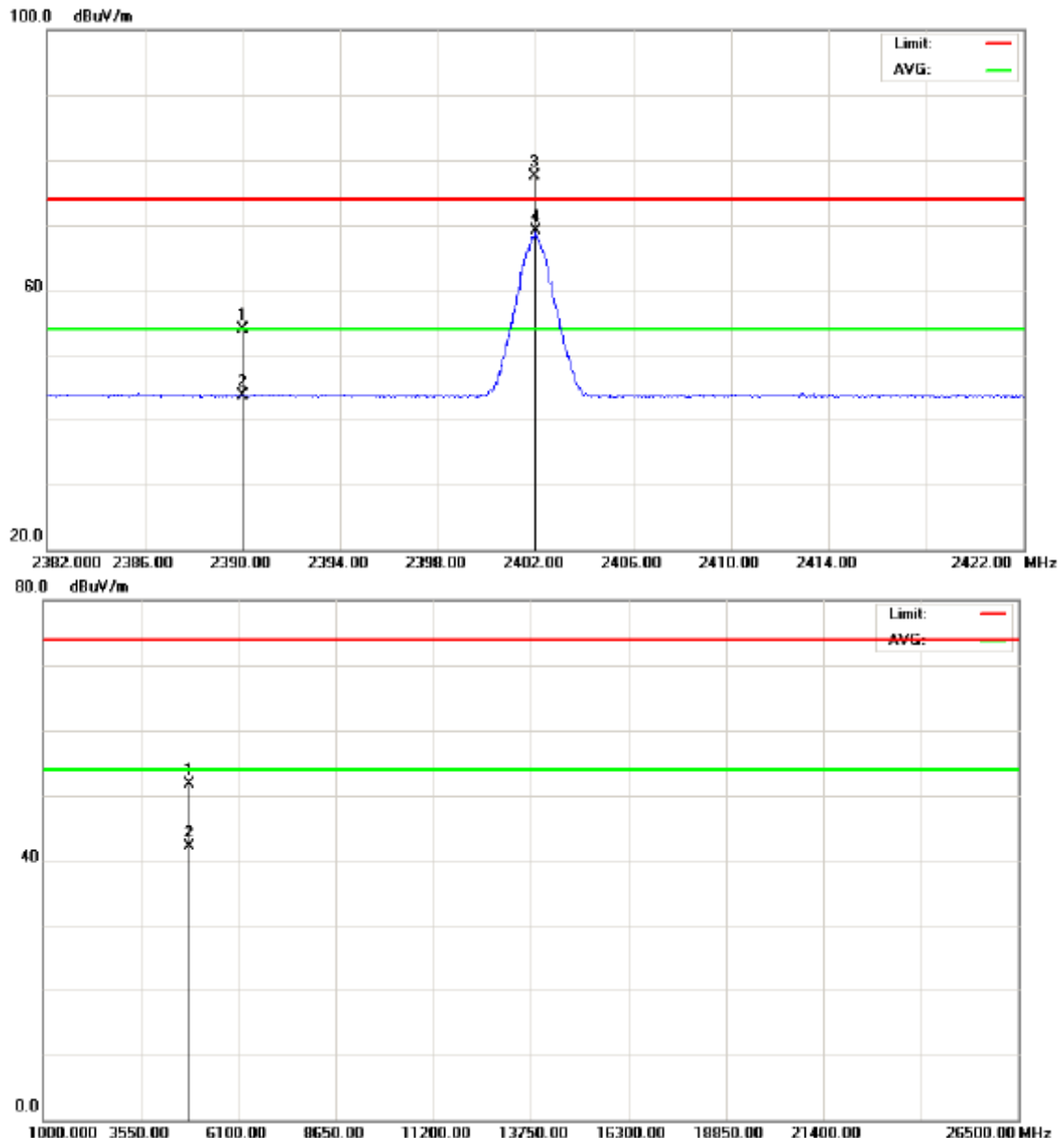
Orthogonal Axis: X



## (b) Antenna polarization: vertical

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2390.00	V	19.13	8.91	34.77	53.90	43.68	74.00	54.00	X/E
2402.00	V	42.61	34.28	34.81	77.42	69.09	114.00	94.00	X/F
4804.05	V	43.98	34.46	7.71	51.69	42.17	74.00	54.00	X/H

## Orthogonal Axis: X



## Remark :

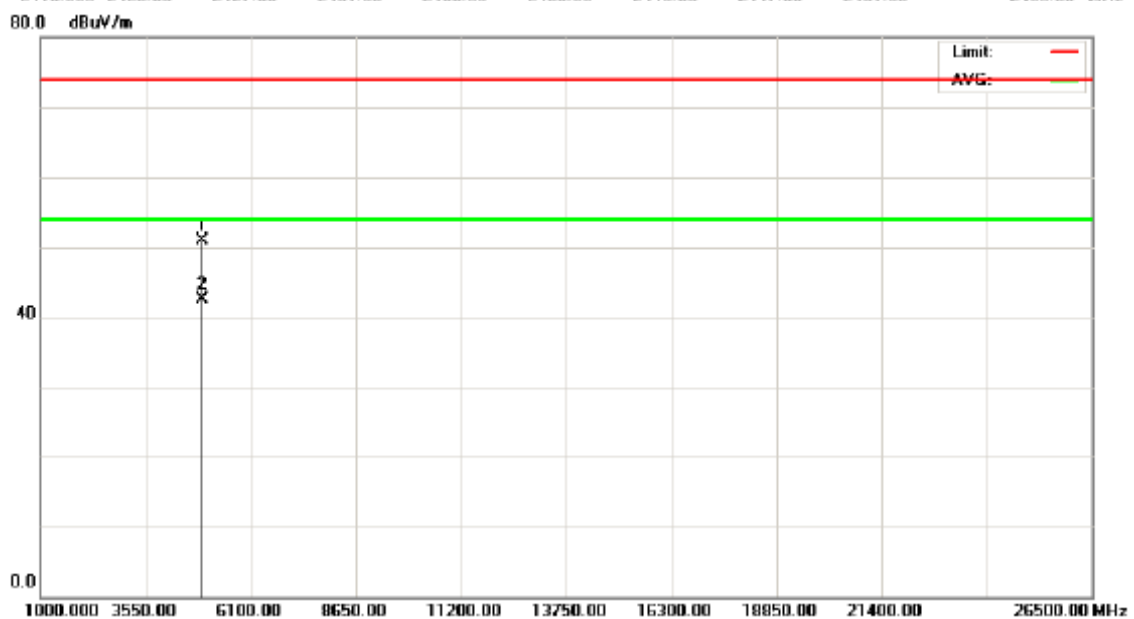
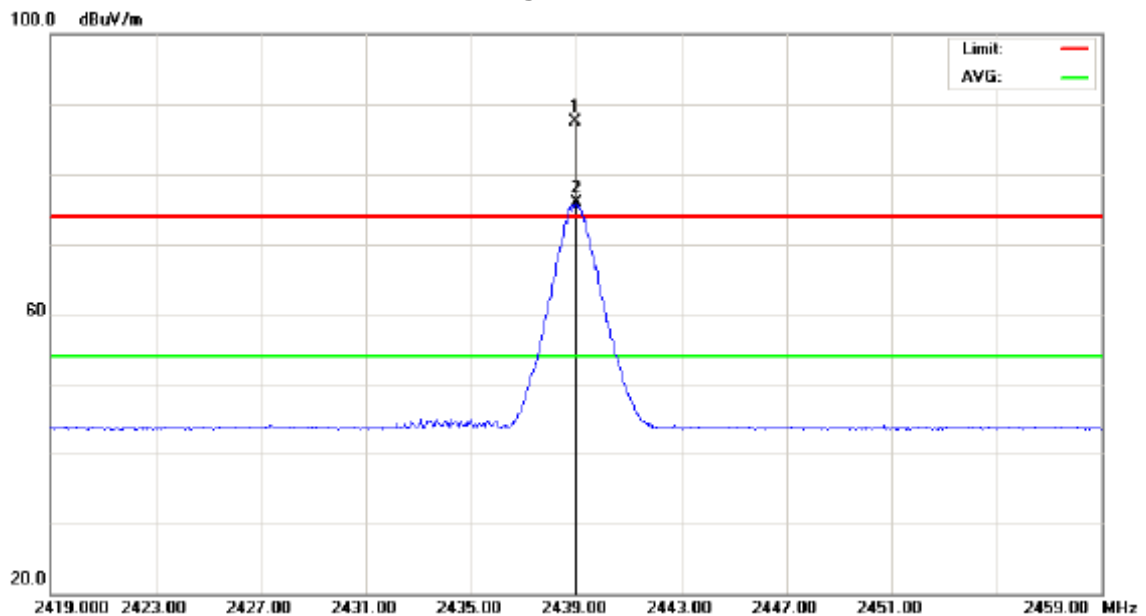
- (1) '\*' means the worst case  
Measurement Level = Reading Level + Factor  
Factor=Ant Factor + Cable Loss
- (2) "F" denotes fundamental frequency; "H" denotes spurious frequency.  
"E" denotes band edge frequency.
- (3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

EUT :	Pro Fit™ 2.4G Wireless Full-size Mouse	Model Name :	M01119-M
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2010-11-20
Test Mode :	TX 2439MHz	Polarization :	Vertical& Horizontal
Test Power :	DC 3V		

(a) Antenna polarization: Horizontal

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2438.96	H	52.53	41.05	34.91	87.44	75.96	114.00	94.00	X/F
4877.98	H	42.78	34.41	8.17	50.95	42.58	74.00	54.00	X/H

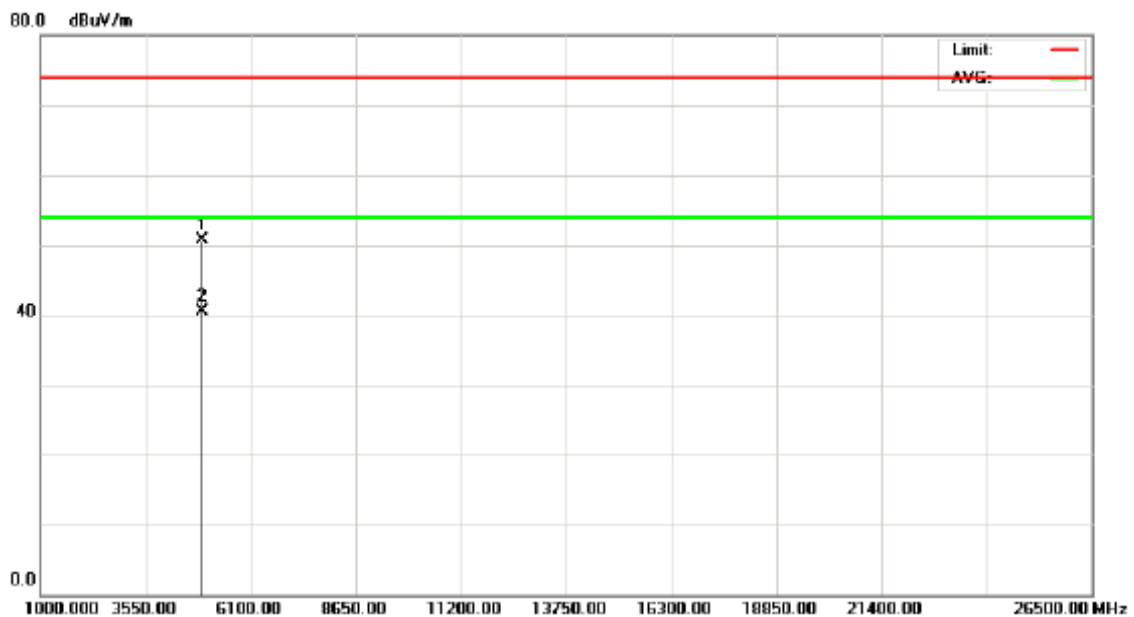
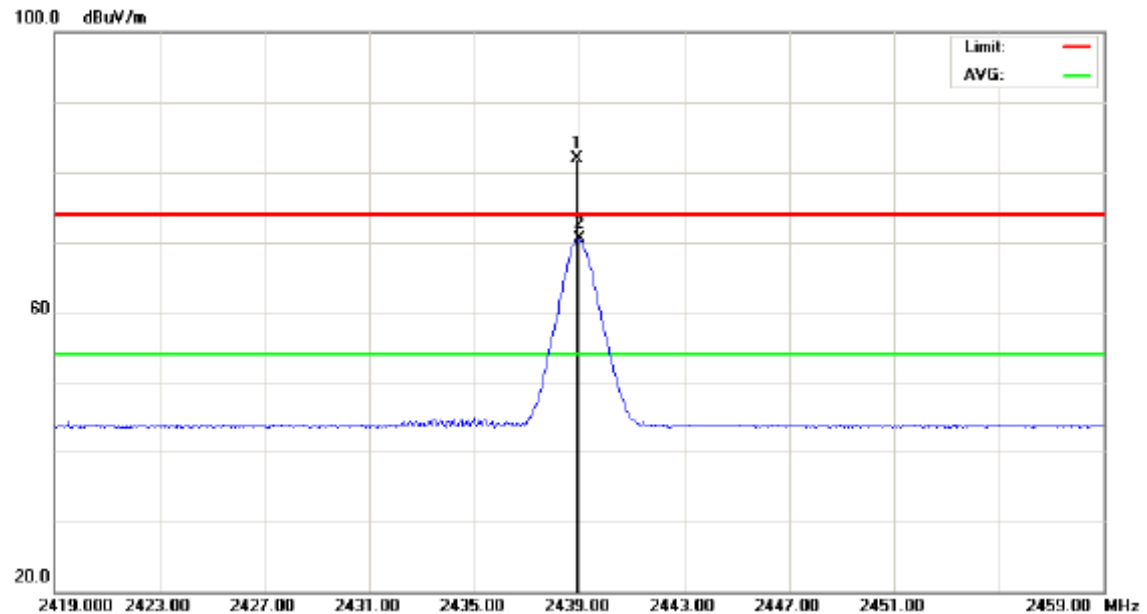
Orthogonal Axis: X



## (b) Antenna polarization: vertical

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2439.00	V	47.00	35.63	34.91	81.91	70.54	114.00	94.00	X/F
4877.91	V	42.59	32.28	8.17	50.76	40.45	74.00	54.00	X/H

## Orthogonal Axis: X



## Remark :

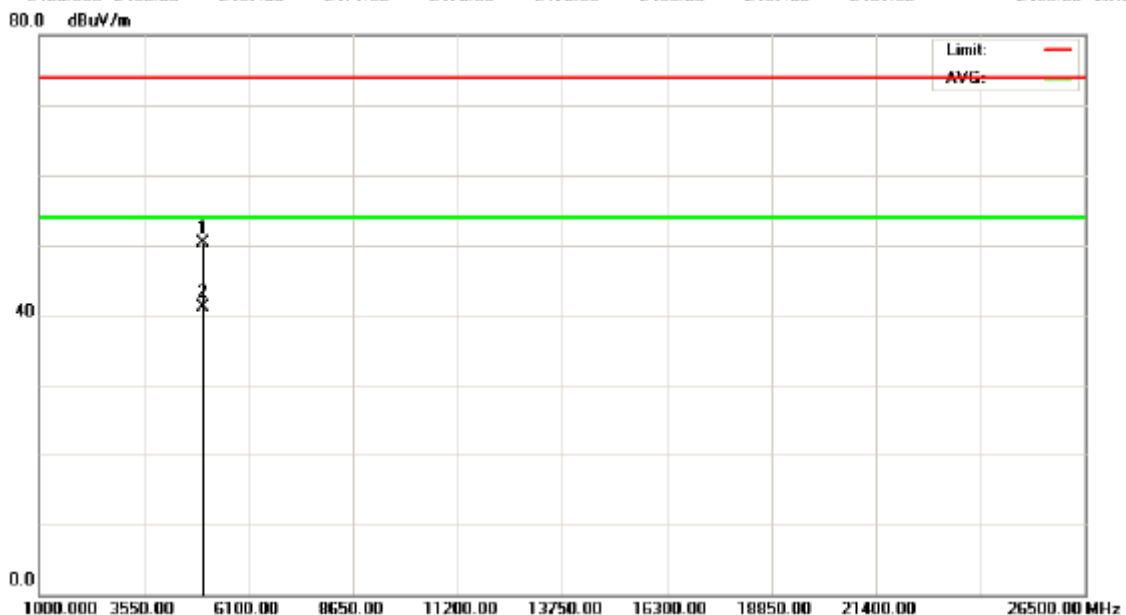
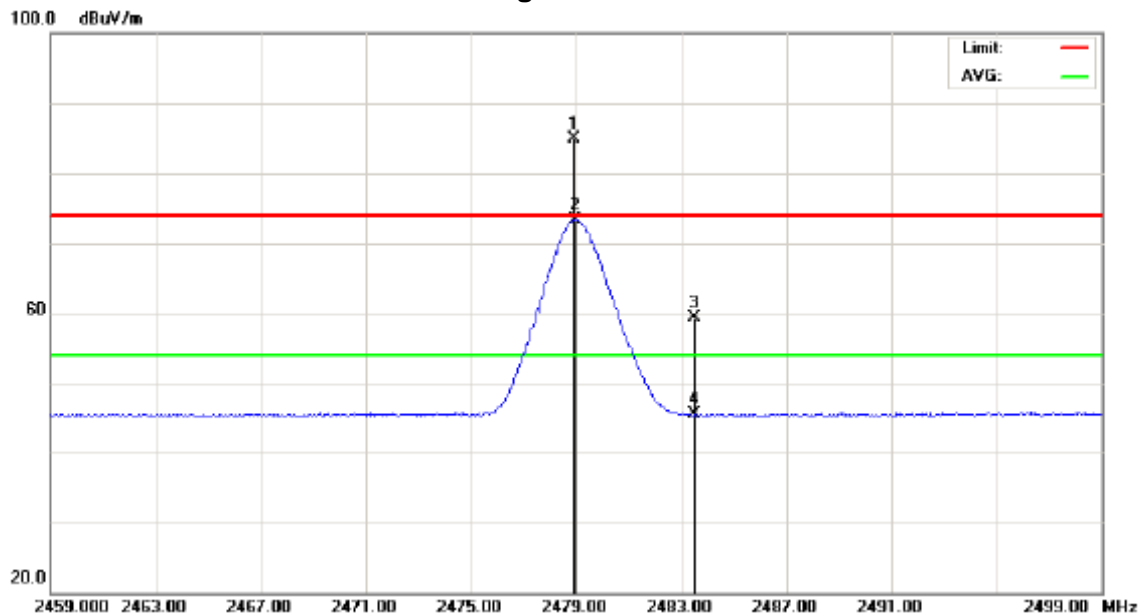
- (1) '\*' means the worst case  
Measurement Level = Reading Level + Factor  
Factor=Ant Factor + Cable Loss
- (2) "F" denotes fundamental frequency; "H" denotes spurious frequency.  
"E" denotes band edge frequency.
- (3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

EUT :	Pro Fit™ 2.4G Wireless Full-size Mouse	Model Name :	M01119-M
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2010-11-20
Test Mode :	TX 2479MHz	Polarization :	Vertical& Horizontal
Test Power :	DC 3V		

(a) Antenna polarization: Horizontal

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2479.00	H	49.90	38.37	35.03	84.93	73.40	114.00	94.00	X/F
2483.50	H	24.27	10.45	35.04	59.31	45.49	74.00	54.00	X/E
4957.96	H	41.55	32.54	8.66	50.21	41.20	74.00	54.00	X/H

Orthogonal Axis: X

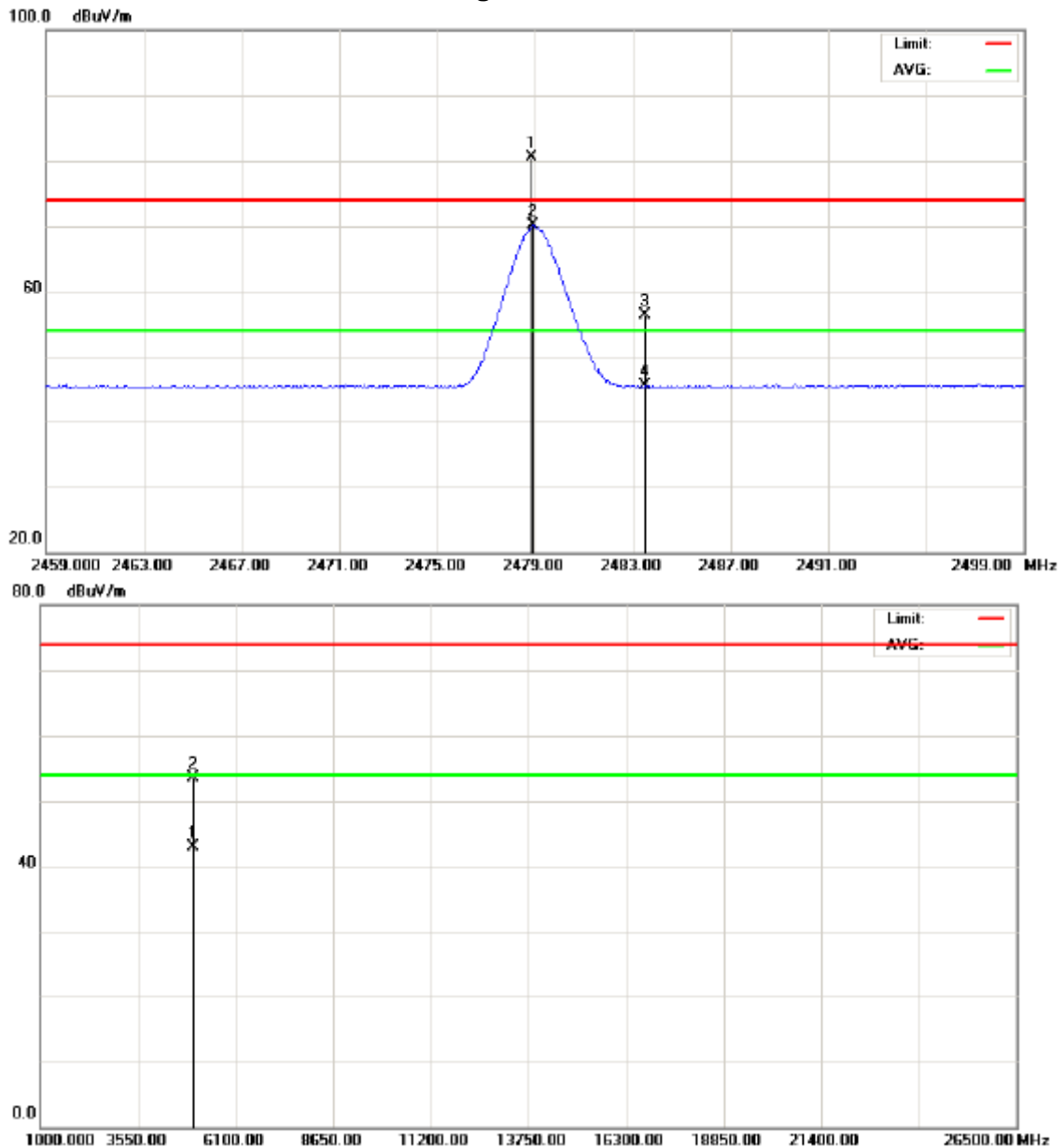




## (b) Antenna polarization: vertical

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2478.84	V	45.39	35.03	35.03	80.42	70.06	114.00	94.00	X/F
2483.50	V	21.22	10.40	35.04	56.26	45.44	74.00	54.00	X/E
4958.00	V	44.75	34.19	8.66	53.41	42.85	74.00	54.00	X/H

## Orthogonal Axis: X



## Remark :

- (1) '\*' means the worst case  
Measurement Level = Reading Level + Factor  
Factor=Ant Factor + Cable Loss
- (2) "F" denotes fundamental frequency; "H" denotes spurious frequency.  
"E" denotes band edge frequency.
- (3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

### 3.3.7 TEST RESULTS ((2400 – 2483.5 MHz)

EUT :	Pro Fit™ 2.4G Wireless Full-size Mouse	Model Name :	M01119-M
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2010-11-20
Test Mode :	2402MHz/2439MHz/2479MHz	Polarization :	Vertical& Horizontal
Test Power :	DC 3V		

		Peak	AV		Peak	AV	Peak	AV	
Freq.	Ant.Pol.	Reading		Ant./CL/	Actual FS		Limit3m		
(MHz)	(H/V)	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	NOTE
2402.00	V	42.61	34.28	34.81	77.42	69.09	114.00	94.00	CH01
2401.92	H	54.46	41.07	34.81	89.27	75.88	114.00	94.00	CH01
2439.00	V	47.00	35.63	34.91	81.91	70.54	114.00	94.00	CH08
2438.96	H	52.53	41.05	34.91	87.44	75.96	114.00	94.00	CH08
2478.84	V	45.39	35.03	35.03	80.42	70.06	114.00	94.00	CH16
2479.00	H	49.90	38.37	35.03	84.93	73.40	114.00	94.00	CH16

#### Remark :

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform .
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (3) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (5) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

### 3.3.8 TEST RESULTS ((Restricted Bands Requirements))

EUT :	Pro Fit™ 2.4G Wireless Full-size Mouse	Model Name :	M01119-M
Temperature :	24 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2010-11-20
Test Power :	DC 3V	Polarization :	Vertical& Horizontal
Test Mode :	TX CH 2402MHz/2479MHz The emission of the carrier radiated field strength is measured for (Peak and AV) as following: 1. The transmitter was then configured with the worst case antenna and setup to transmit at the lowest channel (CH01). Then the field strength was measured at 2310-2390 MHz. 2. The transmitter was configured with the worst case antenna and setup to transmit at the highest channel (CH16). Then the field strength was measured at 2483.5-2500 MHz.		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2390.00	V	19.13	8.91	34.77	53.90	43.68	74.00	54.00	CH01
2483.50	V	21.22	10.40	35.04	56.26	45.44	74.00	54.00	CH16

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2390.00	H	18.19	8.75	34.77	52.96	43.52	74.00	54.00	CH01
2483.50	H	24.27	10.45	35.04	59.31	45.49	74.00	54.00	CH16

Remark :

- (1) ‘\*’ means the worst case  
Measurement Level = Reading Level + Factor  
Factor=Ant Factor + Cable Loss
- (2) “F” denotes fundamental frequency; “H” denotes spurious frequency.  
“E” denotes band edge frequency.
- (3) Data of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

#### 4. BANDWIDTH TEST

##### 4.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting : RBW= 100KHz, VBW $\geq$ RBW, Sweep time = Auto.

##### 4.2 DEVIATION FROM STANDARD

No deviation.

##### 4.3 TEST SETUP

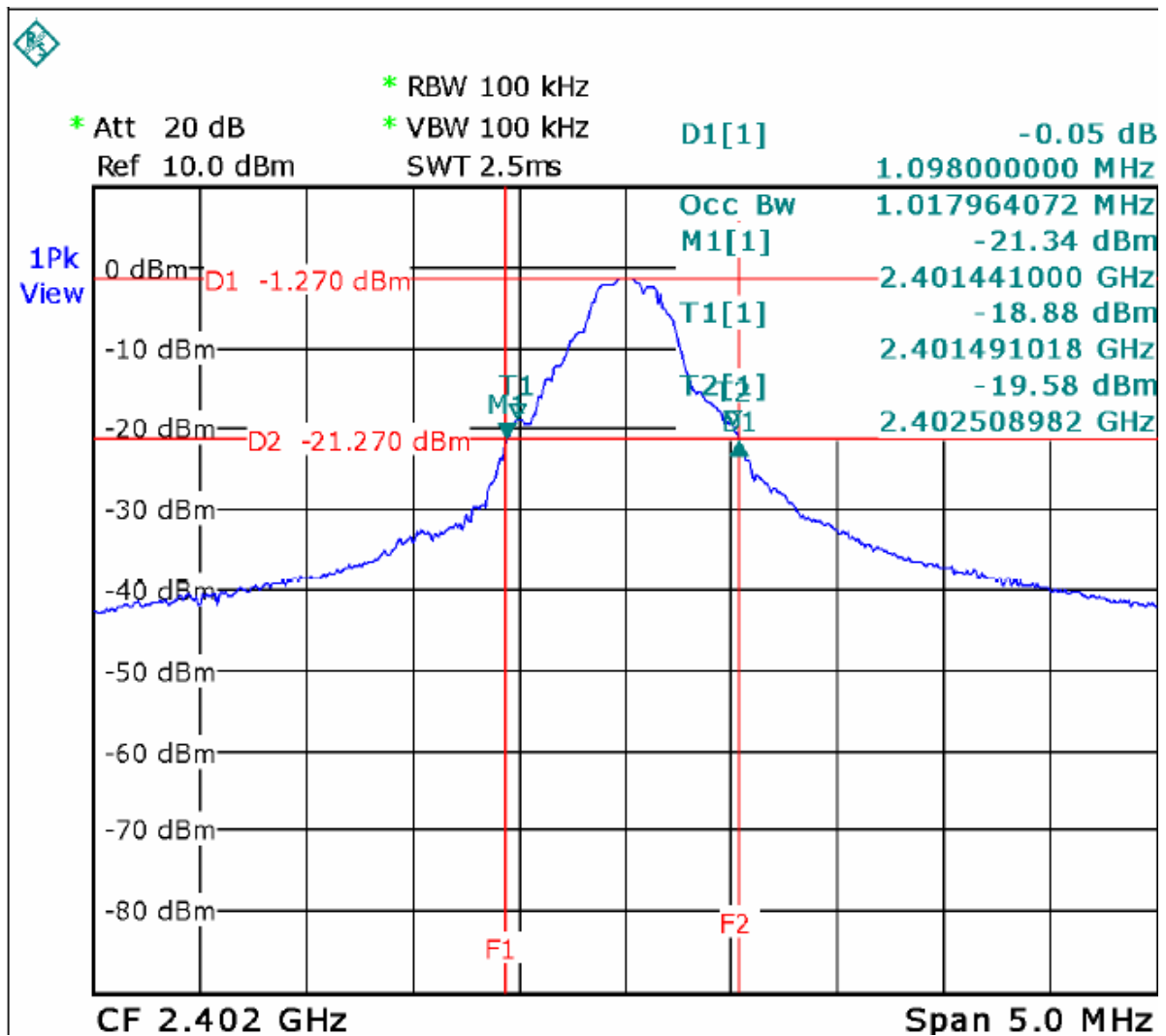


#### 4.4 TEST RESULTS

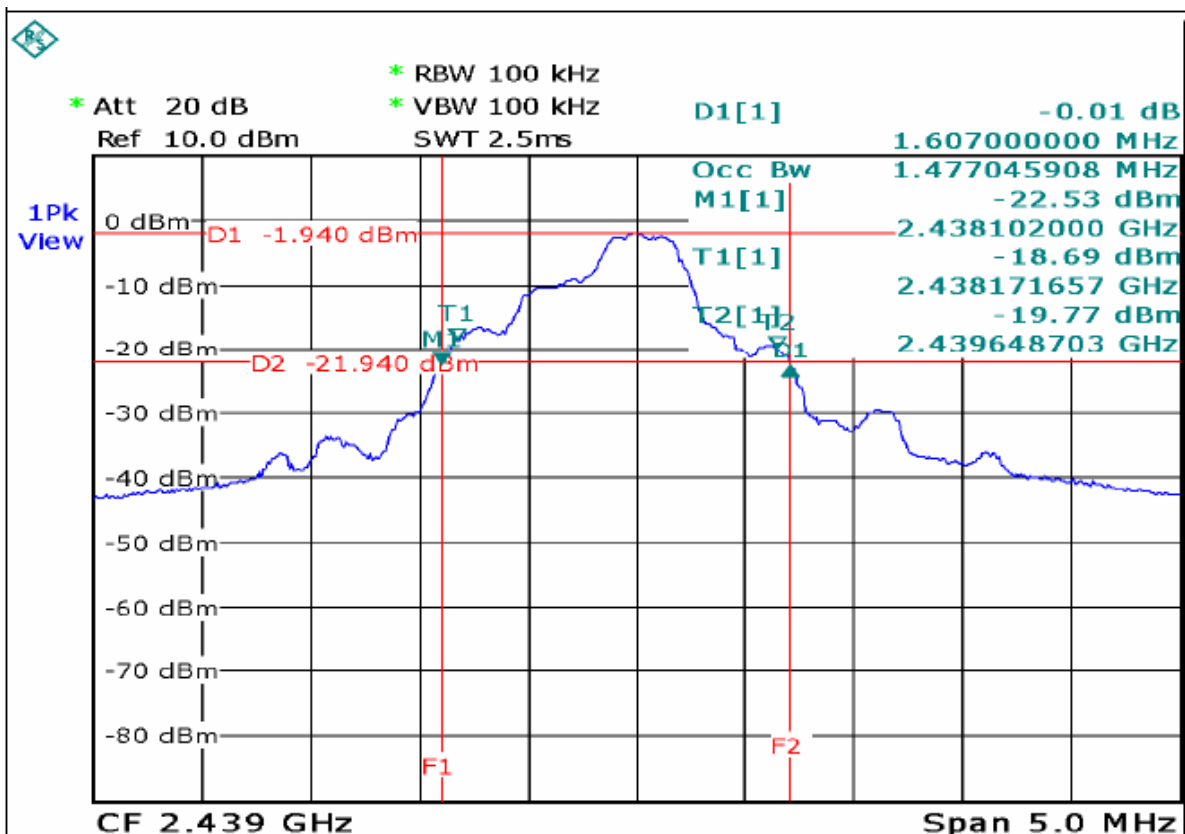
EUT :	Pro Fit™ 2.4G Wireless Full-size Mouse	Model Name :	M01119-M
Temperature :	26 °C	Relative Humidity :	53%
Pressure :	1020 hPa	Test Power :	DC 3V
Test Mode :	TX CH 01/08/16		

Test Channel	Frequency (MHz)	20 dBc Bandwidth (MHz)	99% Bandwidth (MHz)
CH01	2402	1.098	1.02
CH08	2439	1.607	1.477
CH16	2479	2.006	1.886

The Lowest Channel:2402MHz



### The Middle Channel:2439MHz



### The Highest Channel:2479MHz

