



Product Name : 2.4GHz Mouse

Model No. : N740, WTU-M03BK, WTU-M03RD

FCC ID. : O62WTU-M03

Applicant : Darfon Electronics Corp.

Address: 6, Feng-Shu Tsuen, Gueishan, Taoyuan 333,

Taiwan, R.O.C.

Date of Receipt: July. 18, 2006

Issued Date : July. 26, 2006

Report No. : 067L116-RF-US-P07V01

The Test Results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation. This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Page: 1 of 28 Version: 1.0



Test Report Certification

Issued Date: July. 26, 2006

Report No. : 067L116-RF-US-P07V01



Product Name : 2.4GHz Mouse

Applicant : Darfon Electronics Corp.

Address : 6, Feng-Shu Tsuen, Gueishan, Taoyuan 333, Taiwan, R.O.C.

Manufacturer : Darfon Eletronics (Suzhou) Co.,Ltd.

Model No. : N740, WTU-M03BK, WTU-M03RD

Rated Voltage : AC 120V/60Hz

Working Voltage : Battery 1.5V*2

Trade Name : ELECOM

Applicable Standard: FCC Part 15 Subpart C Paragraph 15.249: 2005

ANSI C63.4: 2003

Test Result : Complied

NVLAP Lab Code : 200347-0

The Test Results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation. This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Documented By :

Leven Huang

Tested By :

Tom Hsieh

Approved By

Heart Chen

George Chen

CNLA 0914

Page: 2 of 28 Version:1.0



TABLE OF CONTENTS

	Description	n	Page
1.	GENE	RAL INFORMATION	
	1.1.	EUT Description	
	1.2.	Operation Description	(
	1.3.	Tested System Details	
	1.4.	Configuration of Tested System	
	1.5.	EUT Exercise Software	
	1.6.	Test Facility	
2.	Condu	cted Emission	
	2.1.	Test Equipment	
	2.2.	Test Setup	
	2.3.	Limits	
	2.4.	Test Procedure	10
	2.5.	Uncertainty	10
	2.6.	Test Result of Conducted Emission	1
3.	Radiat	ed Emission	12
	3.1.	Test Equipment	12
	3.2.	Test Setup	12
	3.3.	Limits	13
	3.4.	Test Procedure	14
	3.5.	Uncertainty	14
	3.6.	Test Result of Radiated Emission	15
4.	Band I	Edge	20
	4.1.	Test Equipment	20
	4.2.	Test Setup	20
	4.3.	Limit	2
	4.4.	Test Procedure	2
	4.5.	Uncertainty	2
	4.6.	Test Result of Band Edge	22
5.	EMI R	Reduction Method During Compliance Testing	20
		nent 1: EUT Test Photographs	
	Attachn	nent 2: EUT Detailed Photographs	



1. GENERAL INFORMATION

1.1. EUT Description

Product Name : 2.4GHz Mouse

Trade Name : ELECOM

FCC ID. : O62WTU-M03

Model No. : N740, WTU-M03BK, WTU-M03RD

Frequency Range : 2402 - 2479MHz

Number of Channels : 78 Channel Separation : 1MHz

Type of Modulation : DSSS / GFSK

Antenna Type : Printed on the PCB

Channel Control : Manual
Antenna Gain : -10.02dBi

Frequency of each Channel

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 01:	2402 MHz	Channel 21:	2422 MHz	Channel 41:	2442 MHz	Channel 61:	2462 MHz
Channel 02:	2403 MHz	Channel 22:	2423 MHz	Channel 42:	2443 MHz	Channel 62:	2463 MHz
Channel 03:	2404 MHz	Channel 23:	2424 MHz	Channel 43:	2444 MHz	Channel 63:	2464 MHz
Channel 04:	2405 MHz	Channel 24:	2425 MHz	Channel 44:	2445 MHz	Channel 64:	2465 MHz
Channel 05:	2406 MHz	Channel 25:	2426 MHz	Channel 45:	2446 MHz	Channel 65:	2466 MHz
Channel 06:	2407 MHz	Channel 26:	2427 MHz	Channel 46:	2447 MHz	Channel 66:	2467 MHz
Channel 07:	2408 MHz	Channel 27:	2428 MHz	Channel 47:	2448 MHz	Channel 67:	2468 MHz
Channel 08:	2409 MHz	Channel 28:	2429 MHz	Channel 48:	2449 MHz	Channel 68:	2469 MHz
Channel 09:	2410 MHz	Channel 29:	2430 MHz	Channel 49:	2450 MHz	Channel 69:	2470 MHz
Channel 10:	2411 MHz	Channel 30:	2431 MHz	Channel 50:	2451 MHz	Channel 70:	2471 MHz
Channel 11:	2412 MHz	Channel 31:	2432 MHz	Channel 51:	2452 MHz	Channel 71:	2472 MHz
Channel 12:	2413 MHz	Channel 32:	2433 MHz	Channel 52:	2453 MHz	Channel 72:	2473 MHz
Channel 13:	2414 MHz	Channel 33:	2434 MHz	Channel 53:	2454 MHz	Channel 73:	2474 MHz
Channel 14:	2415 MHz	Channel 34:	2435 MHz	Channel 54:	2455 MHz	Channel 74:	2475 MHz
Channel 15:	2416 MHz	Channel 35:	2436 MHz	Channel 55:	2456 MHz	Channel 75:	2476 MHz
Channel 16:	2417 MHz	Channel 36:	2437 MHz	Channel 56:	2457 MHz	Channel 76:	2477 MHz
Channel 17:	2418 MHz	Channel 37:	2438 MHz	Channel 57:	2458 MHz	Channel 77:	2478 MHz
Channel 18:	2419 MHz	Channel 38:	2439 MHz	Channel 58:	2459 MHz	Channel 78:	2479 MHz
Channel 19:	2420 MHz	Channel 39:	2440 MHz	Channel 59:	2460 MHz		
Channel 20:	2421 MHz	Channel 40:	2441 MHz	Channel 60:	2461 MHz		

Page: 4 of 28 Version: 1.0



Note:

- 1. This device is a 2.4GHz Mouse with a 2.4GHz transceiver.
- 2. The EUT has three models for different marketing requirement.
- 3. These tests are conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.249.
- 4. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.

EMI Test Mode	Mode 1: Transmitter
Livii iest ivioue	Wiode 1. Hansimitei

Page: 5 of 28 Version: 1.0



1.2. Operation Description

The EUT is 2.4GHz Mouse. The operation frequency is 2.402GHz to 2.479GHz. Seventy-eight manually selectable channels are built in the EUT. The signals modulated by DSSS / GFSK are transmitted from the printed antenna on the PCB of the EUT to a USB dongle (receiver). DC 3V shall be provided for EUT operation.

1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

		Product	Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
(1)	N/A	N/A	N/A	N/A	N/A	N/A

Signal Cable Type	Signal Cable Description
(A) N/A	N/A

1.4. Configuration of Tested System

	No. of the Control of
	EUT
1	

Page: 6 of 28 Version: 1.0



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in section 1.4.
- (2) Install the batteries of the EUT.
- (3) Press the right button two times to start continuous transmitting.
- (4) Press the left button to switch the channel.

Page: 7 of 28 Version:1.0



1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

Site Description: File on

Federal Communications Commission

FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046

Reference 31040/SIT1300F2

Accreditation on NVLAP NVLAP Lab Code: 200533-0

Site Name: Quietek Corporation

Site Address: No. 5-22, Ruei-Shu Valley, Ruei-Ping Tsuen,

Lin-Kou Shiang, Taipei,

Taiwan, R.O.C.

TEL: 886-2-8601-3788 / FAX: 886-2-8601-3789

E-Mail: service@quietek.com







Page: 8 of 28 Version: 1.0



2. Conducted Emission

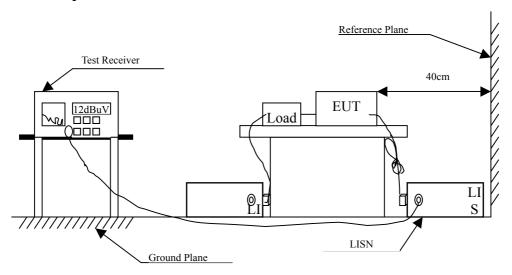
2.1. Test Equipment

The following test equipment are used during the conducted emission test:

Item	Instrument	Manufacturer	Type No./Serial No	Last Cal.	Remark
1	Test Receiver	R & S	ESCS 30/825442/17	May, 2006	
2	L.I.S.N.	R & S	ESH3-Z5/825016/6	May, 2006	EUT
3	L.I.S.N.	Kyoritsu	KNW-407/8-1420-3	May, 2006	Peripherals
4	Pulse Limiter	R & S	ESH3-Z2	May, 2006	
5	No.4 Shielded Room	m		N/A	

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit						
Frequency	Limits					
MHz	QP	AV				
0.15 - 0.50	66-56	56-46				
0.50-5.0	56	46				
5.0 - 30	60	50				

Remarks: In the above table, the tighter limit applies at the band edges.

Page: 9 of 28 Version: 1.0



2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Uncertainty

 \pm 2.26 dB

Page: 10 of 28 Version:1.0



2.6. Test Result of Conducted Emission

The EUT is powered by batteries. This test item is not performed.

Page: 11 of 28 Version: 1.0



3. Radiated Emission

3.1. Test Equipment

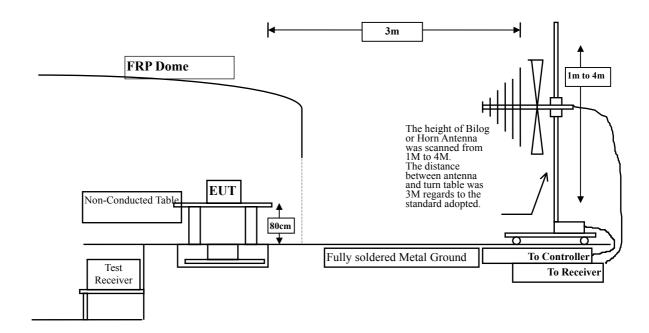
The following test equipment are used during the radiated emission test:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 1		Test Receiver	R & S	ESCS 30 / 825442/14	May, 2006
		Spectrum Analyzer	Advantest	R3261C / 71720140	May, 2006
		Pre-Amplifier	HP	8447D/3307A01812	May, 2006
		Bilog Antenna	Chase	CBL6112B / 12452	Sep., 2005
		Horn Antenna	EM	EM6917 / 103325	May, 2006
		Test Receiver	R & S	ESCS 30 / 825442/17	May, 2006
Site # 2		Spectrum Analyzer	Advantest	R3261C / 71720609	May, 2006
		Pre-Amplifier	HP	8447D/3307A01814	May, 2006
		Bilog Antenna	Chase	CBL6112B / 2455	Sep., 2005
		Horn Antenna	EM	EM6917 / 103325	May, 2006
Site # 3	X	Test Receiver	R & S	ESI 26 / 838786 / 004	May, 2006
	X	Test Receiver	R & S	ESCS 30 / 825442/14	May, 2006
	X	Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2006
	X	Bilog Antenna	SCHAFFNER	CBL6112B / 2697	May, 2006
	X	Horn Antenna	ETS	3115 / 0005-6160	July, 2006
	X	Pre-Amplifier	QTK	QTK-AMP-01 / 0001	July, 2006

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

2. Mark "X" test instruments are used to measure the final test results.

3.2. Test Setup



Page: 12 of 28 Version:1.0



3.3. Limits

> Fundamental and Harmonics Emission Limits

FCC Part 15 Subpart B Paragraph 15.249 Limits						
Frequency	Field Strength	of Fundamental	Field Strength of Harmonics			
MHz	(mV/m @3m)	(dBuV/m @3m)	(uV/m @3m)	(dBuV/m @3m)		
902-928	50	94	500	54		
2400-2483.5	50	94	500	54		
5725-5875	50	94	500	54		

Remarks: 1. RF Voltage $(dBuV/m) = 20 \log RF Voltage (uV/m)$

2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

➤ General Radiated Emission Limits

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 paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart B Paragraph 15.209 Limits						
Frequency MHz	uV/m @3m	dBuV/m@3m				
30-88	100	40				
88-216	150	43.5				
216-960	200	46				
Above 960	500	54				

Remarks: 1. RF Voltage $(dBuV/m) = 20 \log RF Voltage (uV/m)$

- 2. In the Above Table, the tighter limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

Page: 13 of 28 Version: 1.0



3.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2003 on radiated measurement.

Radiated emissions were invested over the frequency range from 30MHz to1GHz using a receiver bandwidth of 120kHz. Radiated was performed at an antenna to EUT distance of 3 meters.

The frequency range from 30MHz to 10th harminics is checked.

3.5. Uncertainty

- ± 3.9 dB above 1GHz
- \pm 3.19 dB below 1GHz

Page: 14 of 28 Version: 1.0



3.6. Test Result of Radiated Emission

Product : 2.4GHz Mouse

Test Item : Fundamental Radiated Emission

Test Site : No.3OATS

Test Mode : Mode 1: Transmitter

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Average Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
Channel 00					
2402.000	5.027	83.611	88.638	-25.362	114.000
Channel 40					
2441.000	5.246	82.281	87.527	-26.473	114.000
Channel 78					
2479.000	5.470	80.842	86.312	-27.688	114.000
Average Detector:					
Channel 00					
2402.000	5.027	82.602	87.629	-6.371	94.000
Channel 40					
2441.000	5.246	81.302	86.548	-7.452	94.000
Channel 78					
2479.000	5.470	79.760	85.230	-8.770	94.000
Vertical					
Peak Detector:					
Channel 00	5.025	00 (11	00.620	25.262	114.000
2402.000	5.027	83.611	88.638	-25.362	114.000
Channel 40	5.246	74.450	70.606	24.204	114.000
2441.000	5.246	74.450	79.696	-34.304	114.000
Channel 78	5 470	75 161	80.631	22.260	114.000
2479.000	5.470	75.161	80.031	-33.369	114.000
Average Detector: Channel 00					
2402.000	5.027	75.678	80.705	-13.295	94.000
Channel 40	3.021	13.070	00.703	-13.293	2 1 .000
2441.000	5.246	73.220	78.466	-15.534	94.000
Channel 78	J.2 TO	13.220	70.700	15.55	71.000
2479.000	5.470	72.925	78.395	-15.605	94.000
Note:		, _ 1, 2 _ 2			2 4 4

Note:

- 1. Emission Level = Reading Level + Correct Factor.
- 2. Correct Factor = Antenna Factor + Cable Loss PreAMP.

Page: 15 of 28 Version:1.0



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmitter (2402MHz)

Correct	Reading	Measurement	Margin	Average
				Limit
dB	dBuV	dBuV/m	dB	dBuV/m
				_
12.164	38.838	51.001	-22.999	74.000
18.363	37.981	56.344	-17.656	74.000
23.130	37.270	60.400	-13.600	74.000
18.363	29.358	47.721	-6.279	54.000
23.130	27.300	50.430	-3.570	54.000
12.164	39.140	51.303	-22.697	74.000
18.363	38.441	56.804	-17.196	74.000
23.130	37.023	60.153	-13.847	74.000
18.363	29.314	47.677	-6.323	54.000
23.130	27.400	50.530	-3.470	54.000
	Factor dB 12.164 18.363 23.130 18.363 23.130 12.164 18.363 23.130	Factor dB Level dBuV 12.164 38.838 18.363 37.981 23.130 37.270 18.363 29.358 23.130 27.300 12.164 39.140 18.363 38.441 23.130 37.023	Factor dB Level dBuV Level dBuV/m 12.164 38.838 51.001 18.363 37.981 56.344 23.130 37.270 60.400 18.363 29.358 47.721 23.130 27.300 50.430 12.164 39.140 51.303 18.363 38.441 56.804 23.130 37.023 60.153 18.363 29.314 47.677	Factor dB Level dBuV Level dBuV/m dB 12.164 38.838 51.001 -22.999 18.363 37.981 56.344 -17.656 23.130 37.270 60.400 -13.600 18.363 29.358 47.721 -6.279 23.130 27.300 50.430 -3.570 12.164 39.140 51.303 -22.697 18.363 38.441 56.804 -17.196 23.130 37.023 60.153 -13.847 18.363 29.314 47.677 -6.323

Note:

- 1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
- 2. Receiver setting (Peak Detector): RBW:1MHz; VBW:1MHz; Span:100MHz •
- 3. Receiver setting (AVG Detector): RBW:1MHz; VBW:30Hz; Span:20MHz •
- 4. Emission Level = Reading Level + Correct Factor.
- 5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Page: 16 of 28 Version: 1.0



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmitter (2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Average Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4882.000	12.281	39.657	51.937	-22.063	74.000
7323.000	18.756	37.956	56.712	-17.288	74.000
9764.000	23.110	38.681	61.791	-12.209	74.000
Average Detector					
7323.000	18.756	28.992	47.748	-6.252	54.000
9764.000	23.110	27.090	50.200	-3.800	54.000
Vertical					
Peak Detector:					
4882.000	12.281	38.968	51.248	-22.752	74.000
7323.000	18.756	39.690	58.446	-15.554	74.000
9764.000	23.110	37.924	61.034	-12.966	74.000
Average Detector					
4882.000	12.281	28.811	41.091	-12.909	54.000
7323.000	18.756	29.071	47.827	-6.173	54.000
9764.000	23.110	27.040	50.150	-3.850	54.000

Note:

- 1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
- 2. Receiver setting (Peak Detector): RBW:1MHz; VBW:1MHz; Span:100MHz •
- 3. Receiver setting (AVG Detector): RBW:1MHz; VBW:30Hz; Span:20MHz •
- 4. Emission Level = Reading Level + Correct Factor.
- 5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmitter (2479MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Average Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4958.000	12.397	39.360	51.756	-22.244	74.000
7437.000	19.132	38.833	57.965	-16.035	74.000
9916.000	23.095	39.094	62.188	-11.812	74.000
D 4 4					
Average Detector					
7437.000	19.132	29.069	48.201	-5.799	54.000
9916.000	23.095	26.815	49.910	-4.090	54.000
Vertical					
Peak Detector:					
4958.000	12.397	38.984	51.380	-22.620	74.000
7437.000	19.132	39.431	58.563	-15.437	74.000
9916.000	23.095	37.861	60.955	-13.045	74.000
Average Detector					
_	10 122	20.495	40 (17	5 202	54,000
7437.000	19.132	29.485	48.617	-5.383	54.000
9916.000	23.095	26.655	49.750	-4.250	54.000

Note:

- 1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
- 2. Receiver setting (Peak Detector): RBW:1MHz; VBW:1MHz; Span:100MHz •
- 3. Receiver setting (AVG Detector): RBW:1MHz; VBW:30Hz; Span:20MHz •
- 4. Emission Level = Reading Level + Correct Factor.
- 5. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Page: 18 of 28 Version: 1.0



Test Item : General Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmitter (2441MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
100.300	12.412	14.800	27.212	-16.288	43.500
205.100	9.878	16.600	26.478	-17.022	43.500
282.200	13.568	12.400	25.968	-20.032	46.000
357.300	15.198	16.700	31.898	-14.102	46.000
380.100	15.603	9.800	25.404	-20.596	46.000
704.100	20.520	5.200	25.719	-20.281	46.000
Vertical					
100.300	10.664	17.100	27.764	-15.736	43.500
112.400	11.958	19.300	31.258	-12.242	43.500
141.500	11.208	15.500	26.708	-16.792	43.500
248.200	13.012	17.100	30.112	-15.888	46.000
284.600	13.791	15.400	29.191	-16.809	46.000
342.800	14.660	16.600	31.260	-14.740	46.000

Note:

- 1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
- 2. "means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor

Page: 19 of 28 Version: 1.0



4. Band Edge

4.1. Test Equipment

The following test equipments are used during the band edge tests:

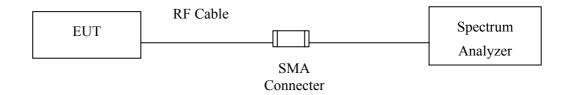
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Test Receiver	R & S	ESI 26 / 838786 / 004	May, 2006
X	Test Receiver	R & S	ESCS 30 / 825442/14	May, 2006
X	Spectrum Analyzer	Advantest	R3261C / 71720140	May, 2006
X	Pre-Amplifier	HP	8447D/3307A01812	May, 2006
X	Bilog Antenna	Chase	CBL6112B / 12452	Sep., 2005
X	Horn Antenna	EM	EM6917 / 103325	May, 2006

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

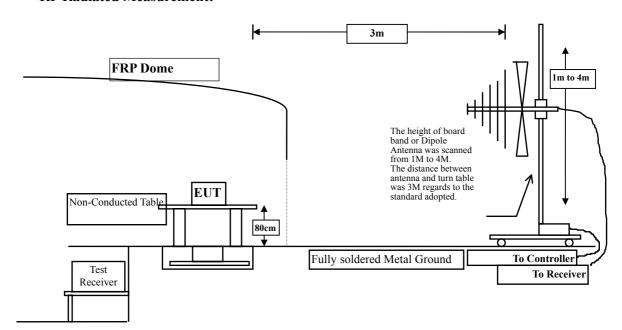
2. Mark "X" test instruments are used to measure the final test results.

4.2. Test Setup

RF Conducted Measurement:



RF Radiated Measurement:



Page: 20 of 28 Version: 1.0



4.3. Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 50 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

4.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2003 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCS 30)is 120 kHz, above 1GHz are 1 MHz.

4.5. Uncertainty

Conducted is ± 1.27 dB

Radiated is \pm 3.9 dB..



4.6. Test Result of Band Edge

Product : 2.4GHz Mouse
Test Item : Band Edge Data
Test Site : No.3 OATS

Test Mode : Mode 1: Transmitter (2402MHz)

RF Radiated Measurement

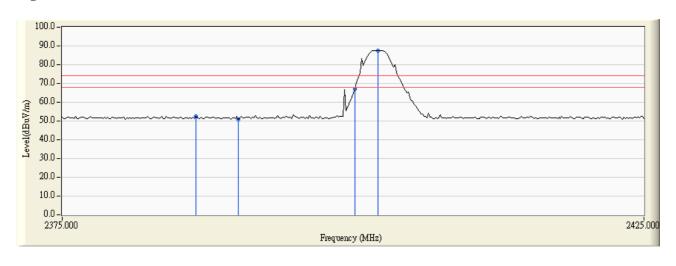
Channel No.	Channel No. Frequency (MHz)		Result
01	<2400	>20	Pass

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01(Peak)	2386.375	4.931	47.755	52.686	74.00	54.00	Pass
01 (Average)	1	-			74.00	54.00	Pass

Figure Channel 01:

Horizontal





Product : 2.4GHz Mouse
Test Item : Band Edge Data
Test Site : No.3 OATS

Test Mode : Mode 1: Transmitter (2402MHz)

RF Radiated Measurement

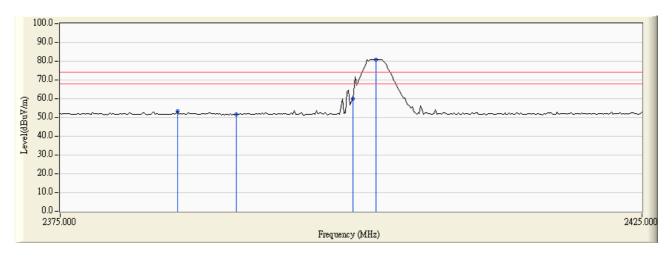
Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
01	<2400	>20	Pass

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2385.000	4.921	48.227	53.149	74.00	54.00	Pass
01(Average)					74.00	54.00	Pass

Figure Channel 01:

Vertical





Product : 2.4GHz Mouse
Test Item : Band Edge Data
Test Site : No.3 OATS

Test Mode : Mode 1: Transmitter (2479MHz)

RF Radiated Measurement

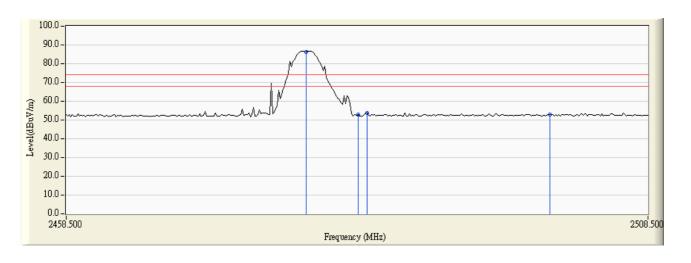
Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
78	>2483.5	>20	Pass

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
78(Peak)	2484.250	5.501	48.413	53.914	74.00	54.00	Pass
78(Average)					74.00	54.00	Pass

Figure Channel 78:

Horizontal





Product : 2.4GHz Mouse
Test Item : Band Edge Data
Test Site : No.3 OATS

Test Mode : Mode 1: Transmitter (2479MHz)

RF Radiated Measurement

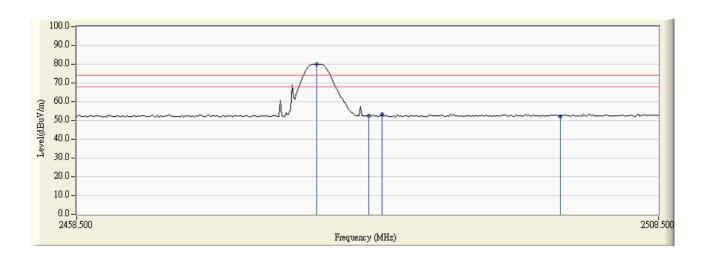
Channel No.	Channel No. Frequency (MHz)		Result	
78	>2483.5	>20	Pass	

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
78(Peak)	2484.625	5.504	47.829	53.332	74.00	54.00	Pass
78(Average)					74.00	54.00	Pass

Figure Channel 78:

Vertical



Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Page: 25 of 28 Version: 1.0



5. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Page: 26 of 28 Version:1.0