Test Report

Product Name	Notebook
Model No.	MS-1719, GX700, MS-171A, GX710, MS-171B, ER710
FCC ID.	I4L-MS6837D7

Applicant	MICRO-STAR INTL Co., LTD.
Address	No. 69, Li-De St., Jung-He City, Taipei Hsien, Taiwan, R.O.C.

Date of Receipt	Apr. 17, 2007
Issued Date	June 21, 2007
Report No.	074L111-RFUSP06V01

Test Report Certification

Issued Date: June 21, 2007
Report No.: 074L111-RFUSP06V01

Product Name	Notebook
Applicant	MICRO-STAR INTL Co., LTD.
Address	No. 69, Li-De St., Jung-He City, Taipei Hsien, Taiwan, R.O.C.
Manufacturer	MICRO-STAR INTL Co., LTD.
Model No.	MS-1719, GX700, MS-171A, GX710, MS-171B, ER710
FCC ID.	I4L-MS6837D7
Rated Voltage	AC 120V/60Hz
Working Voltage	DC 5V
Trade Name	MSI
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2006 ANSI C63.4: 2003 NVLAP Lab Code: 200533-0
Test Result	Complied

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 : (Senior Engineering Adm. Specialist / Anita Chou)

Tested By : (Engineer / Tom Hsieh)

Approved By : (President / Gene Chang)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Notebook
Trade Name	MSI
FCC ID.	I4L-MS6837D7
Model No.	MS-1719, GX700, MS-171A, GX710, MS-171B, ER710
Frequency Range	2402 - 2480MHz
Channel Number	79
Type of Modulation	1Mbps(GFSK)/ 2Mbps(π /4 DQPSK)/ 3Mbps(8DPSK)
Antenna type	Connector / Printed
Channel Control	Auto
Antenna Gain	Refer to the table “Antenna List”
Power Adapter	MFR: LI SHIN, M/N: LSE0202C1990 Cable Out: Non-Shielded, 1.8m with one ferrite core bonded. Power Cord: Non-Shielded, 1.8m

Antenna List

No.	Manufacturer	Part No.	Peak Gain
1	HIGH-TEK	S79-1800470-H39	-2.08dBi for 2.4 GHz
2	MSI	MS-6837D (Printed Antenna)	-4.11dBi for 2.4 GHz

Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 00:	2402 MHz	Channel 20:	2422 MHz	Channel 40:	2442 MHz	Channel 60:	2462 MHz
Channel 01:	2403 MHz	Channel 21:	2423 MHz	Channel 41:	2443 MHz	Channel 61:	2463 MHz
Channel 02:	2404 MHz	Channel 22:	2424 MHz	Channel 42:	2444 MHz	Channel 62:	2464 MHz
Channel 03:	2405 MHz	Channel 23:	2425 MHz	Channel 43:	2445 MHz	Channel 63:	2465 MHz
Channel 04:	2406 MHz	Channel 24:	2426 MHz	Channel 44:	2446 MHz	Channel 64:	2466 MHz
Channel 05:	2407 MHz	Channel 25:	2427 MHz	Channel 45:	2447 MHz	Channel 65:	2467 MHz
Channel 06:	2408 MHz	Channel 26:	2428 MHz	Channel 46:	2448 MHz	Channel 66:	2468 MHz
Channel 07:	2409 MHz	Channel 27:	2429 MHz	Channel 47:	2449 MHz	Channel 67:	2469 MHz
Channel 08:	2410 MHz	Channel 28:	2430 MHz	Channel 48:	2450 MHz	Channel 68:	2470 MHz
Channel 09:	2411 MHz	Channel 29:	2431 MHz	Channel 49:	2451 MHz	Channel 69:	2471 MHz
Channel 10:	2412 MHz	Channel 30:	2432 MHz	Channel 50:	2452 MHz	Channel 70:	2472 MHz
Channel 11:	2413 MHz	Channel 31:	2433 MHz	Channel 51:	2453 MHz	Channel 71:	2473 MHz
Channel 12:	2414 MHz	Channel 32:	2434 MHz	Channel 52:	2454 MHz	Channel 72:	2474 MHz
Channel 13:	2415 MHz	Channel 33:	2435 MHz	Channel 53:	2455 MHz	Channel 73:	2475 MHz
Channel 14:	2416 MHz	Channel 34:	2436 MHz	Channel 54:	2456 MHz	Channel 74:	2476 MHz
Channel 15:	2417 MHz	Channel 35:	2437 MHz	Channel 55:	2457 MHz	Channel 75:	2477 MHz
Channel 16:	2418 MHz	Channel 36:	2438 MHz	Channel 56:	2458 MHz	Channel 76:	2478 MHz
Channel 17:	2419 MHz	Channel 37:	2439 MHz	Channel 57:	2459 MHz	Channel 77:	2479 MHz
Channel 18:	2420 MHz	Channel 38:	2440 MHz	Channel 58:	2460 MHz	Channel 78:	2480 MHz
Channel 19:	2421 MHz	Channel 39:	2441 MHz	Channel 59:	2461 MHz		

The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals

Frequency hopping spread spectrum systems are not required to employ all available hopping channels during each transmission. The transmitter is presented with a continuous data stream. In addition, a system employing short transmission bursts must comply with the definition of a frequency hopping system and must distribute its 79 channels and over the minimum number of hopping channels (75 channels).

The incorporation of intelligence within a frequency hopping spread spectrum system that permits the system to recognize other users within the spectrum band so that it individually and independently chooses and adapts its hop sets to avoid hopping on occupied channels is permitted. The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

Note:

1. This device is a Notebook with a built-in 2.4GHz Bluetooth 2.0+EDR(Enhanced Data Rate) transceiver.
2. The EUT is including six models for different marketing requirement.
3. These tests were conducted on a sample for the purpose of demonstrating compliance of Bluetooth transmitter with Part 15 Subpart C Paragraph 15.247 for spread spectrum devices.
4. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
5. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.

1.2. Operational Description

The EUT is an Notebook with a built-in 2.4GHz Bluetooth 2.0+EDR(Enhanced Data Rate) transceiver. The number of the channels is 79 in 2402-2480MHz. The device adapts the frequency hopping spread spectrum modulation. The antenna is connector-type and provides diversity function to improve the receiving function.

This device provides wireless technology that revolutionizes personal connectivity. It is the solution for the seamless integration of Bluetooth technology into personal computer enabling short-range wireless connections between desktop/laptop computers, Bluetooth-enabled peripherals, and portable handheld devices.

Test Mode	Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1
	Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1
	Mode 3: Transmitter -1Mbps(GFSK)- Antenna 2
	Mode 4: Transmitter -3Mbps(8DPSK)-Antenna 2

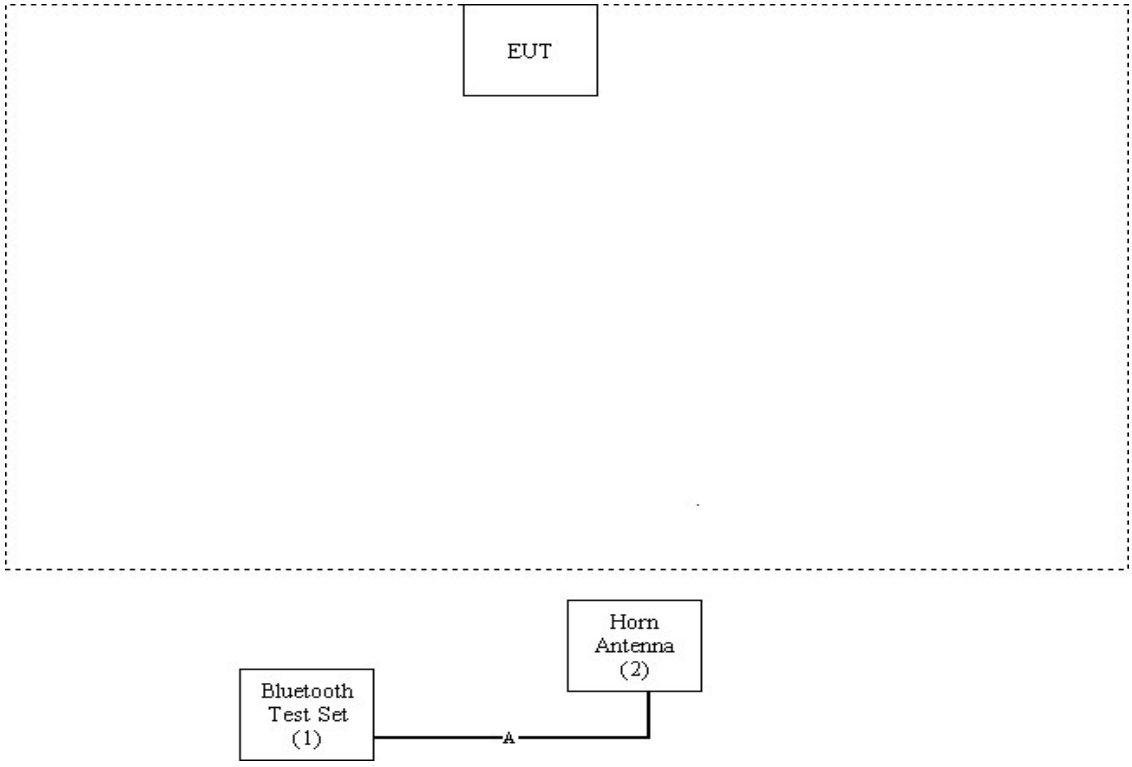
1.3. Tested System Details

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.	Power Cord
(1)	Bluetooth Test Set	Anritsu	MT8852B	6K00006092	Non-Shielded, 1.8m
(2)	Horn Antenna	Schwarzbeck	BBHA9120D	305	N/A

Signal Cable Type		Signal cable Description
A.	RF Cable	Shielded, 1.5m

1.4. Configuration of Tested System



1.5. EUT Exercise Software

1 Setup the EUT and simulators as shown on 1.4.

2 Turn on the power of all equipment.

3 Messages will be transmitted and received through EUT.

4 Test is based on the mandatory continuous transmitter.

5 Repeat the above procedure (3) to (4).

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	30-65
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
FCC Accreditation Number: TW1014

2. Conducted Emission

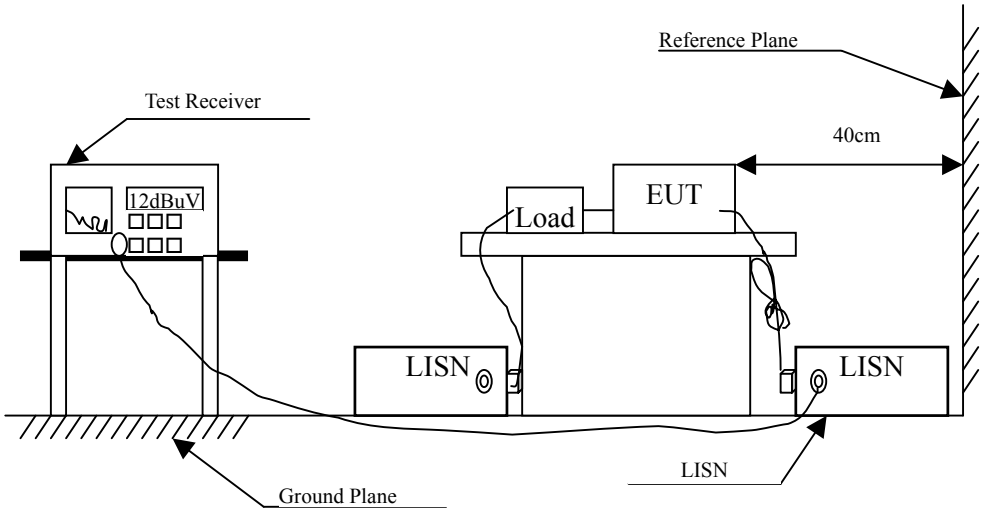
2.1. Test Equipment

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, 2007	
2	L.I.S.N.	R & S	ESH3-Z5/825016/6	May, 2007	EUT
3	L.I.S.N.	Kyoritsu	KNW-407/8-1420-3	May, 2007	Peripherals
4	Pulse Limiter	R & S	ESH3-Z2	May, 2007	
5	No.1 Shielded Room			N/A	

Note: All instruments are calibrated every one year.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit		
Frequency MHz	Limits	
	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.

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 refer 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 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

± 2.26 dB

2.6. Test Result of Conducted Emission

Product : Notebook
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1 (2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.248	0.351	39.870	40.221	-22.979	63.200
0.498	0.300	40.860	41.160	-14.897	56.057
1.064	0.320	24.280	24.600	-31.400	56.000
1.927	0.340	23.670	24.010	-31.990	56.000
3.736	0.390	21.620	22.010	-33.990	56.000
21.662	1.130	28.840	29.970	-30.030	60.000
Average					
0.248	0.351	35.430	35.781	-17.419	53.200
0.498	0.300	40.080	40.380	-5.677	46.057
1.064	0.320	13.860	14.180	-31.820	46.000
1.927	0.340	19.540	19.880	-26.120	46.000
3.736	0.390	11.170	11.560	-34.440	46.000
21.662	1.130	25.150	26.280	-23.720	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Notebook
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1 (2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.185	0.300	47.100	47.400	-17.600	65.000
0.373	0.310	32.540	32.850	-26.779	59.629
0.498	0.310	37.370	37.680	-18.377	56.057
1.056	0.320	21.320	21.640	-34.360	56.000
2.287	0.356	20.330	20.686	-35.314	56.000
21.564	0.960	29.630	30.590	-29.410	60.000
Average					
0.185	0.300	38.100	38.400	-16.600	55.000
0.373	0.310	30.360	30.670	-18.959	49.629
0.498	0.310	32.750	33.060	-12.997	46.057
1.056	0.320	6.170	6.490	-39.510	46.000
2.287	0.356	10.450	10.806	-35.194	46.000
21.564	0.960	26.690	27.650	-22.350	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Notebook
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1 (2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.173	0.678	37.770	38.448	-26.895	65.343
0.271	0.300	33.800	34.100	-28.443	62.543
0.431	0.300	26.470	26.770	-31.201	57.971
0.923	0.310	19.180	19.490	-36.510	56.000
5.392	0.446	20.240	20.686	-39.314	60.000
19.720	1.090	29.140	30.230	-29.770	60.000
Average					
0.173	0.678	22.670	23.348	-31.995	55.343
0.271	0.300	18.780	19.080	-33.463	52.543
0.431	0.300	13.590	13.890	-34.081	47.971
0.923	0.310	11.400	11.710	-34.290	46.000
5.392	0.446	14.320	14.766	-35.234	50.000
19.720	1.090	23.670	24.760	-25.240	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Notebook
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1 (2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.166	0.300	41.440	41.740	-23.803	65.543
0.279	0.300	34.460	34.760	-27.554	62.314
0.584	0.310	25.000	25.310	-30.690	56.000
3.545	0.390	21.830	22.220	-33.780	56.000
5.341	0.420	23.270	23.690	-36.310	60.000
18.490	0.900	27.630	28.530	-31.470	60.000
Average					
0.166	0.300	29.000	29.300	-26.243	55.543
0.279	0.300	18.450	18.750	-33.564	52.314
0.584	0.310	18.410	18.720	-27.280	46.000
3.545	0.390	16.340	16.730	-29.270	46.000
5.341	0.420	17.860	18.280	-31.720	50.000
18.490	0.900	22.270	23.170	-26.830	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Notebook
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 3: Transmitter -1Mbps(GFSK)- Antenna 2 (2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.236	0.203	36.020	36.223	-27.320	63.543
0.293	0.214	36.630	36.844	-25.070	61.914
0.358	0.214	34.830	35.044	-25.013	60.057
0.503	0.216	31.740	31.956	-24.044	56.000
0.648	0.221	36.860	37.081	-18.919	56.000
0.946	0.232	36.660	36.892	-19.108	56.000
Average					
0.236	0.203	30.880	31.083	-22.460	53.543
0.293	0.214	27.090	27.304	-24.610	51.914
0.358	0.214	33.890	34.104	-15.953	50.057
0.503	0.216	26.530	26.746	-19.254	46.000
0.648	0.221	31.690	31.911	-14.089	46.000
0.946	0.232	31.750	31.982	-14.018	46.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Notebook
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 3: Transmitter -1Mbps(GFSK)- Antenna 2 (2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.236	0.203	38.000	38.203	-25.340	63.543
0.353	0.214	36.890	37.104	-23.096	60.200
0.531	0.217	33.570	33.787	-22.213	56.000
0.653	0.218	36.660	36.878	-19.122	56.000
0.881	0.231	37.520	37.751	-18.249	56.000
0.938	0.232	35.750	35.982	-20.018	56.000
Average					
0.236	0.203	30.800	31.003	-22.540	53.543
0.353	0.214	32.660	32.874	-17.326	50.200
0.531	0.217	32.200	32.417	-13.583	46.000
0.653	0.218	32.200	32.418	-13.582	46.000
0.881	0.231	25.890	26.121	-19.879	46.000
0.938	0.232	23.570	23.802	-22.198	46.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Notebook
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 4: Transmitter -3Mbps(8DPSK)-Antenna 2 (2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.255	0.205	36.820	37.025	-25.975	63.000
0.353	0.214	36.550	36.764	-23.436	60.200
0.530	0.217	33.670	33.887	-22.113	56.000
0.653	0.223	36.560	36.783	-19.217	56.000
0.883	0.231	39.460	39.691	-16.309	56.000
0.980	0.233	34.900	35.133	-20.867	56.000
Average					
0.255	0.205	21.900	22.105	-30.895	53.000
0.353	0.214	34.010	34.224	-15.976	50.200
0.530	0.217	32.410	32.627	-13.373	46.000
0.653	0.223	32.270	32.493	-13.507	46.000
0.883	0.231	29.370	29.601	-16.399	46.000
0.980	0.233	22.140	22.373	-23.627	46.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : Notebook
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 4: Transmitter -3Mbps(8DPSK)-Antenna 2 (2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.232	0.203	30.420	30.623	-33.034	63.657
0.257	0.203	34.240	34.443	-28.500	62.943
0.292	0.208	37.750	37.958	-23.985	61.943
0.357	0.214	33.220	33.434	-26.652	60.086
0.527	0.217	31.880	32.097	-23.903	56.000
0.644	0.218	33.590	33.808	-22.192	56.000
Average					
0.232	0.203	29.060	29.263	-24.394	53.657
0.257	0.203	18.640	18.843	-34.100	52.943
0.292	0.208	34.490	34.698	-17.245	51.943
0.357	0.214	32.720	32.934	-17.152	50.086
0.527	0.217	30.580	30.797	-15.203	46.000
0.644	0.218	25.710	25.928	-20.072	46.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

3. Peak Power Output

3.1. Test Equipment

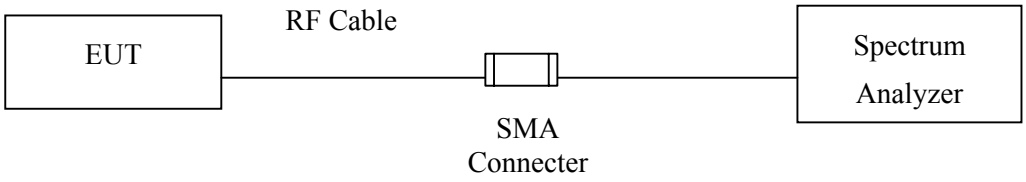
The following test equipments are used during the radiated emission tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum Analyzer	R & S	FSP40 / 100170	Nov, 2007

Note: 1. All equipments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

3.2. Test Setup



3.3. Limit

The maximum peak power shall be less 1Watt.

3.4. Uncertainty

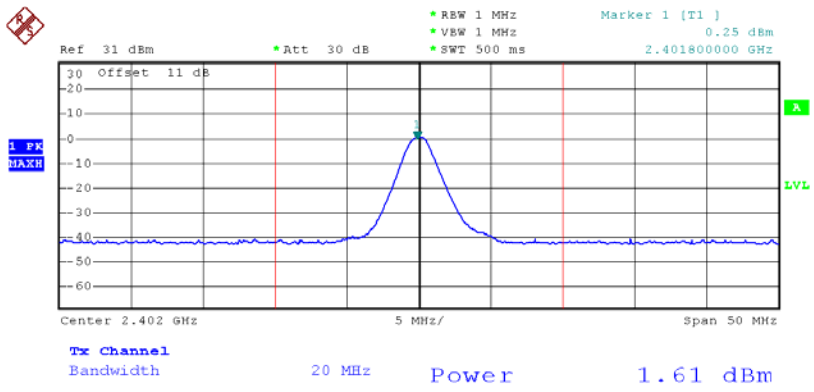
± 1.27 dB

3.5. Test Result of Peak Power Output

Product : Notebook
Test Item : Peak Power Output
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1

Channel No.	Frequency (MHz)	Measurement	Required Limit	Result
Channel 00	2402.00	1.61dBm	1 Watt= 30 dBm	Pass
Channel 39	2441.00	2.01dBm	1 Watt= 30 dBm	Pass
Channel 78	2480.00	2.46dBm	1 Watt= 30 dBm	Pass

Channel 00



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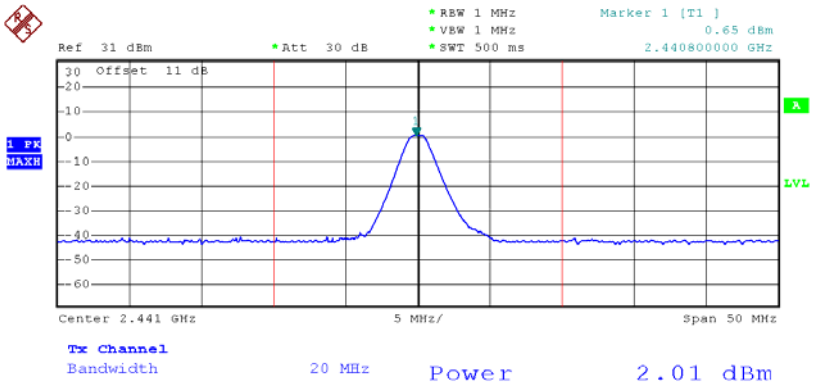
Channel 39



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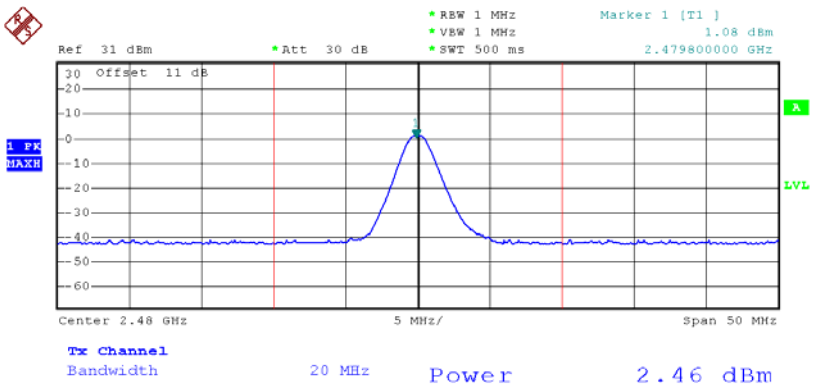
Channel 78



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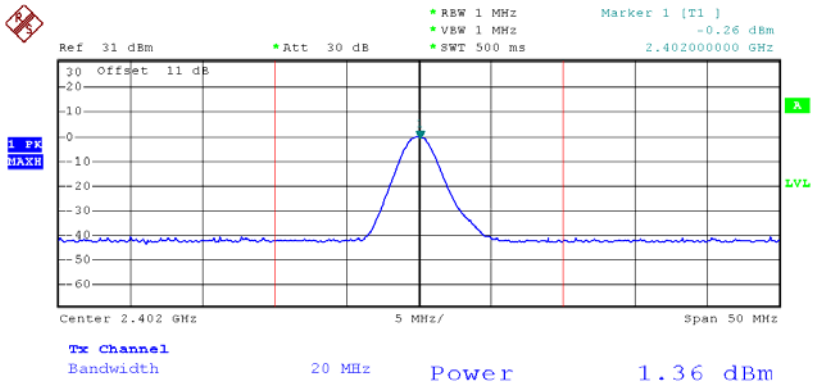
Date: 7.MAY.2007 11:06:39

Product : Notebook
Test Item : Peak Power Output
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1

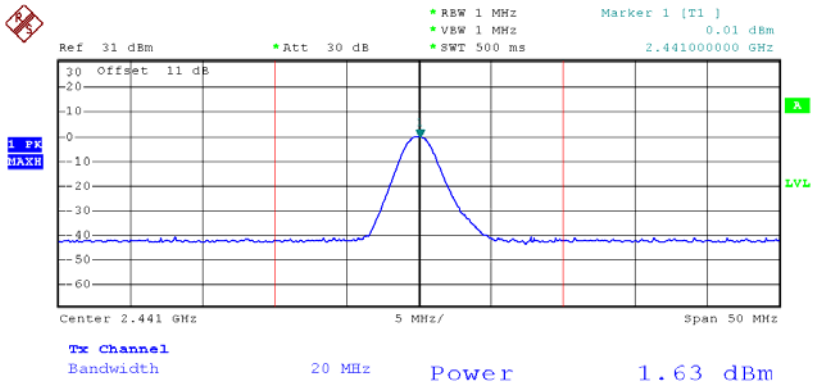
Channel No.	Frequency (MHz)	Measurement	Required Limit	Result
Channel 00	2402.00	1.36dBm	1 Watt= 30 dBm	Pass
Channel 39	2441.00	1.63dBm	1 Watt= 30 dBm	Pass
Channel 78	2480.00	1.88dBm	1 Watt= 30 dBm	Pass

Channel 00



PN1
Date: 7.MAY.2007 11:08:49

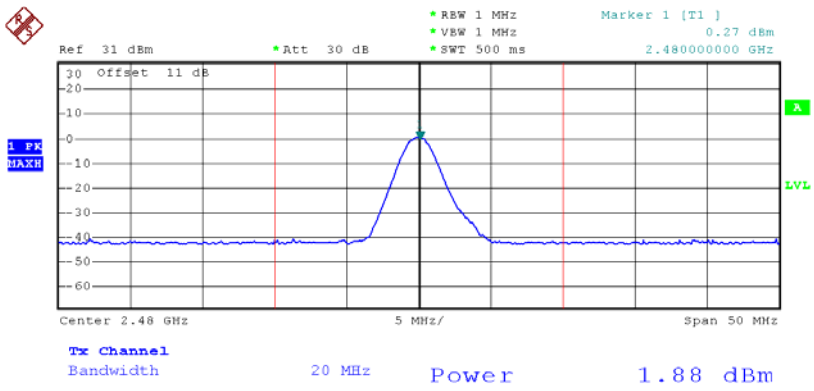
Channel 39



PN1

Date: 7.MAY.2007 11:09:37

Channel 78



PN1

Date: 7.MAY.2007 11:10:28

4. Radiated Emission

4.1. Test Equipment

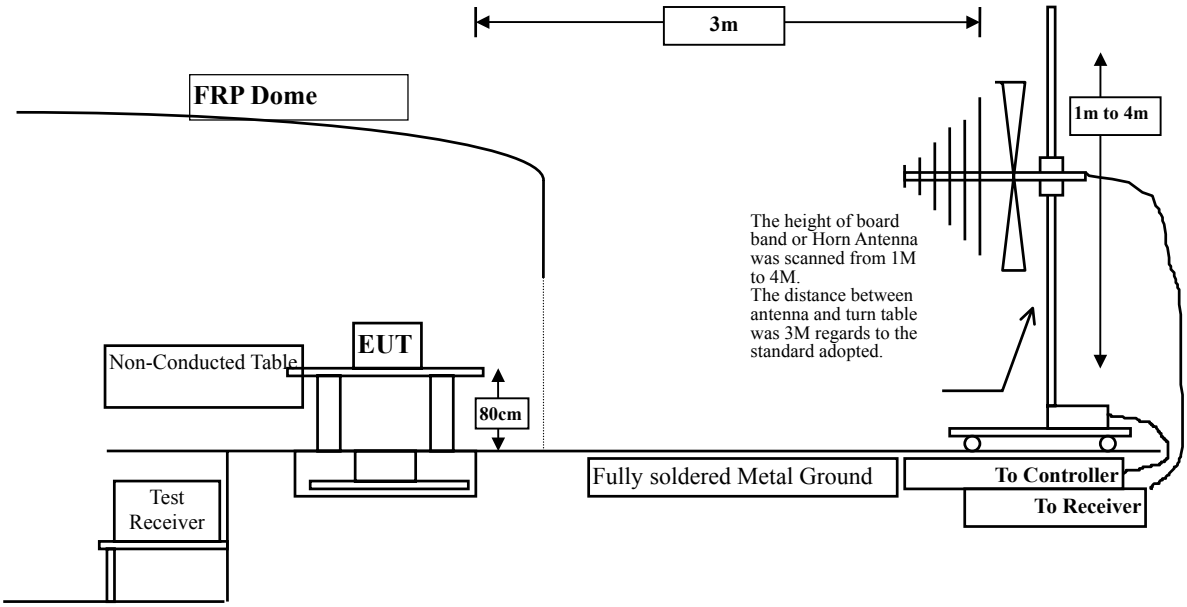
The following test equipments are used during the radiated emission test:

Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☐Site # 1	Test Receiver	R & S	ESVS 10 / 834468/003	May, 2007
	Spectrum Analyzer	Advantest	R3162/ 00803480	May, 2007
	Pre-Amplifier	Advantest	BB525C/ 3307A01812	May, 2007
	Bilog Antenna	SCHAFFNER	CBL6112B / 2697	Sep., 2006
☐Site # 2	Test Receiver	R & S	ESCS 30 / 836858 / 022	May, 2007
	Spectrum Analyzer	Advantest	R3162 / 100803466	May, 2007
	Pre-Amplifier	Advantest	BB525C/3307A01814	May, 2007
	Bilog Antenna	SCHAFFNER	CBL6112B / 2705	May, 2007
	Horn Antenna	ETS	3115 / 0005-6160	Sep., 2006
	Pre-Amplifier	QTK	QTK-AMP-01/ 0001	May, 2007
☒Site # 3	Test Receiver	R & S	ESI 26 / 838786 / 004	May, 2007
	Spectrum Analyzer	HP	E4407B / US39440758	May, 2007
	Bilog Antenna	SCHAFFNER	CBL6112B / 2697	May, 2007
	Horn Antenna	Schwarzbeck	BBHA9120D / 305, 306	July, 2006
	Horn Antenna	Schwarzbeck	BBHA9170 / 208, 209	July, 2006
	Pre-Amplifier	QTK	QTK-AMP-01 / 0001	July, 2006
	Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2007
	Pre-Amplifier	HP	8449B / 3008A01123	July, 2006

Note: 1. All equipments are calibrated every one year.

2. The test instruments marked by “X” are used to measure the final test results.

4.2. Test Setup



4.3. Limits

➢ **General Radiated Emission Limits**

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB 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 C 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) = 20 log RF Voltage (uV)

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.

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 additional latch filter below 1GHz was used to measure the level of harmonics radiated emission during field dtrength of harmonics measurement.
The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz.
The frequency range from 30MHz to 10th harminics is checked.

4.5. Uncertainty

± 3.9 dB above 1GHz
± 3.8 dB below 1GHz

4.6. Test Result of Radiated Emission

Product : Notebook
Test Item : Harmonic Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1(2402MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4804.000	3.663	44.100	47.763	-26.207	74.000
7206.000	9.357	40.600	49.956	-24.014	74.000
9608.000	11.842	36.700	48.542	-25.428	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4804.000	3.663	51.600	55.263	-18.707	74.000
7206.000	9.357	41.100	50.456	-23.514	74.000
9608.000	11.842	38.100	49.942	-24.028	74.000
Average Detector:					
4804.000	3.663	47.100	50.763	-3.207	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:3KHz 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.

Product : Notebook
Test Item : Harmonic Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1(2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4882.000	3.921	45.100	49.021	-24.949	74.000
7323.000	9.657	38.100	47.757	-26.213	74.000
9764.000	11.798	38.100	49.898	-24.072	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4882.000	3.921	49.600	53.521	-20.449	74.000
7323.000	9.657	44.200	53.857	-20.113	74.000
9764.000	11.798	36.500	48.298	-25.672	74.000
Average Detector:					
--					

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:3KHz 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.

Product : Notebook
Test Item : Harmonic Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1(2480MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4960.000	4.197	44.680	48.876	-25.094	74.000
7440.000	9.951	42.000	51.951	-22.019	74.000
9920.000	11.856	36.800	48.656	-25.314	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4960.000	4.197	50.100	54.296	-19.674	74.000
7440.000	9.951	43.100	53.051	-20.919	74.000
9920.000	11.856	36.870	48.726	-25.244	74.000
Average Detector:					
4960.000	4.197	44.600	48.796	-5.174	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:3KHz 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.

Product : Notebook
Test Item : Harmonic Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1 (2402MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4804.000	3.663	42.300	45.963	-28.007	74.000
7206.000	9.357	38.800	48.156	-25.814	74.000
9608.000	11.842	35.900	47.742	-26.228	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4804.000	3.663	45.100	48.763	-25.207	74.000
7206.000	9.357	41.300	50.656	-23.314	74.000
9608.000	11.842	37.100	48.942	-25.028	74.000
Average Detector:					
--					

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:3KHz 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.

Product : Notebook
Test Item : Harmonic Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1 (2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4882.000	3.921	42.100	46.021	-27.949	74.000
7323.000	9.657	36.900	46.557	-27.413	74.000
9764.000	11.798	37.400	49.198	-24.772	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4882.000	3.921	44.100	48.021	-25.949	74.000
7323.000	9.657	37.100	46.757	-27.213	74.000
9764.000	11.798	36.400	48.198	-25.772	74.000
Average Detector:					
--					

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:3KHz 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.

Product : Notebook
Test Item : Harmonic Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1 (2480MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4960.000	4.197	42.530	46.726	-27.244	74.000
7440.000	9.951	38.800	48.751	-25.219	74.000
9920.000	11.856	37.400	49.256	-24.714	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4960.000	4.197	46.160	50.356	-23.614	74.000
7440.000	9.951	36.570	46.521	-27.449	74.000
9920.000	11.856	38.100	49.956	-24.014	74.000
Average Detector:					
--					

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:3KHz 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.

Product : Notebook
Test Item : Harmonic Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter -1Mbps(GFSK)- Antenna 2 (2402MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4804.000	3.663	46.300	49.963	-24.007	74.000
7206.000	9.357	41.560	50.916	-23.054	74.000
9608.000	11.842	32.100	43.942	-30.028	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4804.000	3.663	50.600	54.263	-19.707	74.000
7206.000	9.357	32.600	41.956	-32.014	74.000
9608.000	11.842	33.700	45.542	-28.428	74.000
Average Detector:					
4804.000	3.663	47.900	51.563	-2.407	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:3KHz 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.

Product : Notebook
Test Item : Harmonic Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter -1Mbps(GFSK)- Antenna 2 (2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4882.000	3.921	49.600	53.521	-20.449	74.000
7323.000	9.657	32.360	42.017	-31.953	74.000
9764.000	11.798	32.900	44.698	-29.272	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4882.000	3.921	50.250	54.171	-19.799	74.000
7323.000	9.657	32.600	42.257	-31.713	74.000
9764.000	11.798	34.100	45.898	-28.072	74.000
Average Detector:					
4882.000	3.921	47.300	51.221	-2.749	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:3KHz 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.

Product : Notebook
Test Item : Harmonic Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter -1Mbps(GFSK)- Antenna 2 (2480MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4960.000	4.197	50.740	54.936	-19.034	74.000
7440.000	9.951	36.800	46.751	-27.219	74.000
9920.000	11.856	36.900	48.756	-25.214	74.000
Average Detector:					
4960.000	4.197	47.400	51.596	-2.374	54.000
Vertical					
Peak Detector:					
4960.000	4.197	49.700	53.896	-20.074	74.000
7440.000	9.951	36.280	46.231	-27.739	74.000
9920.000	11.856	38.400	50.256	-23.714	74.000
Average Detector:					
--					

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:3KHz 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.

Product : Notebook
Test Item : Harmonic Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 4: Transmitter -3Mbps(8DPSK)-Antenna 2 (2402MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4804.000	3.663	42.340	46.003	-27.967	74.000
7206.000	9.357	37.140	46.496	-27.474	74.000
9608.000	11.842	36.400	48.242	-25.728	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4804.000	3.663	46.100	49.763	-24.207	74.000
7206.000	9.357	36.400	45.756	-28.214	74.000
9608.000	11.842	34.690	46.532	-27.438	74.000
Average Detector:					
--					

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:3KHz 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.

Product : Notebook
Test Item : Harmonic Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 4: Transmitter -3Mbps(8DPSK)-Antenna 2 (2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4882.000	3.921	41.900	45.821	-28.149	74.000
7323.000	9.657	38.600	48.257	-25.713	74.000
9764.000	11.798	36.900	48.698	-25.272	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4882.000	3.921	45.600	49.521	-24.449	74.000
7323.000	9.657	36.400	46.057	-27.913	74.000
9764.000	11.798	36.900	48.698	-25.272	74.000
Average Detector:					
--					

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:3KHz 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.

Product : Notebook
Test Item : Harmonic Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 4: Transmitter -3Mbps(8DPSK)-Antenna 2 (2480MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4960.000	4.197	43.970	48.166	-25.804	74.000
7440.000	9.951	36.970	46.921	-27.049	74.000
9920.000	11.856	36.740	48.596	-25.374	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4960.000	4.197	44.700	48.896	-25.074	74.000
7440.000	9.951	36.900	46.851	-27.119	74.000
9920.000	11.856	36.720	48.576	-25.394	74.000
Average Detector:					
--					

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:3KHz 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.

Product : Notebook
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1(2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
170.600	10.167	12.300	22.467	-21.033	43.500
205.100	9.878	13.900	23.778	-19.722	43.500
236.100	11.505	13.600	25.105	-20.895	46.000
300.600	14.065	14.300	28.365	-17.635	46.000
415.500	17.637	13.790	31.427	-14.573	46.000
473.600	18.650	13.670	32.320	-13.680	46.000
Vertical					
130.300	11.874	13.500	25.374	-18.126	43.500
228.300	11.133	14.300	25.432	-20.568	46.000
243.600	12.566	15.300	27.866	-18.134	46.000
279.900	13.699	13.900	27.599	-18.401	46.000
345.300	14.913	13.670	28.583	-17.417	46.000
376.300	16.532	13.500	30.032	-15.968	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.
4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.

Product : Notebook
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1 (2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
110.100	12.910	13.360	26.270	-17.230	43.500
122.300	12.879	13.250	26.129	-17.371	43.500
146.600	11.773	11.500	23.273	-20.227	43.500
380.100	15.603	11.800	27.404	-18.596	46.000
410.300	17.397	14.800	32.196	-13.804	46.000
468.900	18.781	13.200	31.981	-14.019	46.000
Vertical					
114.300	11.889	13.570	25.458	-18.042	43.500
120.100	11.485	17.100	28.585	-14.915	43.500
136.600	11.514	13.250	24.764	-18.736	43.500
240.300	12.385	10.350	22.735	-23.265	46.000
354.800	15.681	13.250	28.931	-17.069	46.000
620.100	21.525	13.570	35.095	-10.905	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.
4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.

Product : Notebook
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter -1Mbps(GFSK)- Antenna 2 (2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
112.400	13.042	14.100	27.142	-16.358	43.500
136.700	12.421	13.670	26.091	-17.409	43.500
340.100	14.639	11.670	26.309	-19.691	46.000
384.000	15.765	12.740	28.504	-17.496	46.000
515.300	18.955	16.100	35.055	-10.945	46.000
800.100	21.772	10.100	31.872	-14.128	46.000
Vertical					
136.300	11.639	13.340	24.979	-18.521	43.500
240.100	12.356	10.340	22.696	-23.304	46.000
352.100	15.323	12.820	28.143	-17.857	46.000
451.100	18.885	13.500	32.385	-13.615	46.000
510.100	18.745	13.850	32.595	-13.405	46.000
840.300	21.404	14.300	35.704	-10.296	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.
4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.

Product : Notebook
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 4: Transmitter -3Mbps(8DPSK)-Antenna 2 (2441MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
114.300	12.900	15.500	28.400	-15.100	43.500
136.300	12.504	13.250	25.754	-17.746	43.500
145.300	11.772	14.300	26.072	-17.428	43.500
285.300	13.497	13.200	26.697	-19.303	46.000
451.100	18.307	13.900	32.207	-13.793	46.000
510.100	18.923	13.900	32.823	-13.177	46.000
Vertical					
120.100	11.485	16.300	27.785	-15.715	43.500
136.300	11.639	13.250	24.889	-18.611	43.500
228.300	11.133	13.400	24.532	-21.468	46.000
236.300	11.814	10.100	21.914	-24.086	46.000
345.210	14.900	11.250	26.150	-19.850	46.000
939.100	24.001	5.200	29.202	-16.798	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.
4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.

5. Band Edge

5.1. Test Equipment

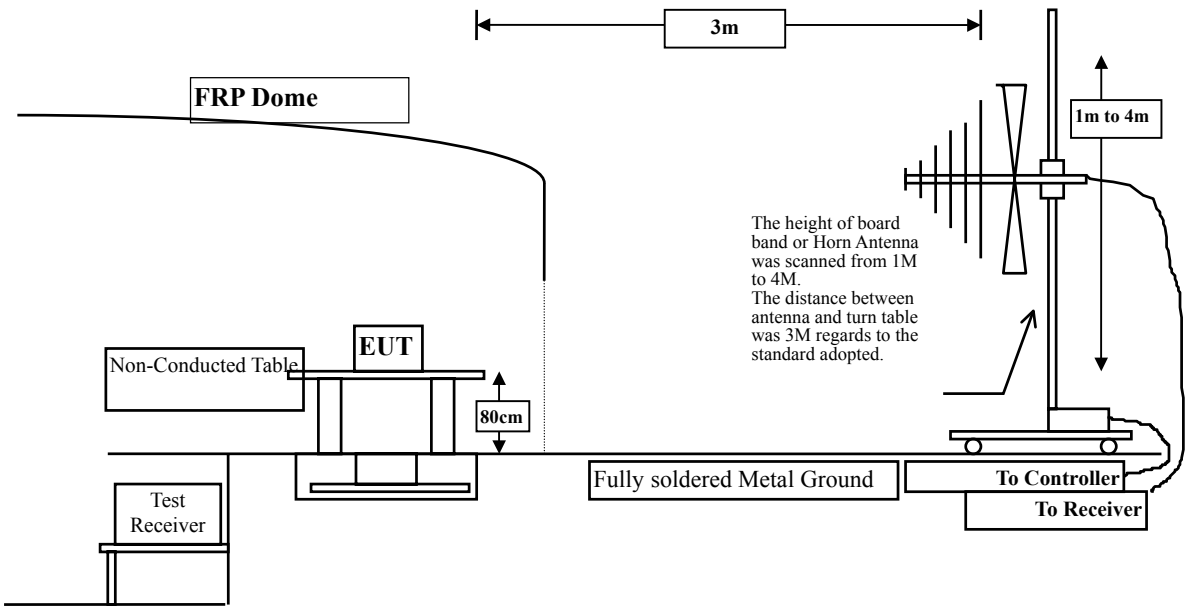
The following test equipments are used during the band edge tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Test Receiver	R & S	ESI 26 / 838786 / 004	May, 2007
X	Spectrum Analyzer	HP	E4407B / US39440758	May, 2007
X	Bilog Antenna	SCHAFFNER	CBL6112B / 2697	May, 2007
X	Horn Antenna	Schwarzbeck	BBHA9120D / 305, 306	July, 2006
X	Horn Antenna	Schwarzbeck	BBHA9170 / 208, 209	July, 2006
X	Pre-Amplifier	QTK	QTK-AMP-01 / 0001	July, 2006
X	Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2007
X	Pre-Amplifier	HP	8449B / 3008A01123	July, 2006
Test Site		Site 3		

Note: 1. All equipments are calibrated every one year.
2. The test instruments marked by "X" are used to measure the final test results.

5.2. Test Setup

RF Radiated Measurement:



5.3. 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 20 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)).

5.4. 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 is 120 kHz, above 1GHz are 1 MHz.

5.5. Uncertainty

± 3.9 dB above 1GHz
± 3.8 dB below 1GHz

5.6. Test Result of Band Edge

Product : Notebook
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1(2402MHz)

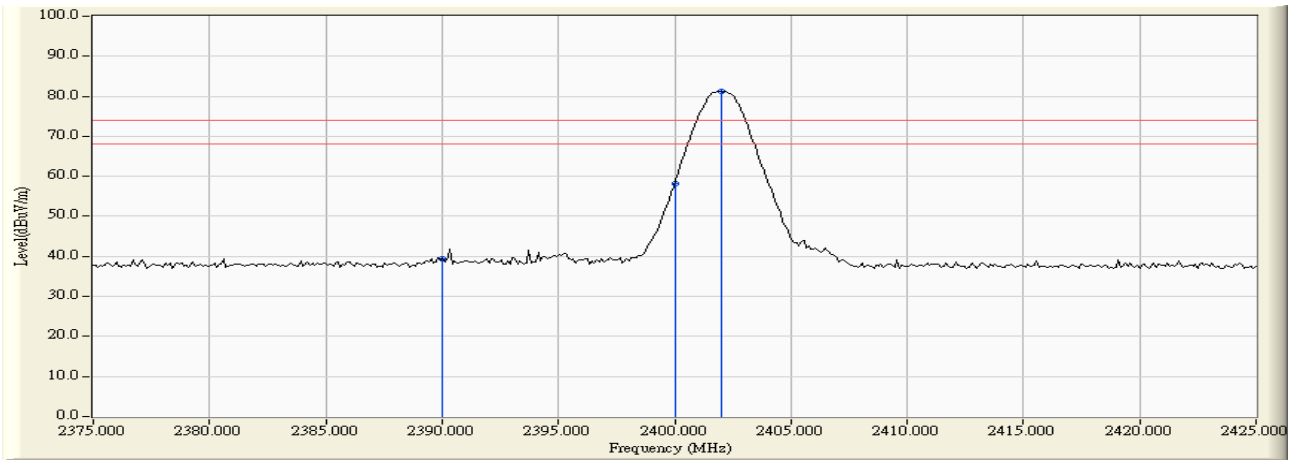
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
00	<2400	>20	Pass

RF Radiated Measurement (Horizontal):

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00 (Peak)	2390.000	-2.378	41.804	39.427	74.00	54.00	Pass
00 (Average)	--	--	--	--	74.00	54.00	Pass

Figure Channel 00: (Horizontal) (Peak)



Note:

RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Product : Notebook
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1(2402MHz)

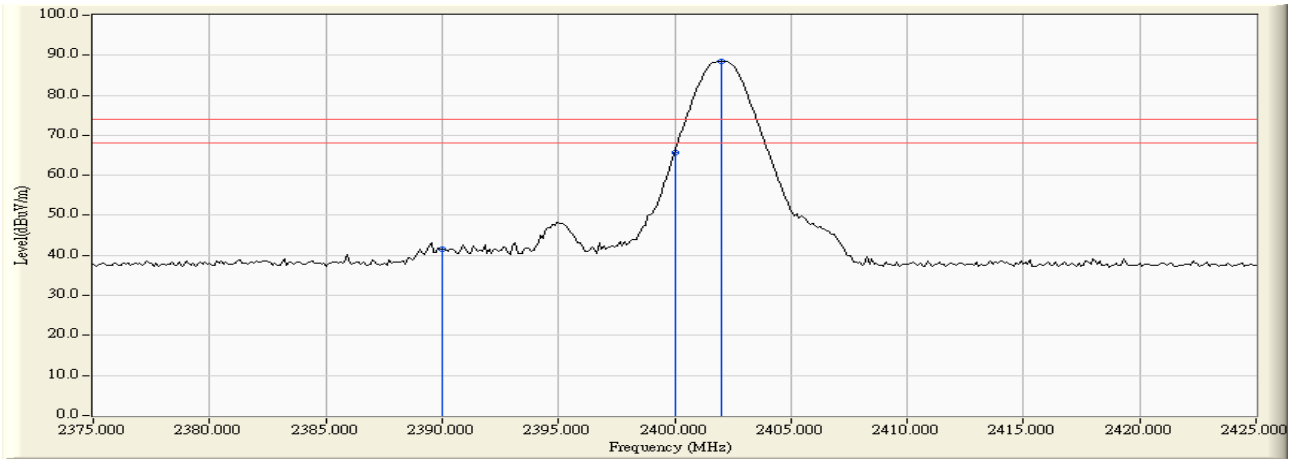
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
00	<2400	>20	Pass

RF Radiated Measurement (Vertical):

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00 (Peak)	2390.000	-2.378	43.973	41.596	74.00	54.00	Pass
00(Average)	--	--	--	--	74.00	54.00	Pass

Figure Channel 00: (Vertical) (Peak)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Product : Notebook
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1(2480MHz)

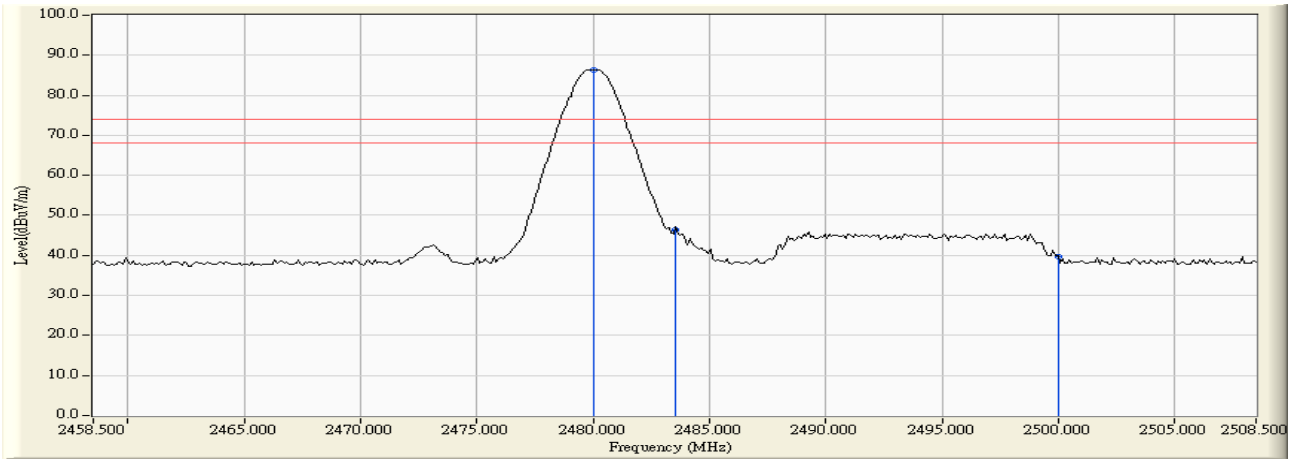
RF Radiated Measurement:

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

RF Radiated Measurement (Horizontal):

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
78(Peak)	2483.500	-1.937	48.195	46.258	74.00	54.00	Pass
78(Average)	--	--	--	--	74.00	54.00	Pass

Figure Channel 78: (Horizontal) (Peak)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Product : Notebook
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1(2480MHz)

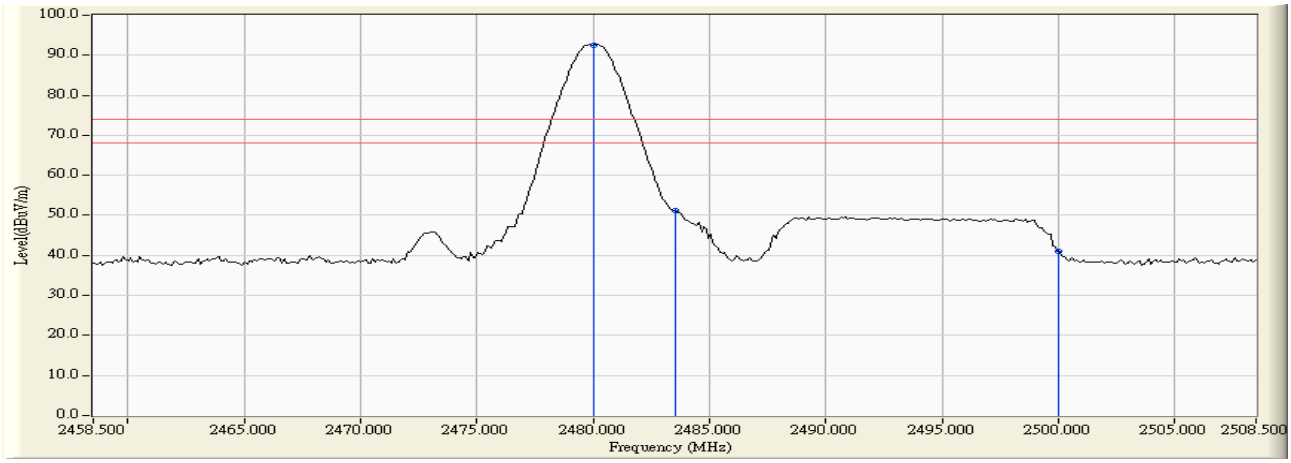
RF Radiated Measurement:

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

RF Radiated Measurement (Vertical):

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
78(Peak)	2483.500	-1.937	53.081	51.144	74.00	54.00	Pass
78(Average)	-	--	--	--	74.00	54.00	Pass

Figure Channel 78: (Vertical) (Peak)



Note:

RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

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.

Product : Notebook
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1(2402MHz)

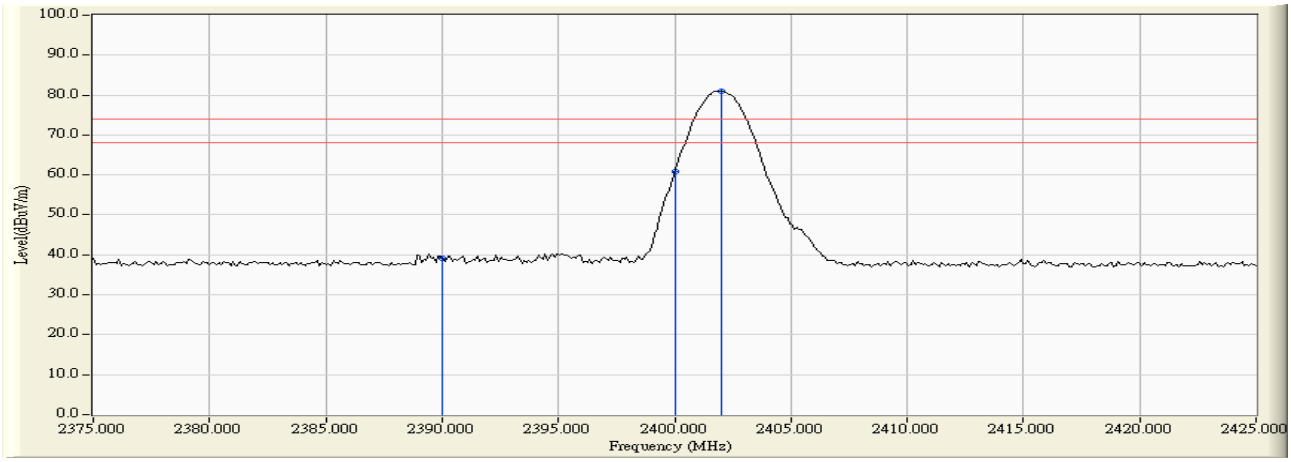
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
00	<2400	>20	Pass

RF Radiated Measurement (Horizontal):

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00 (Peak)	2390.000	-2.378	41.562	39.185	74.00	54.00	Pass
00 (Average)	--	--	--	--	74.00	54.00	Pass

Figure Channel 00: (Horizontal) (Peak)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Product : Notebook
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1(2402MHz)

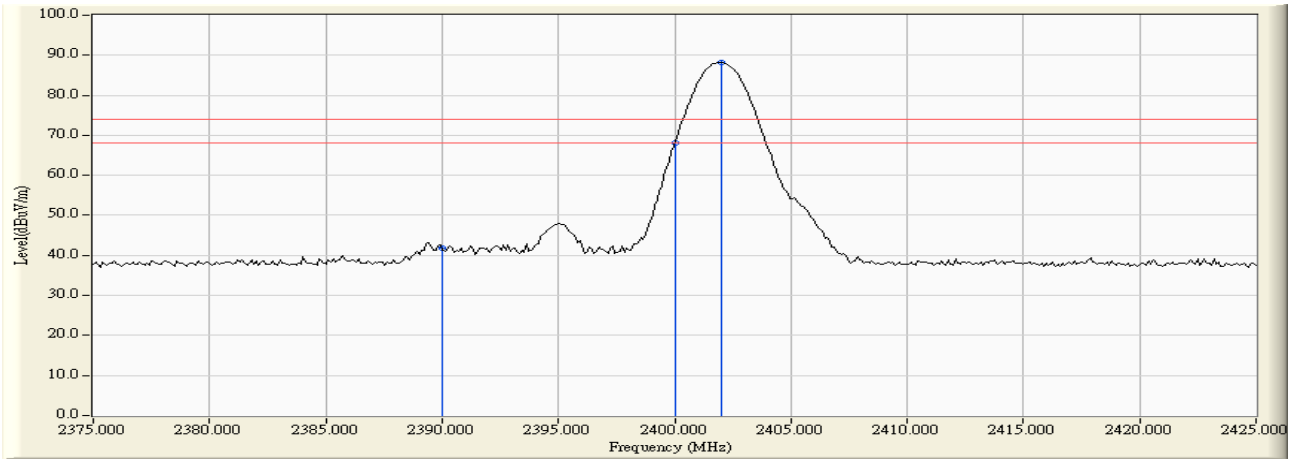
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
00	<2400	>20	Pass

RF Radiated Measurement (Vertical):

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00 (Peak)	2390.000	-2.378	44.080	41.703	74.00	54.00	Pass
00(Average)	--	--	--	--	74.00	54.00	Pass

Figure Channel 00: (Vertical) (Peak)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Product : Notebook
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1(2480MHz)

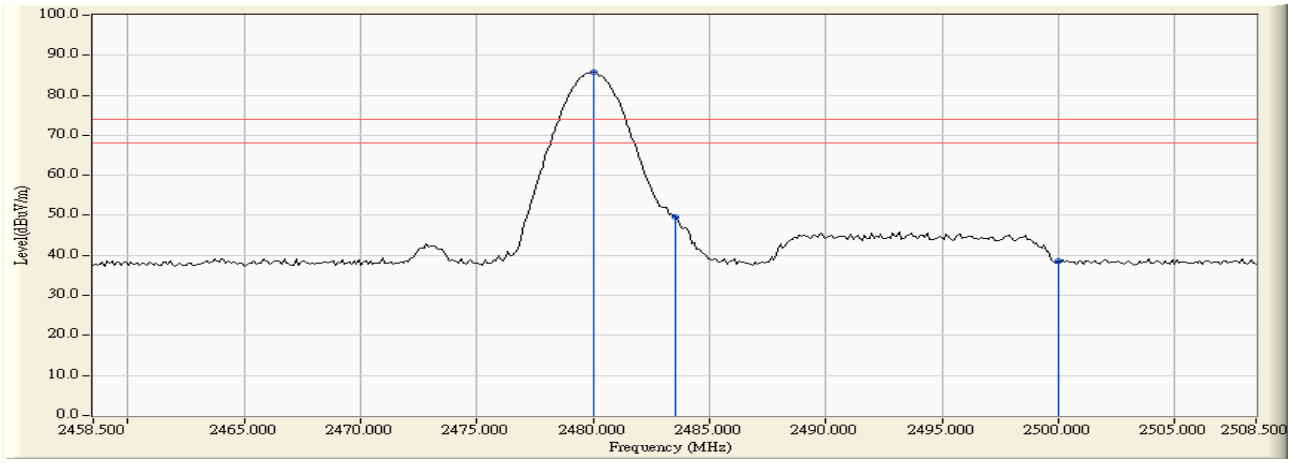
RF Radiated Measurement:

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

RF Radiated Measurement (Horizontal):

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
78(Peak)	2483.500	-1.937	51.630	49.693	74.00	54.00	Pass
78(Average)	--	--	--	--	74.00	54.00	Pass

Figure Channel 78: (Horizontal) (Peak)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Product : Notebook
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1(2480MHz)

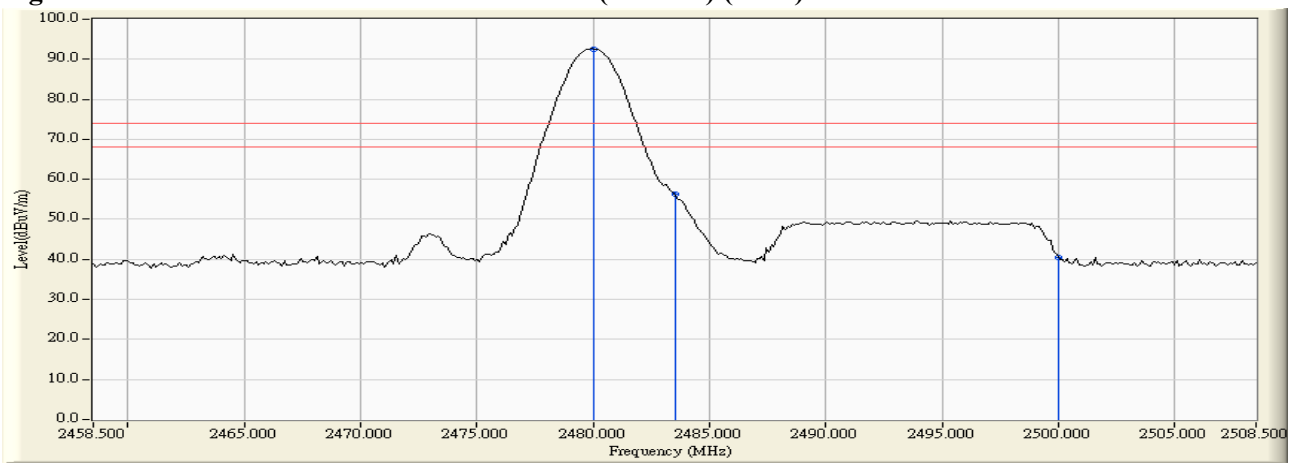
RF Radiated Measurement:

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

RF Radiated Measurement (Vertical):

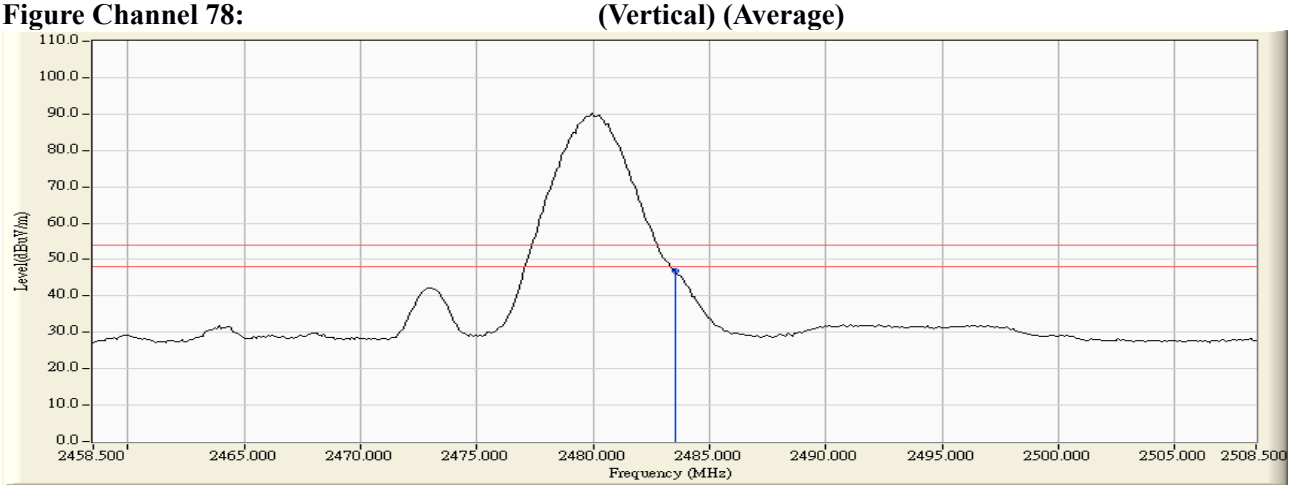
Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
78(Peak)	2483.500	-1.937	58.160	56.223	74.00	54.00	Pass
78(Average)	2483.500	-1.937	48.897	46.960	74.00	54.00	Pass

Figure Channel 78: (Vertical) (Peak)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Figure Channel 78: (Vertical) (Average)



Note:
RBW=1MHz, VBW=3KHz, Sweep Time=500ms.

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.

Product : Notebook
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter -1Mbps(GFSK)- Antenna 2 (2402MHz)

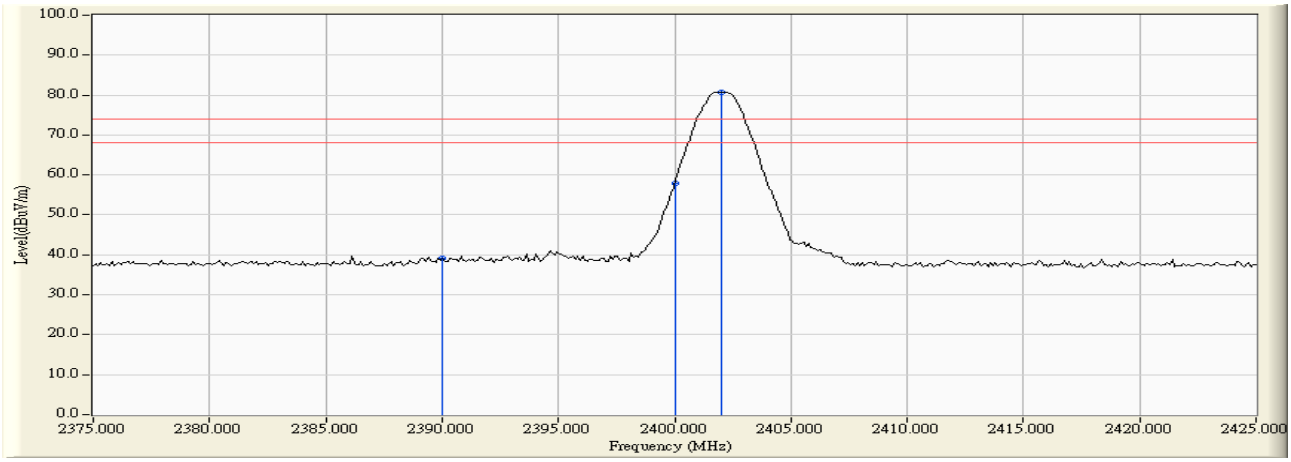
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
00	<2400	>20	Pass

RF Radiated Measurement (Horizontal):

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00 (Peak)	2390.000	-2.378	41.394	39.017	74.00	54.00	Pass
00 (Average)	--	--	--	--	74.00	54.00	Pass

Figure Channel 00: (Horizontal) (Peak)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Product : Notebook
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter -1Mbps(GFSK)- Antenna 2 (2402MHz)

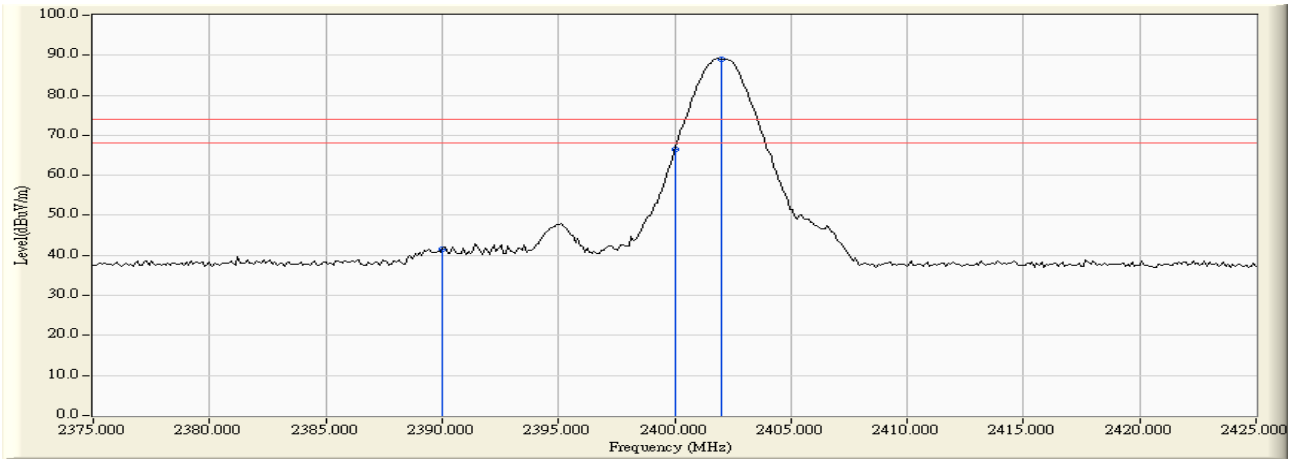
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
00	<2400	>20	Pass

RF Radiated Measurement (Vertical):

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00 (Peak)	2390.000	-2.378	43.852	41.475	74.00	54.00	Pass
00(Average)	--	--	--	--	74.00	54.00	Pass

Figure Channel 00: (Vertical) (Peak)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Product : Notebook
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter -1Mbps(GFSK)- Antenna 2 (2480MHz)

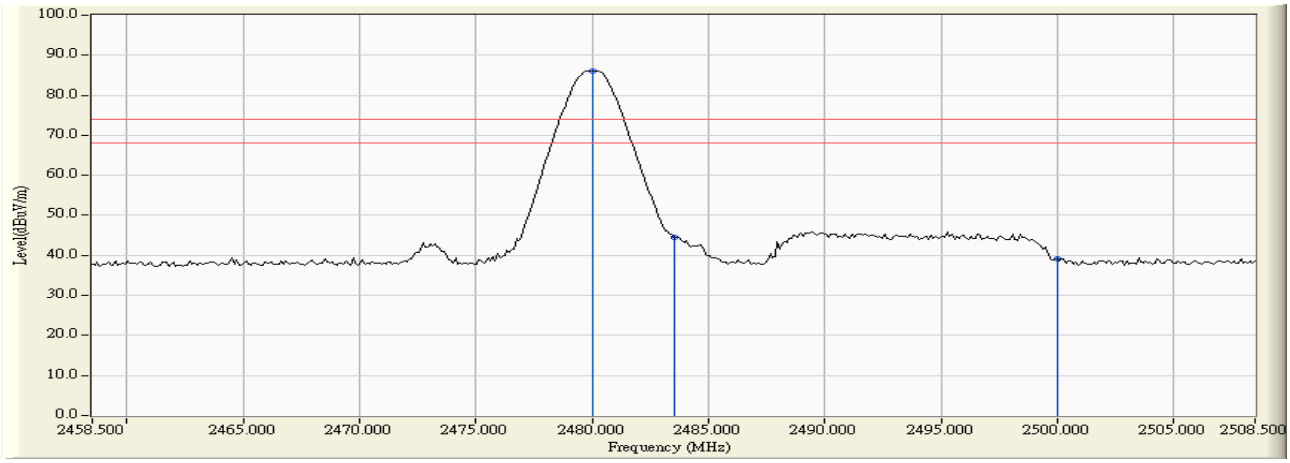
RF Radiated Measurement:

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

RF Radiated Measurement (Horizontal):

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
78(Peak)	2483.500	-1.937	46.539	44.602	74.00	54.00	Pass
78(Average)	--	--	--	--	74.00	54.00	Pass

Figure Channel 78: (Horizontal) (Peak)



Note:

RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Product : Notebook
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter -1Mbps(GFSK)- Antenna 2 (2480MHz)

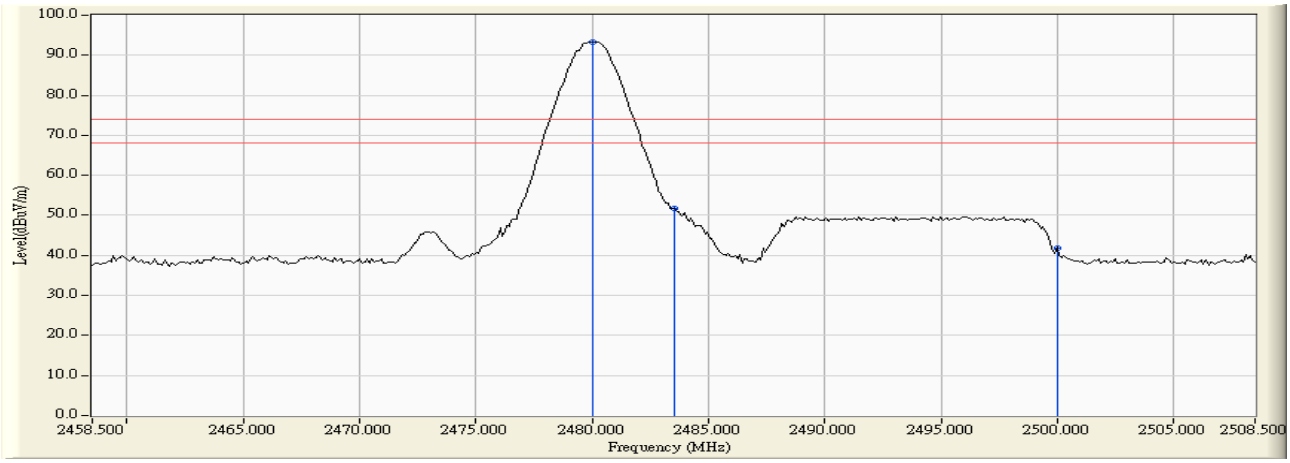
RF Radiated Measurement:

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

RF Radiated Measurement (Vertical):

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
78(Peak)	2483.500	-1.937	53.624	51.687	74.00	54.00	Pass
78(Average)	--	--	--	--	74.00	54.00	Pass

Figure Channel 78: (Vertical) (Peak)



Note:

RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

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.

Product : Notebook
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmitter -3Mbps(8DPSK)-Antenna 2 (2402MHz)

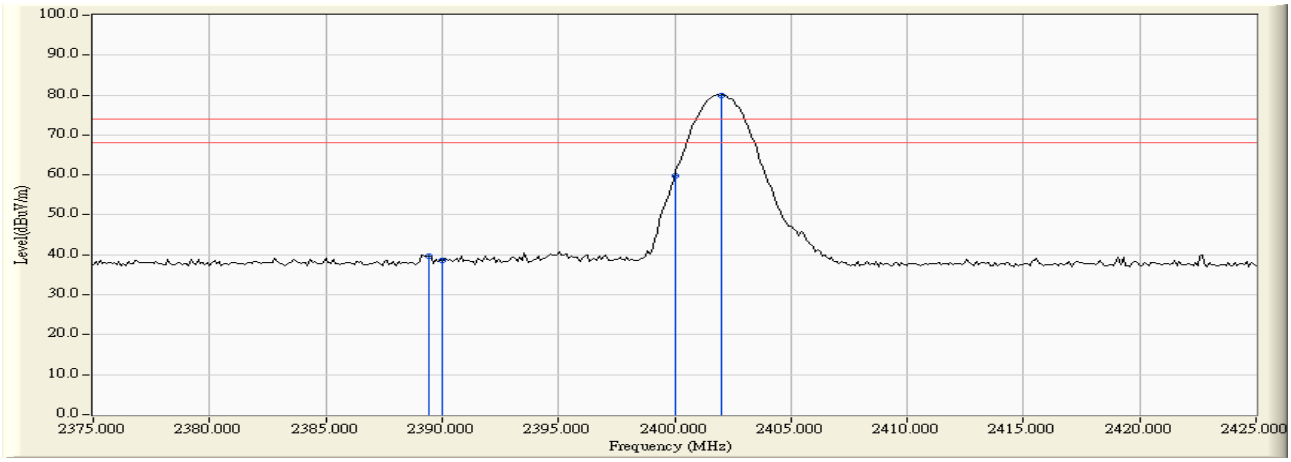
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
00	<2400	>20	Pass

RF Radiated Measurement (Horizontal):

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00 (Peak)	2389.429	-2.381	42.189	39.809	74.00	54.00	Pass
00 (Average)	--	--	--	--	74.00	54.00	Pass

Figure Channel 00: (Horizontal) (Peak)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Product : Notebook
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmitter -3Mbps(8DPSK)-Antenna 2 (2402MHz)

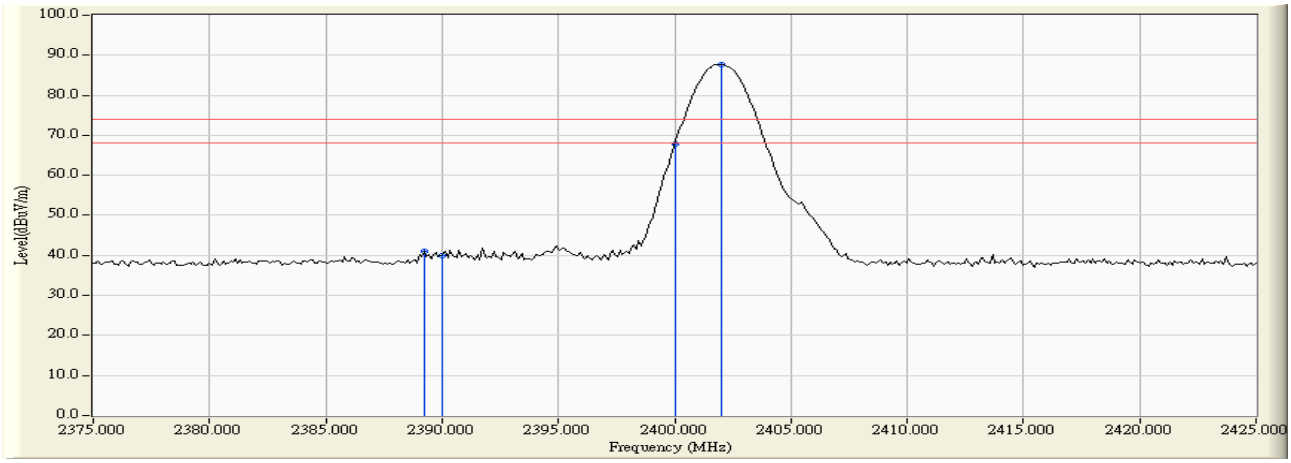
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
00	<2400	>20	Pass

RF Radiated Measurement (Vertical):

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00 (Peak)	2389.229	-2.381	43.517	41.136	74.00	54.00	Pass
00(Average)	--	--	--	--	74.00	54.00	Pass

Figure Channel 00: (Vertical) (Peak)



Note:
RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Product : Notebook
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmitter -3Mbps(8DPSK)-Antenna 2 (2480MHz)

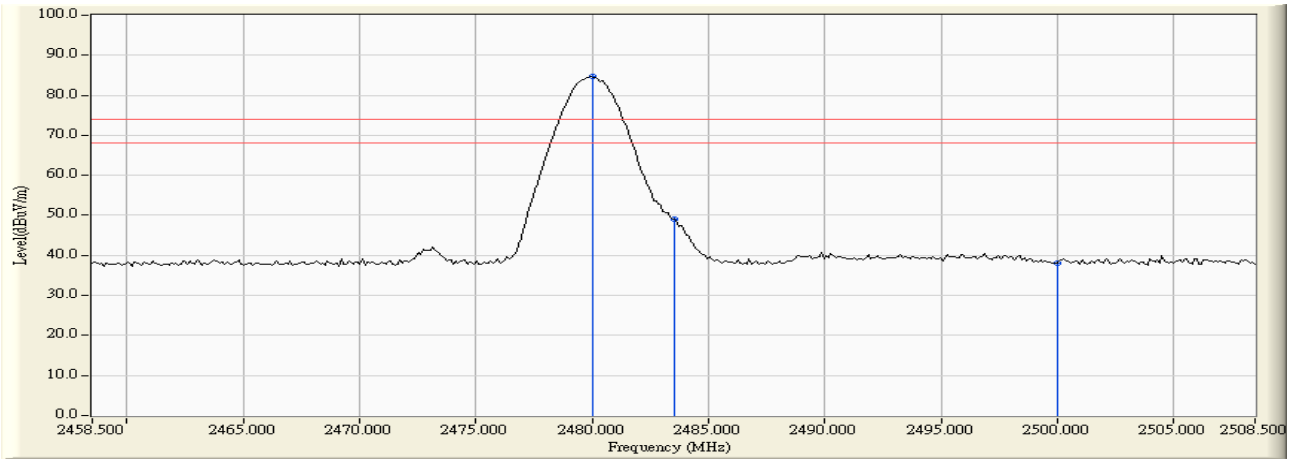
RF Radiated Measurement:

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

RF Radiated Measurement (Horizontal):

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
78(Peak)	2483.500	-1.937	50.981	49.044	74.00	54.00	Pass
78(Average)	--	--	--	--	74.00	54.00	Pass

Figure Channel 78: (Horizontal) (Peak)



Note:

RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Product : Notebook
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmitter -3Mbps(8DPSK)-Antenna 2 (2480MHz)

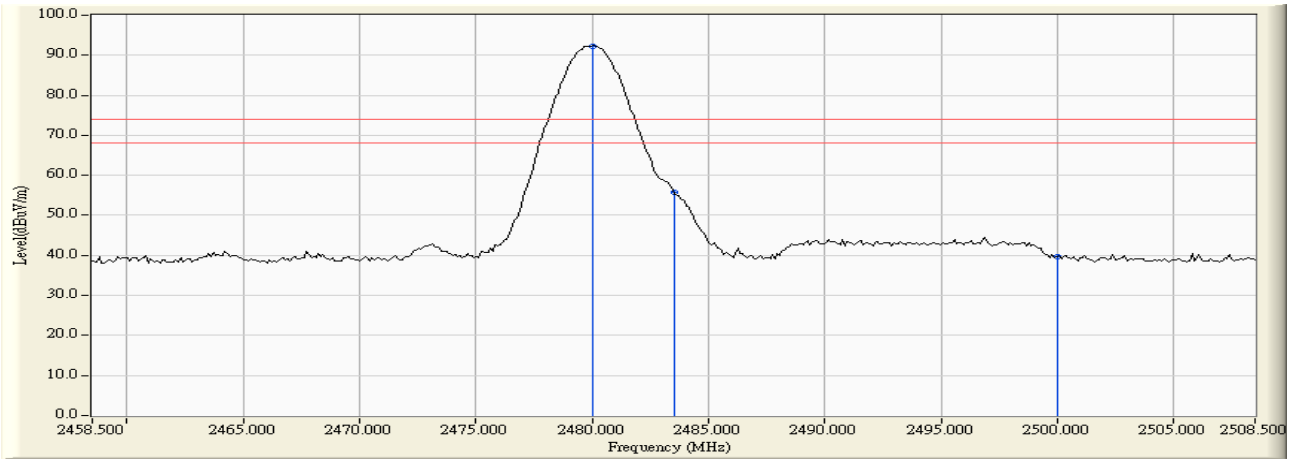
RF Radiated Measurement:

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

RF Radiated Measurement (Vertical):

Channel	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
78(Peak)	2483.500	-1.937	57.791	55.854	74.00	54.00	Pass
78(Average)	2483.500	-1.937	48.284	46.347	74.00	54.00	Pass

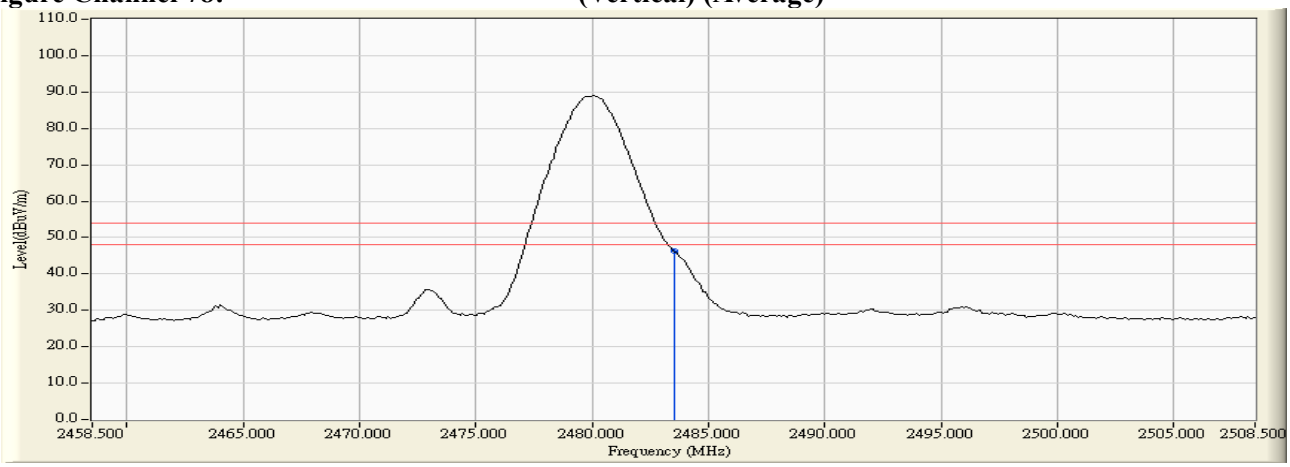
Figure Channel 78: (Vertical) (Peak)



Note:

RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Figure Channel 78: (Vertical) (Average)



Note:

RBW=1MHz, VBW=3KHz, Sweep Time=500ms.

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.

6. Channel Number

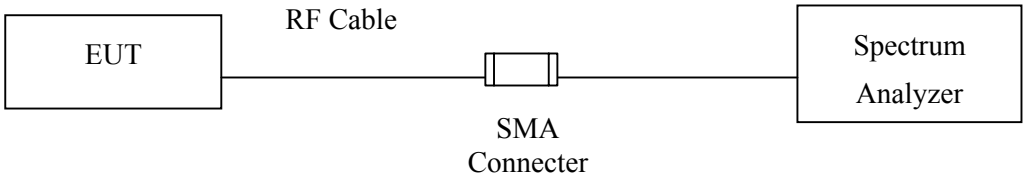
6.1. Test Equipment

The following test equipments are used during the radiated emission tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum Analyzer	R & S	FSP40 / 100170	Nov, 2007

Note: 1. All equipments are calibrated every one year.
2. The test instruments marked by "X" are used to measure the final test results.

6.2. Test Setup



6.3. Limit

Frequency hopping systems operating in the 2400-2483.5 MHz bands shall use at least 75 hopping frequencies.

6.4. Uncertainty

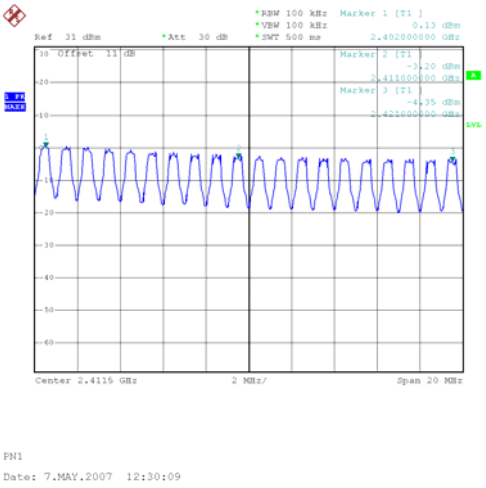
N/A

6.5. Test Result of Channel Number

Product : Notebook
Test Item : Channel Number
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1

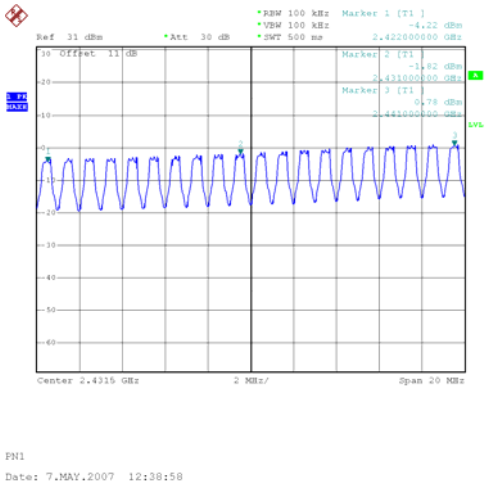
Frequency Range (MHz)	Measurement (Hopping Channel)	Required Limit (Hopping Channel)	Result
2402 ~ 2480	79	>75	Pass

2402-2421MHz



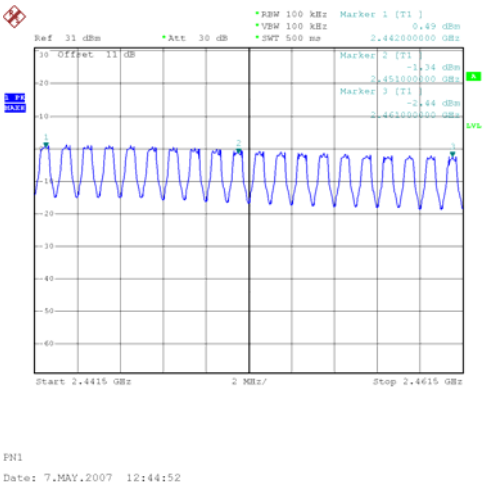
PN1
Date: 7.MAY.2007 12:30:09

2422-2441MHz



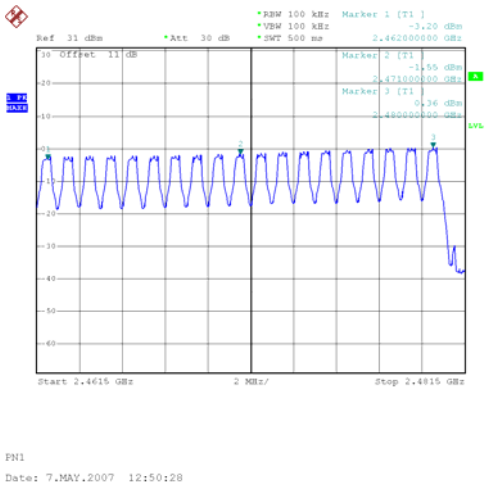
PN1
Date: 7.MAY.2007 12:38:58

2442-2461MHz



PN1
Date: 7.MAY.2007 12:44:52

2462-2480MHz

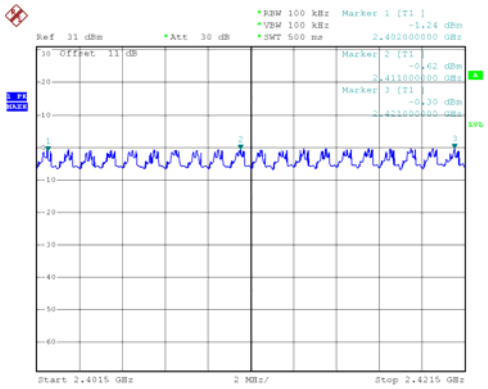


PN1
Date: 7.MAY.2007 12:50:28

Product : Notebook
Test Item : Channel Number
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1

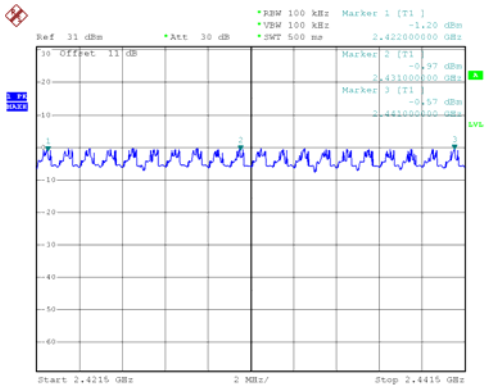
Frequency Range (MHz)	Measurement (Hopping Channel)	Required Limit (Hopping Channel)	Result
2402 ~ 2480	79	>75	Pass

2402-2421MHz



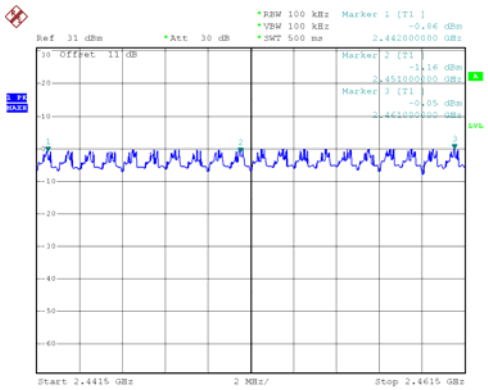
PN1
Date: 8.MAY.2007 16:21:43

2422-2441MHz



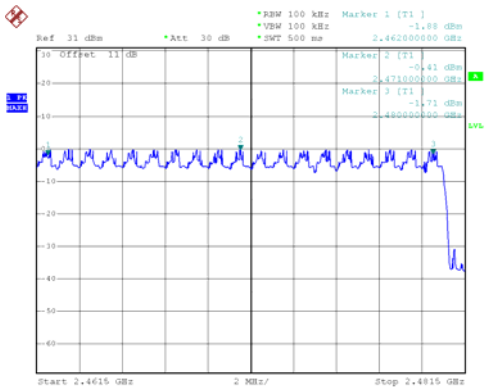
PN1
Date: 8.MAY.2007 16:27:01

2442-2461MHz



PN1
Date: 8.MAY.2007 16:31:59

2462-2480MHz



PN1
Date: 8.MAY.2007 16:37:06

7. Channel Separation

7.1. Test Equipment

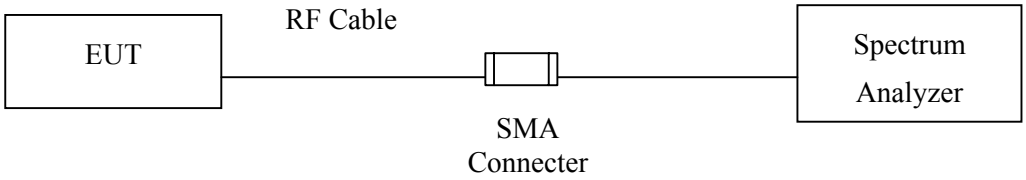
The following test equipments are used during the radiated emission tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum Analyzer	R & S	FSP40 / 100170	Nov, 2007

Note: 1. All equipments are calibrated every one year.

2. The test instruments mark by "X" are used to measure the final test results.

7.2. Test Setup



7.3. Limit

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

7.4. Uncertainty

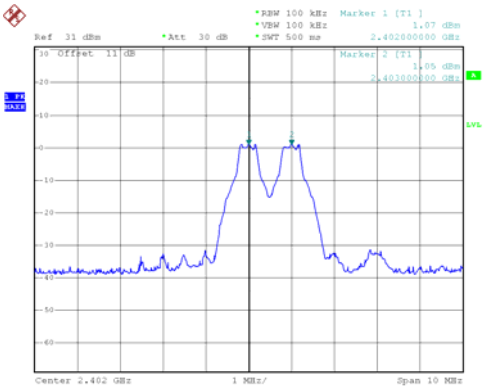
± 150Hz

7.5. Test Result of Channel Separation

Product : Notebook
Test Item : Channel Separation
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1

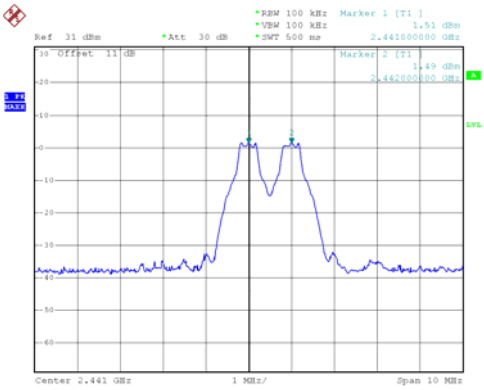
Frequency (MHz)	Measurement Level (MHz)	Required Limit	Result
2402	1.00	>25 kHz or 2/3 * 20 dB BW	Pass
2441	1.00	>25 kHz or 2/3 * 20 dB BW	Pass
2480	1.00	>25 kHz or 2/3 * 20 dB BW	Pass

Channel 00 2402MHz



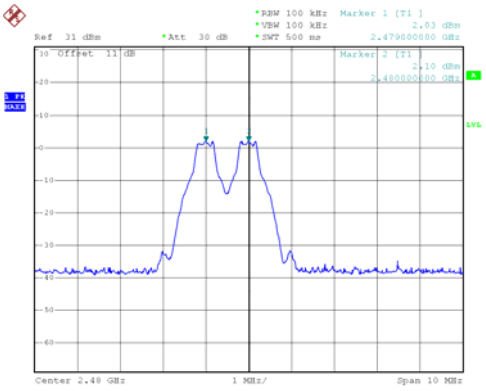
PN1
Date: 7.MAY.2007 11:30:29

Channel 39 2441MHz



PN1
Date: 7.MAY.2007 11:32:49

Channel 78 2480 MHz

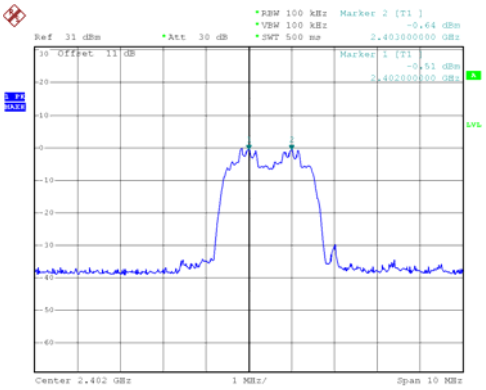


PN1
Date: 7.MAY.2007 11:34:07

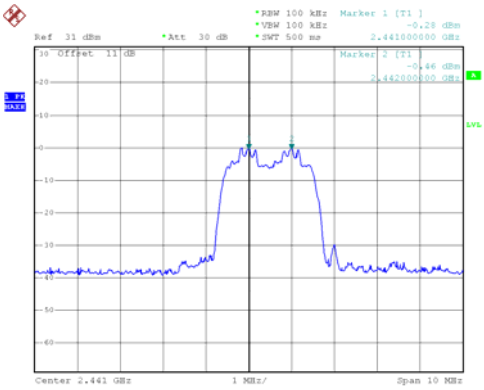
Product : Notebook
Test Item : Channel Separation
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1

Frequency (MHz)	Measurement Level (MHz)	Required Limit	Result
2402	1.00	>25 kHz or 2/3 * 20 dB BW	Pass
2441	1.00	>25 kHz or 2/3 * 20 dB BW	Pass
2480	1.00	>25 kHz or 2/3 * 20 dB BW	Pass

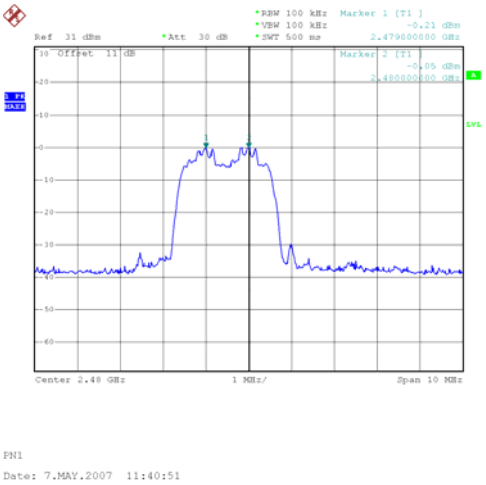
Channel 00 2402MHz



Channel 39 2441MHz



Channel 78 2480 MHz



8. Dwell Time

8.1. Test Equipment

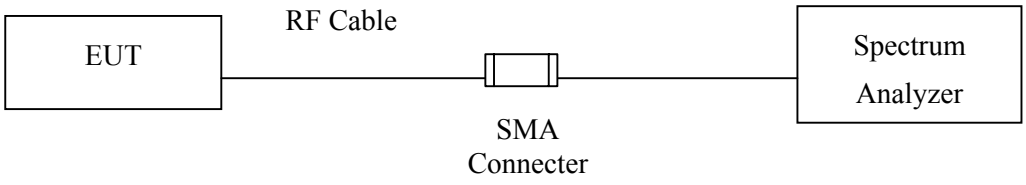
The following test equipments are used during the radiated emission tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2007

Note: 1. All equipments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

8.2. Test Setup



8.3. Limit

The dwell time shall be the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 30 second period.

8.4. Uncertainty

± 25msec

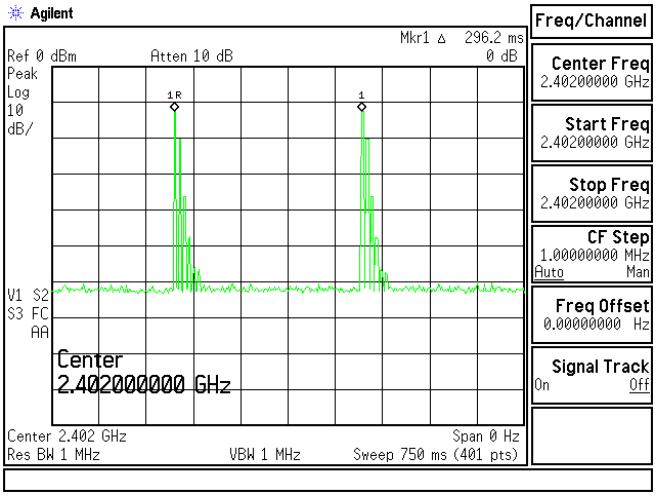
8.5. Test Result of Dwell Time

Product : Notebook
Test Item : Dwell Time
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1(Channel 00,39,78 –DH5)

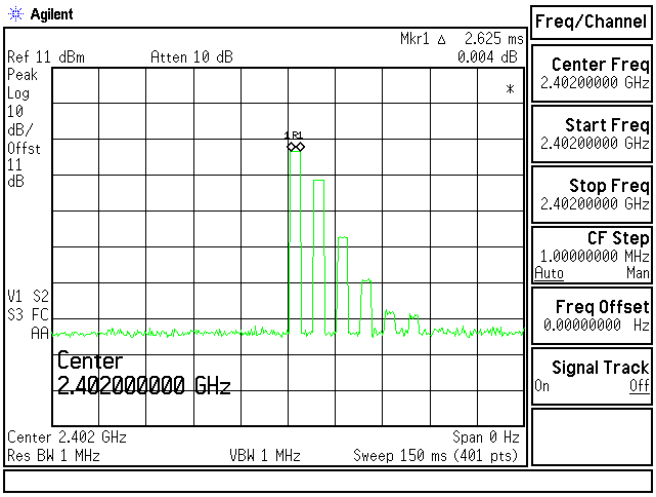
Channel No.	Frequency (MHz)	Time Interval between hops (ms)	Transmission Time (us)	Dwell Time (ms)	Limit (ms)	Result
00	2402	296.2	2625	280	400	Pass
39	2441	296.2	3000	320	400	Pass
78	2480	296.2	2750	293	400	Pass

Note: Dwell Time = 79 * 400 / Time Interval Between Hops * Transmission Time / 1000

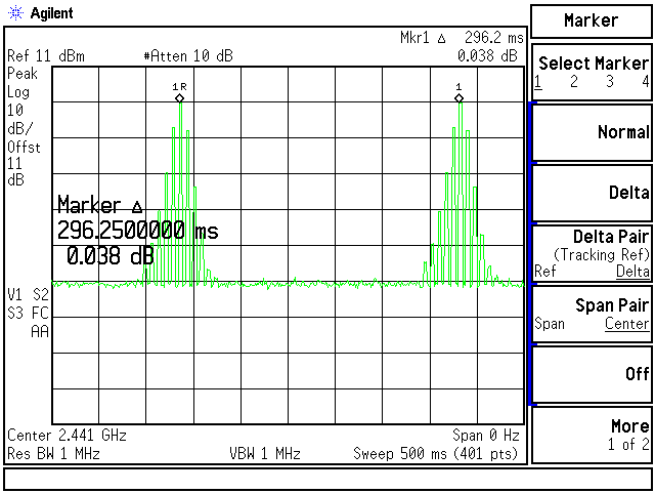
CH00 Time Interval between hops



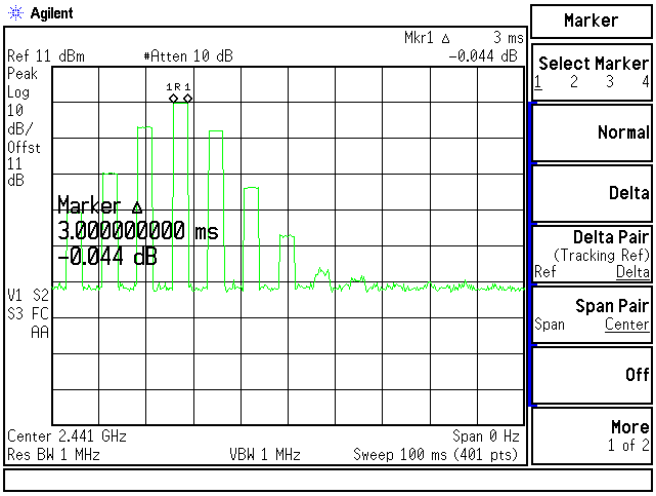
CH 00 Transmission Time



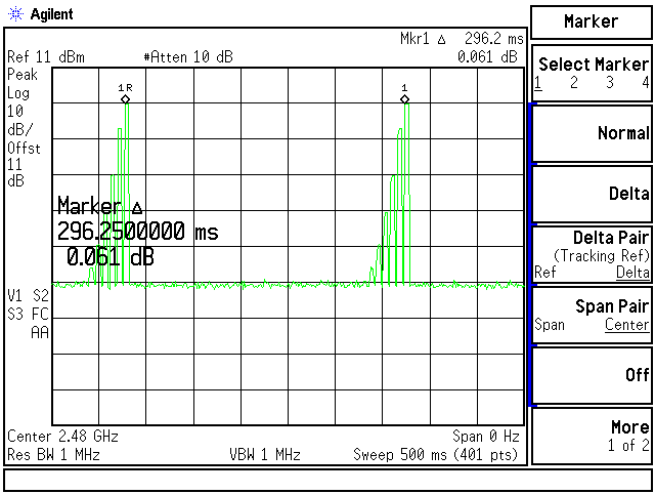
CH39Time Interval between hops



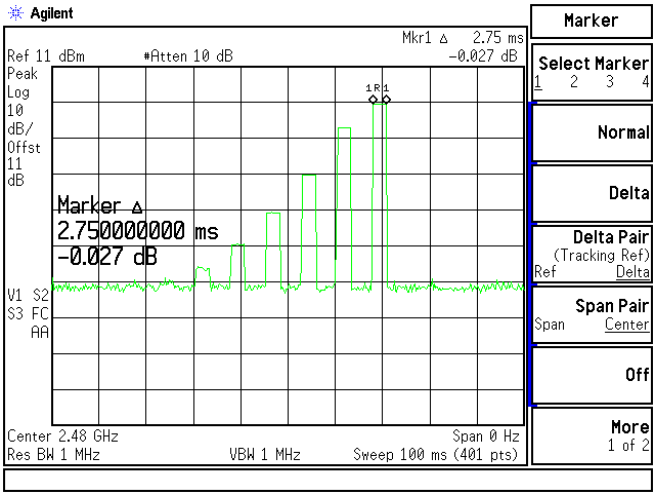
CH 39 Transmission Time



CH 78 Time Interval between hops



CH 78 Transmission Time



Note:

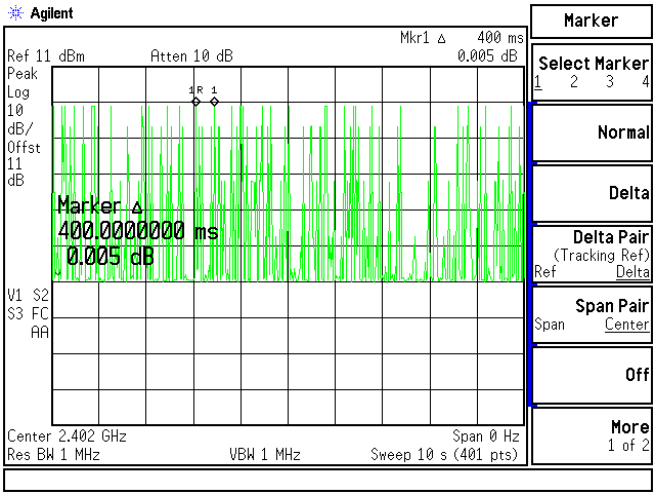
The dwell times of the packet type of DH1, DH3, and DH5 are tested. Only the worst case is shown on the report.

Product : Notebook
Test Item : Dwell Time
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1(Channel 00,39,78 –DH5)

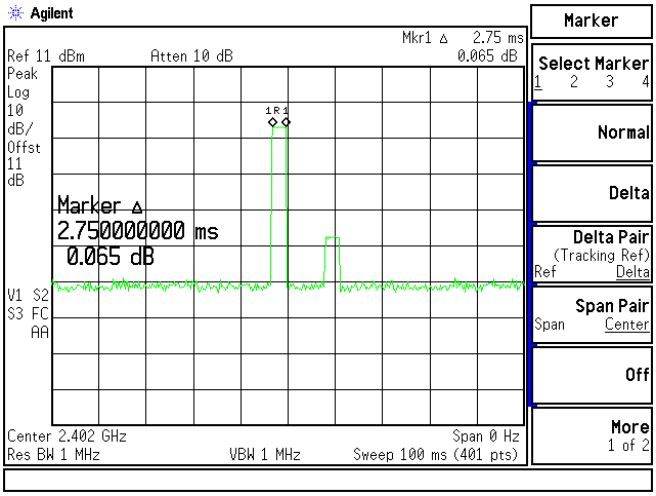
Channel No.	Frequency (MHz)	Time Interval between hops (ms)	Transmission Time (us)	Dwell Time (ms)	Limit (ms)	Result
00	2402	2750	217	400	400	Pass
39	2441	2750	145	600	400	Pass
78	2480	3000	122	775	400	Pass

Note: Dwell Time = 79 * 400 / Time Interval Between Hops * Transmission Time / 1000

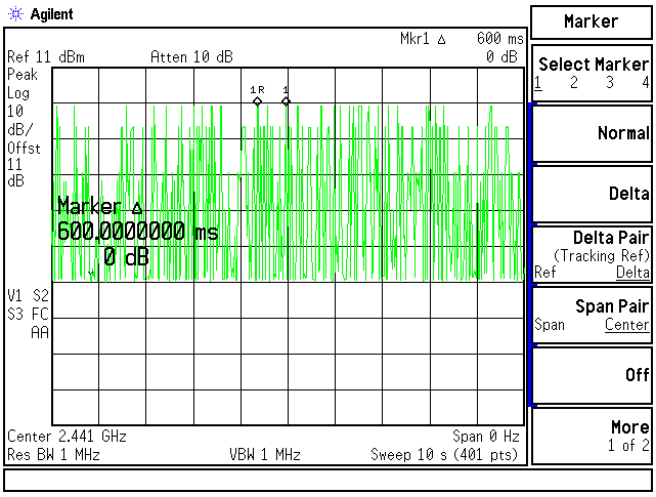
CH00 Time Interval between hops



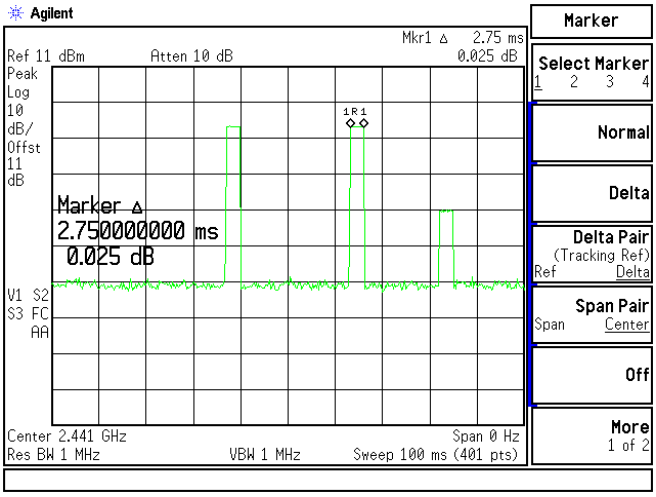
CH00 Transmission Time



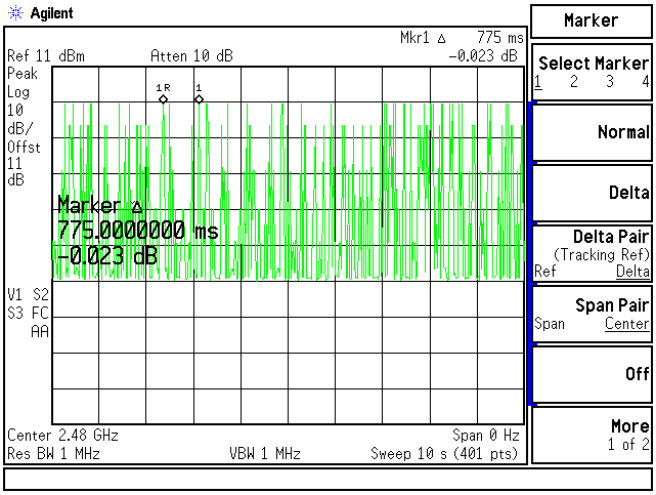
CH 39 Time Interval between hops



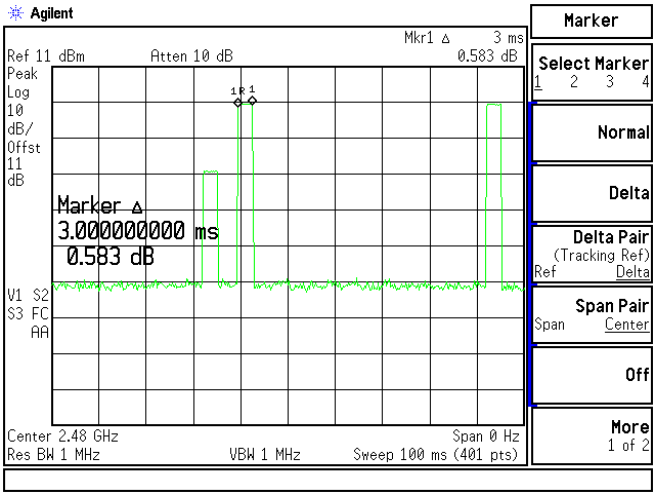
CH39 Transmission Time



CH78 Time Interval between hops



CH78 Transmission Time



Note:

The dwell times of the packet type of DH1, DH3, and DH5 are tested. Only the worst case is shown on the report.

9. Occupied Bandwidth

9.1. Test Equipment

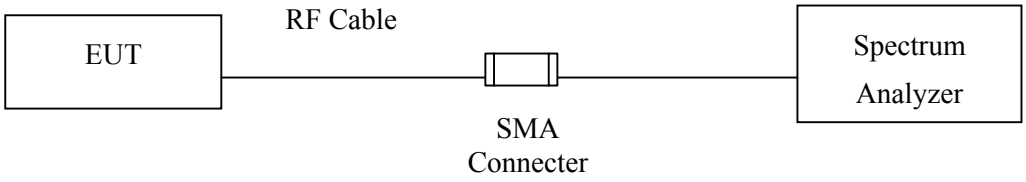
The following test equipments are used during the radiated emission tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum Analyzer	R & S	FSP40 / 100170	Nov, 2007

Note: 1. All equipments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

9.2. Test Setup



9.3. Limits

N/A

9.4. Uncertainty

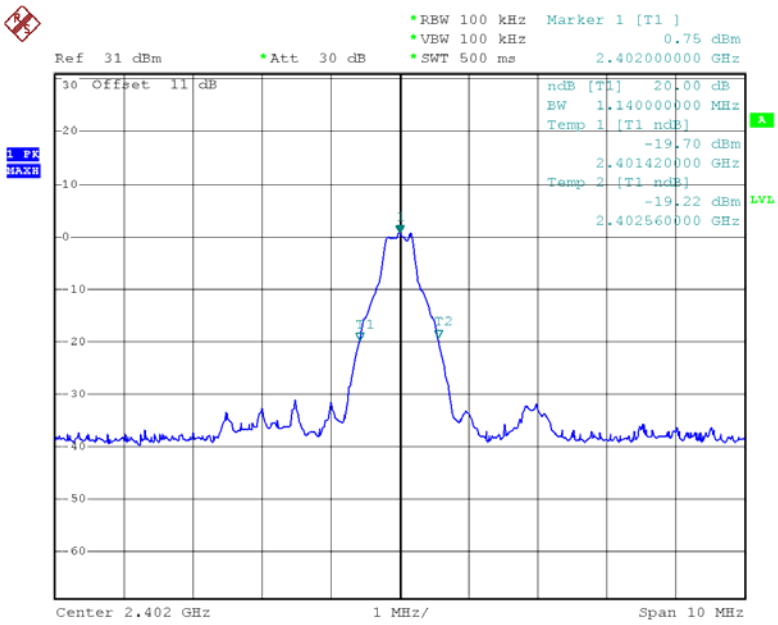
± 150Hz

9.5. Test Result of Occupied Bandwidth

Product : Notebook
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1(2402MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
00	2402	1140	--	NA

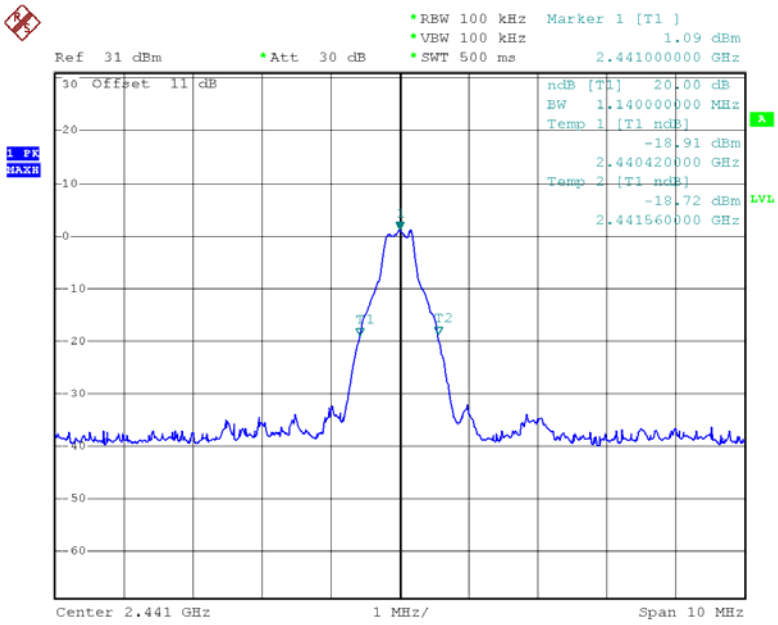
Figure Channel 00:



Product : Notebook
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1(2441MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
39	2441	1140	--	NA

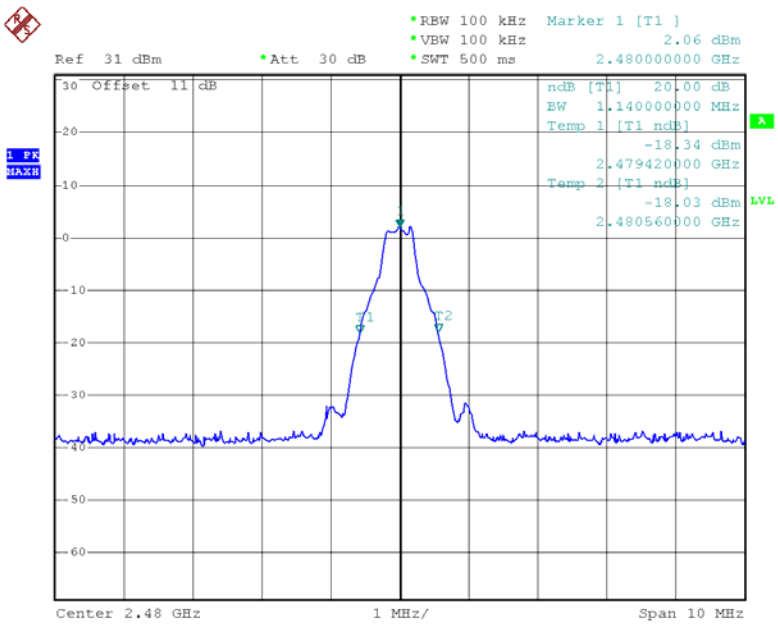
Figure Channel 39:



Product : Notebook
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmitter -1Mbps(GFSK)- Antenna 1(2480MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
78	2480	1140	--	NA

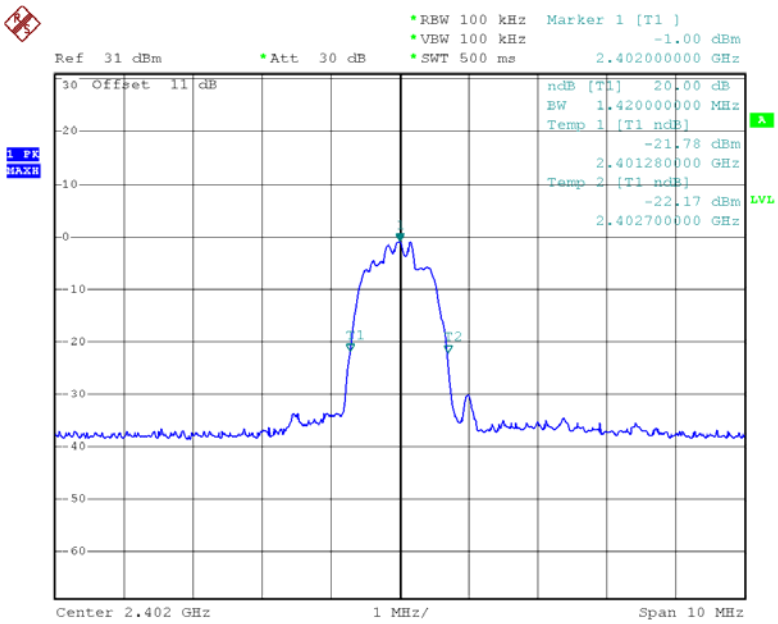
Figure Channel 78:



Product : Notebook
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1 (2402MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
00	2402	1420	--	NA

Figure Channel 00:

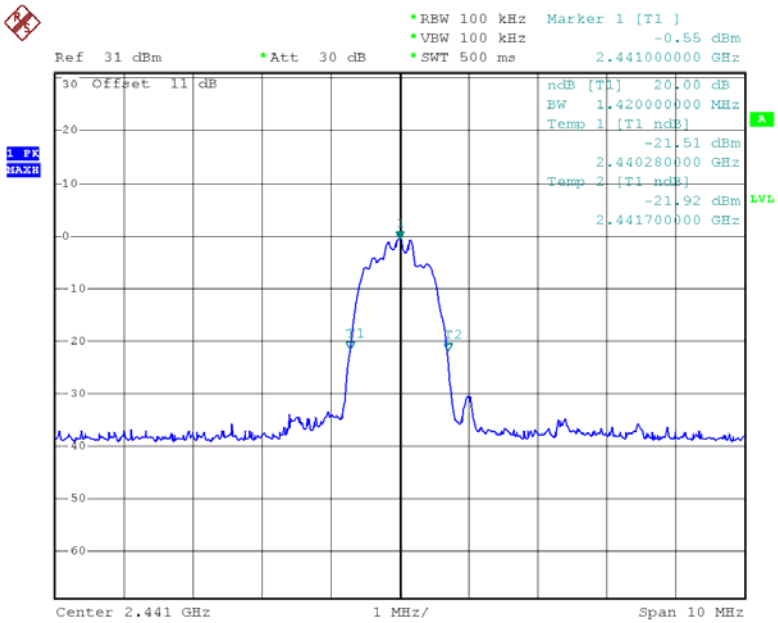


PN1
Date: 7.MAY.2007 11:18:46

Product : Notebook
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1 (2441MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
39	2441	1420	--	NA

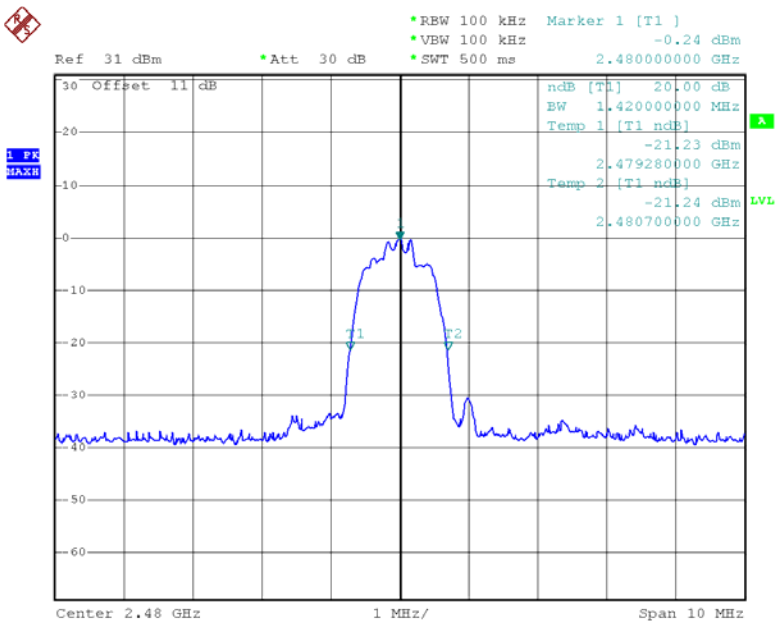
Figure Channel 39:



Product : Notebook
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmitter -3Mbps(8DPSK)- Antenna 1 (2480MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
78	2480	1420	--	NA

Figure Channel 78:



10. EMI Reduction Method During Compliance Testing

No modification was made during testing.