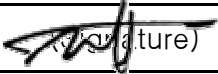


	ESTECH Co., Ltd. Rm 1015, World Venture Center II, 426-5 Gasan-dong, Guncheon-gu, Seoul, 158-803, Korea	   	Electromagnetic Interference Test Report

Test Report for FCC

Report Number		ESTF150609-004		
Applicant	Company name	Hanbit Electronics Co., Ltd.		
	Address	414-5 Woncheon-Dong, Youngtong-Gu, Suwon-City, Kyoungki-Do, Korea		
	Telephone	82-2-2175-9916		
Product	Product name	Handheld Web Computer		
	Model No.	HPAW20256,HPAB20256, HPAP20256,PepperPad3	Manufacturer	Hanbit Electronics Co., Ltd.
	Serial No.	NONE	Country of origin	KOREA
Test date	2006-09-04 ~ 2006-09-13		Date of issue	13-Sep-06
Testing location	ESTECH. Co., Ltd. 97-1 Hoiuk-Ri Majang-Myon, Icheon-city, KyungKi-Do, Korea			
Standard	FCC PART 15 2006 , ANSI C 63.4 2003			
Measurement facility registration number		94696		
Tested by	Engineer J.H.Kim  (Signature)			
Reviewed by	Engineering Manager J.M.Yang  (Signature)			
Abbreviation	OK, Pass = Passed, Fail = Failed, N/A = not applicable			
* Note '– HPAW20256,HPAB20256,HPAP20256 and PepperPad3 are same product, Only color of the product is different. – This test report is not permitted to copy partly without our permission – This test result is dependent on only equipment to be used – This test result based on a single evaluation of one sample of the above mentioned				

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Appendix 1. Spectral diagram

Appendix 2. Antenna Requirement

1. Laboratory Information

1.1 General

This EUT (Equipment Under Test) has been shown to be capable of compliance with the applicable technical standards and is tested in accordance with the measurement procedures as indicated in this report.

ESTECH Lab attests to accuracy of test data. All measurement reported herein were performed by ESTECH Co., Ltd.

ESTECH Lab assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

1.2 Test Lab.

Corporation Name : ESTECH Co. Ltd

Head Office : Rm 1015, World Venture Center II, 426-5, Gasan-dong, Geumcheon-gu, Seoul, Korea
(Safety & Telecom. Test Lab)

EMC Test Lab : 58-1 Osan-Ri, GaNam-Myon, YeoJoo-Gun, KyungKi-Do, Korea
97-1 Hoiuk-Ri Majang-Myon, Icheon-city, KyungKi-Do, Korea

1.3 Official Qualification(s)

MIC : Granted Accreditation from Ministry of Information & Communication for EMC, Safety and Telecommunication

KOLAS : Accredited Lab By Korea Laboratory Accreditation Schema base on CENELEC requirements

FCC : Filed Laboratory at Federal Communications Commission

VCCI : Granted Accreditation from Voluntary Control Council for Interference from ITE

2. Description of EUT

2.1 Summary of Equipment Under Test

Product Name	: Handheld Web Computer
Model Number	: HPAW20256, HPAB20256, HPAP20256, PepperPad3
Modulation Type	: WLAN(DSSS, OFDM), BT(GFSK)
Transfer Rate	: up to 54Mbps
Number of Channel	: 802.11b and 802.11g:11, BT: 79
Channel Spacing	: 802.11b and 802.11g: 5MHz, BT: 1MHz
Output Power	: 802.11b: 13.5dBm, 802.11g: 13.7dBm, BT: 11.9dBm
Serial Number	: NONE
Manufacturer	: Hanbit Electronics Co., Ltd.
Country of origin	: KOREA
Rating	: INPUT:AC120V / 60Hz ,DC OUTPUT:12V,3A
Receipt Date	: 2006-07-10

2.2 General descriptions of EUT

This device fully compatible with the 802.11b standard to provide a wireless data rate of 11Mbps.
 This device fully compatible with the 802.11g standard to provide a wireless data rate of up to 54Mbps

The Bluetooth frequency hopping transceiver is designed to operate between 2400 and 2483.5MHz.

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

3. Test Standards

Test Standard : FCC PART 15 (2006)

This Standard sets out the regulations under which an intentional, unintentional, or incidental radiator may be operated without an individual license. It also contains the technical specifications, administrative requirements and other conditions relating to the marketing of Part 15 devices.

Test Method : ANSI C 63.4 (2003)

This standard sets forth uniform methods of measurement of radio-frequency (RF) signals and noise emitted from both unintentional and intentional emitters of RF energy in the frequency range 9 kHz to 40 GHz. Methods for the measurement of radiated and AC power-line conducted radio noise are covered and may be applied to any such equipment unless otherwise specified by individual equipment requirements. These methods cover measurement of certain devices that deliberately radiate energy, such as intentional emitters, but does not cover licensed transmitters. This standard is not intended for certification/approval of avionic equipment or for industrial, scientific, and medical (ISM) equipment. These methods apply to the measurement of individual units or systems comprised of multiple units.

Summary of Test Results

Applied Standard : 47 CFR Part 15, Subpart C				
Standard	Test Type	Result	Remark	Limit
15.207	AC Power Conducted Emission	Pass	Meet the requirement	
15.209	Radiated Emission	Pass	Meet the requirement	
15.247(a)(2)	Spectrum Bandwidth of a DSSS System	Pass	Meet the requirement	Min. 500kHz
15.247(a)(1)	Carrier Frequency Separation & 20 Bandwidth	Pass	Meet the requirement	>25kHz
15.247(b)	Maximum Peak output power	Pass	Meet the requirement	Max. 30dBm
15.247(a)(1)(ii)	Number of Hopping Frequency	Pass	Meet the requirement	>75
15.247(a)(1)(iii)	Time of Occupancy (Dwell Time)	Pass	Meet the requirement	<400ms
15.247(c)	Transmitter Radiated Emission	Pass	Meet the requirement	Table 15.209
15.247(d)	Power Spectral Density	Pass	Meet the requirement	Max. 8dBm
15.247(c)	Band Edge Measurement	Pass	Meet the requirement	20dB less

4. Measurement Condition

4.1 EUT Operation(For 802.11b and 802.11g)

a. Channel

Ch.	Frequency	Ch.	Frequency
1	2412MHz	7	2442MHz
2	2417MHz	8	2447MHz
3	2422MHz	9	2452MHz
4	2427MHz	10	2457MHz
5	2432MHz	11	2462MHz
6	2437MHz		

BT

Ch.	Frequency	Ch.	Frequency
0	2402 MHz	40	2442 MHz
1	2403 MHz	41	2443 MHz
2	2404 MHz	42	2444 MHz
3	2405 MHz	43	2445 MHz
4	2406 MHz	...	...
...	...	78	2480 MHz
39	2441 MHz		

b. Measurement Channel : WLAN: Low(2412MHz), Middle(2437Mhz),High(2462MHz)

BT: Low(2402MHz), Middle(2441MHz),High(2480MHz)

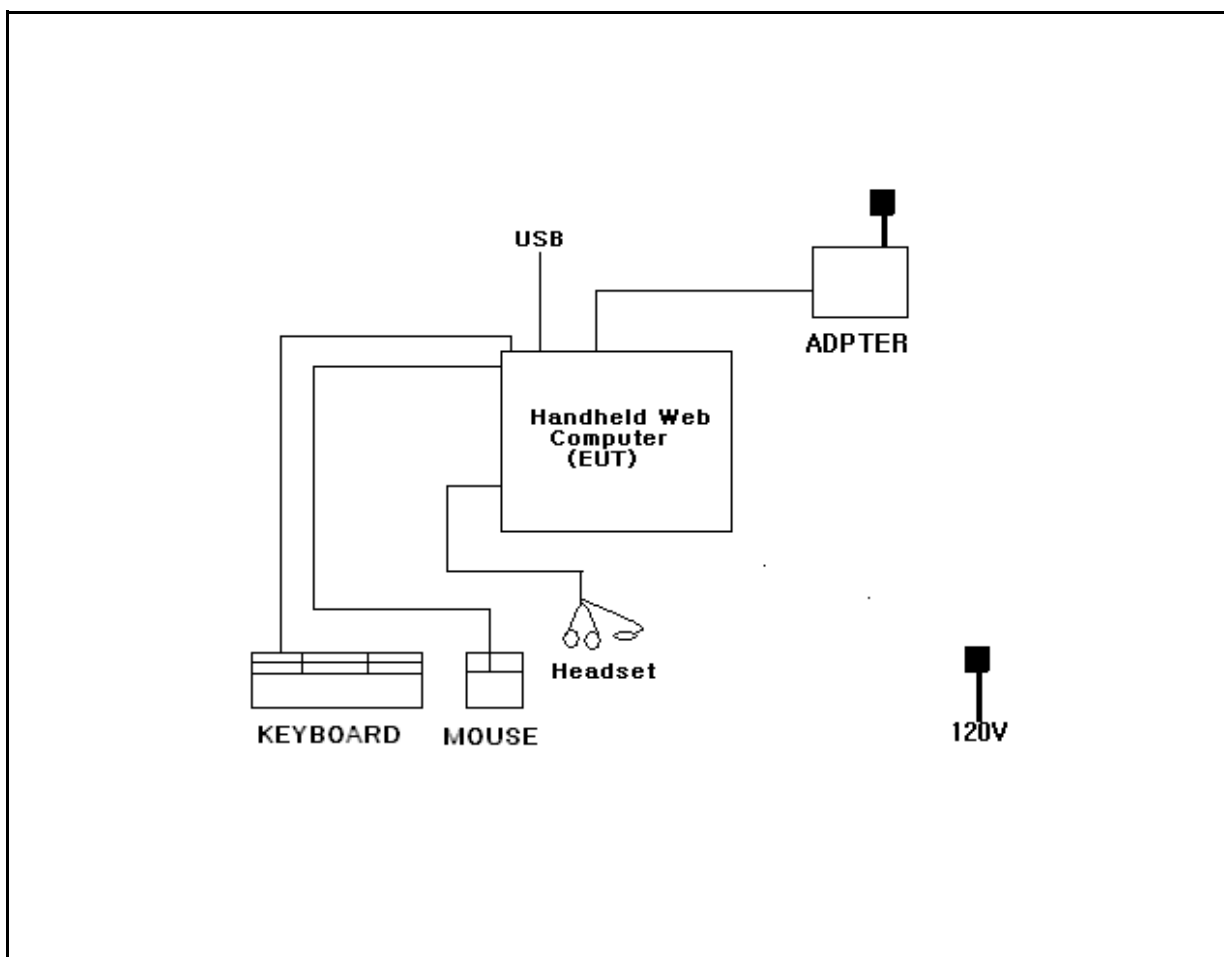
c. Test Mode : Continuous Output, DSSS, OFDM and GFSK

d. Test rate : the worst case of rate 802.11b(11Mbps), 802.11g(54Mbps), BT: 1Mbps

4.2 EUT Operation.

- * The EUT was in the following operation mode during all testing
- * The operational conditions of the EUT was determined by the manufacturer according to the typical use of the EUT with respect to the expected highest level of emission
- * The computer system ran a test program to enable EUT under transmission/receiving condition continuously at specific channel frequency.

4.3 Configuration and Peripherals



4.4 EUT and Support equipment

Equipment Name	Model Name	S/N	Manufacturer	Remark (FCC ID)
Handheld Web Computer	HPAW20256,HPAB20256, HPAP20256,PepperPad3	NONE	Hanbit Electronics Co., Ltd.	EUT
ADAPTER	DSA-36W-1236	1806HB	Dee Van Electronics Co., Ltd.	
MOUSE	Wheel Mouse Optical	3902C693	Microsoft	
KEYBOARD	PKB-7000X	015090341942	SAMSUNG CORPORATION.	
HEADSET	CMC-909MV	NONE	COSY	

4.5 Cable Connecting

Start Equipment		End Equipment		Cable Standard		Remark
Name	I/O port	Name	I/O port	Length	Shielded	
Handheld Web Computer	USB	KEYBOARD	USB	2	Shielded	
Handheld Web Computer	USB	-	-	1	Shielded	Connected with ferrite core
Handheld Web Computer	POWER	ADAPTER	-	1	Unshielded	Connected with ferrite core
Handheld Web Computer	Speaker Out	Headset	-	1	Unshielded	
Handheld Web Computer	Mic In	Headset	-	1	Unshielded	
Keyboard	USB	MOUSE	USB	1	Shielded	Connected with ferrite core

5. 6dB Bandwidth Measurement

5.1 Test procedure

The transmitter output was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measured by spectrum analyzer. The 6dB bandwidth is defined as the bandwidth at 6dB below from peak power point. The minimum of 6dB bandwidth measurement is 0.5MHz.

5.2 Test instruments and measurement setup

The spectrum analyzer is set to as following.

- . RBW= 100KHz
- . VBW= 100KHz
- . Span= 20MHz
- . Sweep= suitable duration based on the EUT specification.

6dB Bandwidth Test Instruments

Description	Model	Serial Number	Cal. Due Date
Spectrum Analyzer	E4407B	US42041281	2007-03-03
RF Cable	Length: 20cm	—	
—Spectrum Analyzer <=> EUT	Loss: 0.7dB	—	

5.3 Measurement results

EUT	Handheld Web Computer	MODEL	HPAW20256,HPAB20256,HPA P20256
MODE	CCK	ENVIRONMENTAL CONDITION	24℃, 44%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	Bandwidth at 6dB below(MHz)	Minimum Limit (MHz)	PASS/FAIL
1	2412	11.74	0.5	PASS
6	2437	10.75	0.5	PASS
11	2462	12.19	0.5	PASS

EUT	Handheld Web Computer	MODEL	HPAW20256,HPAB20256,HPAP20256
MODE	OFDM	ENVIRONMENTAL CONDITION	24℃, 43%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	Bandwidth at 6dB below(MHz)	Minimum Limit (MHz)	PASS/FAIL
1	2412	16.55	0.5	PASS
6	2437	16.51	0.5	PASS
11	2462	16.54	0.5	PASS



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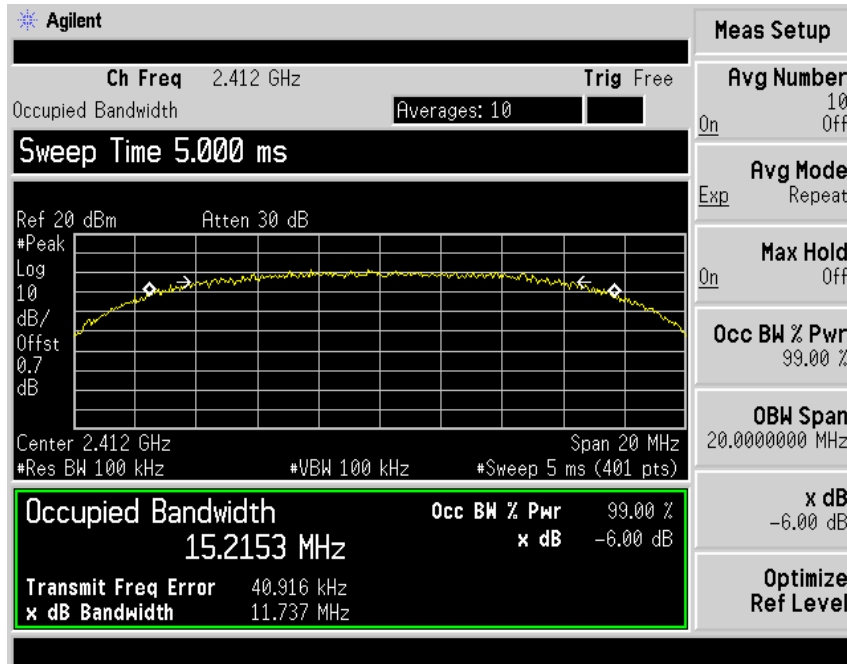
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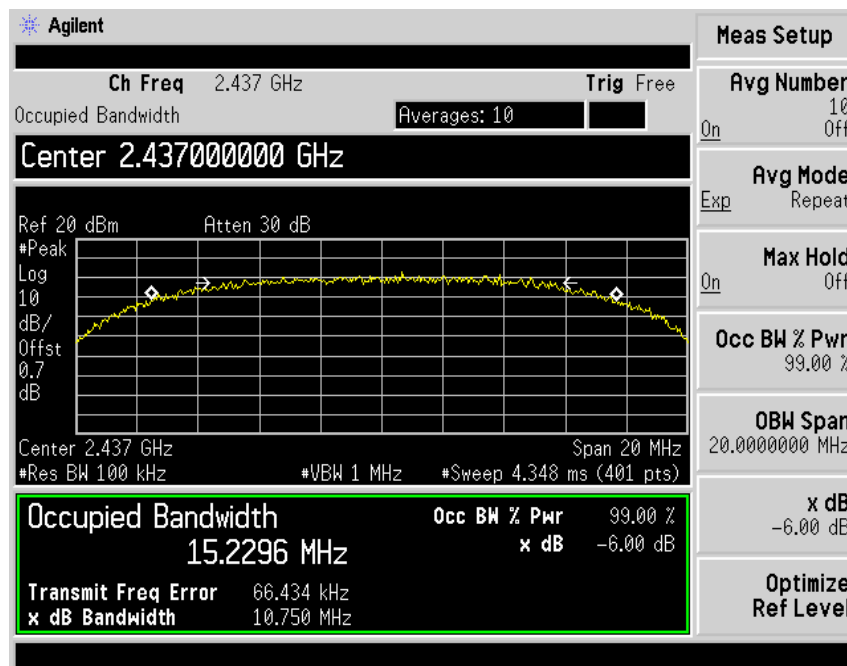
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5.4 Trace data

CCK (802.11b-1ch)



CCK (802.11b-6ch)





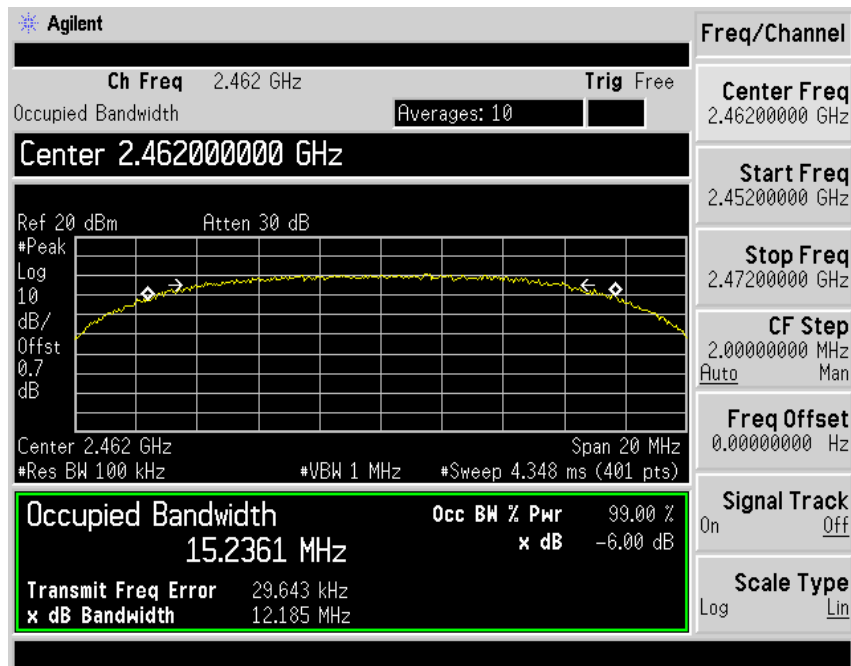
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CCK (802.11b-11ch)





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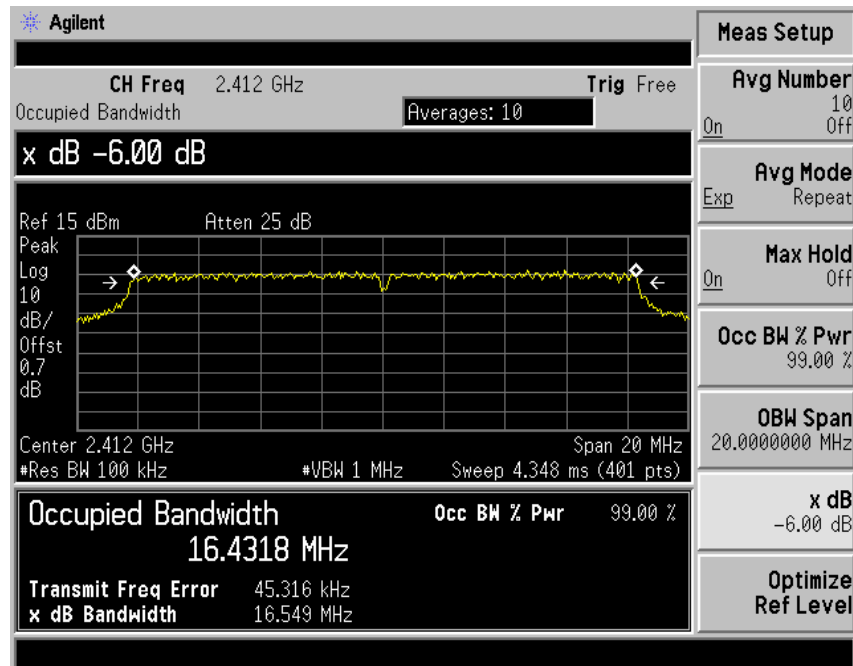
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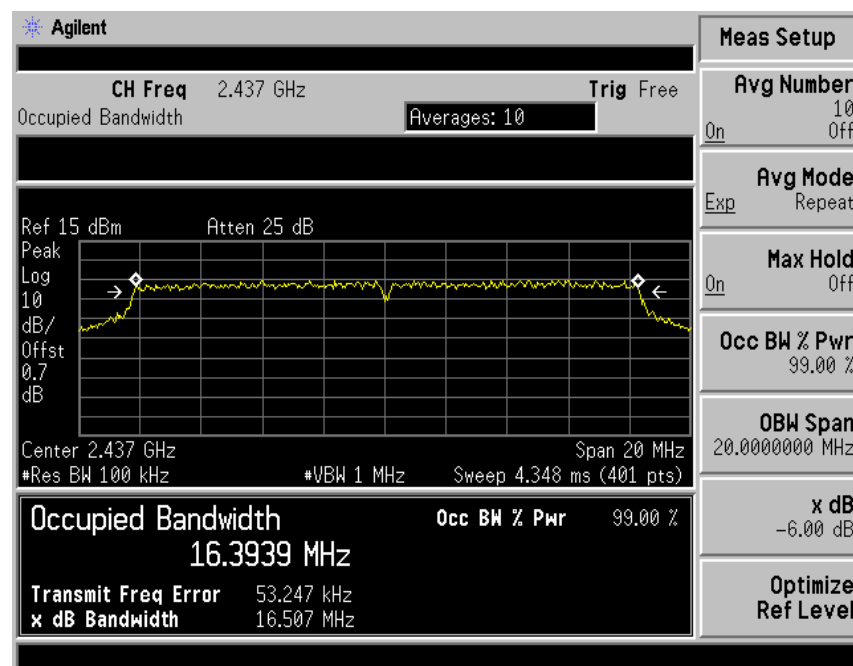
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5.4 Trace data

OFDM (802.11g-1ch)



OFDM (802.11g-6ch)





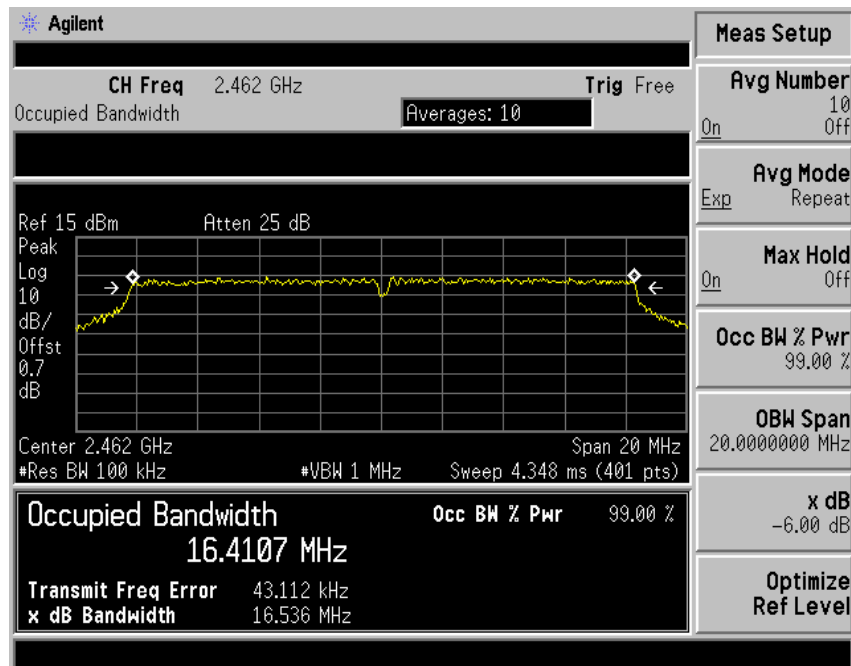
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OFDM (802.11g-11ch)



6. MAXIMUM PEAK OUTPUT POWER

6.1 Test procedure

The transmitter antenna terminal is connected to the input of a RF power sensor. Measurement is made while EUT is operating in transmission mode at the appropriate center frequency. The maximum peak output power measurement is 30dBm.

Maximum Peak Output Power Test Instruments

Description	Model	Serial Number	Cal. Due Date
Power Meter	HP E4418A	GB38272717	2007-03-03
Power Sensor	HP 8481A	3318A96478	2007-03-08
RF Cable:	Length: 20cm	-	
-Spectrum Analyzer <=> EUT	Loss: 0.7dB	-	

6.2 Measurement results

EUT	Handheld Web Computer	MODEL	HPAW20256,HPAB20256,HPAP20256
MODE	CCK	ENVIRONMENTAL CONDITION	24℃, 43%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	Peak Power Output(dBm)		Limit[1W] (dBm)	PASS/FAIL
		(dBm)	(W)		
1	2412	13.5	0.022	30.0	PASS
6	2437	12.6	0.018	30.0	PASS
11	2462	13.0	0.020	30.0	PASS

EUT	Handheld Web Computer	MODEL	HPAW20256,HPAB20256,HPAP20256
MODE	OFDM	ENVIRONMENTAL CONDITION	24℃, 43%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	Peak Power Output(dBm)		Limit[1W] (dBm)	PASS/FAIL
		(dBm)	(W)		
1	2412	13.7	0.023	30.0	PASS
6	2437	13.5	0.022	30.0	PASS
11	2462	13.6	0.023	30.0	PASS

7. Transmitter power spectral density

7.1 Test procedure

The peak power density was measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency. The maximum of power spectral density measurement is 8dBm.

7.2 Test instruments and measurement setup

The spectrum analyzer is set to as following.

- . RBW= 3KHz
- . VBW= 30KHz
- . Span= 1.5MHz
- . Sweep= 500 seconds (It is allowed to be longer than span/3kHz.)

The peak power density Test Instruments

Description	Model	Serial Number	Cal. Due Date
Spectrum Analyzer	E4407B	US42041281	2007-03-03
RF Cable	Length: 20cm	—	
—Spectrum Analyzer <=> EUT	Loss: 0.7dB	—	

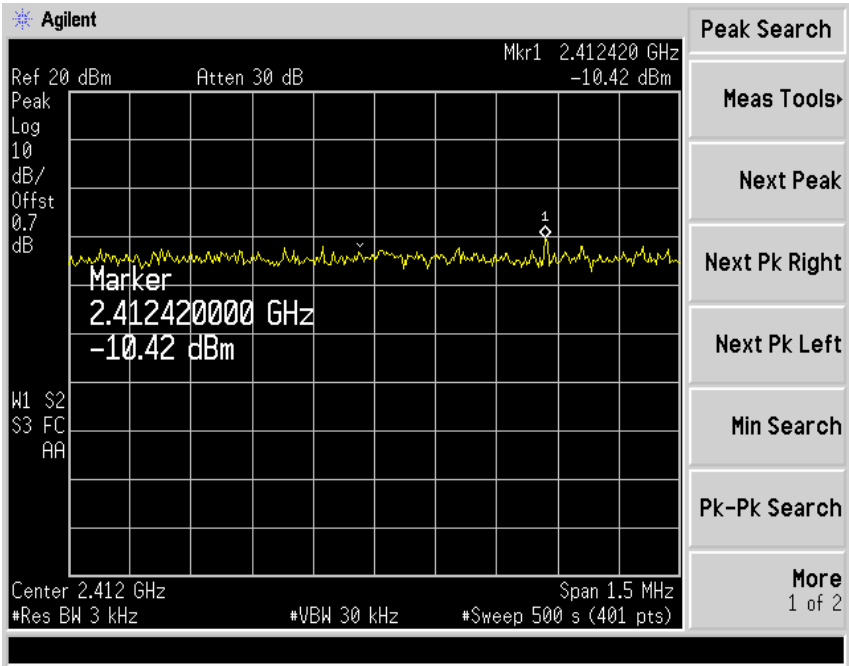
7.3 Measurement results

EUT	Handheld Web Computer	MODEL	HPAW20256,HPAB20256,HPAP20256	
MODE	CCK	ENVIRONMENTAL CONDITION	23℃, 43%RH	
INPUT POWER	120Vac, 60Hz			
CHANNEL	Channel Frequency (MHz)	RF Power Spectral Density (dBm)	Maximum Limit (dBm)	PASS/FAIL
1	2412	-10.42	8.0	PASS
6	2437	-9.62	8.0	PASS
11	2462	-9.65	8.0	PASS

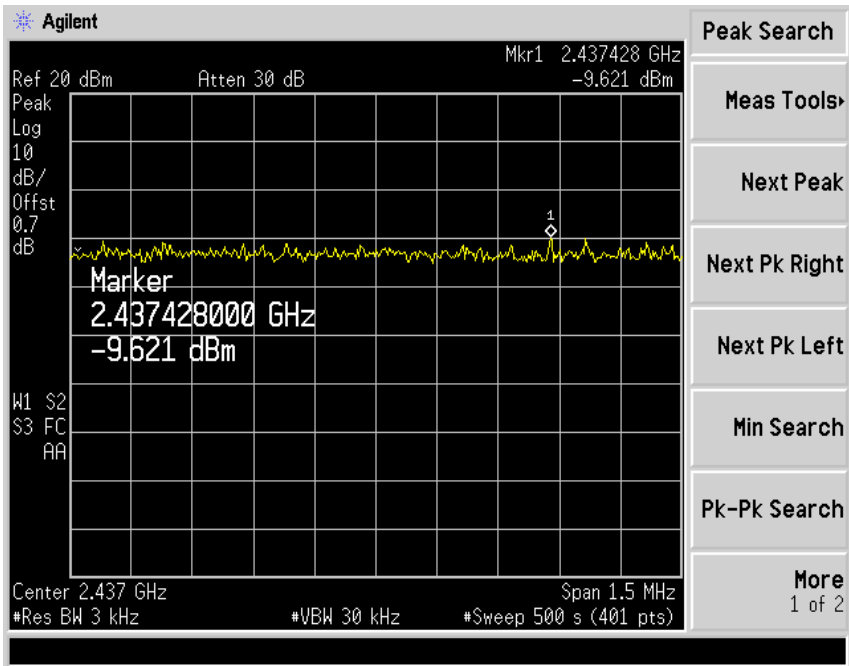
EUT	Handheld Web Computer	MODEL	HPAW20256,HPAB20256,HPAP20256
MODE	OFDM	ENVIRONMENTAL CONDITION	23℃, 43%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	RF Power Spectral Density (dBm)	Maximum Limit (dBm)	PASS/FAIL
1	2412	-14.14	8.0	PASS
6	2437	-16.98	8.0	PASS
11	2462	-16.15	8.0	PASS

7.4 Trace data
CCK (802.11b-1ch)



CCK (802.11b-6ch)





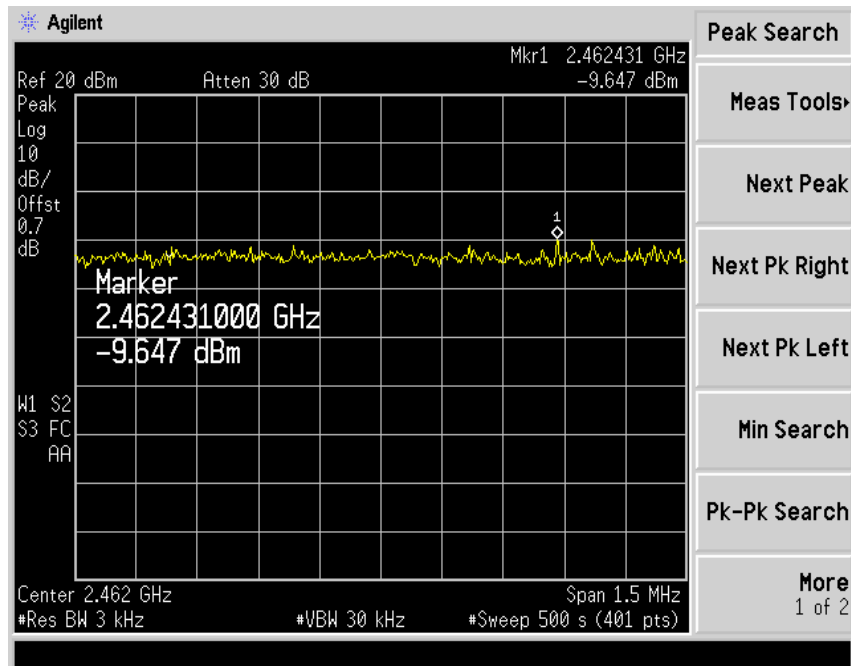
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CCK (802.11b-11ch)





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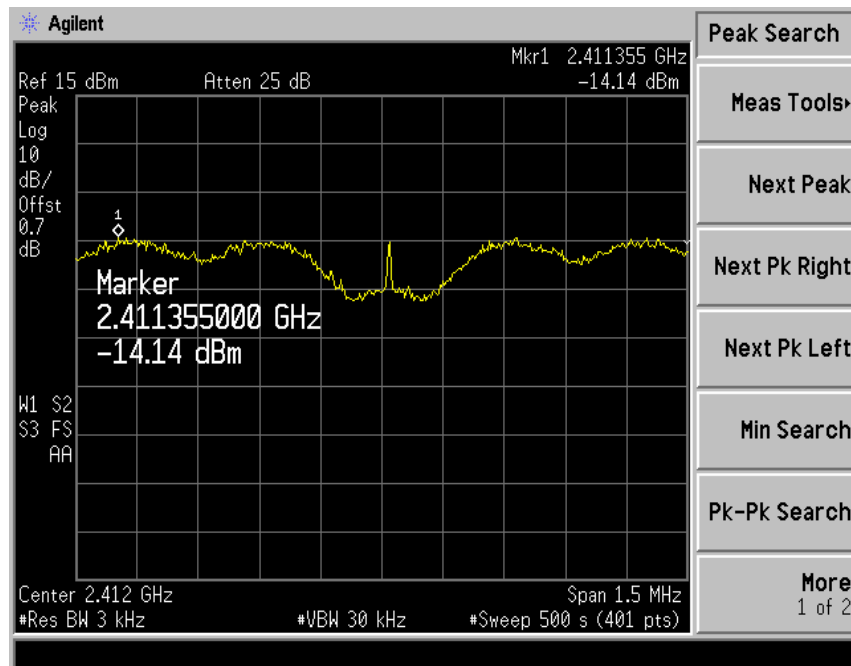
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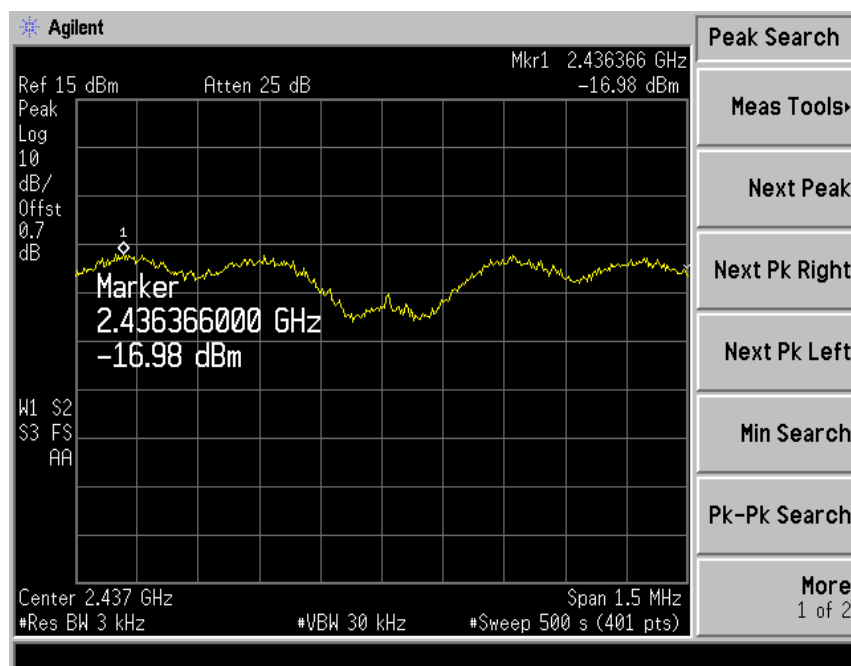
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7.4 Trace data

OFDM (802.11g-1ch)



OFDM (802.11g-6ch)





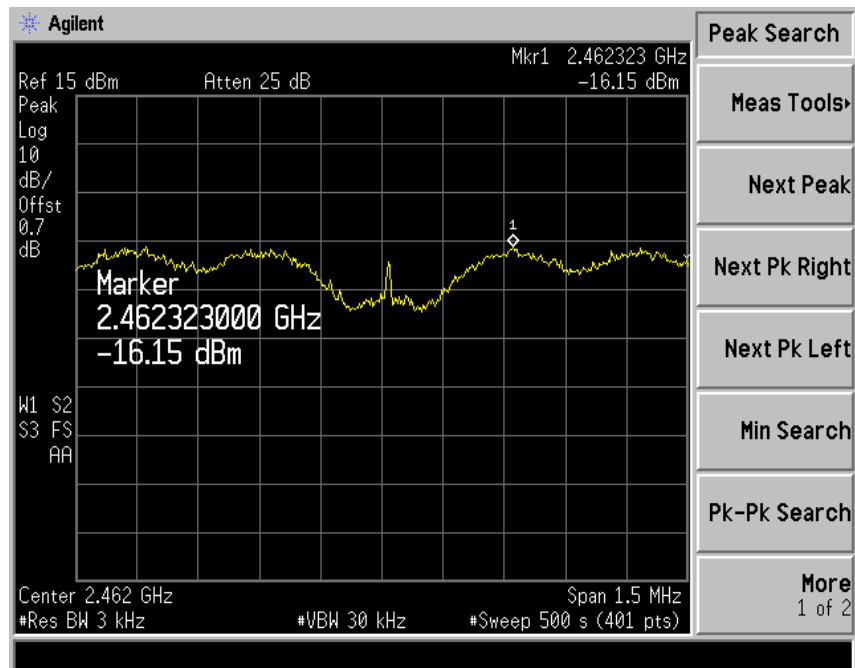
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OFDM (802.11g-11ch)



8. band-edge and out of band emissions.

8.1 Test procedure

The radio frequency power at 20dB down from the highest inband power level is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency. The band edge&out of band emission shall be at least 20dB below of the highest inband power level.

8.2 Test instruments and measurement setup

The spectrum analyzer is set to as following.

- . RBW= 100KHz(11b), 1MHz(11g)
- . VBW= 100KHz(11b), 300Hz(11g)
- . Span= suitable frequency span
- . Sweep= suitable duration based on the EUT specification.

Band Edge&Out of Emission Test Instruments

Description	Model	Serial Number	Cal. Due Date
Spectrum Analyzer	E4407B	US42041281	2007-03-03
RF Cable	Length: 20cm		—
-Spectrum Analyzer <=> EUT	Loss: 0.7dB		—

8.3 Measurement results of band-edge & out of emission

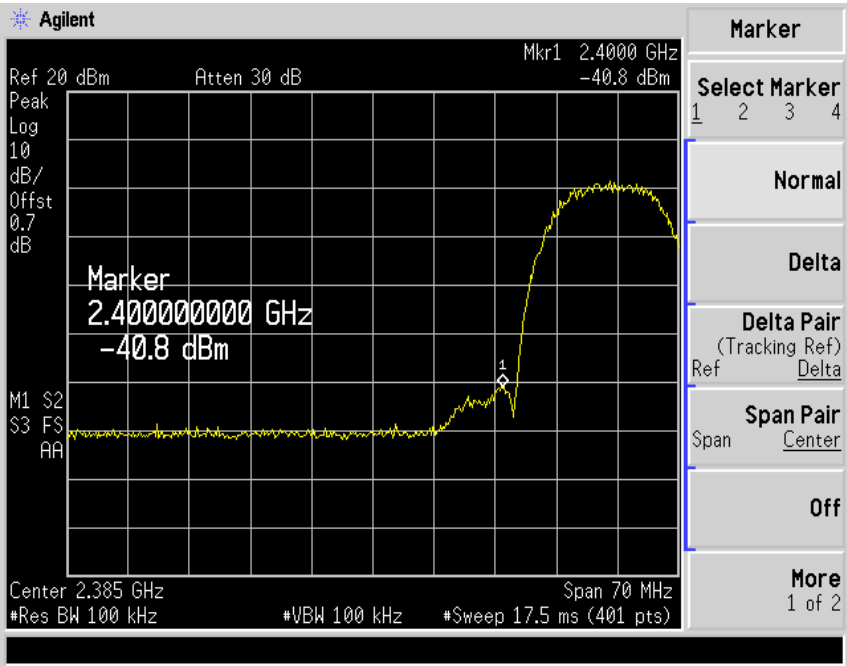
EUT	Handheld Web Computer	MODEL	HPAW20256,HPAB20256,HPAP20256
MODE	CCK	ENVIRONMENTAL CONDITION	23℃, 43%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	Measurement Frequency (MHz)	Peak Level at 20dB below(dBm)	Limit (MHz)
1	2412	2400.0	-40.80	Below 20dB from peak power level to band edge
11	2462	2487.0	-48.41	Below 20dB from peak power level to band edge

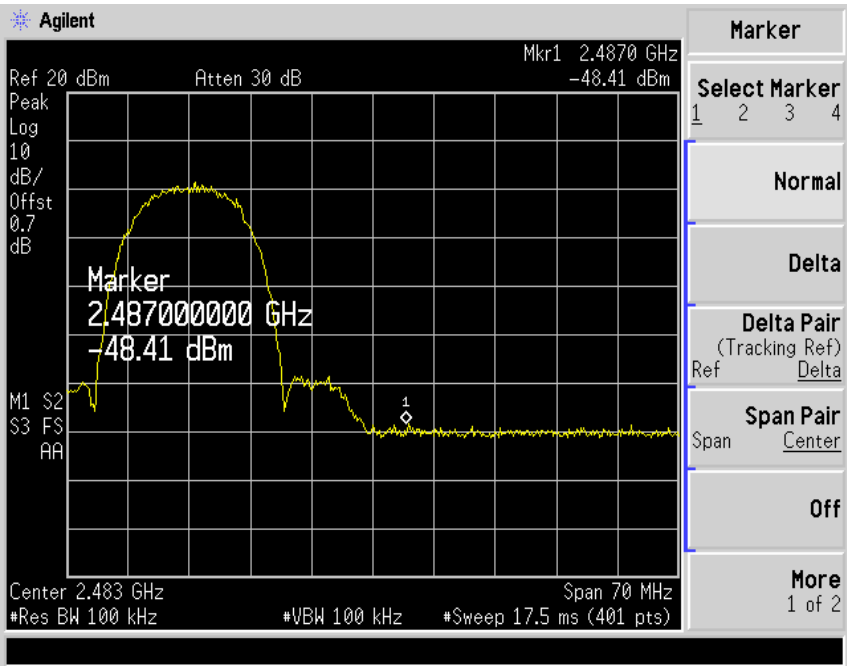
EUT	Handheld Web Computer	MODEL	HPAW20256,HPAB20256,HPAP20256
MODE	OFDM	ENVIRONMENTAL CONDITION	23℃, 43%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	Measurement Frequency (MHz)	Peak Level at 20dB below(dBm)	Limit (MHz)
1	2412	2400.0	-40.67	Below 20dB from peak power level to band edge
11	2462	2483.5	-51.75	Below 20dB from peak power level to band edge

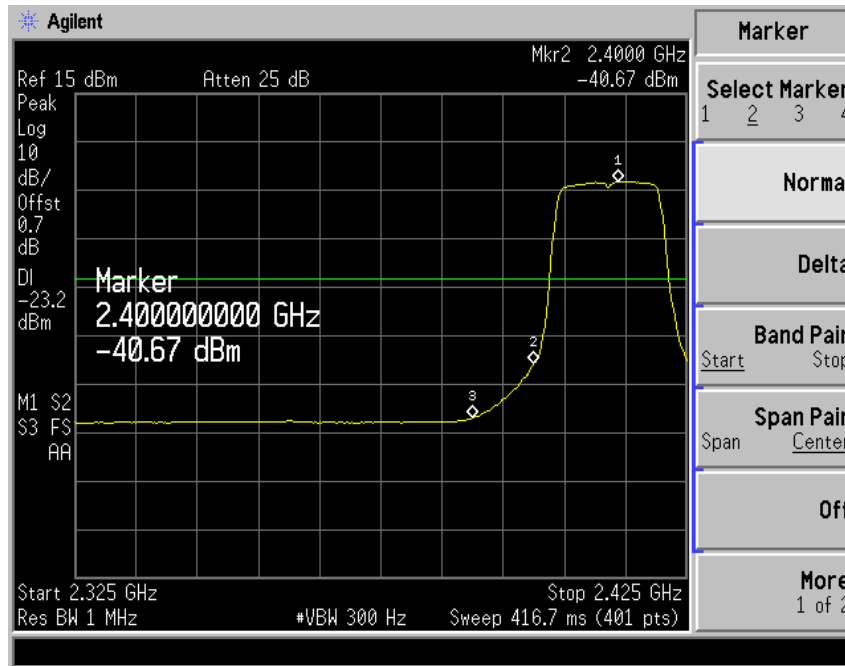
8.4 Trace data of band-edge & Out of Emission CCK (802.11b-1ch)



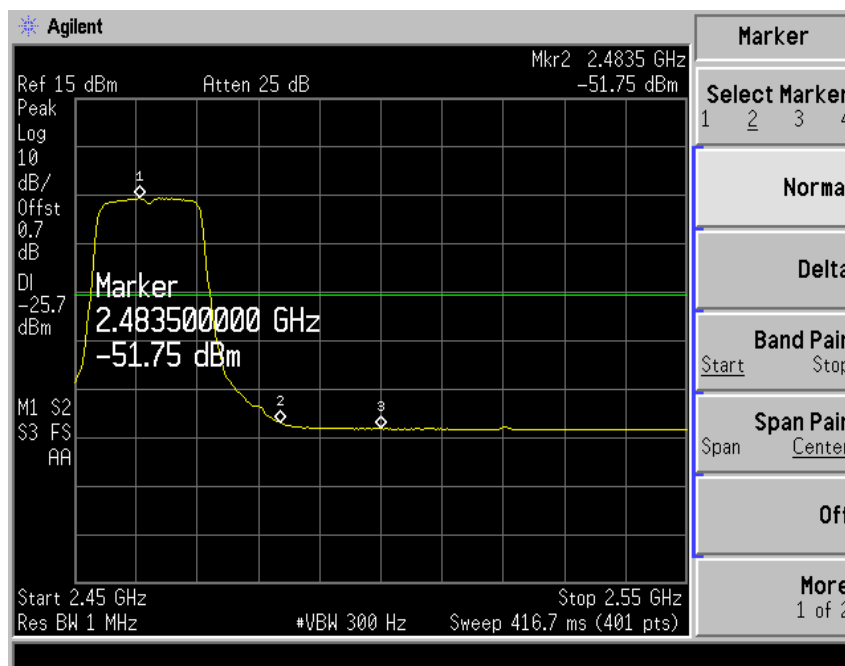
CCK (802.11b-11ch)



OFDM (802.11g-1ch)



OFDM (802.11g-11ch)



9. Carrier Frequency Separation

9.1 Test procedure

According to §15.247(a)(1), Frequency hopping systems shall have hopping channel carrier frequencies separated by minimum of 25kHz or the 20dB bandwidth of the hopping channel, whichever is greater.

9.2 Test instruments and measurement setup

The spectrum analyzer is set to as following.

- . RBW= 300KHz
- . VBW= 300KHz
- . Span= 3MHz
- . Sweep= suitable duration based on the EUT specification.

6dB Bandwidth Test Instruments

Description	Model	Serial Number	Cal. Due Date
Spectrum Analyzer	E4407B	US42041281	2007-03-03
RF Cable	Length: 20cm	—	
-Spectrum Analyzer <=> EUT	Loss: 0.7dB	—	

9.3 Measurement results

EUT	Handheld Web Computer	MODEL	HPAW20256,HPAB20256,
MODE	FHSS	ENVIRONMENTAL CONDITION	24℃, 43%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	Bandwidth at 20dB below(kHz)	Channel Separation (MHz)	Limit (kHz)	PASS/FAIL
39	2441	874.4	1.0	>25	PASS



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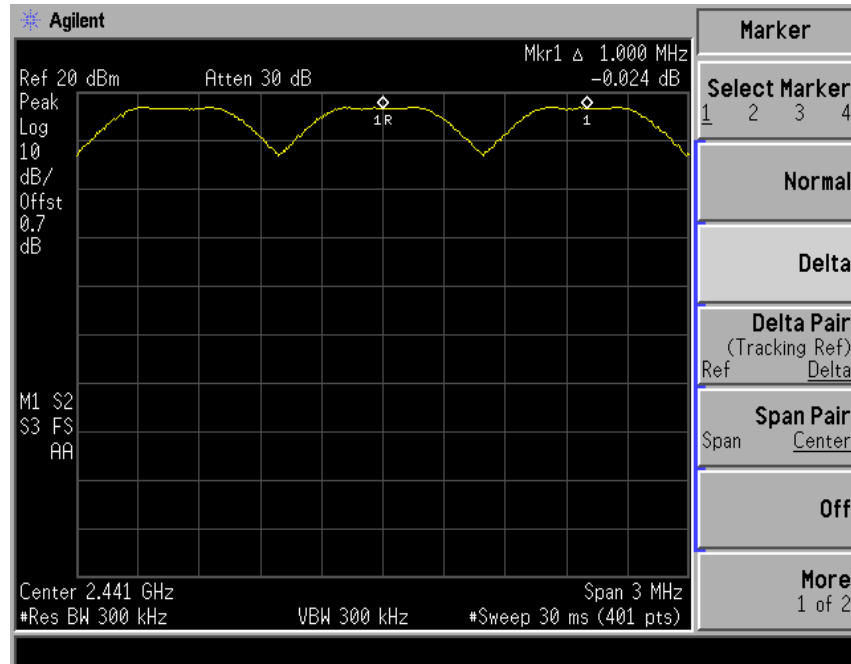
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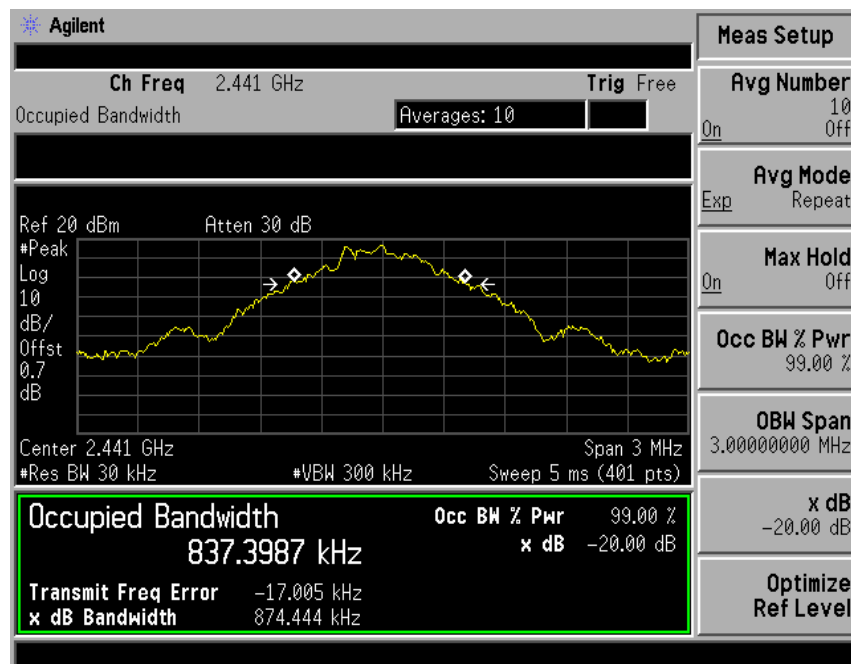
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9.4 Trace data

Channel Separation



20dB bandwidth



10. MAXIMUM PEAK OUTPUT POWER

10.1 Test procedure

The transmitter antenna terminal is connected to the input of a Spectrum Analyzer. Measurement is made while EUT is operating in transmission mode at the appropriate center frequency. The maximum peak output power measurement is 30dBm.

Maximum Peak Output Power Test Instruments

Description	Model	Serial Number	Cal. Due Date
Spectrum Analyzer	E4407B	US42041281	2007-03-03
RF Cable	Length: 20cm		—
-Spectrum Analyzer <=> EUT	Loss: 0.7dB		—

10.2 Measurement results

EUT	Handheld Web Computer	MODEL	HPAW20256, HPAB20256, HPAP20256, PepperPad3
MODE	GFSK, DH5	ENVIRONMENTAL CONDITION	24℃, 43%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	Peak Power Output(dBm)		Limit[1W] (dBm)	PASS/ FAIL
		(dBm)	(W)		
0	2402	11.60	0.0145	30.0	PASS
39	2441	11.60	0.0145	30.0	PASS
78	2480	11.90	0.0155	30.0	PASS

11. Number of Hopping Frequency

11.1 Test procedure

According to §15.247(a)(1)(ii), Frequency hopping systems operating in the 2400MHz–2483.5MHz bands shall use at least 75 hopping frequencies.

11.2 Test instruments and measurement setup

The spectrum analyzer is set to as following.

- . RBW= 300KHz
- . VBW= 300KHz
- . Span= the frequency band of operation
- . Sweep= suitable duration based on the EUT specification.

The Number of Hopping Frequency Test Instruments

Description	Model	Serial Number	Cal. Due Date
Spectrum Analyzer	E4407B	US42041281	2007-03-03
RF cable	Length: 20cm	–	
–Spectrum Analyzer <=> EUT	Loss: 0.7dB		

11.3 Measurement results

EUT	Handheld Web Computer	MODEL	HPAW20256, HPAB20256, HPAP20256, PepperPad3
MODE	FHSS	ENVIRONMENTAL CONDITION	24 °C, 43%RH
INPUT POWER	120Vac, 60Hz		
Number of CH	Limit (Number of CH)	PASS/FAIL	
79	>75	PASS	



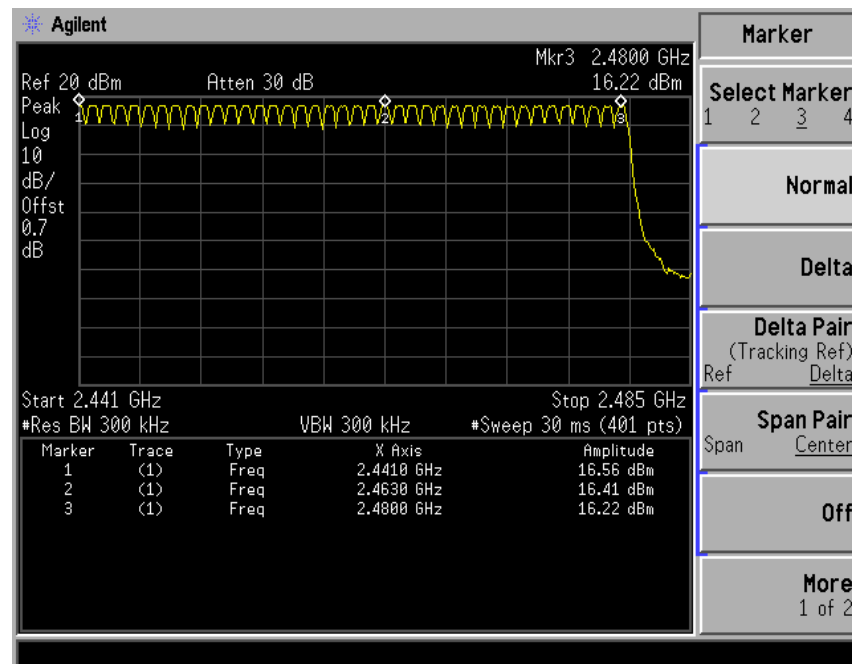
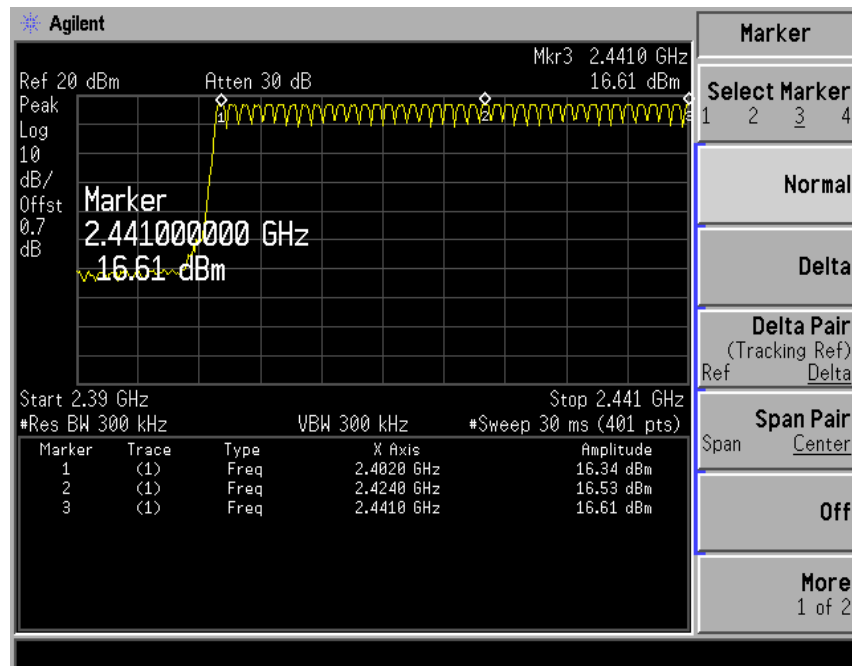
ESTECH Co., Ltd.

Rm 1015, World Venture Center II,
426-5 Gasan-dong, Guncheon-gu,
Seoul, 158-803, Korea



**Electromagnetic
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Test Report**

11.4 Trace data



12. Time of Occupancy (Dwell Time)

12.1 Test procedure

According to §15.247(a)(1)(iii), Frequency hopping systems operating in the 2400MHz–2483.5 MHz bands. The average time of occupancy on any channels shall not greater than 0.4 s within a period 0.4 s multiplied by the number of hopping channels employed.

12.2 Test instruments and measurement setup

The spectrum analyzer is set to as following.

- . RBW= 1MHz
- . VBW= 1MHz
- . Span= zero
- . Sweep= suitable duration based on the EUT specification.

The Time of Occupancy Test Instruments

Description	Model	Serial Number	Cal. Due Date
Spectrum Analyzer	E4407B	US42041281	2007-03-03
RF cable	Length: 20cm	—	
–Spectrum Analyzer <=> EUT	Loss: 0.7dB		

12.3 Measurement results

EUT	Handheld Web Computer	MODEL	HPAW20256,HPAB20256, HPAP20256,PepperPad3	
MODE	FHSS	ENVIRONMENTAL CONDITION	24℃, 43%RH	
INPUT POWER	120Vac, 60Hz			
Channel	Pulse Time(ms) (DH1/DH5)	Limit (ms)	PASS/FAIL	
39	0.40/2.94	400.0	PASS	



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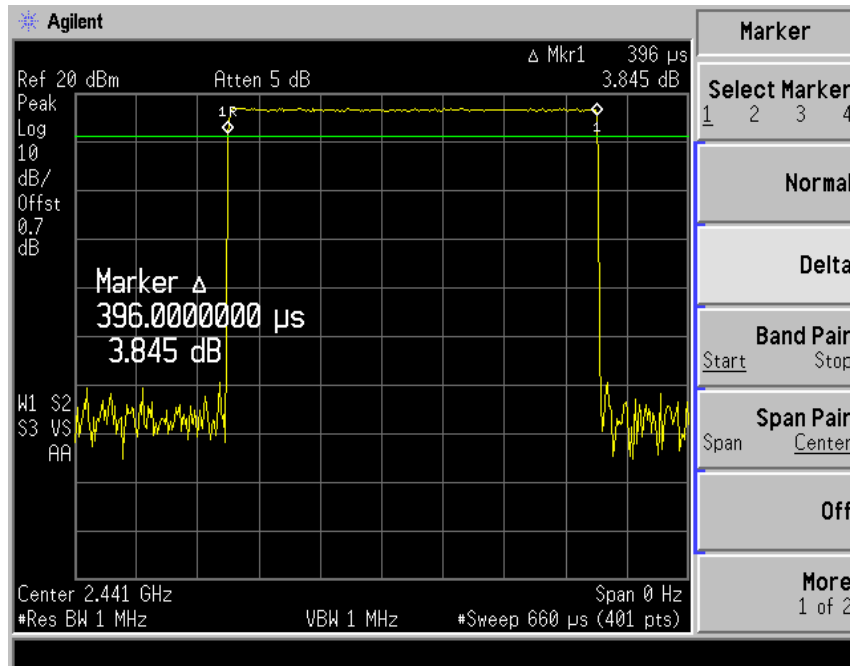
Rm 1015, World Venture Center II,
426-5 Gasan-dong, Guncheon-gu,
Seoul, 158-803, Korea



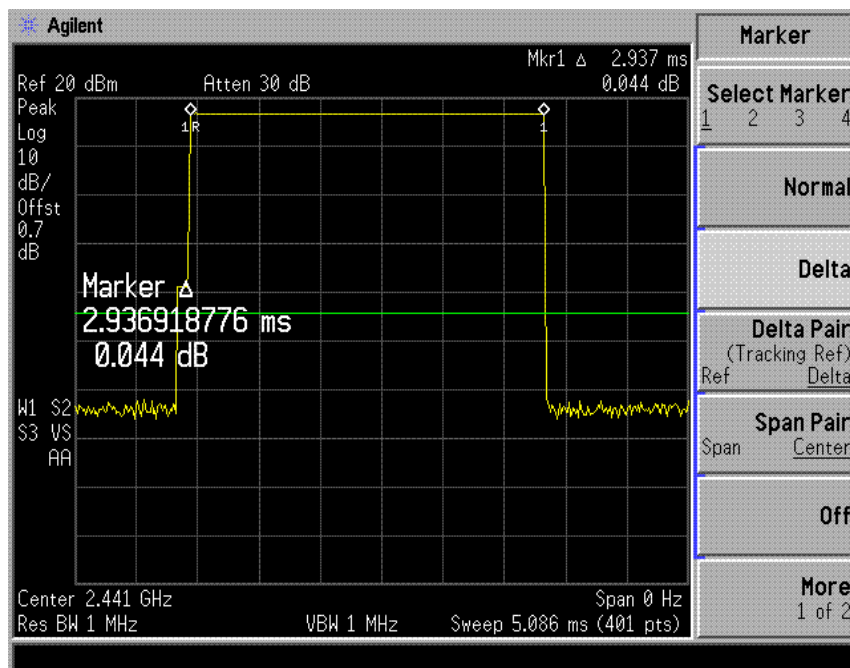
**Electromagnetic
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Test Report**

12.4 Trace data

DH1



DH5



13. band-edge and out of band emissions.

13.1 Test procedure

The radio frequency power at 20dB down from the highest inband power level is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency. The band edge&out of band em

13.2 Test instruments and measurement setup

The spectrum analyzer is set to as following.

- . RBW= 100KHz
- . VBW= 100KHz
- . Span= suitable frequency span
- . Sweep= suitable duration based on the EUT specification.

Band Edge&Out of Emission Test Instruments

Description	Model	Serial Number	Cal. Due Date
Spectrum Analyzer	E4407B	US42041281	2007-03-03
RF cable	Length: 20cm		—
-Spectrum Analyzer <=> EUT	Loss: 21dB		—

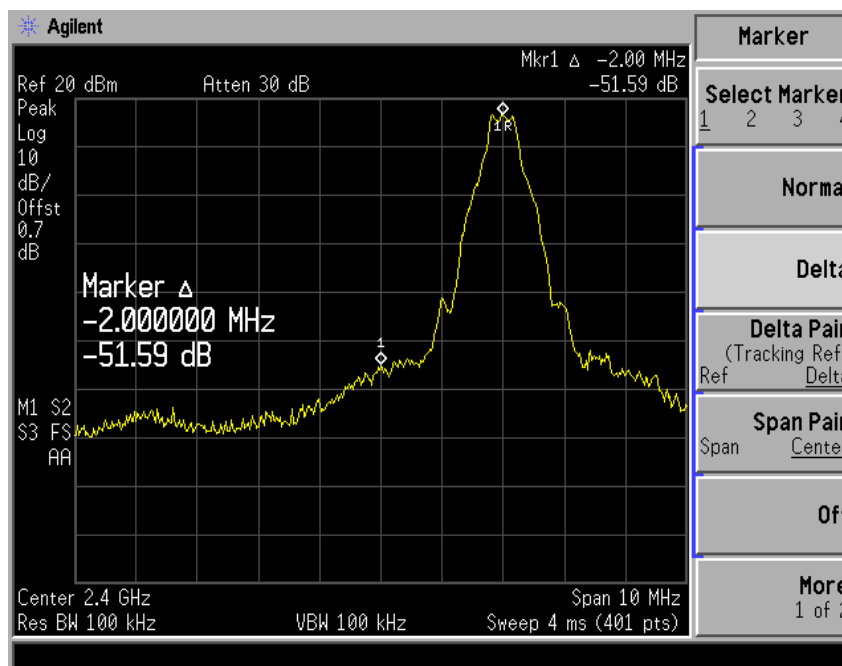
13.3 Measurement results of band-edge & out of emission

EUT	Handheld Web Computer	MODEL	HPAW20256,HPAB20256,HPAP20256,PepperPad3
MODE	GFSK	ENVIRONMENTAL CONDITION	24℃, 43%RH
INPUT POWER	120Vac, 60Hz		

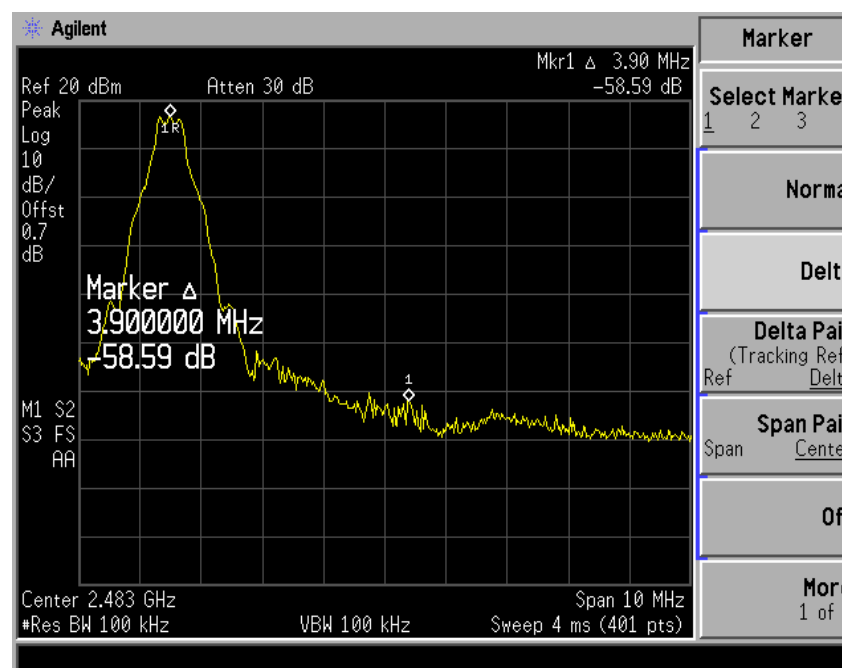
* Refer to attach spectrum analyzer data chart.

13.4 Trace data of band-edge & Out of Emission

CH 0



CH78





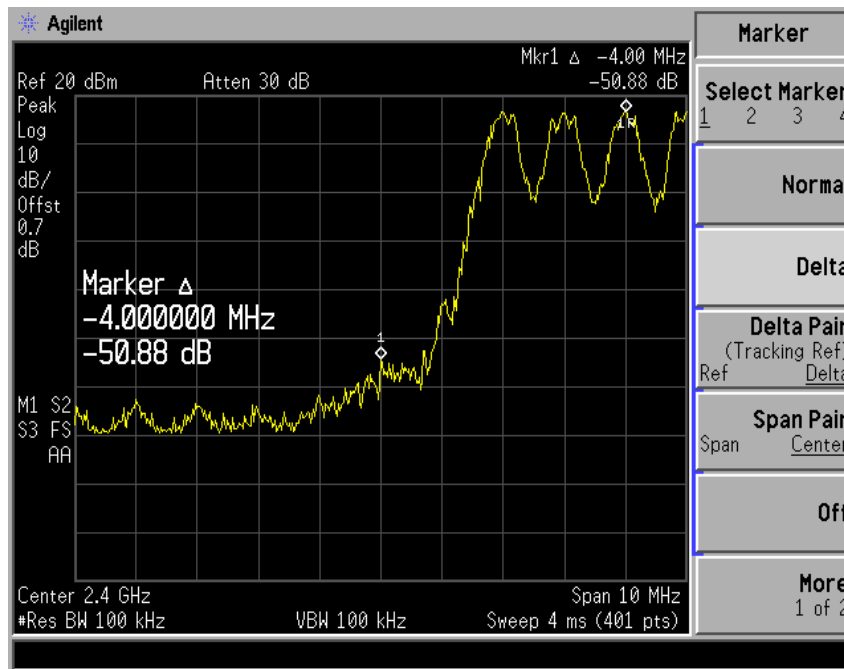
ESTECH Co., Ltd.

Rm. 1015, World Venture Center II,
426-5 Gasan-dong, Guncheon-gu,
Seoul, 158-803, Korea

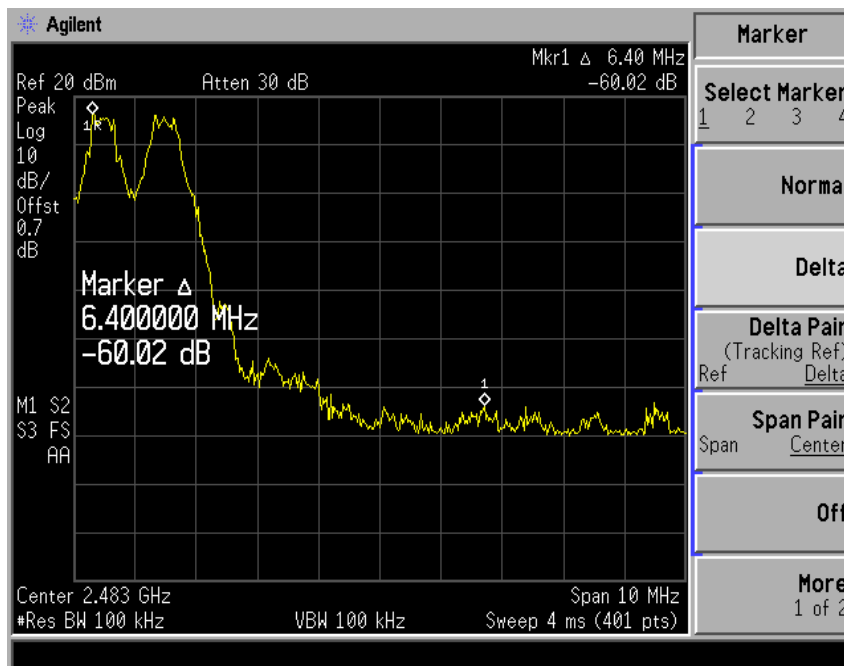


**Electromagnetic
Interference
Test Report**

CH 0



CH78



14. Measurement of radiated disturbance

Above 30 MHz Electric Field strength was measured in accordance with FCC Part 15 (2006) & ANSI C 63.4 (2003). The test setup was made according to FCC Part 15 (2006) & ANSI C 63.4 (2003) on an open test site, which allows a 3m distance measurement. The EUT was placed in the center of wooden turntable. The height of this table was 0.8m. The measurement was conducted with both horizontal and vertical antenna polarization. The turntable has fully rotated. For further description of the configuration refer to the picture of the test setup.

14.1 Measurement equipments

Equipment Name	Type	Manufacturer	Serial No.	Next Calibration date
TEST Receiver	ESVS10	Rohde & Schwarz	838562/002	2007. 1. 23
TEST Receiver	ESPI7	Rohde & Schwarz	100185	2007. 8. 24
Amplifier	310N	Sonoma Instrument	185723	2006. 9. 21
Spectrum Analyzer	R3261C	ADVANTEST	61720116	2007. 4. 19
LogBicon Antenna	VULB 9160	S/B	3142	2007. 5. 03
Horn Antenna	BBHA 9120 D	SCHWARZBECK	352	2007. 6. 05
Spectrum Analyzer	8563E	HP	3623A05297	2007. 3. 6
PREAMPLIFIER	8449B	HP	3008A00581	2007. 3. 9
Turn Table	2087	EMCO	2129	–
Antenna Mast	2070-01	EMCO	9702-203	–
ANT Mast Controller	2090	EMCO	1535	–
Turn Table Controller	2090	EMCO	1535	–

14.2 Environmental Condition

Test Place : Open site(3m)
 Temperature (°C) : 24 °C
 Humidity (%) : 44 %

14.3 Test Data for wireless LAN

Test Date : 5-Sep-06

Measurement Distance : 3 m

Frequency (MHz)	Reading (dB μ V)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dB μ V/m)	Result (dB μ V/m)	Margin (dB)
48.00	17.90	H	2.4	12.64	1.2	40.0	31.69	-8.31
81.31	13.40	H	2.1	8.75	1.4	40.0	23.58	-16.42
110.59	15.00	H	1.9	11.13	1.6	43.5	27.77	-15.73
122.87	17.90	V	1.0	12.20	1.7	43.5	31.83	-11.67
166.63	20.10	H	1.5	13.52	2.0	43.5	35.60	-7.90
197.74	12.80	H	1.2	10.54	2.1	43.5	25.49	-18.01
216.84	17.20	H	1.1	10.70	2.3	46.0	30.20	-15.80
245.75	19.10	H	1.0	11.83	2.5	46.0	33.44	-12.56
281.61	15.30	H	1.0	12.84	2.8	46.0	30.91	-15.09
383.78	16.00	H	1.0	14.96	3.3	46.0	34.25	-11.75
399.89	15.30	H	1.0	15.32	3.4	46.0	33.99	-12.01
499.87	19.30	H	1.0	17.06	3.8	46.0	40.19	-5.81
666.50	8.10	V	1.0	19.80	4.6	46.0	32.48	-13.52
784.12	7.20	H	1.0	21.64	5.1	46.0	33.95	-12.05
Remark	H : Horizontal, V : Vertical Test Mode:802.11b *CL = Cable Loss-Amplifier Gain(In case of above1000Mhz) *CL = Cable Loss(In case of below1000Mhz)							

14.3-1 Test Data for wireless LAN

Test Date : 6-Sep-06

Measurement Distance : 3 m

Frequency (MHz)	Reading (dBμV)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dBμV/m)	Result (dBμV/m)	Margin (dB)
PEAK(RBW:1Mhz VBW:1Mhz)								
2351.22	46.33	H	1.6	27.71	-33.0	74.0	41.03	-32.97
2412	57.33	H	1.4	27.62	-33.0	-	87.22	-
4824	44.00	H	1.4	31.30	-32.3	74.0	42.99	-31.01
2351.22	48.50	V	1.6	27.71	-33.0	74.0	43.20	-30.80
2412	56.50	V	1.2	27.62	-33.0	-	86.39	-
4824	44.00	V	1.2	31.30	-32.3	74.0	42.99	-31.01
AV(RBW:1Mhz VBW:10hz)								
2351.22	36.50	H	1.6	27.71	-33.0	54.0	31.20	-22.80
2412	50.17	H	1.4	27.62	-33.0	-	80.06	-
4824	33.83	H	1.4	31.30	-32.3	54.0	32.82	-21.18
2351.22	40.50	V	1.6	27.71	-33.0	54.0	35.20	-18.80
2412	48.83	V	1.2	27.62	-33.0	-	43.42	-
4824	33.00	V	1.2	31.30	-32.3	54.0	31.99	-22.01
Remark	H : Horizontal, V : Vertical TEST MODE : 802.11b - CH1(2412MHz) *The TX signal isn't detected from 2th harmonics. *OB = Operating band *CL = Cable Loss-Amplifier Gain(In case of above1000Mhz) *CL = Cable Loss(In case of below1000Mhz)							

14.3-2 Test Data for wireless LAN

Test Date : 6-Sep-06

Measurement Distance : 3 m

Frequency (MHz)	Reading (dB μ V)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dB μ V/m)	Result (dB μ V/m)	Margin (dB)
PEAK(RBW:1Mhz VBW:1Mhz)								
2437	58.83	H	1.3	27.61	-33.0	-	88.71	-
4874	45.00	H	1.3	31.37	-32.3	74.0	44.06	-29.94
2437	57.83	V	1.5	27.61	-33.0	-	87.71	-
4874	43.83	V	1.5	31.37	-32.3	74.0	42.89	-31.11
AV(RBW:1Mhz VBW:10hz)								
2437	52.00	H	1.3	27.61	-33.0	-	81.88	-
4874	35.50	H	1.3	31.37	-32.3	54.0	34.56	-19.44
2437	51.00	V	1.5	27.61	-33.0	-	45.58	-
4874	33.83	V	1.5	31.37	-32.3	54.0	32.89	-21.11
Remark	H : Horizontal, V : Vertical TEST MODE : 802.11b - CH6(2437MHz) *The TX signal isn't detected from 2th harmonics. *OB = Operating band *CL = Cable Loss-Amplifier Gain(In case of above1000Mhz) *CL = Cable Loss(In case of below1000Mhz)							

14.3-3 Test Data for wireless LAN

Test Date : 6-Sep-06

Measurement Distance : 3 m

Frequency (MHz)	Reading (dBμV)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dBμV/m)	Result (dBμV/m)	Margin (dB)
PEAK(RBW:1Mhz VBW:1Mhz)								
2462	59.00	H	1.2	27.60	-33.0	-	53.57	-
2487.71	58.17	H	1.6	27.58	-33.0	74.0	52.72	-21.28
4924	45.33	H	1.2	31.44	-32.3	74.0	44.46	-29.54
2462	55.17	V	1.5	27.60	-33.0	-	49.74	-
2487.71	55.83	V	1.9	27.58	-33.0	74.0	50.38	-23.62
4924	44.33	V	1.5	31.44	-32.3	74.0	43.46	-30.54
AV(RBW:1Mhz VBW:10hz)								
2462	52.17	H	1.2	27.60	-33.0	-	46.74	-
2487.71	54.17	H	1.6	27.58	-33.0	54.0	48.72	-5.28
4924	36.00	H	1.2	31.44	-32.3	54.0	35.13	-18.87
2462	48.50	V	1.5	27.60	-33.0	-	43.07	-
2487.71	49.50	V	1.9	27.58	-33.0	54.0	44.05	-9.95
4924	34.00	V	1.5	31.44	-32.3	54.0	33.13	-20.87
Remark	H : Horizontal, V : Vertical TEST MODE : 802.11b – CH11(2462MHz) *The TX signal isn't detected from 2th harmonics. *OB = Operating band *CL = Cable Loss–Amplifier Gain(In case of above1000Mhz) *CL = Cable Loss(In case of below1000Mhz)							

14.4 Test Data for wireless LAN

Test Date : 5-Sep-06

Measurement Distance : 3 m

Frequency (MHz)	Reading (dB μ V)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dB μ V/m)	Result (dB μ V/m)	Margin (dB)
48.00	18.20	H	2.5	12.64	1.2	40.0	31.99	-8.01
81.38	12.90	H	2.1	8.75	1.4	40.0	23.08	-16.92
110.58	14.30	H	1.8	11.13	1.6	43.5	27.07	-16.43
135.16	14.00	H	1.5	13.01	1.8	43.5	28.82	-14.68
166.64	21.00	V	1.0	13.51	2.0	43.5	36.50	-7.00
198.00	19.00	H	1.2	10.52	2.1	43.5	31.67	-11.83
216.84	17.00	H	1.1	10.70	2.3	43.5	30.00	-13.50
245.76	18.50	H	1.0	11.83	2.5	46.0	32.84	-13.16
264.00	16.30	H	1.0	12.27	2.7	46.0	31.25	-14.75
359.84	17.10	H	1.0	14.39	3.1	46.0	34.62	-11.38
383.77	16.20	H	1.0	14.96	3.3	46.0	34.45	-11.55
431.75	15.20	H	1.0	16.00	3.5	46.0	34.74	-11.26
499.85	20.10	H	1.0	17.06	3.8	46.0	40.99	-5.01
666.48	9.70	H	1.0	19.80	4.6	46.0	34.08	-11.92
784.14	7.20	H	1.0	21.64	5.1	46.0	33.95	-12.05
Remark	H : Horizontal, V : Vertical Test Mode:802.11g *CL = Cable Loss-Amplifier Gain(In case of above1000Mhz) *CL = Cable Loss(In case of below1000Mhz)							

14.4-1 Test Data for wireless LAN

Test Date : 7-Sep-06

Measurement Distance : 3 m

Frequency (MHz)	Reading (dB μ V)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dB μ V/m)	Result (dB μ V/m)	Margin (dB)
PEAK(RBW:1Mhz VBW:1Mhz)								
2350.89	48.50	H	1.1	27.71	-33.0	74.0	43.20	-30.80
2412	52.33	H	1.9	27.62	-33.0	-	82.22	-
4824	45.00	H	1.9	31.30	-32.3	74.0	43.99	-30.01
2350.89	50.83	V	1.6	27.71	-33.0	74.0	45.53	-28.47
2412	52.33	V	1.0	27.62	-33.0	-	82.22	-
4824	45.33	V	1.0	31.30	-32.3	74.0	44.32	-29.68
AV(RBW:1Mhz VBW:10hz)								
2350.89	38.67	H	1.1	27.71	-33.0	54.0	33.37	-20.63
2412	41.50	H	1.9	27.62	-33.0	-	71.39	-
4824	33.67	H	1.9	31.30	-32.3	54.0	32.66	-21.34
2350.89	41.67	V	1.6	27.71	-33.0	54.0	36.37	-17.63
2412	41.33	V	1.0	27.62	-33.0	-	35.92	-
4824	33.50	V	1.0	31.30	-32.3	54.0	32.49	-21.51
Remark	H : Horizontal, V : Vertical TEST MODE : 802.11g - CH1(2412MHz) *The TX signal isn't detected from 2th harmonics. *OB = Operating band *CL = Cable Loss-Amplifier Gain(In case of above1000Mhz) *CL = Cable Loss(In case of below1000Mhz)							

14.4-2 Test Data for wireless LAN

Test Date : 7-Sep-06

Measurement Distance : 3 m

Frequency (MHz)	Reading (dB μ V)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dB μ V/m)	Result (dB μ V/m)	Margin (dB)
PEAK(RBW:1Mhz VBW:1Mhz)								
2437	57.33	H	1.4	27.61	-33.0	-	87.21	-
4874	45.17	H	1.4	31.37	-32.3	74.0	44.23	-29.77
2437	56.67	V	1.2	27.61	-33.0	-	86.55	-
4874	45.50	V	1.2	31.37	-32.3	74.0	44.56	-29.44
AV(RBW:1Mhz VBW:10hz)								
2437	47.83	H	1.4	27.61	-33.0	-	77.71	-
4874	33.50	H	1.4	31.37	-32.3	54.0	32.56	-21.44
2437	46.50	V	1.2	27.61	-33.0	-	41.08	-
4874	33.67	V	1.2	31.37	-32.3	54.0	32.73	-21.27
Remark	H : Horizontal, V : Vertical TEST MODE : 802.11g- CH6(2437MHz) *The TX signal isn't detected from 2th harmonics. *OB = Operating band *CL = Cable Loss-Amplifier Gain(In case of above1000Mhz) *CL = Cable Loss(In case of below1000Mhz)							

14.4-3 Test Data for wireless LAN

Test Date : 7-Sep-06

Measurement Distance : 3 m

Frequency (MHz)	Reading (dB μ V)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dB μ V/m)	Result (dB μ V/m)	Margin (dB)
PEAK(RBW:1Mhz VBW:1Mhz)								
2462	58.17	H	1.1	27.60	-33.0	-	52.74	-
2483.64	72.50	H	1.5	27.59	-33.0	74.0	67.06	-6.94
4924	45.00	H	1.1	31.44	-32.3	74.0	44.13	-29.87
2462	56.67	V	1.2	27.60	-33.0	-	51.24	-
2483.64	71.70	V	1.4	27.59	-33.0	74.0	66.26	-7.74
4924	45.50	V	1.2	31.44	-32.3	74.0	44.63	-29.37
AV(RBW:1Mhz VBW:10hz)								
2462	47.83	H	1.1	27.60	-33.0	-	42.40	-
2483.64	54.83	H	1.5	27.59	-33.0	54.0	49.39	-4.61
4924	33.67	H	1.1	31.44	-32.3	54.0	32.80	-21.20
2462	46.17	V	1.2	27.60	-33.0	-	40.74	-
2483.64	52.33	V	1.4	27.59	-33.0	54.0	46.89	-7.11
4924	33.50	V	1.2	31.44	-32.3	54.0	32.63	-21.37
Remark	H : Horizontal, V : Vertical TEST MODE : 802.11g - CH11(2462MHz) *The TX signal isn't detected from 2th harmonics. *OB = Operating band *CL = Cable Loss-Amplifier Gain(In case of above1000Mhz) *CL = Cable Loss(In case of below1000Mhz)							

14.5 Test Data for Bluetooth

Test Date : 5-Sep-06

Measurement Distance : 3 m

Frequency (MHz)	Reading (dB μ V)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dB μ V/m)	Result (dB μ V/m)	Margin (dB)
48.00	19.10	H	2.5	12.64	1.2	40.0	32.89	-7.11
81.38	13.80	H	2.2	8.75	1.4	40.0	23.98	-16.02
122.92	17.30	H	1.8	12.21	1.7	43.5	31.23	-12.27
135.18	14.30	H	1.6	13.01	1.8	43.5	29.12	-14.38
198.00	20.10	H	1.3	10.52	2.1	43.5	32.77	-10.73
216.83	17.20	H	1.2	10.70	2.3	46.0	30.20	-15.80
228.87	12.90	H	1.1	11.18	2.4	46.0	26.50	-19.50
263.86	16.90	H	1.0	12.26	2.7	46.0	31.85	-14.15
311.81	13.50	H	1.0	13.46	2.9	46.0	29.90	-16.10
359.81	16.20	H	1.0	14.39	3.1	46.0	33.72	-12.28
383.78	18.40	H	1.0	14.96	3.3	46.0	36.65	-9.35
422.26	16.70	H	1.0	15.76	3.5	46.0	35.99	-10.01
499.85	20.20	H	1.0	17.06	3.8	46.0	41.09	-4.91
666.49	9.80	H	1.0	19.80	4.6	46.0	34.18	-11.82
784.14	7.80	H	1.0	21.64	5.1	46.0	34.55	-11.45
Remark	H : Horizontal, V : Vertical Bluetooth(39CH) *CL = Cable Loss-Amplifier Gain(In case of above1000Mhz) *CL = Cable Loss(In case of below1000Mhz)							

14.5-1 Test Data for Bluetooth

Test Date : 5-Sep-06

Measurement Distance : 3 m

Frequency (MHz)	Reading (dB μ V)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dB μ V/m)	Result (dB μ V/m)	Margin (dB)
PEAK(RBW:1Mhz VBW:1Mhz)								
2328.93	44.67	H	1.5	27.75	-33.0	74.0	39.42	-34.58
2402	56.83	H	1.5	27.62	-33.0	-	86.72	-
4804	52.33	H	1.0	31.27	-32.3	74.0	51.29	-22.71
2328.93	46.83	V	1.5	27.75	-33.0	74.0	41.58	-32.42
2402	56.98	V	1.3	27.62	-33.0	-	86.87	-
4804	53.67	V	1.1	31.27	-32.3	74.0	52.63	-21.37
AV(RBW:1Mhz VBW:3Khz)								
2328.93	35.17	H	1.5	27.75	-33.0	54.0	29.92	-24.08
2402	53.67	H	1.5	27.62	-33.0	-	83.56	-
4804	49.83	H	1.0	31.27	-32.3	54.0	48.79	-5.21
2328.93	35.33	V	1.5	27.75	-33.0	54.0	30.08	-23.92
2402	54.00	V	1.3	27.62	-33.0	-	48.59	-
4804	51.33	V	1.1	31.27	-32.3	54.0	50.29	-3.71
Remark	H : Horizontal, V : Vertical TEST MODE : Bluetooth-CH0(2402MHz) *The TX signal isn't detected from 2th harmonics. *OB = Operating band *CL = Cable Loss-Amplifier Gain(In case of above1000Mhz) *CL = Cable Loss(In case of below1000Mhz)							

14.5-2 Test Data for Bluetooth

Test Date : 5-Sep-06

Measurement Distance : 3 m

Frequency (MHz)	Reading (dB μ V)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dB μ V/m)	Result (dB μ V/m)	Margin (dB)
PEAK(RBW:1Mhz VBW:1Mhz)								
2441	56.33	H	1.5	27.60	-33.0	-	86.20	-
4882	53.00	H	1.0	31.38	-32.3	74.0	52.07	-21.93
2441	57.83	V	1.2	27.60	-33.0	-	87.70	-
4882	55.33	V	1.9	31.38	-32.3	74.0	54.40	-19.60
AV(RBW:1Mhz VBW:3khz)								
2441	54.50	H	1.5	27.60	-33.0	-	84.37	-
4882	49.50	H	1.0	31.38	-32.3	54.0	48.57	-5.43
2441	56.17	V	1.2	27.60	-33.0	-	50.74	-
4882	51.00	V	1.9	31.38	-32.3	54.0	50.07	-3.93
Remark	H : Horizontal, V : Vertical TEST MODE : Bluetooth-CH39(2441MHz) *The TX signal isn't detected from 2th harmonics. *OB = Operating band *CL = Cable Loss-Amplifier Gain(In case of above1000Mhz) *CL = Cable Loss(In case of below1000Mhz)							

14.5-3 Test Data for Bluetooth

Test Date : 5-Sep-06

Measurement Distance : 3 m

Frequency (MHz)	Reading (dB μ V)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dB μ V/m)	Result (dB μ V/m)	Margin (dB)
PEAK(RBW:1Mhz VBW:1Mhz)								
2480	55.33	H	1.2	27.59	-33.0	-	49.89	-
2486.53	47.83	H	1.6	27.59	-33.0	74.0	42.39	-31.61
4960	49.67	H	1.2	31.49	-32.3	74.0	48.85	-25.15
2480	56.33	V	1.5	27.59	-33.0	-	50.89	-
2486.53	46.00	V	1.9	27.59	-33.0	74.0	40.56	-33.44
4960	53.33	V	1.5	31.49	-32.3	74.0	52.51	-21.49
AV(RBW:1Mhz VBW:10hz)								
2480	53.50	H	1.2	27.59	-33.0	-	48.06	-
2486.53	36.33	H	1.6	27.59	-33.0	54.0	30.89	-23.11
4960	43.00	H	1.2	31.49	-32.3	54.0	42.18	-11.82
2480	54.50	V	1.5	27.59	-33.0	-	49.06	-
2486.53	36.17	V	1.9	27.59	-33.0	54.0	30.73	-23.27
4960	50.33	V	1.5	31.49	-32.3	54.0	49.51	-4.49
Remark	H : Horizontal, V : Vertical TEST MODE : Bluetooth-CH78(2480MHz) *The TX signal isn't detected from 2th harmonics. *OB = Operating band *CL = Cable Loss-Amplifier Gain(In case of above1000Mhz) *CL = Cable Loss(In case of below1000Mhz)							

15. Measurement of conducted disturbance

The continuous disturbance voltage of AC Mains in the frequency from 0.15 to 30 MHz was measured in accordance to FCC Part 15 (2006) & ANSI C 63.4 (2003). The test setup was made according to FCC Part 15 (2006) & ANSI C 63.4 (2003) in a shielded. The EUT was placed on a non-conductive table at least 80 above the ground plan. A grounded vertical reference plane was positioned in a distance of 40cm from the EUT. The distance from the EUT to other metal surfaces was at least 0.8m. The EUT was only earthen by its power cord through the line impedance stabilizing network. The power cord has been bundled to a length of 1.0m.. The test receiver with Quasi Peak detector complies with CISPR 16.

15.1 Measurement equipments

Equipment Name	Type	Manufacturer	Serial No.	Next Calibration date
LISN	ESH3-Z5	Rohde & Schwarz	838979/010	2007. 2. 27
LISN	NNLA8120A	Schwarzbeck	NONE	2007. 2. 27
TEST Receive	ESPI7	Rohde & Schwarz	100185	2007. 8. 24
Pulse Limiter	ESH3Z2	Rohde & Schwarz	NONE	2007. 6. 15

15.2 Environmental Condition

Test Place : Shield Room

Temperature (°C) : 21 °C

Humidity (%) : 42.8 %

15.3 Test Data for wireless LAN

Frequency (MHz)	Correction Factor		Line (H/N)	Quasi-peak Value			Average Value		
	Lisn (dB)	Cable (dB)		Limit (dB μ V)	Reading (dB μ V)	Result (dB μ V)	Limit (dB μ V)	Reading (dB μ V)	Result (dB)
0.15	0.10	0.0	H	66.00	47.33	47.43	56.00	34.94	35.04
0.19	0.10	0.0	N	64.21	42.89	43.01	54.21	33.01	33.13
0.20	0.10	0.0	N	63.57	41.55	41.68	53.57	31.20	31.33
0.22	0.10	0.0	H	62.97	39.96	40.10	52.97	—	—
0.23	0.10	0.1	N	62.56	38.91	39.06	52.56	27.20	27.35
0.27	0.10	0.1	H	61.27	34.90	35.08	51.27	26.85	27.03
0.30	0.10	0.1	H	60.38	36.18	36.38	50.38	28.70	28.90
0.31	0.10	0.1	N	59.97	36.80	37.01	49.97	31.57	31.78
0.36	0.10	0.1	H	58.80	42.30	42.53	48.80	37.49	37.72
0.49	0.10	0.2	H	56.12	32.12	32.42	46.12	27.55	27.85
0.59	0.10	0.2	N	56.00	31.84	32.14	46.00	27.14	27.44
Remark	H : Hot Line, N : Neutral Line TEST MODE : 802.11b – CH 6(2437MHz)								

15.3-1 Test Data for wireless LAN

Frequency (MHz)	Correction Factor		Line (H/N)	Quasi-peak Value			Average Value		
	Lisn (dB)	Cable (dB)		Limit (dB μ V)	Reading (dB μ V)	Result (dB μ V)	Limit (dB μ V)	Reading (dB μ V)	Result (dB)
0.15	0.10	0.0	H	66.00	47.86	47.96	56.00	30.46	30.56
0.18	0.10	0.0	N	64.67	43.68	43.80	54.67	31.88	32.00
0.20	0.10	0.0	N	63.74	40.92	41.05	53.74	28.33	28.46
0.23	0.10	0.1	H	62.60	37.56	37.71	52.60	27.93	28.08
0.30	0.10	0.1	H	60.16	35.04	35.24	50.16	32.19	32.39
0.33	0.10	0.1	N	59.43	37.87	38.09	49.43	31.94	32.16
0.35	0.10	0.1	H	59.01	41.24	41.46	49.01	36.78	37.00
Remark	H : Hot Line, N : Neutral Line TEST MODE : 802.11g - CH 6 (2437MHz)								

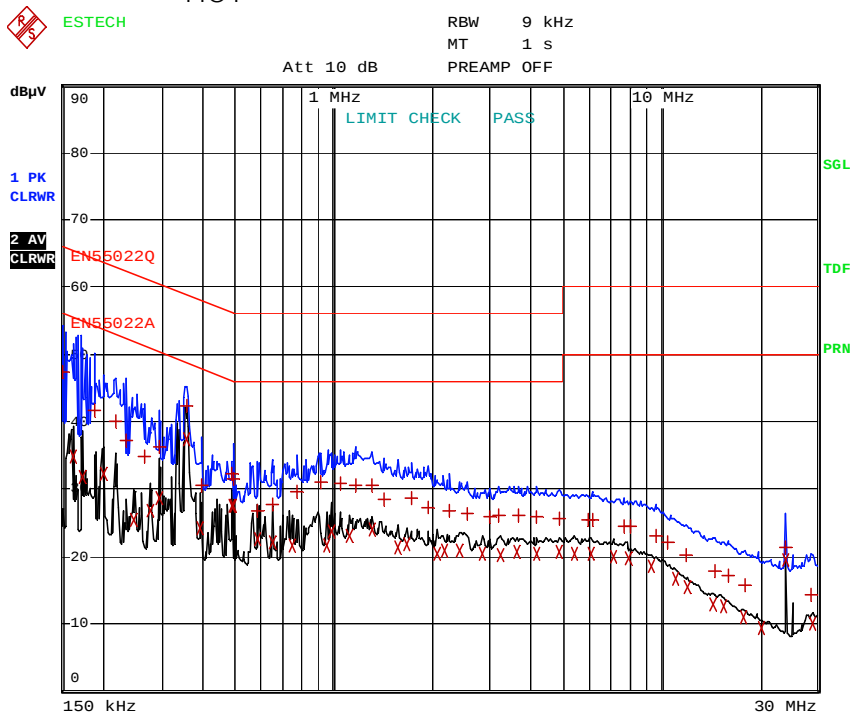
15.3-2 Test Data for Bluetooth

Frequency (MHz)	Correction Factor		Line (H/N)	Quasi-peak Value			Average Value		
	Lisn (dB)	Cable (dB)		Limit (dB μ V)	Reading (dB μ V)	Result (dB μ V)	Limit (dB μ V)	Reading (dB μ V)	Result (dB)
0.15	0.10	0.0	N	65.89	49.34	49.44	55.89	36.22	36.32
0.16	0.10	0.0	H	65.73	46.77	46.87	55.73	33.61	33.71
0.17	0.10	0.0	N	64.82	46.32	46.44	54.82	26.56	26.68
0.18	0.10	0.0	H	64.67	43.24	43.36	54.67	31.10	31.22
0.21	0.10	0.0	N	63.32	39.76	39.90	53.32	27.22	27.36
0.23	0.10	0.1	N	62.63	36.96	37.11	52.63	23.16	23.31
0.35	0.10	0.1	H	59.01	40.39	40.61	49.01	35.16	35.38
0.36	0.10	0.1	N	58.82	37.22	37.45	48.82	30.64	30.87
0.68	0.10	0.2	N	56.00	31.40	31.70	46.00	27.70	28.00
Remark	H : Hot Line, N : Neutral Line TEST MODE : Bluetooth-CH39(2441MHz)								

Appendix 1. Spectral diagram for Wireless LAN

802.11b – CH 6

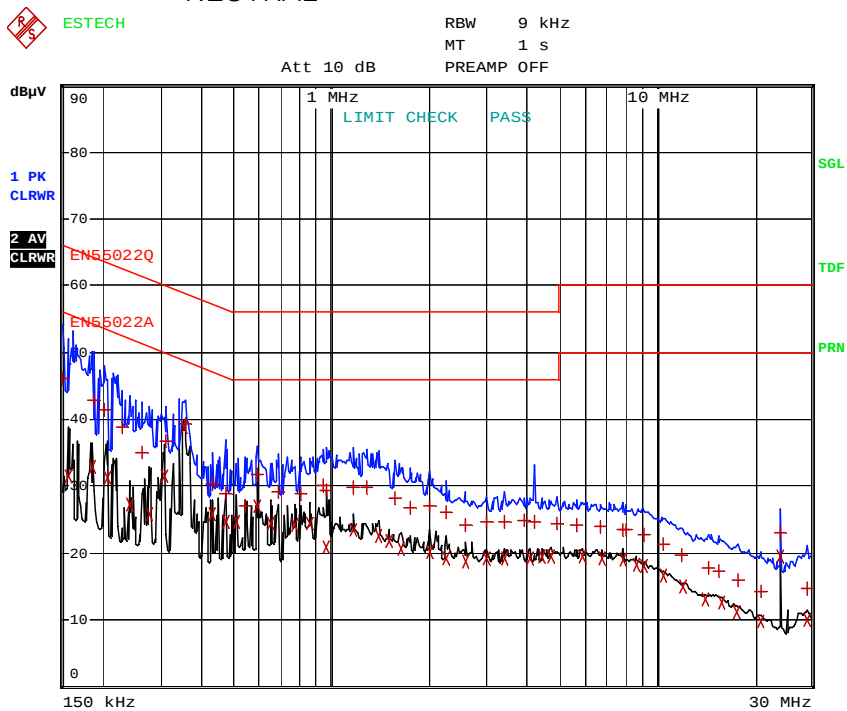
*HOT



Comment: HPAW20256(802.11B)_HOT

Date: 6.SEP.2006 10:32:48

*NEUTRAL



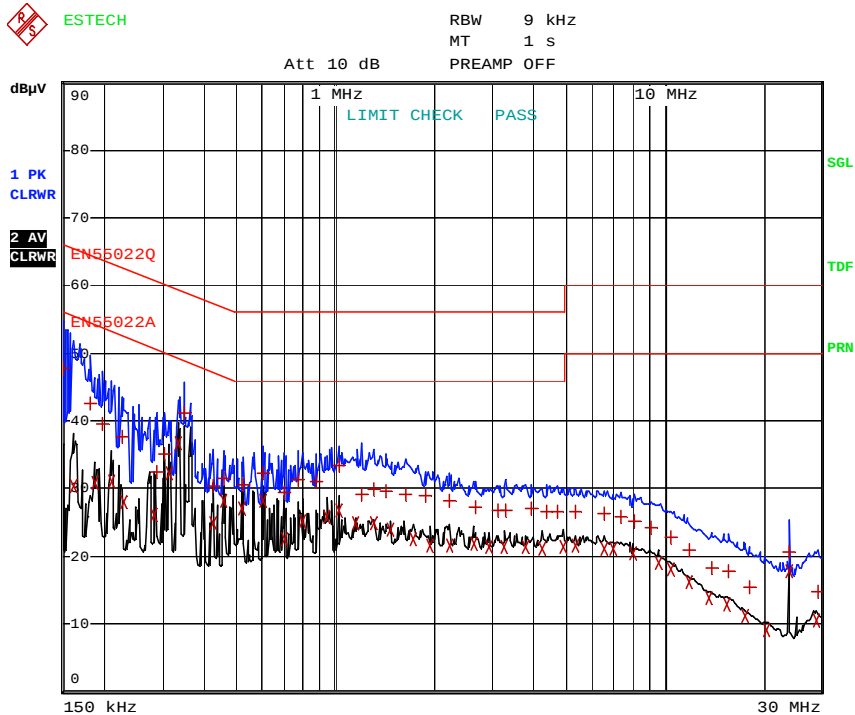
Comment: HPAW20256(802.11B)_NEUTRAL

Date: 6.SEP.2006 10:39:17

Appendix 1. Spectral diagram for Wireless LAN

802.11g – CH 6

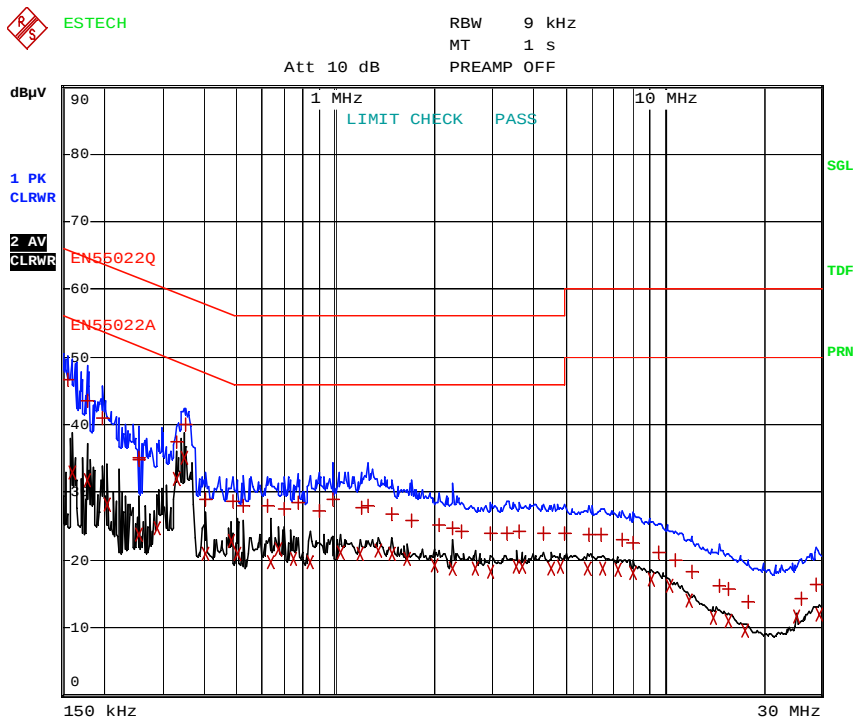
*HOT



Comment: HPAW20256(801.1G)_HOT

Date: 6.SEP.2006 11:24:38

*NEUTRAL



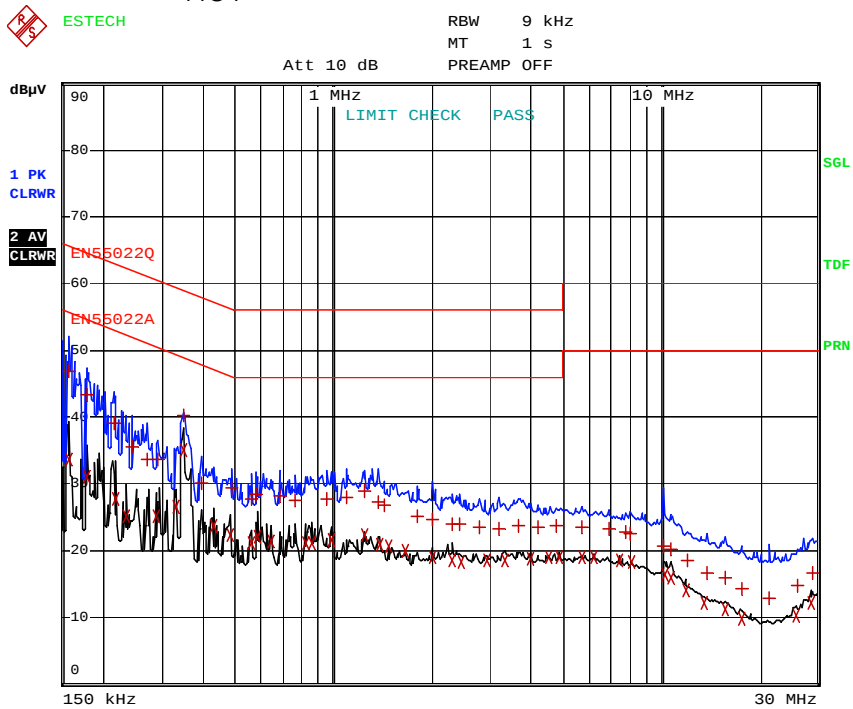
Comment: HPAW20256(801.1G)_NEUTRAL

Date: 6.SEP.2006 11:14:18

Appendix 1. Spectral diagram for Bluetooth

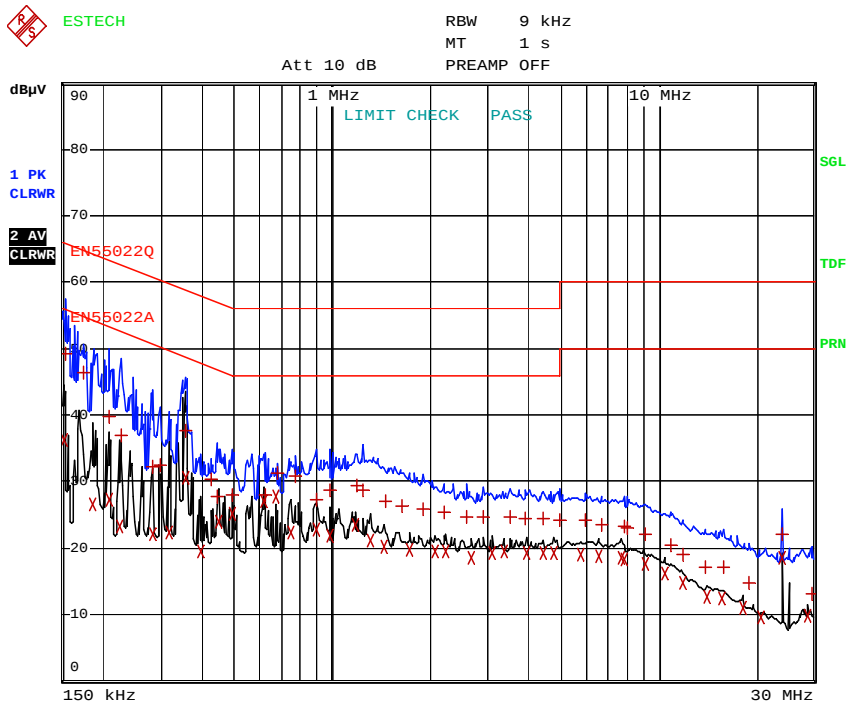
Bluetooth – CH 39

*HOT



Comment: HPAW20256(BLUETOOTH)_HOT
Date: 6.SEP.2006 10:08:26

*NEUTRAL



Comment: HPAW20256(BLUETOOTH)_NEUTRAL
Date: 6.SEP.2006 10:04:18

Appendix 2. Antenna Requirement

1. Antenna Requirement

1.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.24

1.2 Antenna Connected Construction

The antenna types used in this product are Integral Antenna.

1) Bluetooth is chip Ant-gain:-1.5dBi 2) Wireless is PIPA Ant-gain: 4.06dBi□□□□