



Compliance Test Report for FCC

Report Number		ESTF150405-002			
Applicant	Company name	Samsung Electro Mechanics			
	Address	314, Maetan 3-Dong Pal Dal-Ku Suwon City, Kyungki-Do, 442-743 Korea			
	Telephone	82-31-210-6270			
Product	Product name	Mini PCI Card			
	Model No.	SWL-2700M	Manufacturer	Samsung Electro Mechanics	
	Serial No.	NONE	Country of origin	KOREA	
Test date	2004-05-14	~	2004-05-19	Date of issue	2004-05-20
Testing location	ESTECH. Co., Ltd. 97-1 Hoiuk-Ri Majang-Myon, Icheon-city, KyungKi-Do, Korea				
Standard	FCC PART 15.247 2002 , ANSI C 63.4 2001				
Test item	<input checked="" type="checkbox"/> Conducted Emission	<input type="checkbox"/> Class A	<input checked="" type="checkbox"/> Class B	Test result	OK
	<input checked="" type="checkbox"/> Radiated Emission	<input type="checkbox"/> Class A	<input checked="" type="checkbox"/> Class B	Test result	OK
Measurement facility registration number	94696				
Tested by	Senior Engineer J.M. Yang		(Signature)		
Reviewed by	Director T.K. Lee		(Signature)		
Abbreviation	OK, Pass = Passed, Fail = Failed, N/A = not applicable				
<p>* Note</p> <ul style="list-style-type: none"> - 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 3. Block diagram of EUT

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1. Laboratory Information

Corporation Name : ESTECH Co. Ltd

Head Office : 3 rd Fl., Chungdam Bldg., 119-1 Chungdam-dong Kangnam-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

2. Description of EUT

2.1 Summary of Equipment Under Test

Product	: Mini PCI Card
Model Number	: SWL-2700M
Serial Number	: NONE
Modulation Type	: DSSS, OFDM
Transfer Rate	: up to 54Mbps
Rating	: PC Power using (DC 3.3V, DC5V)
Channel Spacing	: 5MHz
Number of Channel	: 11
Output Power	: 19dBm
Antenna Type	: PIFA type, max gain 2.94dBi

2.2 Descriptions Of EUT

This device fully compatible with the 802.11b and g standard to provide a wireless data rate of up to 54Mbps
For the detailed features, please refer to the manufacturer's specifications or User's Manual

3. Test Standards

Test Standard : FCC PART 15 (2002)

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 (2001)

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	
15.247(a)(2)	Spectrum Bandwidth of a DSSS System	Pass	Meet the requirement	Min. 500kHz
15.247(b)	Maximum Peak output power	Pass	Meet the requirement	Max. 30dBm
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.

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		

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

c. Test Mode : Continuous Output, DSSS and OFDM

d. Test rate : the worst case of rate

4.3 EUT and Support equipment

Equipment Name	Model Name	S/N	Manufacturer	Remark (FCC ID)
Mini PCI Card	SWL-2700M	NONE	Samsung Electro Mechanics	EUT
NOTEBOOK COMPUTER	NZ2	304K1202747	LG ELETRONICS	-
ADAPTER	PA-1650-02L	32000410401	Lite-on Electronics Co., Ltd.	-
Card Reader	UR2060E	UR2A000870	-	-
Mouse	X08-70400	154227	Micro Soft	-
LCD Monitor	KD17NS	300852K	Samsung Electronics	-
ADAPTER	AP04914-UV	0401011616AC	ANAM	-
PRINTER	LQ-570H+	B1021095782	SAMBO COMPUTER	-

4.4 Cable Connecting

Start Equipment		End Equipment		Cable Standard		Remark
Name	I/O port	Name	I/O port	Length	Shielded	
MiniPCI Card	PCMCIA	NOTEBOOK COMPUTER	PCMCIA	0	N	-
NOTEBOOK COMPUTER	POWER	ADAPTER	-	2	N	-
NOTEBOOK COMPUTER	VIDEO	LCD Monitor	VIDEO	2	Y	
NOTEBOOK COMPUTER	PARALLEL	PRINTER	PARALLEL	2	Y	
NOTEBOOK COMPUTER	USB	Card Reader	USB	2	Y	
NOTEBOOK COMPUTER	USB	Mouse	USB	2	Y	
LCD Monitor	POWER	ADAPTER	POWER	2	N	

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
Spectrum Analyzer	HP 8563E	3623A05297
RF Cable	Length: 52cm	-
-Spectrum Analyzer <=> EUT	Loss: 1.0dB	-

5.3 Measurement results

EUT	Mini PCI Card	MODEL	SWL-2700M
MODE	CCK (802.11b)	ENVIRONMENTAL CONDITION	24°C, 49%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	Bandwidth at 6dB below(MHz)	Minimum Limit (MHz)	PASS/FAIL
1	2412	11.20	0.5	PASS
6	2437	11.43	0.5	PASS
11	2462	11.63	0.5	PASS



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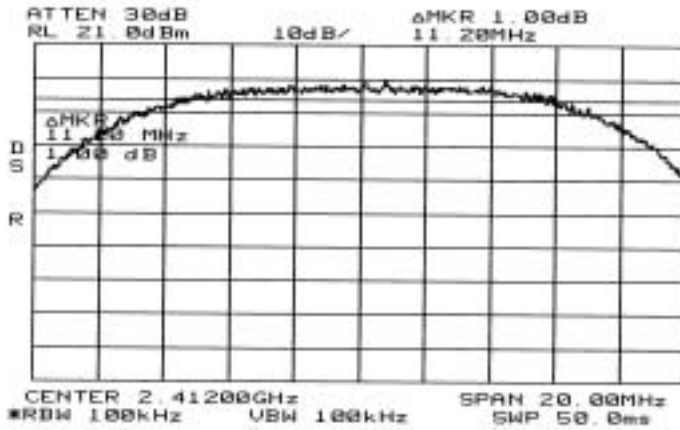
EUT	Mini PCI Card	MODEL	SWL-2700M
MODE	OFDM (802.11g)	ENVIRONMENTAL CONDITION	24°C, 49%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	Bandwidth at 6dB below(MHz)	Minimum Limit (MHz)	PASS/FAIL
1	2412	16.67	0.5	PASS
6	2437	16.60	0.5	PASS
11	2462	16.60	0.5	PASS

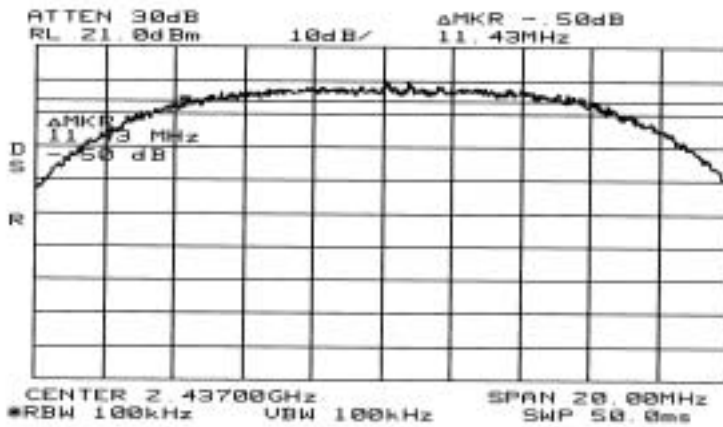


5.4 Trace data

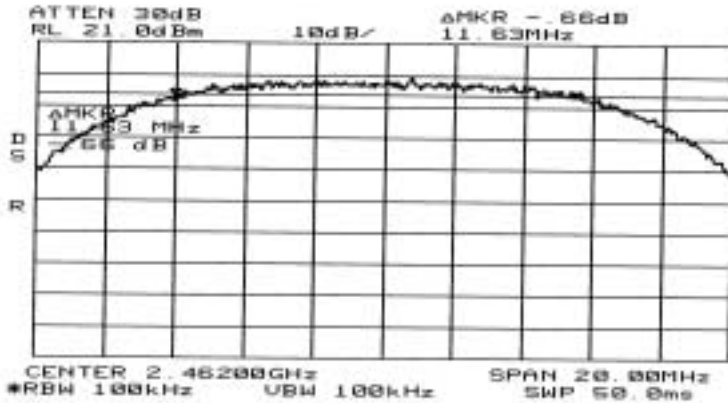
5.4.1 CCK (802.11b-1ch)



CCK (802.11b-6ch)



CCK (802.11b-11ch)



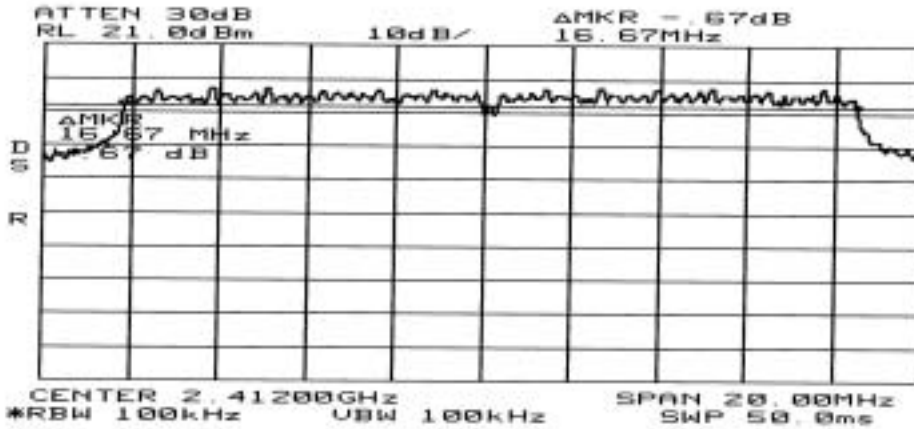


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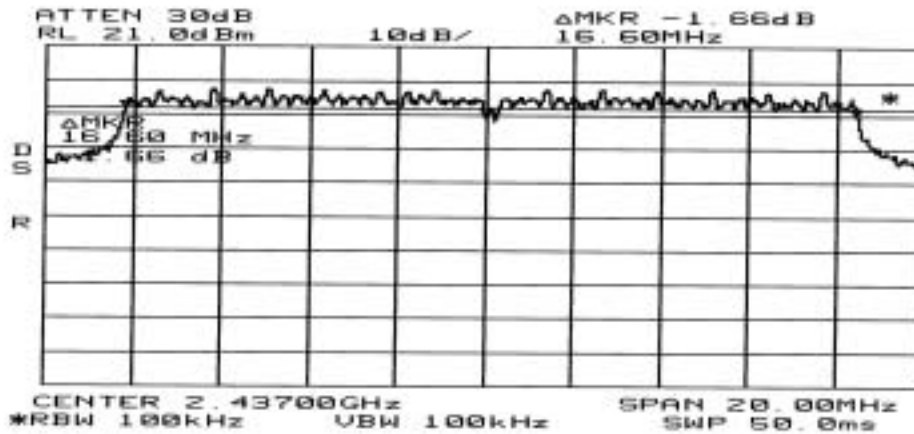


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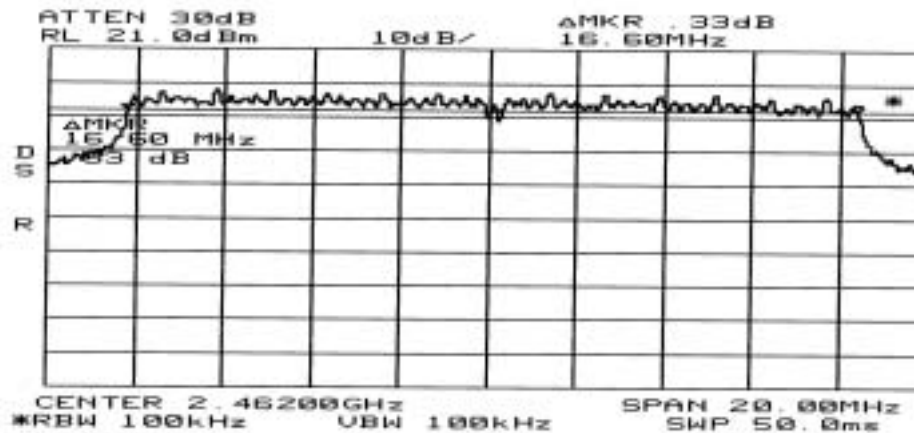
5.4.2 OFDM (802.11g-1ch)



OFDM (802.11g-6ch)



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
Power Meter	HP E4418A	GB38272717
Power Sensor	HP 8481A	3318A96478
RF Cable:	Length: 52cm	-
-Spectrum Analyzer <=> EUT	Loss: 1.0dB	-

6.2 Measurement results

EUT	Mini PCI Card	MODEL	SWL-2700M
MODE	CCK (802.11b)	ENVIRONMENTAL CONDITION	24°C, 49%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	Peak Power Output (dBm)	Result		Limit[1W] (dBm)	PASS/FAIL
			(dBm)	(W)		
1	2412	18.92	18.92	0.0780	30.0	PASS
6	2437	18.87	18.87	0.0771	30.0	PASS
11	2472	19.36	19.36	0.0863	30.0	PASS

EUT	Mini PCI Card	MODEL	SWL-2700M
MODE	OFDM(802.11b)	ENVIRONMENTAL CONDITION	24°C, 49%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	Peak Power Output (dBm)	Result		Limit[1W] (dBm)	PASS/FAIL
			(dBm)	(W)		
1	2412	18.72	18.72	0.0745	30.0	PASS
6	2437	19.15	19.15	0.0822	30.0	PASS
11	2472	18.91	18.91	0.0778	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
Spectrum Analyzer	HP 8563E	3623A05297
RF Cable	Length: 52cm	-
-Spectrum Analyzer <=> EUT	Loss: 1.0dB	

7.3 Measurement results

EUT	Mini PCI Card	MODEL	SWL-2700M
MODE	CCK (802.11b)	ENVIRONMENTAL CONDITION	24°C , 49%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	RF Power Spectral Density (dBm)	Maximum Limit (dBm)	PASS/FAIL
1	2412.00	2.67	8.0	PASS
6	2437.00	2.67	8.0	PASS
11	2462.00	0.50	8.0	PASS



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EUT	Mini PCI Card	MODEL	SWL-2700M
MODE	OFDM (802.11g)	ENVIRONMENTAL CONDITION	24 °C , 49%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	RF Power Spectral Density (dBm)	Maximum Limit (dBm)	PASS/FAIL
1	2412.00	0.50	8.0	PASS
6	2437.00	0.83	8.0	PASS
11	2462.00	1.67	8.0	PASS



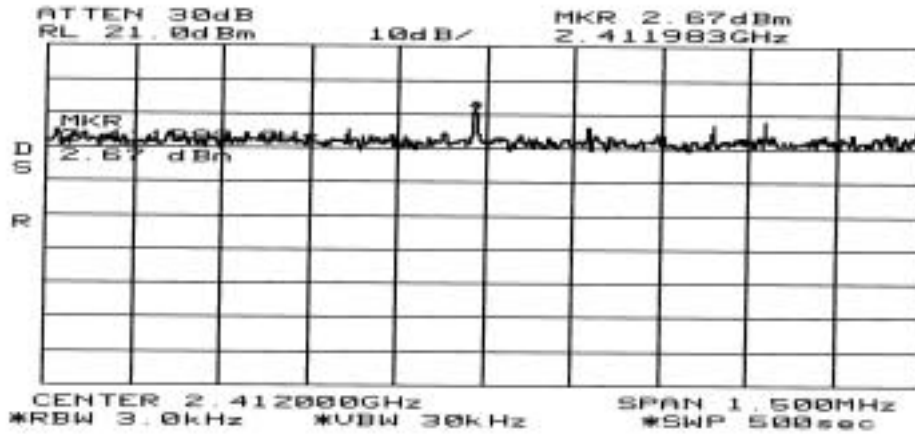
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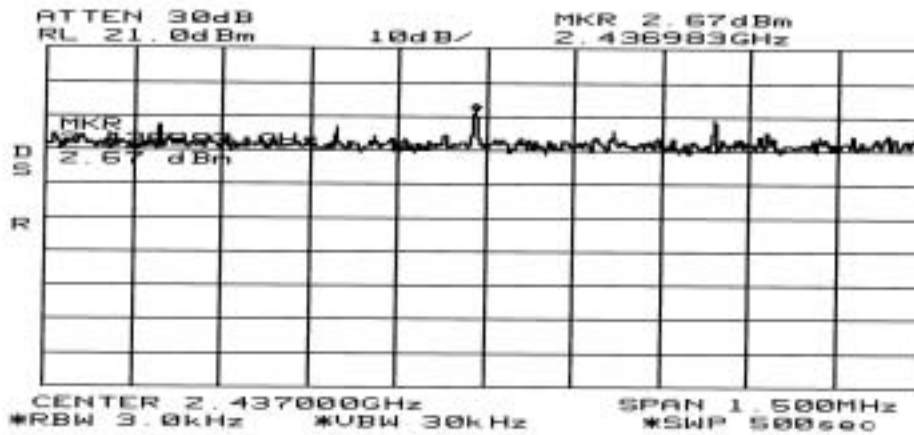
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7.4 Trace data

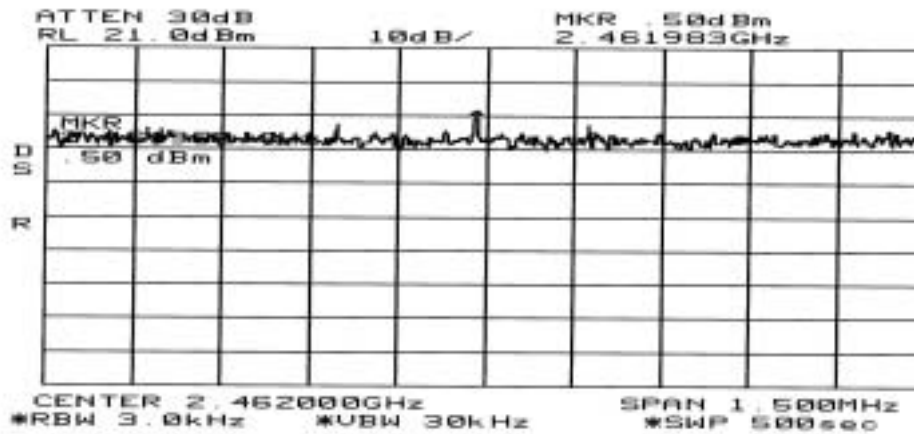
7.4.1 CCK (802.11b-1ch)



CCK (802.11b-6ch)



CCK (802.11b-11ch)



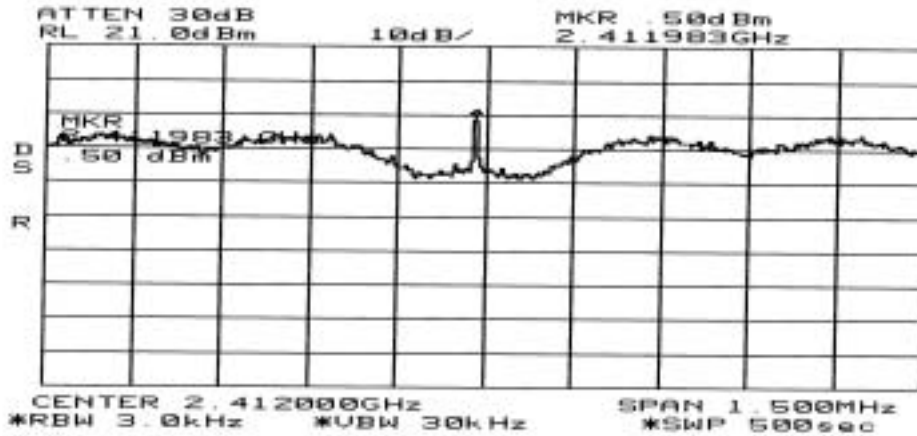


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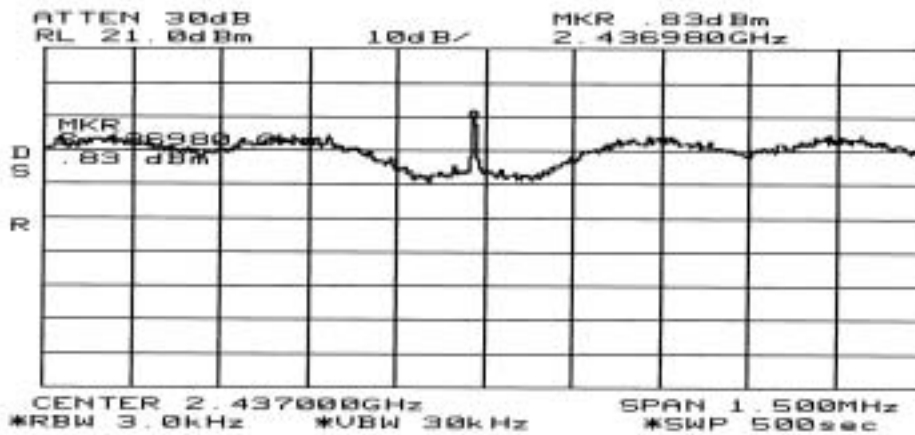


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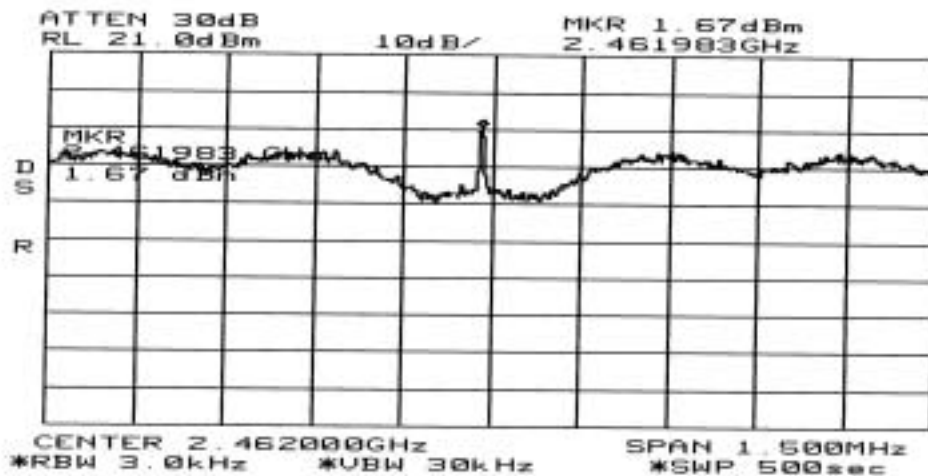
7.4.2 OFDM (802.11g-1ch)



OFDM (802.11g-6ch)



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
Spectrum Analyzer	HP 8563E	3623A05297
RF Cable	Length: 52cm	-
-Spectrum Analyzer <=> EUT	Loss: 1.0dB	-

8.3 Measurement results of band-edge & out of emission

EUT	Mini PCI Card	MODEL	SWL-2700M
MODE	CCK(802.11b)	ENVIRONMENTAL CONDITION	24°C, 49%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	Measurement Frequency (MHz)	Peak Level at 20dB below(dBm)	Limit (MHz)
1	2412	2400	-33.00	Below 20dB from peak power level to band edge
11	2472	2487.75	-41.17	Below 20dB from peak power level to band edge



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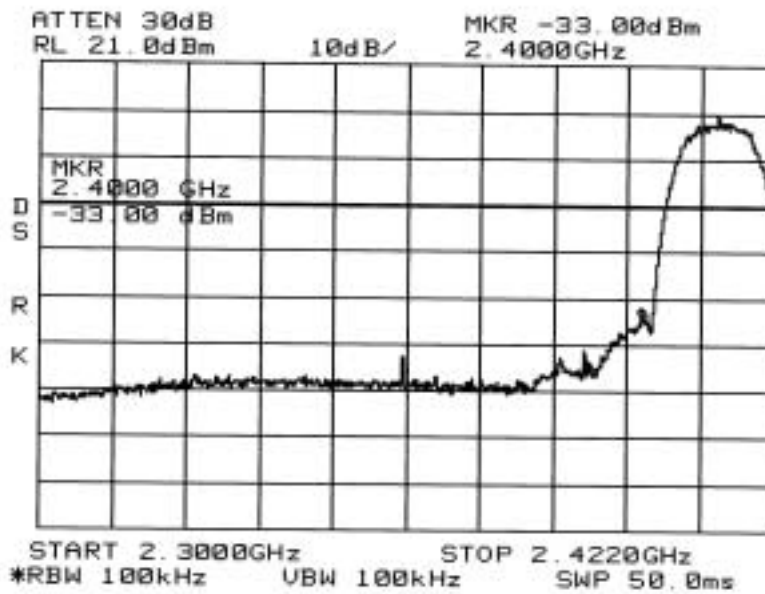
EUT	Mini PCI Card	MODEL	SWL-2700M
MODE	OFDM(802.11g)	ENVIRONMENTAL CONDITION	24°C, 49%RH
INPUT POWER	120Vac, 60Hz		

CHANNEL	Channel Frequency (MHz)	Measurement Frequency (MHz)	Peak Level at 20dB below(dBm)	Limit (MHz)
1	2412	2400	-19.83	Below 20dB from peak power level to band edge
11	2472	2483.55	-34.00	Below 20dB from peak power level to band edge

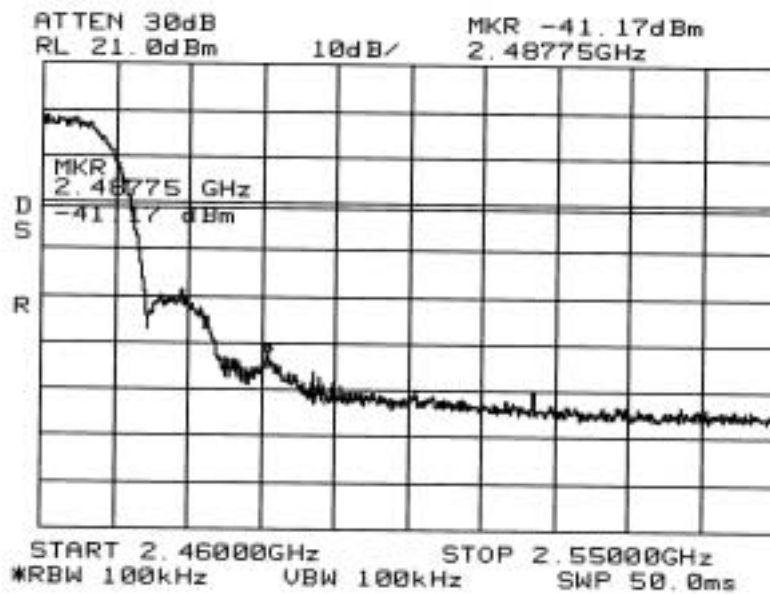


8.4 Trace data of band-edge & Out of Emission

8.4.1 CCK (802.11b-1ch)



CCK (802.11b-11ch)



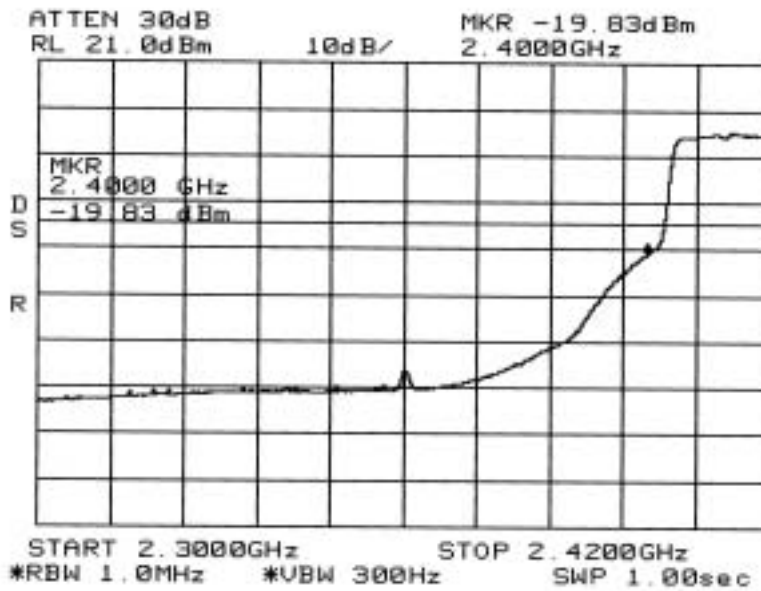


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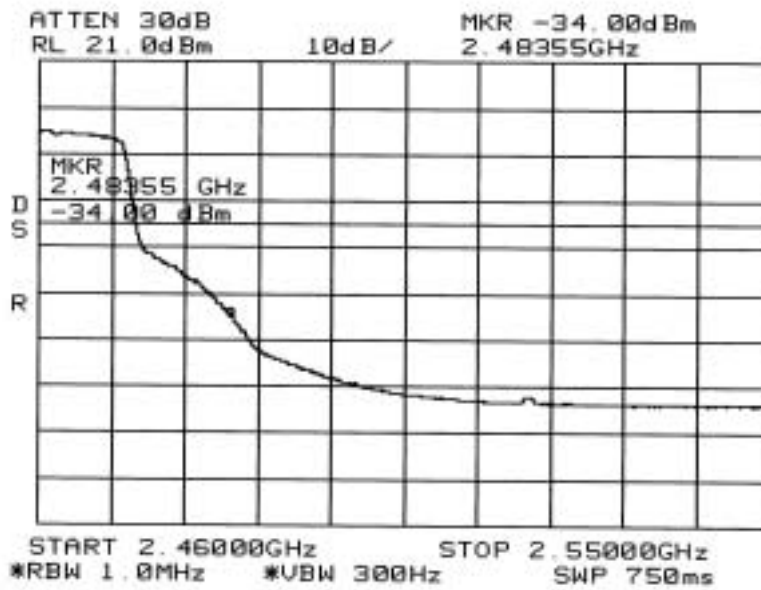


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8.4.2 OFDM (802.11g-1ch)



OFDM (802.11g-11ch)



9. 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 (2002) & ANSI C 63.4 (2001) The test setup was made according to FCC Part 15 (2002) & ANSI C 63.4 (2001) in a shielded. The EUT was placed on a non-conductive table at least 80 above the ground plane. 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.

9.1 Measurement equipments

Equipment Name	Type	Manufacturer	Serial No.	Next Calibration date
LISN	NNLA8120A	Schwarzbeck	NONE	2005. 2. 12
LISN	ESH3-Z5	ROHDE & SCHWARZ	838979/010	2005. 2. 12
TEST Receive	ESPC	Rohde & Schwarz	838248/001	2005.1.29
Pulse Limiter	ESH3Z2	ROHDE & SCHWARZ	NONE	2003. 7. 4

9.2 Environmental Condition

Test Place : Shield Room
 Temperature (°C) : 22 °C
 Humidity (%) : 49 %

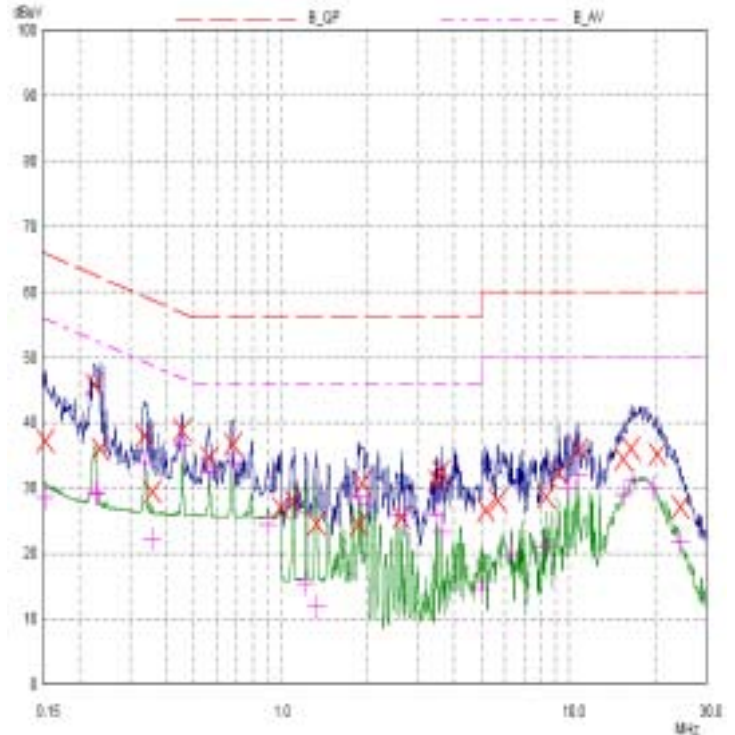
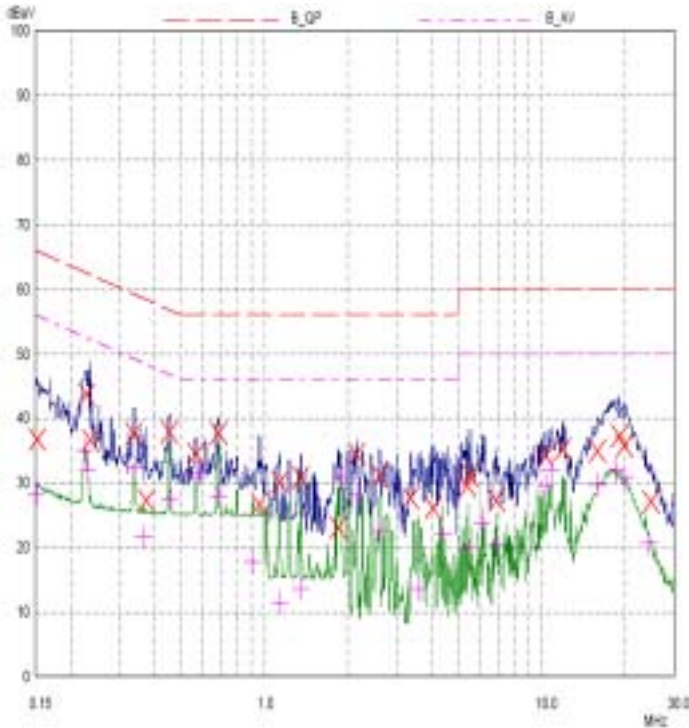
9.3 Test data

9.3.1 Ch.1(2412MHz)

Frequency (MHz)	Reading (dB μ V)	Line (H/N)	Correction Factor		Limit (dB μ V)	Result (dB μ V)	Margin (dB μ V)
			Lisn (dB)	Cable (dB)			
0.152	37.23	N	0.07	0.0	65.87	37.30	-28.57
0.156	41.52	H	0.07	0.0	65.67	41.59	-24.08
0.166	38.63	N	0.07	0.0	65.14	38.71	-26.43
0.208	36.69	H	0.07	0.0	63.29	36.80	-26.49
0.211	39.99	N	0.07	0.0	63.15	40.10	-23.05
0.225	45.78	N	0.07	0.1	62.62	45.90	-16.72
0.229	43.76	H	0.07	0.1	62.49	43.88	-18.61
0.231	41.66	H	0.07	0.1	62.43	41.78	-20.65
0.236	36.58	H	0.07	0.1	62.23	36.71	-25.52
0.335	38.00	N	0.07	0.1	59.32	31.89	-27.43
0.338	37.64	H	0.07	0.1	59.25	37.83	-21.42
0.454	38.90	N	0.07	0.2	56.80	32.92	-23.88

HOT LINE

NEUTRAL-LINE



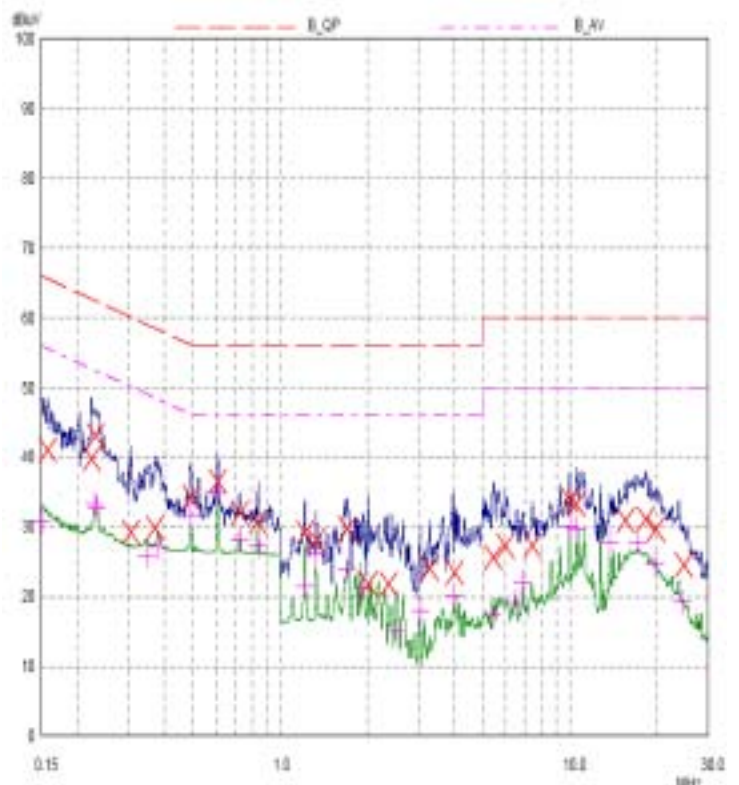
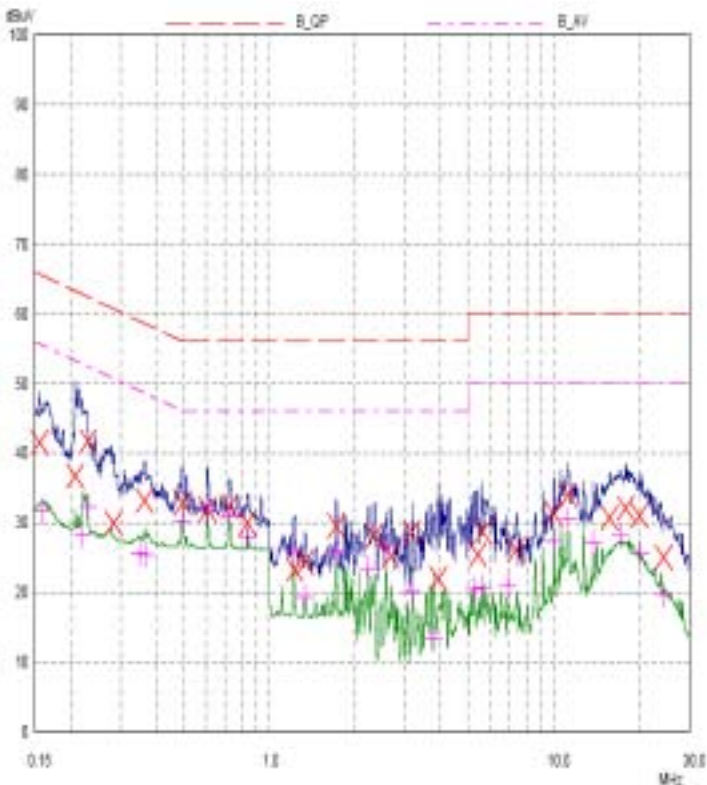
9.3 Test data

9.3.1 Ch.6(2437MHz)

Frequency (MHz)	Reading (dB μ V)	Line (H/N)	Correction Factor		Limit (dB μ V)	Result (dB μ V)	Margin (dB μ V)
			Lisn (dB)	Cable (dB)			
0.150	41.10	H	0.07	0.0	66.00	41.17	-24.83
0.151	36.37	H	0.07	0.0	65.93	36.44	-29.49
0.166	38.03	N	0.07	0.0	65.14	31.89	-33.25
0.211	39.23	N	0.07	0.0	63.15	39.34	-23.81
0.216	39.07	H	0.07	0.0	62.96	39.18	-23.78
0.222	41.72	H	0.07	0.0	62.76	41.84	-20.92
0.225	43.64	N	0.07	0.1	62.62	43.76	-18.86
0.231	39.64	N	0.07	0.1	62.43	39.76	-22.67
0.232	42.36	H	0.07	0.1	62.36	42.48	-19.88
0.232	41.33	N	0.07	0.1	62.36	32.92	-29.44
0.338	39.77	N	0.07	0.1	59.25	39.96	-19.29
0.450	37.47	H	0.07	0.2	56.87	37.72	-19.15

HOT LINE

NEUTRAL-LINE



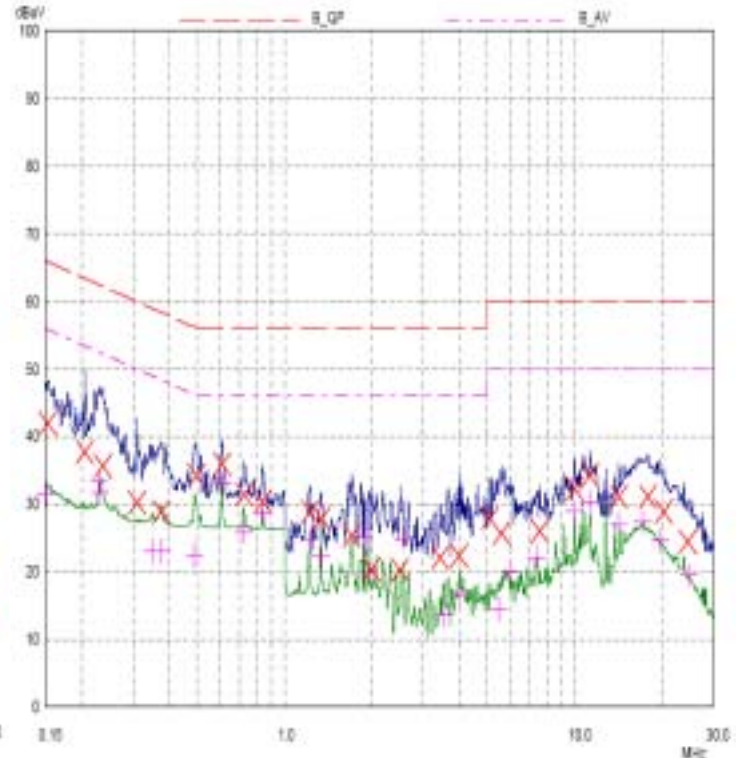
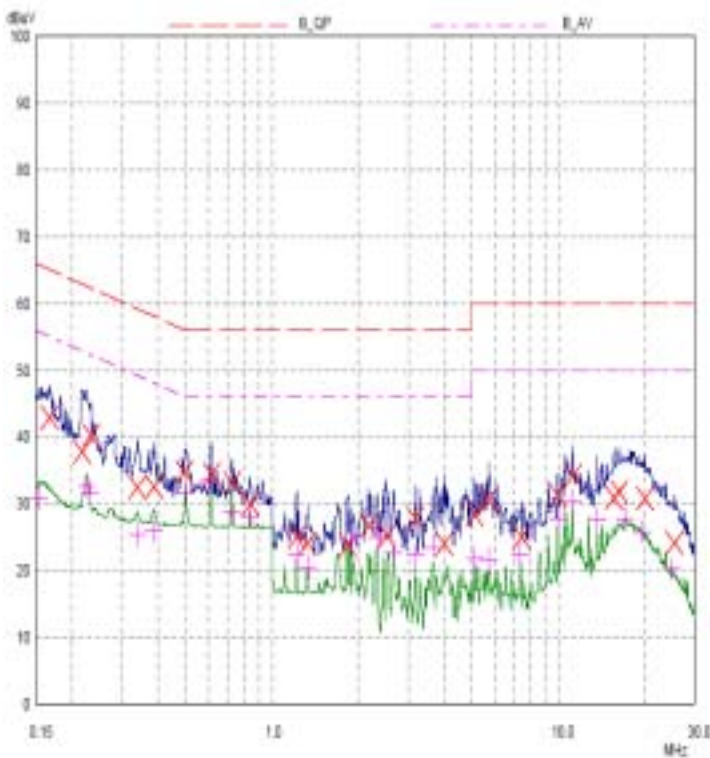
9.3 Test data

9.3.1 Ch.11(2462MHz)

Frequency (MHz)	Reading (dB μ V)	Line (H/N)	Correction Factor		Limit (dB μ V)	Result (dB μ V)	Margin (dB μ V)
			Lisn (dB)	Cable (dB)			
0.152	41.99	N	0.07	0.0	65.87	42.06	-23.81
0.154	41.08	N	0.07	0.0	65.60	41.15	-24.45
0.166	42.95	H	0.07	0.0	65.14	43.03	-22.11
0.205	37.70	N	0.07	0.0	63.42	32.92	-30.50
0.216	37.78	H	0.07	0.0	62.96	37.89	-25.07
0.223	39.74	N	0.07	0.0	62.69	39.86	-22.83
0.225	42.62	H	0.07	0.1	62.62	42.74	-19.88
0.231	43.11	N	0.07	0.1	62.43	43.23	-19.20
0.232	36.42	H	0.07	0.1	62.36	36.54	-25.82
0.232	40.24	H	0.07	0.1	62.36	40.36	-22.00
0.810	36.52	N	0.09	0.2	56.00	31.89	-24.11
18.609	37.62	H	0.67	0.8	60.00	39.09	-20.91

HOT LINE

NEUTRAL-LINE



9.4 Photographs of test setup



FRONT



REAR



SETUP

10. Measurement of radiated disturbance (30MHz – 1GHz)

Above 30 MHz Electric Field strength was measured in accordance with FCC Part 15 (2002) & ANSI C 63.4 (2001). The test setup was made according to FCC Part 15 (2002) & ANSI C 63.4 (2001) 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 set-up.

10.1 Measurement equipments

Equipment Name	Type	Manufacturer	Serial No.	Next Calibration date
Receiver	ESVS10	Rohde & Schwarz	838562/002	2005. 1. 12
LogBicon Antenna	VULB 9160	S/B	3142	2004. 7. 11
Turn Table	2087	EMCO	2129	–
Antenna Mast	2070-01	EMCO	9702-203	–
Amplifier	310N	Sonoma Instrument	185817	2002.11.13
ANT Mast Controller	2090	EMCO	1535	–
Turn Table Controller	2090	EMCO	1535	–

10.2 Environmental Condition

Test Place : Open site (3m)
 Temperature (°C) : 22 °C
 Humidity (%) : 58 %



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10.3 Test data

10.3.1 CCK (802.11b-1ch)

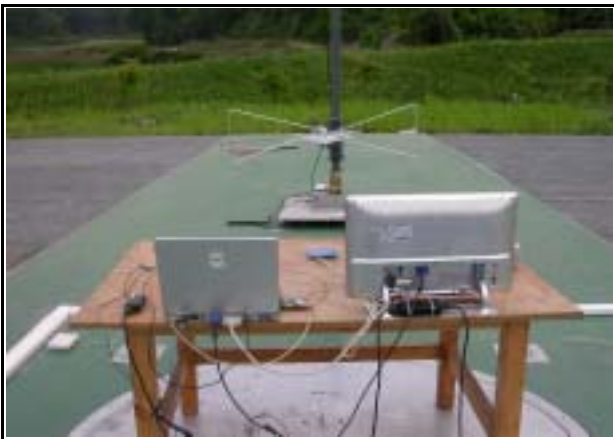
Measurement Distance : 3 m

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 μ V/m)
90.7	23.10	H	2.8	9.37	1.5	43.5	33.97	9.53
99.95	24.50	H	2.7	10.24	1.5	43.5	36.24	7.26
166.19	20.50	H	1.9	13.54	2.0	43.5	36.04	7.46
199.6	18.50	H	1.8	10.41	2.2	43.5	31.11	12.39
214.53	10.40	H	2.0	10.66	2.3	43.5	23.36	20.14
232.6	23.30	H	1.3	11.36	2.4	46.0	37.06	8.94
265.82	26.00	H	1.3	12.33	2.5	46.0	40.83	5.17
299	25.00	H	1.1	13.17	2.7	46.0	40.87	5.13
332.16	22.20	H	1.6	13.92	2.8	46.0	38.92	7.08
352	20.20	H	1.1	14.27	2.9	46.0	37.37	8.63
432.03	21.20	H	1.0	16.01	3.2	46.0	40.41	5.59
439.99	22.00	V	1.0	16.21	3.3	46.0	41.51	4.49
498.44	18.50	H	1.0	17.05	3.5	46.0	39.05	6.95
532.04	18.50	V	1.0	17.54	3.6	46.0	39.64	6.36
Remark	H : Horizontal, V : Vertical							

10.4 Setup for Radiated Test : 30 ~ 1 GHz



FRONT



REAR



SETUP

11. Measurement of radiated disturbance (1GHz – 25GHz)

Above 1 GHz Electric Field strength was measured in accordance with FCC Part 15 (2002) & ANSI C 63.4 (2001). The test setup was made according to FCC Part 15 (2002) & ANSI C 63.4 (2001) on an Anechoic chamber, 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.

11.1 Measurement equipments

Equipment Name	Type	Manufacturer	Serial No.	Next Calibration date
Spectrum Analyzer	8563E	HP	3623A05297	2005. 3. 8
Horn Ant.	BBHA 9120D	Schwarzbeck	352	2006. 4. 25
RF Amp	8449B	HP	3008A00833	-

11.2 Test data

11.2.1 CCK (802.11b-1ch)

Detector Mode: Peak

Frequency (MHz)	Polarity (H/V)	Measured (dBuV/m)	Antenna Factor (dB/m)	Corr Factor(dB)	Field Strength (dBuV/m)	FCC Limit (dBuV/m)
2360(PEAK)	H	59.0	27.7	-23.4	45.87	RB
2360(AV)	H	50.0	27.7	-23.4	44.42	RB
2412(PEAK)	H	105.7	27.6	-23.4	109.92	OB*
2412(AV)	H	94.5	27.6	-23.4	98.75	OB*
2412(PEAK)	V	105.0	27.6	-23.4	109.20	OB*
2412(AV)	V	95.0	27.6	-23.4	99.17	OB*
4824	H	58.5	31.3	-21.7	68.12	74
4824	V	58.0	31.3	-21.7	67.59	74
9648	H	-	37.9	-18.2	-	74
9648	V	-	37.9	-18.2	-	74

* Note

Correction Factor(dB)= Cable Factor(dB) + Amp. Factor (dB)
 OB means " operation band", (2400 - 2483.5MHz)
 RB means " Restricted Band "(2310-2390MHz/2483.5-2500MHz)

11.2.1 CCK (802.11b-6ch)

Detector Mode: Peak

Frequency (MHz)	Polarity (H/V)	Measured (dBuV/m)	Antenna Factor (dB/m)	Corr Factor(dB)	Field Strength (dBuV/m)	FCC Limit (dBuV/m)
2437	H	109.8	27.6	-23.4	114.08	OB*
2437	V	105.8	27.6	-23.4	110.03	OB*
4874	H	58.0	31.3	-21.7	67.59	74
4874	V	57.5	31.3	-21.7	67.09	74
9748	H	-	38.1	-18.2	-	74
9748	V	49.0	38.1	-18.2	68.88	74

* Note
 Correction Factor(dB)= Cable Factor(dB) + Amp. Factor (dB)
 OB means " operation band", (2400 – 2483.5MHz)



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11.2.1 CCK (802.11b-11ch)

Detector Mode: Peak

Frequency (MHz)	Polarity (H/V)	Measured (dBuV/m)	Antenna Factor (dB/m)	Corr Factor(dB)	Field Strength (dBuV/m)	FCC Limit (dBuV/m)
2484.6(PEAK)	H	62.0	27.6	-23.4	47.17	RB
2484.6(AV)	H	47.0	27.6	-23.4	51.05	RB
2462(PEAK)	H	109.2	27.6	-23.4	113.42	OB*
2462(AV)	H	98.0	27.6	-23.4	102.25	OB*
2462(PEAK)	V	104.7	27.6	-23.4	108.87	OB*
2462(AV)	V	93.7	27.6	-23.4	97.90	OB*
4924	H	59.0	31.3	-21.7	68.59	74
4924	V	57.0	31.3	-21.7	66.59	74
9848	H	-	38.2	-18.2	-	74
9848	V	47.0	38.2	-18.2	67.01	74

* Note

Correction Factor(dB)= Cable Factor(dB) + Amp. Factor (dB)

OB means " operation band", (2400 – 2483.5MHz)

RB means " Restricted Band "(2310-2390MHz/2483.5-2500MHz)

11.2.2 OFDM (802.11g-1ch)

Detector Mode: Peak

Frequency (MHz)	Polarity (H/V)	Measured (dBuV/m)	Antenna Factor (dB/m)	Corr Factor(dB)	Field Strength (dBuV/m)	FCC Limit (dBuV/m)
2387(PEAK)	H	58.3	27.6	-23.4	48.30	RB
2387(AV)	H	46.2	27.6	-23.4	50.88	RB
2412(PEAK)	H	106.6	27.6	-23.4	110.85	OB*
2412(AV)	H	97.0	27.6	-23.4	101.25	OB*
2412(PEAK)	V	106.5	27.6	-23.4	110.70	OB*
2412(AV)	V	96.5	27.6	-23.4	100.70	OB*
4824	H	57.5	31.3	-21.7	67.09	74
4824	V	55.5	31.3	-21.7	65.09	74
9648	H	46.0	37.9	-18.2	65.74	74
9648	V	43.5	37.9	-18.2	63.24	74

* Note
 Correction Factor(dB)= Cable Factor(dB) + Amp. Factor (dB)
 OB means " operation band", (2400 - 2483.5MHz)
 RB means " Restricted Band "(2310-2390MHz/2483.5-2500MHz)

11.2.2 OFDM (802.11g-6ch)

Detector Mode: Peak

Frequency (MHz)	Polarity (H/V)	Measured (dBuV/m)	Antenna Factor (dB/m)	Corr Factor(dB)	Field Strength (dBuV/m)	FCC Limit (dBuV/m)
2437	H	108.3	27.6	-23.4	112.55	OB*
2437	V	104.2	27.6	-23.4	108.37	OB*
4874	H	57.0	31.3	-21.7	66.59	74
4874	V	54.8	31.3	-21.7	64.39	74
9748	H	-	38.1	-18.2	-	74
9748	V	44.0	38.1	-18.2	63.88	74

* Note
 Correction Factor(dB)= Cable Factor(dB) + Amp. Factor (dB)
 OB means " operation band", (2400 - 2483.5MHz)



12. Antenna Requirement

12.1 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 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

12.2 Antenna Connected Construction

The antenna types used in this product are Patched Inverse F Antenna with UFL connector. The maximum Gain of this antenna is 2.94dBi.