



SK TECH CO., LTD.

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FCC-Certificate of Compliance

Test Report No.:	SKTFCE-080321-016		
NVLAP CODE :	200220-0		
Applicant:	SAMSUNG ELECTRONICS CO., LTD.		
Applicant Address:	#416, Meatan3-Dong, Yeongtong-Gu, Suwon City, Gyunggi-Do, South Korea		
Manufacturer :	SAMSUNG ELECTRO-MECHANICS CO., LTD.		
Manufacturer Address:	#314, Meatan3-Dong, Yeongtong-Gu, Suwon City, Gyunggi-Do, South Korea		
Product:	2.4GHz WLAN Module		
FCC ID:	A3LDELL5002	Model No.:	Dell5002
Buyer Model/ Multi Model No.:	N/A		
Receipt No.:	SKTEU08-0106	Date of receipt:	Feb. 14, 2008
Date of Issue:	Mar. 21, 2008		
Testing location:	SK TECH CO., LTD. 820-2, Wolmoon-Ri, Wabu-Up, Namyangju-Si, Kyunggi-Do, Korea		
Test Standards:	ANSI C63.4 / 2003		
Rule Parts:	FCC part 15 Subpart B		
Equipment Class :	JBP: Class B Computing Device Peripheral		
Test Result:	The above mentioned product has been tested and passed.		
Prepared by: E.H. Jeong	Tested by: H.H. Lee /Engineer	Approved by: C.H. Lee /Manager& Chief Engineer	
 Signature	 Signature	 Signature	
Mar. 21, 2008 Date	Mar. 21, 2008 Date	Mar. 21, 2008 Date	
Other Aspects :			
Abbreviations :	· OK, Pass = passed · Fail = failed · N/A = not applicable		
• 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 is based on a single evaluation of one sample of the above mentioned. • This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S Government. • We certify that this test report has been based on the measurement standards that is traceable to the national or International standards. • The above test report is the accredited test results by Korea Laboratory Accreditation Scheme, which signed the ILAC-MRA.			
 NVLAP Lab. Code: 200220-0			

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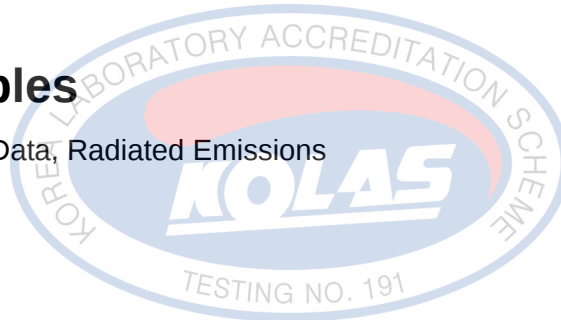


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1. General

This equipment has been shown to be capable of compliance with the applicable technical standards and was tested in accordance with the measurement procedures as indicated in this report.

We attest to the accuracy of data. All measurements reported herein were performed by SK TECH Co., Ltd. and were made under Chief Engineer's supervision.

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

2. Test Site

SK TECH Co., Ltd.



2.1 Location

820-2, Wolmoon Ri, Wabu-Up, Namyangju-Si, Kyunggi-Do, Korea

The test site is in compliance with ISO/IEC 17025 for general requirements for the competence of testing and calibration laboratories.

This laboratory is recognized as a Conformity Assessment Body(CAB) for CAB's, Designation Number: **KR0007** by FCC, is accredited by NVLAP for NVLAP Lab. Code : **200220-0** and KOLAS for Accreditation No.:**KT191**.



2.2 List of Test and Measurement Instruments

Table 1 : List of Test and Measurement Equipment

- Conducted Disturbance

Kind of Equipment	Type	S/N	Calibrated until
EMI Receiver	ESHS10	862970/019	07.2008
Artificial Mains Network	ESH2-Z5	834549/011	07.2008
Artificial Mains Network	ESH3-Z5	836679/018	07.2008

- Radiated Disturbance

Kind of Equipment	Type	S/N	Calibrated until
EMI Receiver	ESVS10	834468/008	07.2008
EMI Receiver	ESIB40	100277	07.2008
Amplifier	AFS44	1116321	03.2009
Amplifier	8447F	3113A05153	07.2008
Trilog-Broadband Antenna	VULB9168	9168-230	07.2008
Horn Antenna	3115	00056768	07.2008
Antenna Turntable Driver	5907	91X518	N/A
Antenna Turntable controller	5906	91X519	N/A
Spectrum Analyzer	R3361A	11730187	07.2008

2.3 Test Date

Date of Application : Feb. 14, 2008

Date of Test : Mar. 03, 2008 ~ Mar. 20, 2008

2.4 Test Environment

See each test item's description.



3. Description of the tested samples

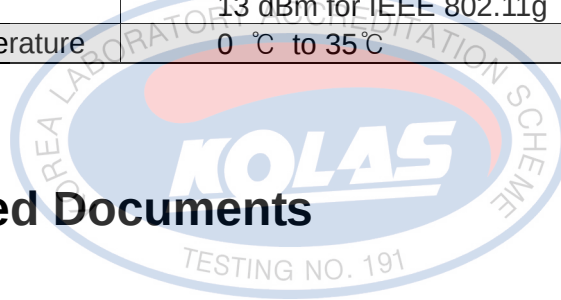
The The EUT is a 2.4GHz WLAN Module.

3.1 Rating and Physical Characteristics

Type of EUT	Wireless LAN device
Type designation	2.4GHz WLAN Module/Dell5002
Power source	DC 5.0V(supplied by Host Equipment)
Transmit Frequency	2412 ~ 2462 MHz (5 MHz step, 11 channels)
Antenna Type	Integral(fractal antenna on PCB (X2), Max:1.24dBi)
Type of Modulation	Modulation technologies: DSSS(IEEE 802.11b), OFDM(IEEE 802.11g) Modulation: DBPSK, DQPSK, CCK, BPSK, QPSK, 16QAM, 64QAM
Transfer Data Rate	1/ 2/ 5.5/ 11/ 6/9/12/18/ 24/ 36/ 48/ 54 Mbps
RF Output power	17 dBm for IEEE 802.11b, 13 dBm for IEEE 802.11g
Operating Temperature	0 °C to 35 °C

3.2 Submitted Documents

N/A





4. Measurement Conditions

Operating voltage of the EUT is supplied from PC.

4.1 Modes of Operation

The communication link between the EUT and WLAN Access Point was established with WLAN technology as PING TEST Mode during the all tests.

- Transmitter Condition: IEEE 802.11b & 802.11g
- Receiver Condition: : IEEE 802.11b & 802.11g.
- Channel No. : 6

4.2 List of Peripherals

Equipment	Manufacturer	Model Name	Serial No.
Note book Computer	Dell Inc.	PP22L	JX189
Wireless Router	Linksys	WAP54G	MDG3OGA10455
Adaptor	DELTA ELECTRONICS (JIANG SU),Ltd.	DA90PS-100	7BR-ORP3
Adaptor	Hon-Kwang Electronics (Shenzhen)CO.,Ltd.	AD12/05	HK-07-23

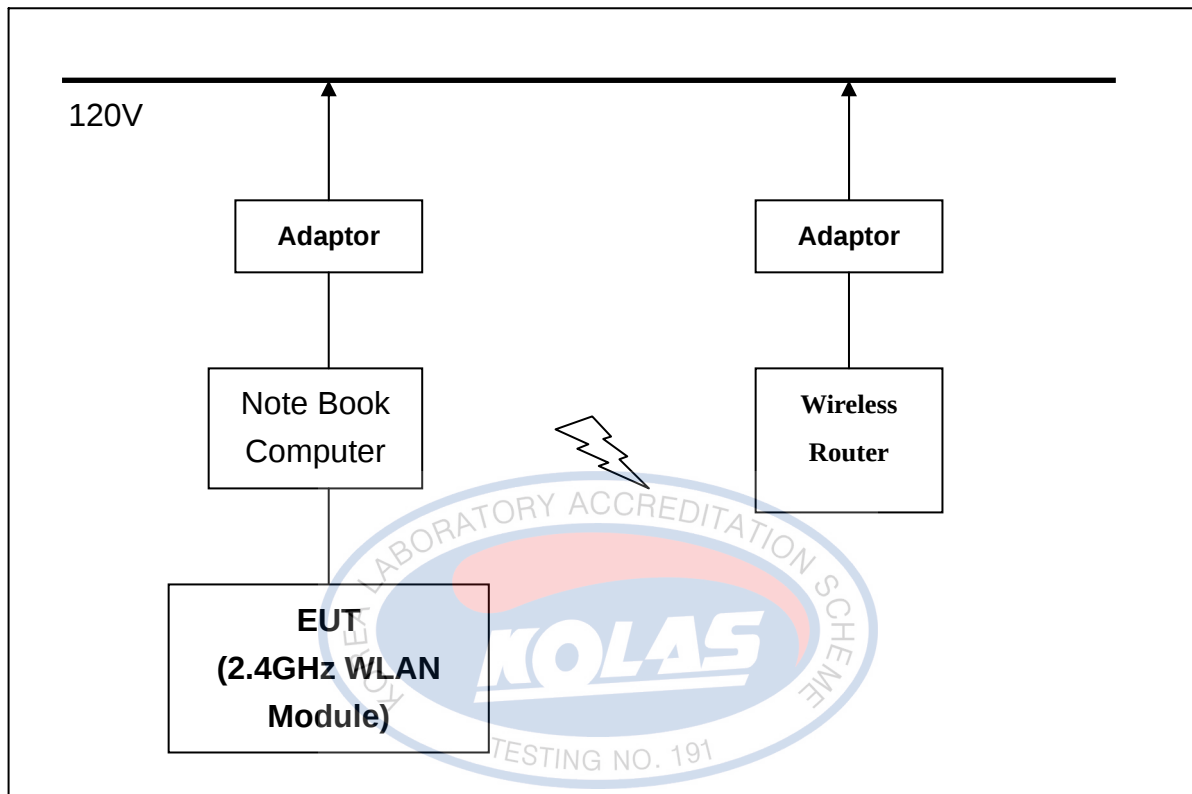
4.3 Type of Used Cables

#	START		END		Cable	
	Name	I/O Port	Name	I/O Port	Length	Shielded
1	EUT	USB	Note book Computer		0.3	Shielded
2		wireless	Wireless Router	-	-	-



4.4 Test Setup

The test setup photographs showed the external supply connections and interfaces.



[System Block Diagram of Test Configuration]



4.5 Uncertainty

1) Radiated disturbances from 30 MHz to 1000 MHz at a distance of 3m and 10 m

Expanded Uncertainty

$$U = k * U_c(x_i) = 2 * 2.3 = 4.60\text{dB}$$

The coverage factor $k = 2$ yields approximately a 95% level of confidence.

2) Conducted disturbance from 150 KHz to 30 MHz using a 50 Ω /50 μH AMN

Expanded uncertainty

$$U = k * U_c(x_i) = 2 * 1.96 = 3.92\text{dB}$$

The coverage factor $k = 2$ yields approximately a 95% level of confidence.

※ When the measured emission is positioned within the range of the uncertainty of measurement from the emission limit, the uncertainty of measurement shall be concerned as follow.

Compliance or non-compliance with a disturbance limit shall be determined in the following manner.

If U_{lab} is less than or equal to U_{cisp}

- compliance is deemed to occur if no measured disturbance exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance exceeds the disturbance limit.

If U_{lab} is greater than U_{cisp}

- compliance is deemed to occur if no measured disturbance, increased by $(U_{lab} - U_{cisp})$, exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance, increased by $(U_{lab} - U_{cisp})$, exceeds the disturbance limit.

※ If the measurement value is lower or equal to the limit, the EUT is considered to pass the test.



5. EMISSION Test

5.1 Conducted Emissions

Result:

PASS

The line-conducted facility is located inside a 2.6M x 3.6M x 7.0M shielded enclosure.

The shielding effectiveness of the shielded room is in accordance with MIL-Std-285 or NSA 604-05. A 1 m x 1.5 m wooden table 80 cm high is placed 40 cm. away from the vertical wall and 1.5 m away from the side wall of the shielded room. ROHDE & SCHWARZ Model ESH3-Z5 (10 kHz-30 MHz) 50 ohm/50 uH Line-Impedance Stabilization Networks(LISNs) are bonded to the shielded room.

The EUT is powered from the ROHDE & SCHWARZ LISN and the support equipment is powered from the ROHDE & SCHWARZ LISN. Power to the LISNs are filtered by a high-current high-insertion loss Lindgren enclosures power line filters (100dB 14 kHz-10 GHz).

The purpose of the filter is to attenuate ambient signal interference and this filter is also bonded to the shielded enclosure.

All electrical cables are shielded by braided tinned copper zipper tubing with inner diameter of 1/2". If the EUT is a DC-powered device, power will be derived from the source power supply it normally will be powered from and this supply lines will be connected to the ROHDE & SCHWARZ LISN.

All interconnecting cables more than 1 meter were shortened by non-inductive bundling (serpentine fashion) to a 1-meter length.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the spectrum analyzer to determine the frequency producing the maximum EME from the EUT.

The spectrum was scanned from 150 kHz to 30 MHz with 100msec. sweep time.

The frequency producing the maximum level was reexamined using EMI/field Intensity Meter (ESHS 10) and Quasi-Peak adapter. The detector function was set to CISPR quasi-peak mode.

The bandwidth of the receiver was set to 10 kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each EME emission.

Each emission was maximized by: switching power lines; varying the mode of operation or resolution; clock or data exchange speed; if applicable; whichever determined the worst-case emission.

Photographs of the worst-case emission can be seen in photograph of conducted test.

Each EME reported was calibrated using self-calibrating mode.



Supplement 1: Test Data, Conducted Disturbance

Transmitter Mode (11b)

<Quasi-Peak>

Frequency (MHz)	Reading (dBuV)	Line	C/F (dB)	C/L (dB)	Actual (dBuV)	Limit (dBuV)	Margin (dB)
0.442	39.79	L	0.13	0.24	40.16	57.01	16.85
0.490	39.55	N	0.12	0.24	39.91	56.15	16.24
0.601	40.60	N	0.12	0.24	40.96	56.00	15.04
0.604	41.59	L	0.13	0.24	41.96	56.00	14.04
0.711	37.96	L	0.14	0.31	38.41	56.00	17.59
0.855	34.95	L	0.14	0.31	35.40	56.00	20.60

<Average>

Frequency (MHz)	Reading (dBuV)	Line	C/F (dB)	C/L (dB)	Actual (dBuV)	Limit (dBuV)	Margin (dB)
0.333	23.77	L	0.12	0.18	24.07	49.37	25.30
0.442	29.65	N	0.12	0.24	30.01	47.01	17.00
0.664	20.96	N	0.13	0.31	21.40	46.00	24.60
0.711	22.69	L	0.14	0.31	23.14	46.00	22.86
0.855	23.30	L	0.14	0.31	23.75	46.00	22.25
0.858	21.03	N	0.13	0.31	21.47	46.00	24.53

► NOTE

* C/F = Correction Factor

* C/L = Cable Loss

* LINE : L = Line-PE, N = Neutral-PE

* Margin Calculation

Margin(Q.P) = Limit - Actual

[Actual(Q.P) = Reading(Q.P) + C/F + C/L]

**Supplement 2 :Spectral Diagram, LINE – PE (Transmitter Mode – 11b)**

SK TECH Co., Ltd.

05 Mar 2008 11:41

CONDUCTED DISTURBANCE

EUT: 2.4GHz WLAN Module

Manuf:

Op Cond: 11b-Transmitter

Operator:

Test Spec:

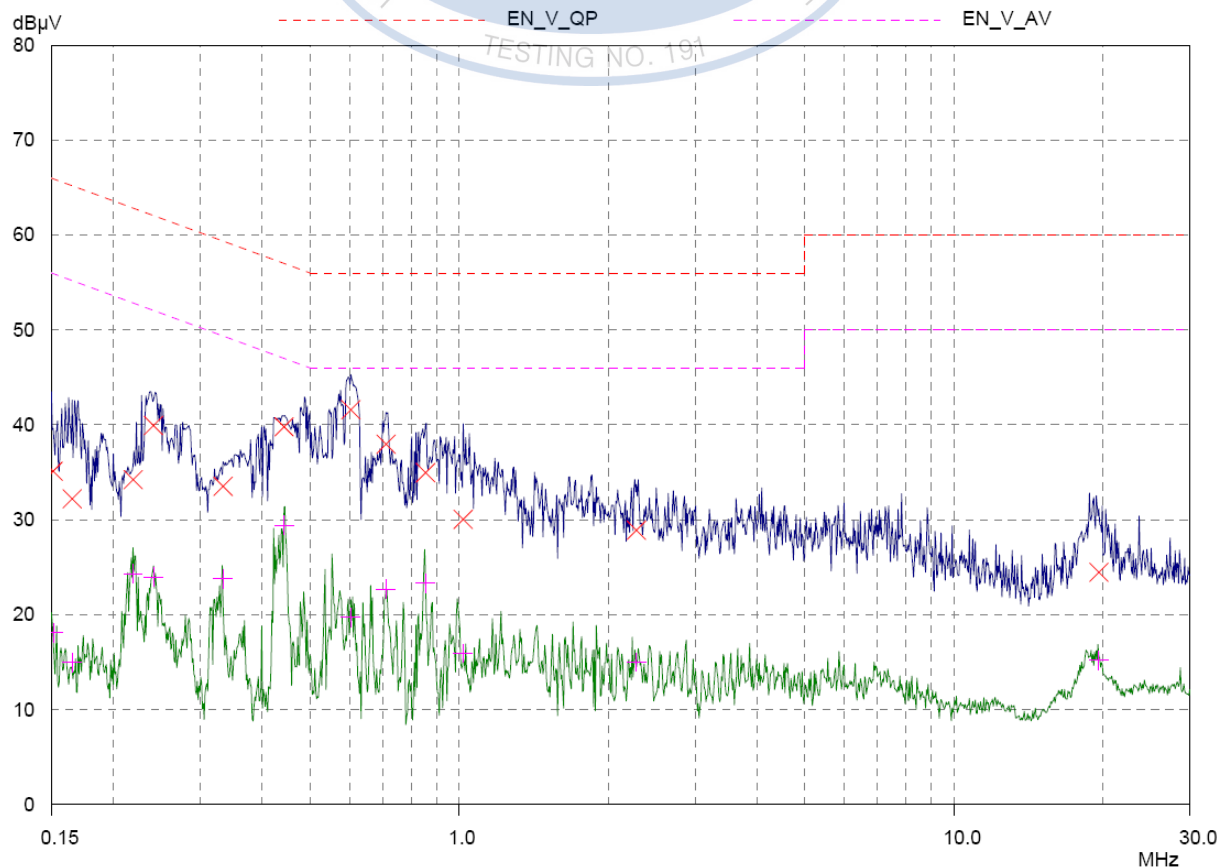
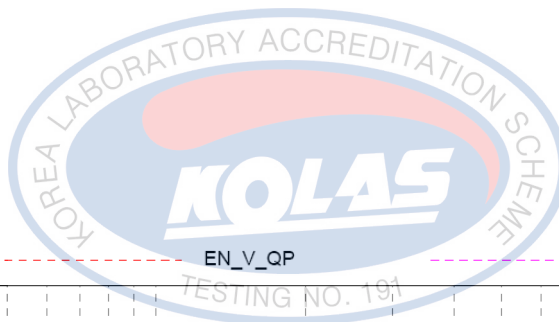
Comment: L1

Result File: 0106_1.dat : New Measurement

Scan Settings (1 Range)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	30MHz	0.4%	10kHz	PK+AV	20msec	Auto	OFF	60dB

Final Measurement: Detectors: X QP / + AV
Meas Time: 1sec
Peaks: 8
Acc Margin: 35 dB





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Supplement 3 :Spectral Diagram, NEUTRAL – PE (Transmitter Mode – 11b)

SK TECH Co., Ltd.

05 Mar 2008 11:56

CONDUCTED DISTURBANCE

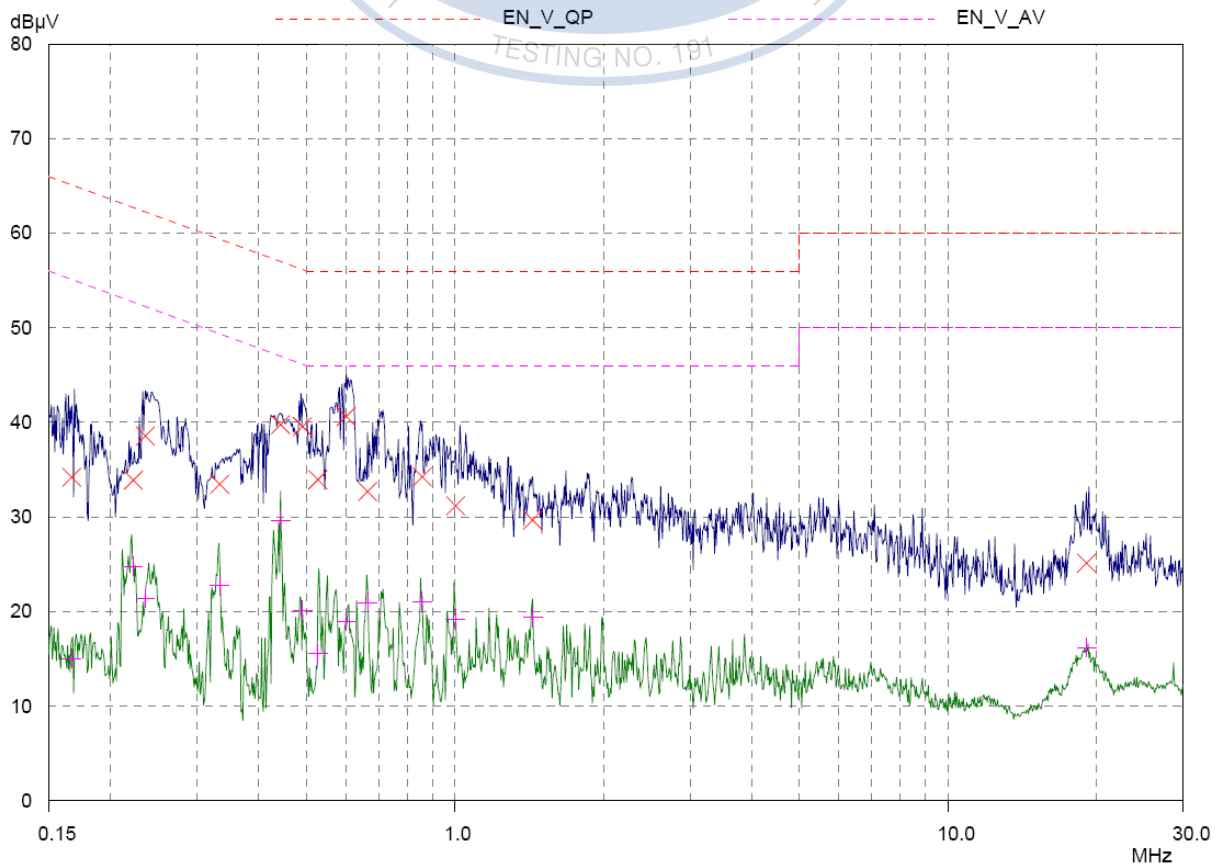
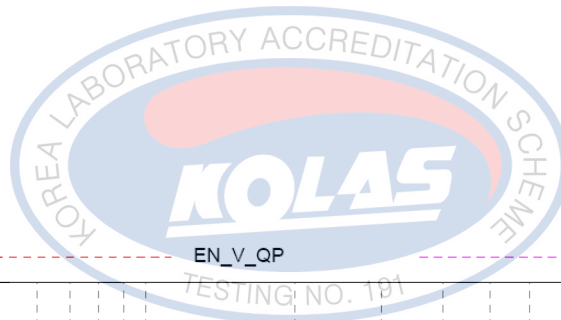
EUT: 2.4GHz WLAN Module
Manuf:
Op Cond: 11b-Transmitter
Operator:
Test Spec:
Comment: NEUTRAL

Result File: 0106_I.dat : New Measurement

Scan Settings (1 Range)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	30MHz	0.4%	10kHz	PK+AV	20msec	Auto	OFF	60dB

Final Measurement: Detectors: X QP / + AV
Meas Time: 1sec
Peaks: 8
Acc Margin: 35 dB





Supplement 4: Test Data, Conducted Disturbance

Transmitter Mode Mode (11g)

<Quasi-Peak>

Frequency (MHz)	Reading (dBuV)	Line	C/F (dB)	C/L (dB)	Actual (dBuV)	Limit (dBuV)	Margin (dB)
0.240	39.98	L	0.12	0.18	40.28	62.09	21.81
0.440	0.71	L	0.13	0.24	1.08	57.05	55.97
0.442	39.49	N	0.12	0.24	39.85	57.01	17.16
0.538	33.51	L	0.13	0.24	33.88	56.00	22.12
0.601	41.63	L	0.13	0.24	42.00	56.00	14.00
0.604	38.94	N	0.12	0.24	39.30	56.00	16.70

<Average>

Frequency (MHz)	Reading (dBuV)	Line	C/F (dB)	C/L (dB)	Actual (dBuV)	Limit (dBuV)	Margin (dB)
0.440	28.01	L	0.13	0.24	28.38	47.05	18.67
0.442	29.18	N	0.12	0.24	29.54	47.01	17.47
0.601	19.40	L	0.13	0.24	19.77	46.00	26.23
0.855	21.90	N	0.13	0.31	22.34	46.00	23.66
1.219	20.59	L	0.14	0.36	21.09	46.00	24.91
1.430	22.51	N	0.14	0.36	23.01	46.00	22.99

► NOTE

* C/F = Correction Factor

* C/L = Cable Loss

* LINE : L = Line-PE, N = Neutral-PE

* Margin Calculation

Margin(Q.P) = Limit - Actual

[Actual(Q.P) = Reading(Q.P) + C/F + C/L]

**Supplement 5 :Spectral Diagram, LINE – PE (Transmitter Mode Mode – 11g)**

SK TECH Co., Ltd.

05 Mar 2008 13:03

CONDUCTED DISTURBANCE

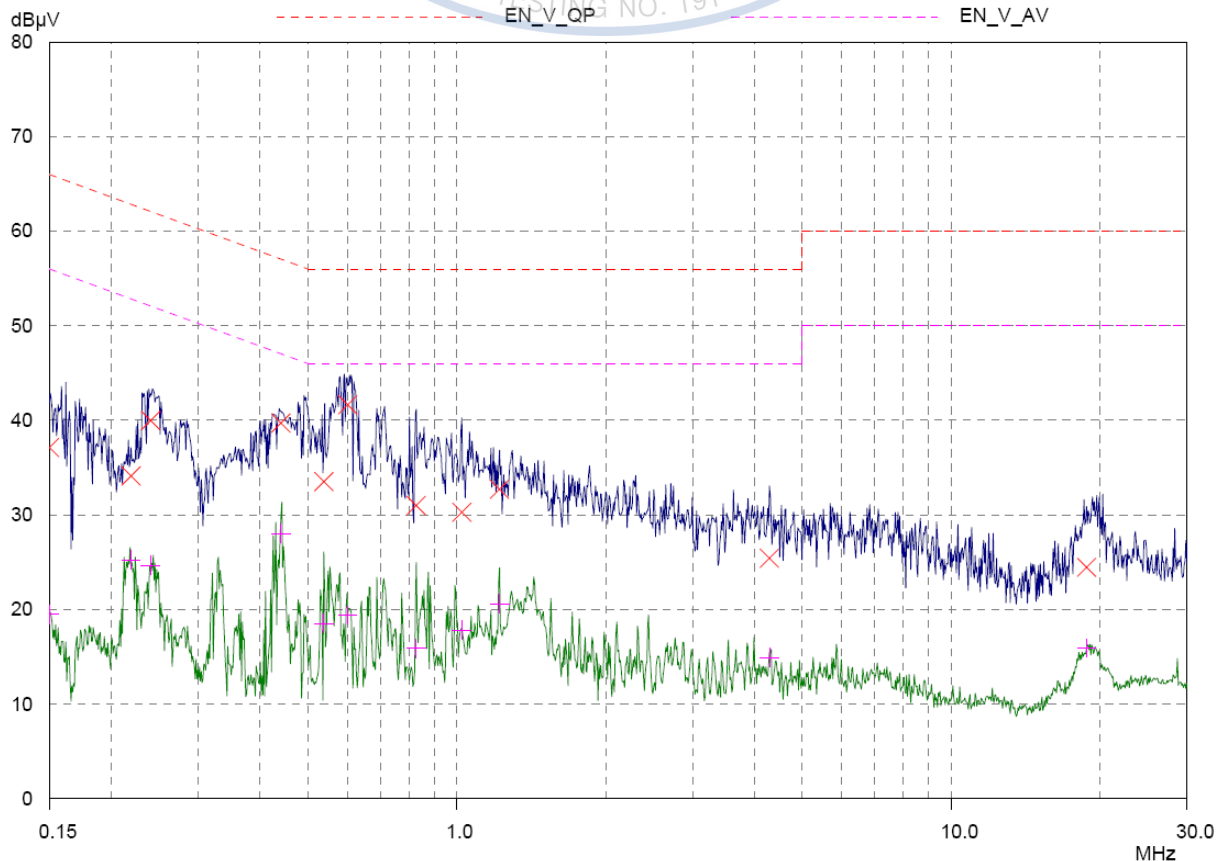
EUT: 2.4GHz WLAN Module
Manuf:
Op Cond: 11g-Transmitter
Operator:
Test Spec:
Comment: L1

Result File: 0106_I.dat : New Measurement

Scan Settings (1 Range)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	30MHz	0.4%	10kHz	PK+AV	20msec	Auto	OFF	60dB

Final Measurement: Detectors: X QP / + AV
Meas Time: 1sec
Peaks: 8
Acc Margin: 35 dB





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Supplement 6: Spectral Diagram, NEUTRAL – PE (Transmitter Mode Mode – 11g)

SK TECH Co., Ltd.

05 Mar 2008 13:10

CONDUCTED DISTURBANCE

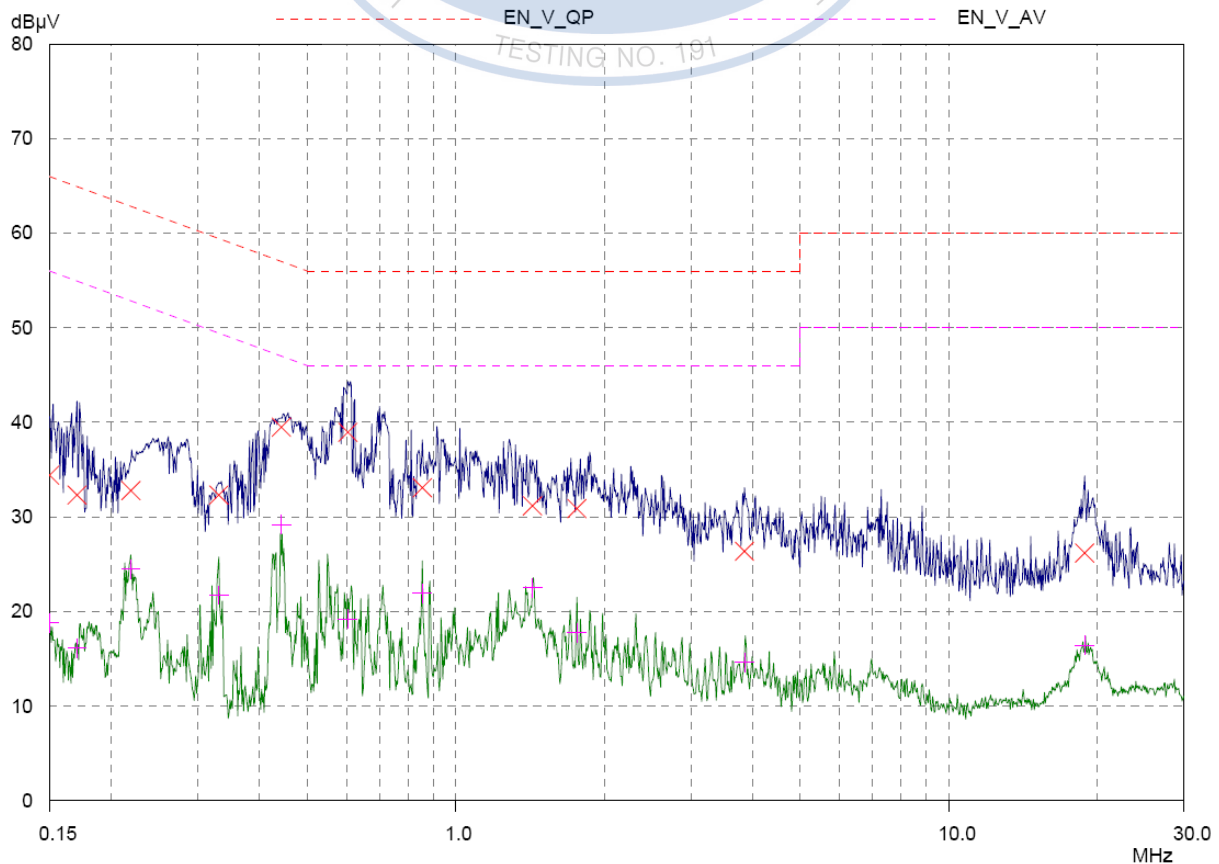
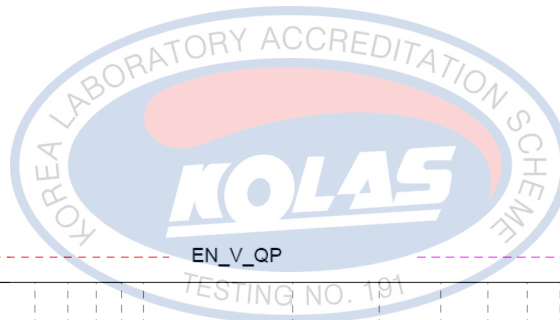
EUT: 2.4GHz WLAN Module
Manuf:
Op Cond: 11g-Transmitter
Operator:
Test Spec:
Comment: NEUTRAL

Result File: 0106_1.dat : New Measurement

Scan Settings (1 Range)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	30MHz	0.4%	10kHz	PK+AV	20msec	Auto	OFF	60dB

Final Measurement: Detectors: X QP / + AV
Meas Time: 1sec
Peaks: 8
Acc Margin: 35 dB





Supplement 7: Test Data, Conducted Disturbance

Receiver Mode (11b)

<Quasi-Peak>

Frequency (MHz)	Reading (dBuV)	Line	C/F (dB)	C/L (dB)	Actual (dBuV)	Limit (dBuV)	Margin (dB)
0.423	38.88	N	0.12	0.24	39.24	57.38	18.14
0.442	35.58	L	0.13	0.24	35.95	57.01	21.06
0.446	38.47	N	0.12	0.24	38.83	56.95	18.12
0.601	39.67	N	0.12	0.24	40.03	56.00	15.97
0.626	36.66	N	0.12	0.24	37.02	56.00	18.98
0.708	35.31	L	0.14	0.31	35.76	56.00	20.24

<Average>

Frequency (MHz)	Reading (dBuV)	Line	C/F (dB)	C/L (dB)	Actual (dBuV)	Limit (dBuV)	Margin (dB)
0.423	25.54	N	0.12	0.24	25.90	47.38	21.48
0.446	24.97	N	0.12	0.24	25.33	46.95	21.62
0.601	18.57	L	0.13	0.24	18.94	46.00	27.06
0.708	21.37	L	0.14	0.31	21.82	46.00	24.18
0.855	23.07	N	0.13	0.31	23.51	46.00	22.49
1.430	20.15	N	0.14	0.36	20.65	46.00	25.35

► NOTE

* C/F = Correction Factor

* C/L = Cable Loss

* LINE : L = Line-PE, N = Neutral-PE

* Margin Calculation

Margin(Q.P) = Limit - Actual

[Actual(Q.P) = Reading(Q.P) + C/F + C/L]



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Supplement 8 :Spectral Diagram, LINE – PE (Receiver Mode – 11b)

SK TECH Co., Ltd.

05 Mar 2008 11:34

CONDUCTED DISTURBANCE

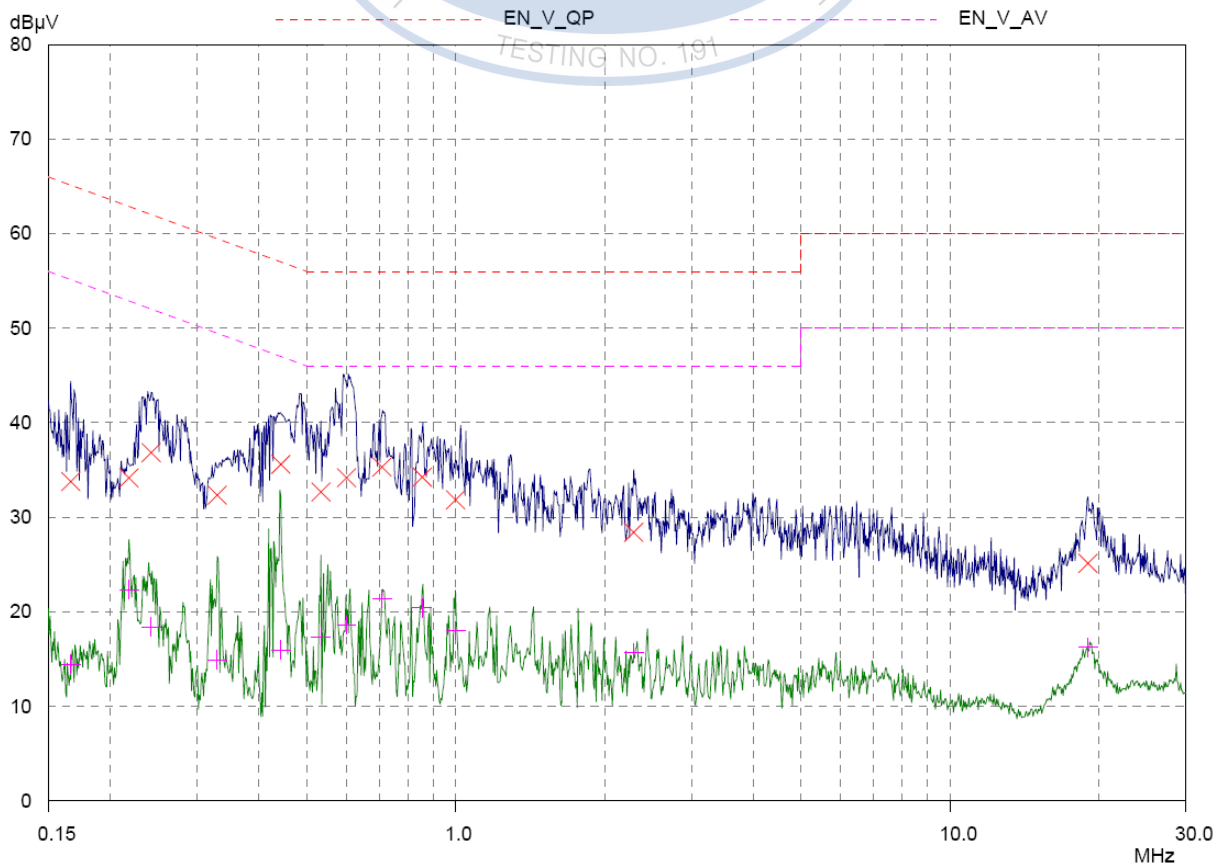
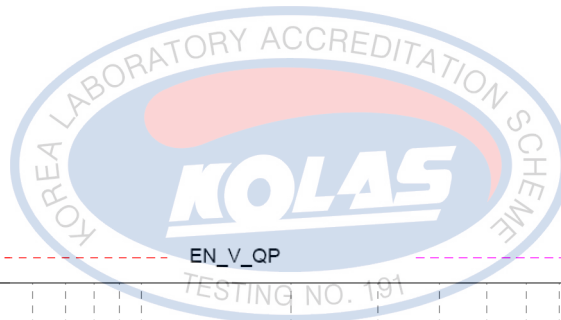
EUT: 2.4GHz WLAN Module
Manuf:
Op Cond: 11b-Receiver
Operator:
Test Spec:
Comment: L1

Result File: 0106_n.dat : New Measurement

Scan Settings (1 Range)

Frequencies			Receiver Settings						
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge	
150kHz	30MHz	0.4%	10kHz	PK+AV	20msec	Auto	OFF	60dB	

Final Measurement: Detectors: X QP / + AV
Meas Time: 1sec
Peaks: 8
Acc Margin: 35 dB



**Supplement 9 :Spectral Diagram, NEUTRAL – PE (Receiver Mode – 11b)**

SK TECH Co., Ltd.

05 Mar 2008 11:23

CONDUCTED DISTURBANCE

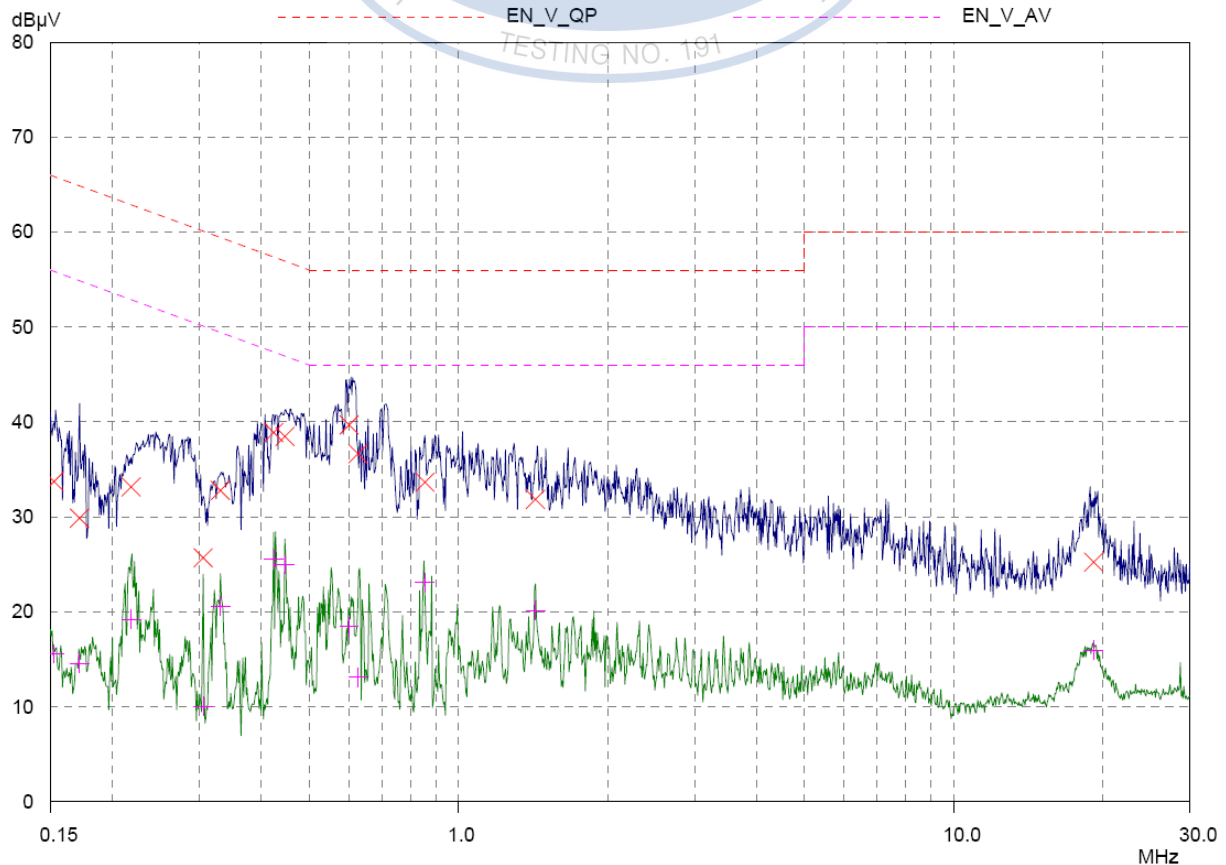
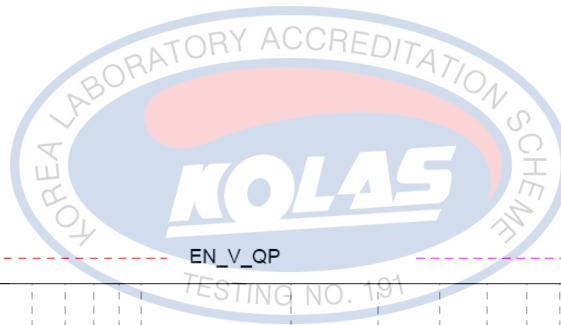
EUT: 2.4GHz WLAN Module
Manuf:
Op Cond: 11b-Receiver
Operator:
Test Spec:
Comment: NEUTRAL

Result File: 0106_n.dat : New Measurement

Scan Settings (1 Range)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	30MHz	0.4%	10kHz	PK+AV	20msec	Auto	OFF	60dB

Final Measurement: Detectors: X QP / + AV
Meas Time: 1sec
Peaks: 8
Acc Margin: 35 dB





Supplement 10: Test Data, Conducted Disturbance

Receiver Mode (11g)

<Quasi-Peak>

Frequency (MHz)	Reading (dBuV)	Line	C/F (dB)	C/L (dB)	Actual (dBuV)	Limit (dBuV)	Margin (dB)
0.440	39.67	L	0.13	0.24	40.04	57.05	17.01
0.442	39.14	N	0.12	0.24	39.50	57.01	17.51
0.553	36.37	N	0.12	0.24	36.73	56.00	19.27
0.601	40.14	L	0.13	0.24	40.51	56.00	15.49
0.604	39.98	N	0.12	0.24	40.34	56.00	15.66
0.711	37.82	N	0.13	0.31	38.26	56.00	17.74

<Average>

Frequency (MHz)	Reading (dBuV)	Line	C/F (dB)	C/L (dB)	Actual (dBuV)	Limit (dBuV)	Margin (dB)
0.440	29.95	L	0.13	0.24	30.32	47.05	16.73
0.442	28.85	N	0.12	0.24	29.21	47.01	17.80
0.553	23.79	N	0.12	0.24	24.15	46.00	21.85
0.711	21.99	N	0.13	0.31	22.43	46.00	23.57
0.851	21.38	N	0.13	0.31	21.82	46.00	24.18
1.436	22.60	N	0.14	0.36	23.10	46.00	22.90

► NOTE

* C/F = Correction Factor

* C/L = Cable Loss

* LINE : L = Line-PE, N = Neutral-PE

* Margin Calculation

Margin(Q.P) = Limit - Actual

[Actual(Q.P) = Reading(Q.P) + C/F + C/L]

**Supplement 11 :Spectral Diagram, LINE – PE (Receiver Mode – 11g)**

SK TECH Co., Ltd.

05 Mar 2008 13:25

CONDUCTED DISTURBANCE

EUT: 2.4GHz WLAN Module

Manuf:

Op Cond: 11g-Receiver

Operator:

Test Spec:

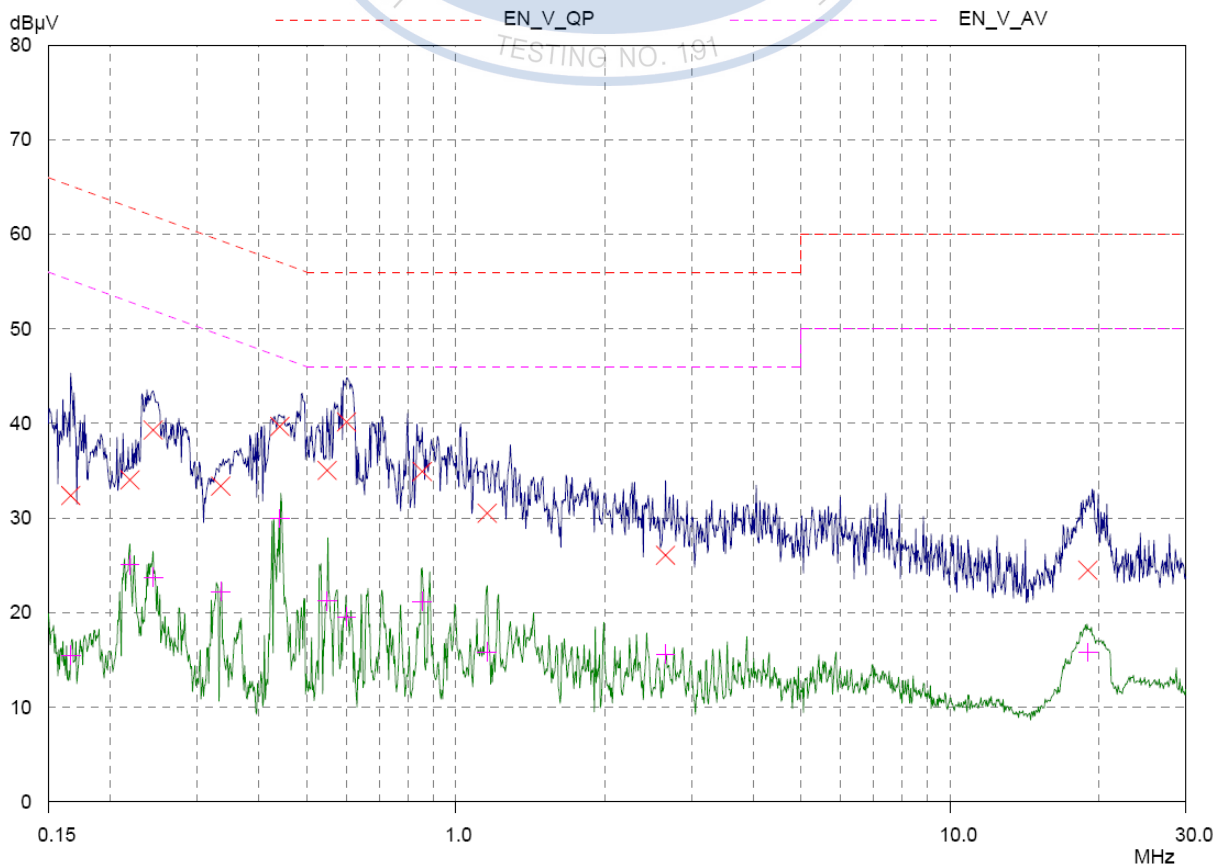
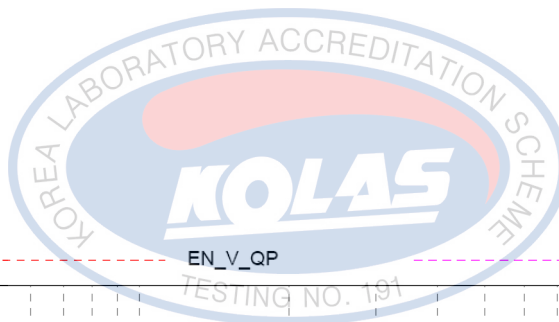
Comment: L1

Result File: 0106_n.dat : New Measurement

Scan Settings (1 Range)

Frequencies			Receiver Settings						
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge	
150kHz	30MHz	0.4%	10kHz	PK+AV	20msec	Auto	OFF	60dB	

Final Measurement: Detectors: X QP / + AV
Meas Time: 1sec
Peaks: 8
Acc Margin: 35 dB





SK TECH CO., LTD.

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Supplement 12 :Spectral Diagram, NEUTRAL – PE (Receiver Mode – 11g)

SK TECH Co., Ltd.

05 Mar 2008 13:17

CONDUCTED DISTURBANCE

EUT: 2.4GHz WLAN Module

Manuf:

Op Cond: 11g-Receiver

Operator:

Test Spec:

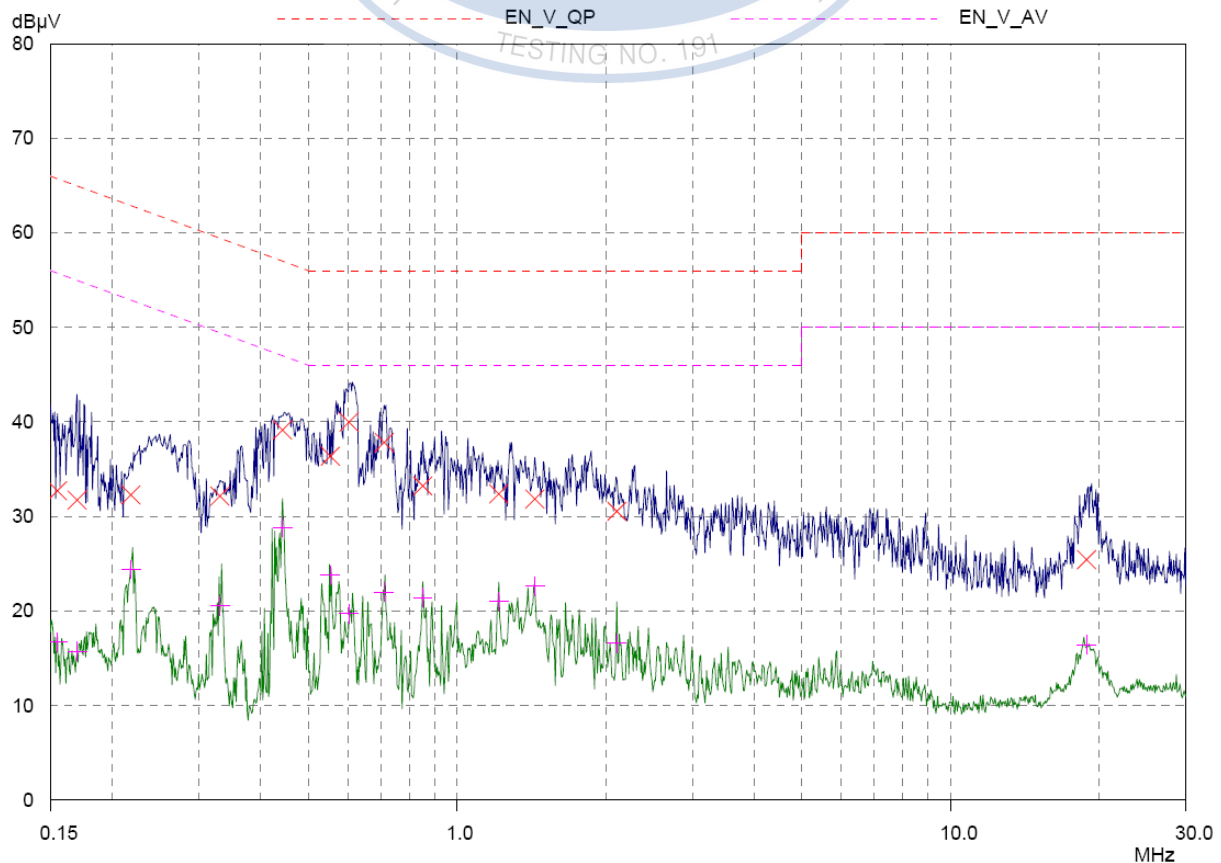
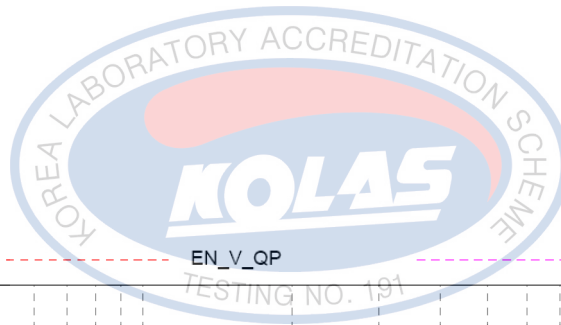
Comment: NEUTRAL

Result File: 0106_n.dat : New Measurement

Scan Settings (1 Range)

Frequencies			Receiver Settings						
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge	
150kHz	30MHz	0.4%	10kHz	PK+AV	20msec	Auto	OFF	60dB	

Final Measurement: Detectors: X QP / + AV
Meas Time: 1sec
Peaks: 8
Acc Margin: 35 dB





5.2 Radiated Emissions

Result :

PASS

Preliminary measurements were made indoors at 3 meter using broadband antennas, broadband amplifier, and spectrum analyzer to determine the frequency producing the maximum EME.

Appropriate precaution was taken to ensure that all EME from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, turntable azimuth with respect to the antenna were noted for each frequency found.

The spectrum was scanned from 30 to 300 MHz using biconical antenna and from 300 to 1000 MHz using log-periodic antenna. Above 1 GHz, linearly polarized double ridge horn antennas were used.

Final measurements were made outdoors at 3-meter test range using Trilog-Broadband Antenna.

The test equipment was placed on a wooden table situated on a 4x4 meter area adjacent to the measurement area. Turntable was to protect from weather in the dome that made with FRP.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. Each frequency found during pre-scan measurements was re-examined and investigated using EMI/Field Intensity Meter(ESVS 10) and Quasi-Peak Adapter.

The detector function was set to CISPR quasi-peak mode and the bandwidth of the receiver was set to 100 kHz or 1 MHz depending on the frequency or type of signal.

The half-wave dipole antenna was tuned to the frequency found during preliminary radiated measurements. The EUT, support equipment and interconnecting cables were re-configured to the set-up producing the maximum emission for the frequency and were placed on top of a 0.8-meter high non-metallic 1 x 1.5 meter table.

The EUT, support equipment, and interconnecting cables were re-arranged and manipulated to maximize each EME emission. The turntable containing the system was rotated; the antenna height was varied 1 to 4 meters and stopped at the azimuth or height producing the maximum emission.

Each emission was maximized by: varying the mode of operation or resolution; clock or data exchange speed, and/or support equipment, if applicable; and changing the polarity of the antenna, whichever determined the worst-case emission.

Photographs of the worst-case emission can be seen in photograph of radiated emission test.

Each EME reported was calibrated using self-calibrating mode.

**Table 2 : Test Data, Radiated Emissions****(Transmitter Mode 11b)**

Frequency [MHz]	Pol.	Angle	Height [m]	Real Reading	Correction Factor		T-Fact [dB]	Data [dBuV/m]	Limits [dBuV/m]	Margin [dB]
					Antenna	Cable				
116.44	H	154	2.3	15.4	8.9	1.0	9.9	25.3	43.5	18.2
126.14	H	240	2.3	25.0	10.7	1.1	11.8	36.8	43.5	6.7
132.89	H	168	2.3	20.0	10.7	1.1	11.8	31.8	43.5	11.7
300.00	V	270	1.4	24.6	12.9	1.7	14.6	39.2	46.0	6.8
400.00	H	250	2.0	23.8	15.2	2.0	17.2	41.0	46.0	5.0
700.00	H	99	1.8	15.0	20.5	3.1	23.6	38.6	46.0	7.4
800.00	H	298	1.6	11.9	22.3	2.8	25.1	37.0	46.0	9.0
4874.00	H	53	1.8	41.8	32.5	8.1	40.6	37.8	54.0	16.2

(Transmitter Mode 11g)

Frequency [MHz]	Pol.	Angle	Height [m]	Real Reading	Correction Factor		T-Fact [dB]	Data [dBuV/m]	Limits [dBuV/m]	Margin [dB]
					Antenna	Cable				
116.45	H	174	2.3	15.8	8.9	1.0	9.9	25.7	43.5	17.8
126.97	H	302	2.3	24.7	10.7	1.1	11.8	36.5	43.5	7.0
132.89	H	187	2.3	19.4	10.7	1.1	11.8	31.2	43.5	12.3
299.98	V	267	1.4	24.9	12.9	1.7	14.6	39.5	46.0	6.5
400.01	H	247	2.0	23.8	15.2	2.0	17.2	41.0	46.0	5.0
700.00	H	105	1.8	16.4	20.5	3.1	23.6	40.0	46.0	6.0
799.98	H	179	1.6	12.0	22.3	2.8	25.1	37.1	46.0	8.9
4874.00	H	17	1.9	38.6	32.5	8.1	40.6	34.6	54.0	19.4

Table. Radiated Measurements at 3-meters

NOTES:

1. All modes of operation were investigated and the worst-case emission are reported.
2. All other emission are non-significant.
3. All readings are calibrated by self-mode in receiver.
4. Measurements using CISPR Quasi-Peak mode.
5. H = Horizontal, V = Vertical Polarization
6. Data = Real Reading + T – Fact (Antenna+Cable)
7. Margin = Limits – Data

**(Receiving Mode 11b)**

Frequency [MHz]	Pol.	Angle	Height [m]	Real Reading	Correction Factor		T-Fact [dB]	Data [dBuV/m]	Limits [dBuV/m]	Margin [dB]
					Antenna	Cable				
116.40	H	147	2.3	16.6	8.9	1.0	9.9	26.5	43.5	17.0
126.12	H	198	2.3	24.4	10.7	1.1	11.8	36.2	43.5	7.3
133.01	H	162	2.3	19.5	10.7	1.1	11.8	31.3	43.5	12.2
300.00	V	265	1.4	24.3	12.9	1.7	14.6	38.9	46.0	7.1
400.00	H	248	2.0	24.9	15.2	2.0	17.2	42.1	46.0	3.9
700.00	H	100	1.8	14.8	20.5	3.1	23.6	38.4	46.0	7.6
800.00	H	301	1.6	12.4	22.3	2.8	25.1	37.5	46.0	8.5
3282.00	H	20	2.0	34.7	30.8	7.2	38.0	28.5	54.0	25.5

(Receiving Mode 11g)

Frequency [MHz]	Pol.	Angle	Height [m]	Real Reading	Correction Factor		T-Fact [dB]	Data [dBuV/m]	Limits [dBuV/m]	Margin [dB]
					Antenna	Cable				
116.36	H	174	2.3	15.4	8.9	1.0	9.9	25.3	43.5	18.2
126.30	H	302	2.3	25.0	10.7	1.1	11.8	36.8	43.5	6.7
133.01	H	187	2.3	20.0	10.7	1.1	11.8	31.8	43.5	11.7
300.01	V	267	1.4	24.6	12.9	1.7	14.6	39.2	46.0	6.8
400.00	H	247	2.0	23.8	15.2	2.0	17.2	41.0	46.0	5.0
699.98	H	105	1.8	15.0	20.5	3.1	23.6	38.6	46.0	7.4
800.00	H	179	1.6	11.9	22.3	2.8	25.1	37.0	46.0	9.0
3282.00	H	18	2.3	35.0	30.8	7.2	38.0	28.8	54.0	25.2

Table. Radiated Measurements at 3-meters

NOTES:

1. All modes of operation were investigated and the worst-case emission are reported.
2. All other emission are non-significant.
3. All readings are calibrated by self-mode in receiver.
4. Measurements using CISPR Quasi-Peak mode.
5. H = Horizontal, V = Vertical Polarization
6. Data = Real Reading + T – Fact (Antenna+Cable)
7. Margin = Limits – Data