FCC CFR47 PART 22 SUBPART H
FCC CFR47 PART 24 SUBPART E
INDUSTRY CANADA RSS-132 ISSUE 2
INDUSTRY CANADA RSS-133 ISSUE 5
CLASS II PERMISSIVE CHANGE

CERTIFICATION TEST REPORT
FOR

CELLULAR/PCS WCDMA/GSM/EDGE MODULE (TESTED INSIDE OF SAMSUNG NOTEBOOK PC, NP-N230)

MODEL NUMBER: GT-Y3300

FCC ID: A3LGTY3300
IC: 649E-GTY3300

REPORT NUMBER: 10I13236-1

ISSUE DATE: JUNE 02, 2010

Prepared for

SAMSUNG ELICTRONICS CO., INC.
416, MAETAN 3-DONG, YEONGTONG-GU
SUWON-CITY, GYEONGGI-DO 443-742, SOUTH KOREA

Prepared by

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	06/02/10	Initial Issue	T. Chan

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELICTRONICS CO., INC.
416, MAETAN 3-DONG, YEONGTONG-GU
SUWON-CITY, GYEONGGI-DO 443-742, SOUTH KOREA

EUT DESCRIPTION: CELLULAR/PCS WCDMA/GSM/EDGE MODULE (TESTED INSIDE OF SAMSUNG NOTEBOOK PC, NP-N230)

MODEL: GT-Y3300

SERIAL NUMBER: ZS7PH93HZ400042D

DATE TESTED: MAY 24 AND 25, 2010

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 22H AND 24E	PASS (Radiated Portion)
IC RSS-132 ISSUE 2 AND RSS-133 ISSUE 5	PASS (Radiated Portion)

Compliance Certification Services, Inc. (CCS) tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by CCS based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document. No part of this report may be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any government agency.

Approved & Released For CCS By:

THU CHAN
EMC MANAGER
COMPLIANCE CERTIFICATION SERVICES

Tested By:

CHIN PANG
EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA-603-C, FCC CFR 47 Part 2, FCC CFR 47 Part 22, FCC CFR Part 24, FCC Part 27, RSS-132 Issue 2, and RSS-133 Issue 5.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://www.ccsemc.com.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 1000 MHz	4.94 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is the Samsung 850/1900 GSM/WCDMA/GPRS/EDGE Module with HSPA (Tested inside of SAMSUNG Notebook PC, NP-N230).

5.2. MAXIMUM OUTPUT POWER

The test measurement passed within ± 0.5dBm of the original output power.

5.3. DESCRIPTION OF CLASS II PERMISSIVE CHANGE

The major change filed under this application is:

Change #1: The subject approved module is being used in a different host (portable category configuration).

Change #2 Add one antenna, for all detail please refers to antenna specs.

5.4. MAXIMUM RADIATED OUTPUT POWER

The transmitter has a maximum ERP & EIRP output powers as follows:

824 to 849 MHz Authorized Band

Frequency Range (MHz)	Modulation	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low CH - 824.2	GPRS	29.2	831.8
Mid CH - 836.6		28.8	758.6
High CH - 848.8		29.1	812.8

1850 to 1910 MHz Authorized Band

Frequency Range (MHz)	Modulation	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low CH - 1850.25	GPRS	29.8	955.0
Mid CH - 1880.00		30.2	1047.1
High CH - 1909.75		29.3	851.1

5.5. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes PIFA type antennas on main and aux antennas with a maximum peak gain of 2dBi for Cell band and 3.2dBi for PCS band.

5.6. SOFTWARE AND FIRMWARE

The EUT is linked with Agilent Communication Test Set.

5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC/DC Adapter	Lite-On Technologies	PA-1400-14	CNBA4400266AD2VH03QO161	DoC
Netbook	Samsung	NT-N230PI2-PS3	ZS7PH93HZ400042D	DoC

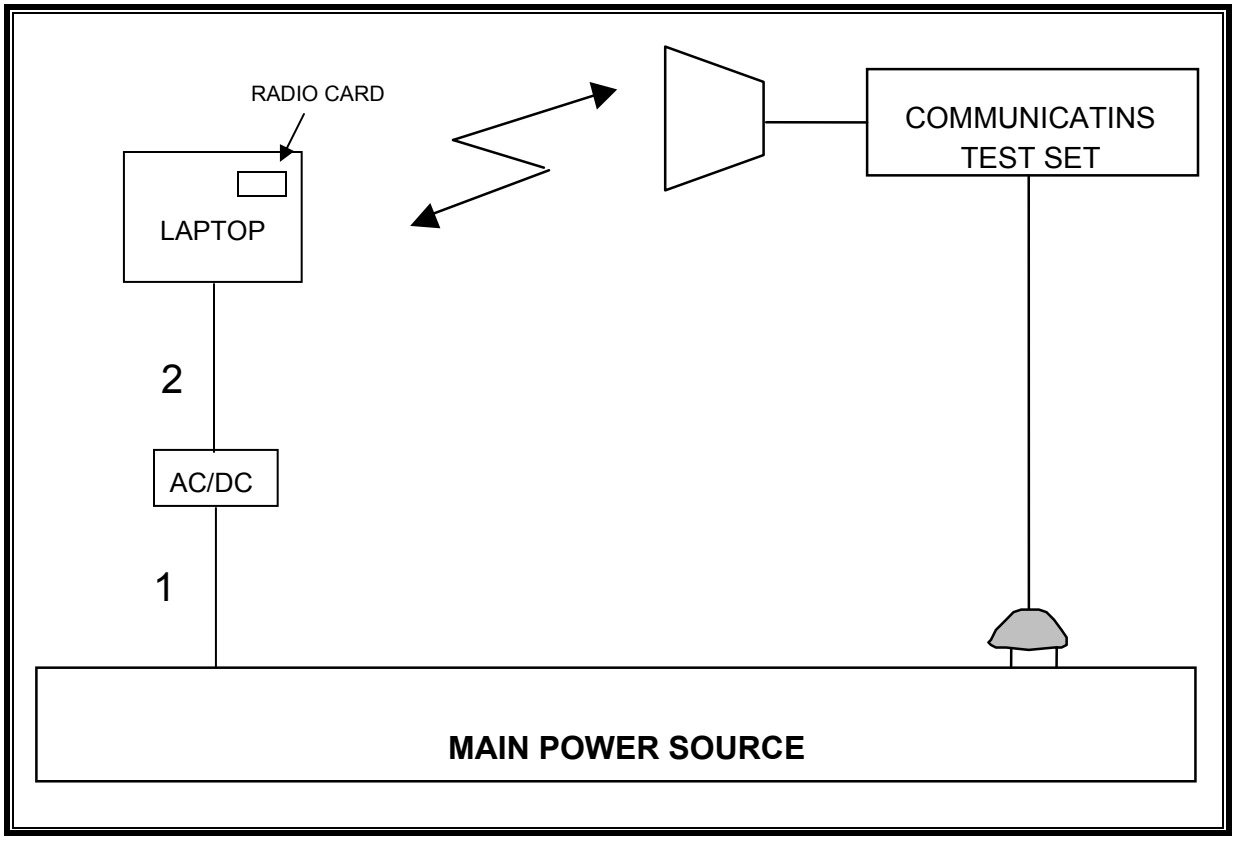
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC Input	1	US115	Un-Shielded	1.0 m	N/A
2	DC Input	1	US115	Un-Shielded	2.0 m	Ferrite at one end

TEST SETUP

The EUT is tested as a standalone configuration. Communications Test Set is used to link the device under test.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01052	08/04/10
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00885	07/06/10
Antenna, Horn, 18 GHz	EMCO	3115	C00945	07/29/10
Antenna, Horn, 18 GHz	EMCO	3115	C00943	07/29/10
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01011	07/14/10
Dipole	Speag	D900V2	NA	11/16/11
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02689`	CNR
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02687	CNR
Signal Generator	R & S	SMP04	C00953	02/16/11
Communications Test Set	Agilent / HP	E5515C	C01086	06/16/10
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01179	08/24/10
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	05/06/11
LISN, 30 MHz	FCC	LISN-50/250-25-2	N02625	11/06/10

7. LIMITS AND RESULTS

7.1. RADIATED OUTPUT POWER

LIMITS

22.913(a) The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232(b) & RSS133 § 6.4 Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

RSS-132 § 4.4 The maximum ERP shall be 6.3 Watts for mobile stations.

TEST PROCEDURE

ANSI / TIA / EIA 603 Clause 2.2.17, RSS-132 & RSS-133

RESULTS

CELL OUTPUT POWER (ERP)

High Frequency Substitution Measurement
Compliance Certification Services Chamber A

Company: Samsung Electronic Co., LTD
Project #: 10I13236
Date: 5/24/2010
Test Engineer: Chin Pang
Configuration:EUT/AC Adapter
Mode:TX, GPRS850

Test Equipment:
Receiving: Sunol T122, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch							
824.20	-5.6	V	34.8	29.2	38.5	-9.3	
824.20	-4.0	H	30.5	26.5	38.5	-11.9	
Mid Ch							
836.60	-4.3	V	33.1	28.8	38.5	-9.6	
836.60	-3.3	H	31.2	27.9	38.5	-10.5	
High Ch							
848.80	-3.1	V	32.1	29.1	38.5	-9.4	
848.80	-2.8	H	31.2	28.4	38.5	-10.0	

Rev. 1.24.7

PCS OUTPUT POWER (EIRP)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber A

Company: Samsung Electronic Co., LTD
Project #: 10I13236
Date: 5/24/2010
Test Engineer: Chin Pang
Configuration:EUT/AC Adapter
Mode:TX, GPRS1900

Test Equipment:
Receiving: Horn T73, and Camber B SMA Cables
Substitution: Horn T72 Substitution, 6ft SMA Cable (208947003) Warehouse

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch							
1.850	-11.3	V	40.4	29.1	33.0	-3.9	
1.850	-9.9	H	39.7	29.8	33.0	-3.2	
Mid Ch							
1.880	-11.8	V	39.9	28.1	33.0	-4.9	
1.880	-10.0	H	40.1	30.2	33.0	-2.8	
High Ch							
1.910	-11.3	V	39.8	28.5	33.0	-4.5	
1.910	-10.9	H	40.2	29.3	33.0	-3.8	

Rev. 1.24.7

7.2. FIELD STRENGTH OF SPURIOUS RADIATION

LIMIT

§22.917 (e) and §24.238 (a), RSS-132 § 4.5.1, & RSS-133 § 6.5.1 (a) (i) & (b): Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

TEST PROCEDURE

ANSI / TIA / EIA 603 Clause 3.2.12 & FCC 22.917 (b) & FCC 24.238 (b)(1)(2), RSS-132 & RSS-133

RESULTS

CELL SPURIOUS & HARMONIC (ERP)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Samsung Electronic Co., LTD
Project #: 10I13236
Date: 5/24/2010
Test Engineer: Chin Pang
Configuration:EUT/AC Adapter
Mode:TX, GPRS850

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	TX, Part 22

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.2MHz										
1.65	-38.1	H	3.0	36.5	38.2	1.0	-38.7	-13.0	-25.7	
2.47	-43.0	H	3.0	40.0	37.5	1.0	-39.5	-13.0	-26.5	
3.30	-38.0	H	3.0	43.9	37.1	1.0	-30.3	-13.0	-17.3	
4.12	-52.0	H	3.0	46.2	36.5	1.0	-41.4	-13.0	-28.4	
4.95	-56.0	H	3.0	48.6	36.3	1.0	-42.7	-13.0	-29.7	
1.65	-45.0	V	3.0	36.8	38.2	1.0	-45.3	-13.0	-32.3	
2.47	-43.5	V	3.0	41.7	37.5	1.0	-38.3	-13.0	-25.3	
3.30	-42.0	V	3.0	44.0	37.1	1.0	-34.1	-13.0	-21.1	
4.12	-57.3	V	3.0	45.9	36.5	1.0	-46.9	-13.0	-33.9	
4.95	-54.6	V	3.0	48.1	36.3	1.0	-41.8	-13.0	-28.8	
Mid Ch, 836.6MHz										
1.67	-45.6	H	3.0	36.8	38.1	1.0	-45.9	-13.0	-32.9	
2.51	-44.0	H	3.0	40.1	37.5	1.0	-40.3	-13.0	-27.3	
3.35	-41.2	H	3.0	44.0	37.1	1.0	-33.3	-13.0	-20.3	
4.18	-52.5	H	3.0	46.4	36.5	1.0	-41.7	-13.0	-28.7	
5.02	-55.2	H	3.0	48.8	36.3	1.0	-41.7	-13.0	-28.7	
1.67	-43.5	V	3.0	37.1	38.1	1.0	-43.5	-13.0	-30.5	
2.51	-46.1	V	3.0	41.9	37.5	1.0	-40.7	-13.0	-27.7	
3.35	-39.1	V	3.0	44.1	37.1	1.0	-31.1	-13.0	-18.1	
4.18	-53.5	V	3.0	46.1	36.5	1.0	-42.9	-13.0	-29.9	
5.02	-56.0	V	3.0	48.3	36.3	1.0	-43.0	-13.0	-30.0	
High Ch, 848.8MHz										
1.70	-40.6	H	3.0	37.0	38.1	1.0	-40.7	-13.0	-27.7	
2.55	-41.5	H	3.0	40.4	37.5	1.0	-37.6	-13.0	-24.6	
3.40	-37.4	H	3.0	44.1	37.1	1.0	-29.3	-13.0	-16.3	
4.24	-45.6	H	3.0	46.6	36.5	1.0	-34.6	-13.0	-21.6	
5.09	-52.2	H	3.0	49.0	36.3	1.0	-38.4	-13.0	-25.4	
1.70	-41.0	V	3.0	37.4	38.1	1.0	-40.7	-13.0	-27.7	
2.55	-43.1	V	3.0	42.0	37.5	1.0	-37.6	-13.0	-24.6	
3.40	-40.5	V	3.0	44.2	37.1	1.0	-32.3	-13.0	-19.3	
4.24	-43.0	V	3.0	46.2	36.5	1.0	-32.3	-13.0	-19.3	
5.09	-50.5	V	3.0	48.5	36.3	1.0	-37.3	-13.0	-24.3	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

PCS Spurious & Harmonic (EIRP)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Samsung Electronic Co., LTD
Project #: 10I13236
Date: 5/24/2010
Test Engineer: Chin Pang
Configuration:EUT/AC Adapter
Mode:TX, GPRS1900

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	TX, Part 24

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1850.2MHz										
3.70	-34.5	H	3.0	45.0	36.8	1.0	-25.3	-13.0	-12.3	
5.55	-50.0	H	3.0	49.9	36.3	1.0	-35.4	-13.0	-22.4	
7.40	-51.4	H	3.0	52.9	36.6	1.0	-34.1	-13.0	-21.1	
9.25	-53.1	H	3.0	55.2	37.0	1.0	-33.9	-13.0	-20.9	
11.10	-50.0	H	3.0	55.9	36.9	1.0	-30.0	-13.0	-17.0	
3.70	-34.1	V	3.0	44.9	36.8	1.0	-25.0	-13.0	-12.0	
5.55	-42.3	V	3.0	49.3	36.3	1.0	-28.3	-13.0	-15.3	
7.40	-50.1	V	3.0	51.8	36.6	1.0	-33.8	-13.0	-20.8	
9.25	-47.3	V	3.0	54.2	37.0	1.0	-29.1	-13.0	-16.1	
11.10	-46.3	V	3.0	56.3	36.9	1.0	-25.9	-13.0	-12.9	
Mid Ch, 1880MHz										
3.76	-36.4	H	3.0	45.2	36.8	1.0	-27.0	-13.0	-14.0	
5.64	-52.2	H	3.0	50.1	36.3	1.0	-37.4	-13.0	-24.4	
7.52	-55.0	H	3.0	53.1	36.6	1.0	-37.5	-13.0	-24.5	
9.40	-56.1	H	3.0	55.4	37.0	1.0	-36.7	-13.0	-23.7	
11.28	-53.0	H	3.0	55.8	36.8	1.0	-33.0	-13.0	-20.0	
3.76	-36.0	V	3.0	45.1	36.8	1.0	-26.7	-13.0	-13.7	
5.64	-46.5	V	3.0	49.4	36.3	1.0	-32.4	-13.0	-19.4	
7.52	-47.0	V	3.0	52.0	36.6	1.0	-30.6	-13.0	-17.6	
9.40	-52.0	V	3.0	54.4	37.0	1.0	-33.6	-13.0	-20.6	
11.28	-52.5	V	3.0	56.5	36.8	1.0	-31.9	-13.0	-18.9	
High Ch, 1.9098MHz										
3.82	-37.1	H	3.0	45.3	36.7	1.0	-27.5	-13.0	-14.5	
5.73	-52.0	H	3.0	50.2	36.3	1.0	-37.1	-13.0	-24.1	
7.64	-54.6	H	3.0	53.2	36.6	1.0	-37.0	-13.0	-24.0	
9.55	-57.6	H	3.0	55.6	37.1	1.0	-38.1	-13.0	-25.1	
11.46	-60.0	H	3.0	55.7	36.8	1.0	-40.0	-13.0	-27.0	
3.82	-33.3	V	3.0	45.2	36.7	1.0	-23.8	-13.0	-10.8	
5.73	-48.3	V	3.0	49.5	36.3	1.0	-34.1	-13.0	-21.1	
7.64	-52.0	V	3.0	52.1	36.6	1.0	-35.5	-13.0	-22.5	
9.55	-54.0	V	3.0	54.6	37.1	1.0	-35.5	-13.0	-22.5	
11.46	-54.5	V	3.0	56.7	36.8	1.0	-33.6	-13.0	-20.6	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

7.3. RECEIVER SPURIOUS EMISSIONS

LIMIT

RSS-Gen 7.2.2

Spurious Emission Limits for Receivers:

Spurious Frequency (MHz)	Field Strength (microvolts/m at 3 metres)
30-88	100
88-216	150
216-960	200
Above 960	500

TEST PROCEDURE

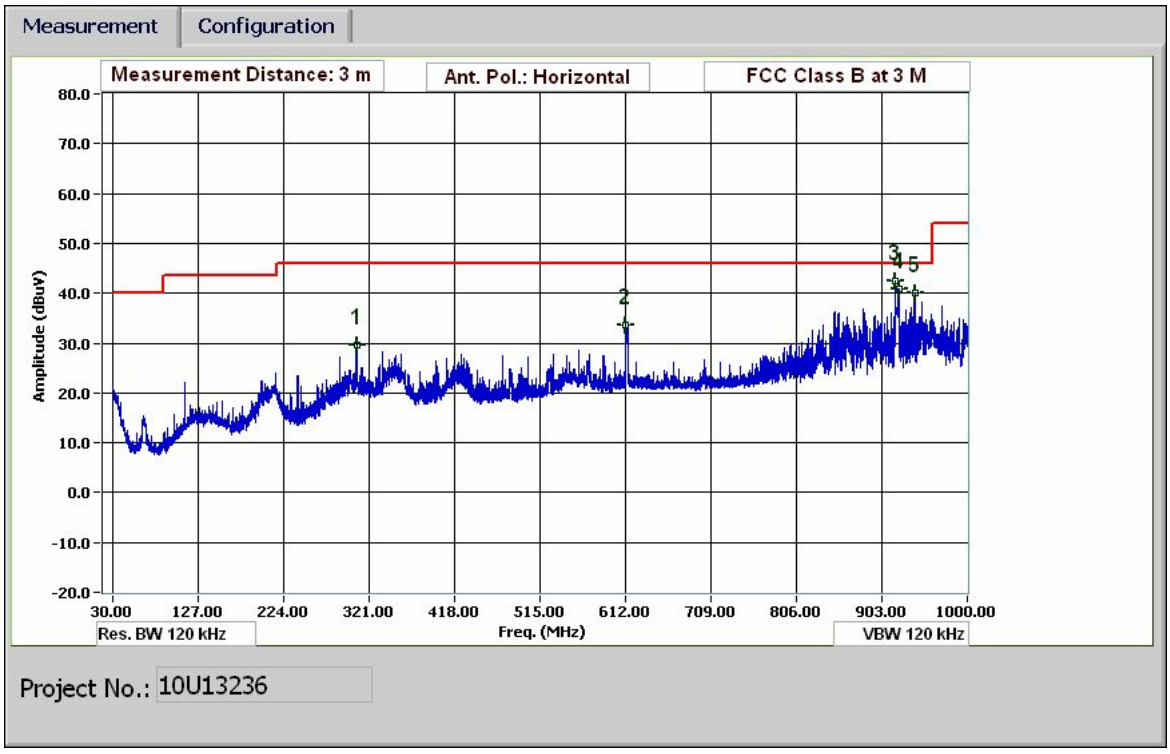
The search for spurious emissions shall be from the lowest frequency internally generated or used in the receiver (local oscillator frequency, intermediate frequency or carrier frequency),

or 30 MHz, whichever is the higher, to at least 3 times the highest tunable and local oscillator frequencies.

RESULTS

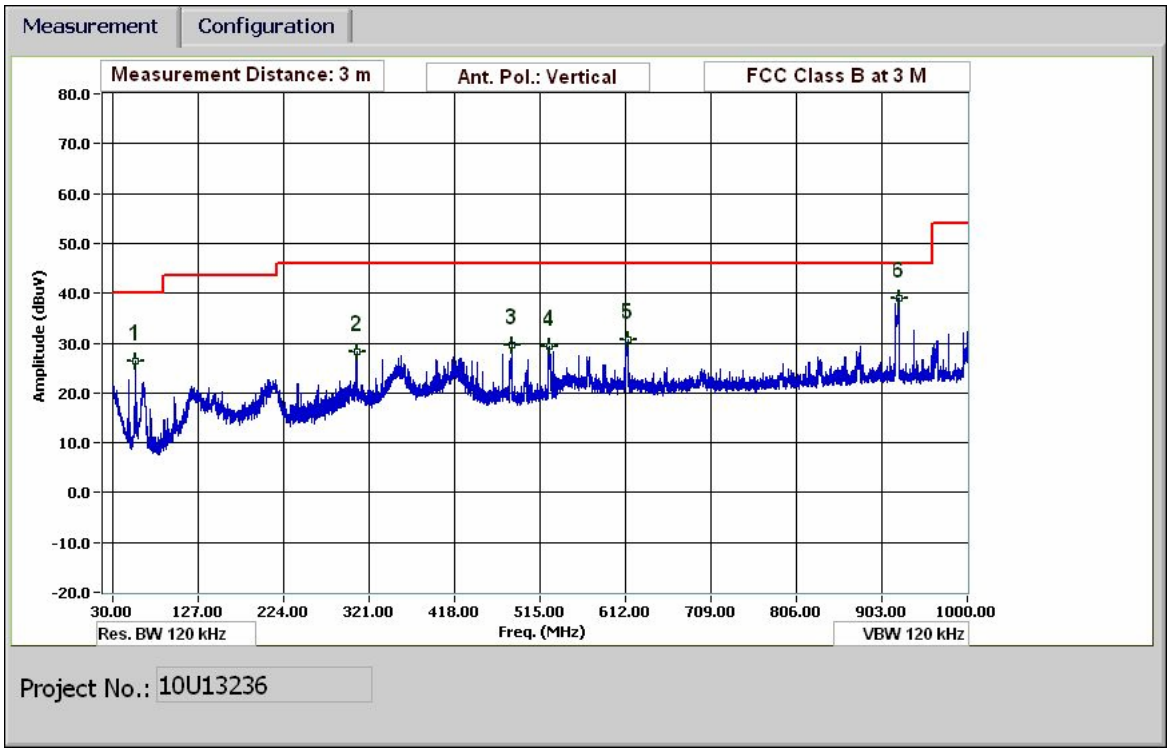
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZONTAL



SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)

VERTICAL



SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)

30-1000MHz Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber

Test Engr: MENGISTU MEKURIA
Date: 05/24/10
Project #: 10U13236
Company: SAMSUNG ELECTRONICS CO., LTD.
Test Target: FCC CLASS B
Mode Oper: RX Mode

f	Measurement Frequency	Amp	Preamp Gain	Margin	Margin vs. Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters		
Read	Analyzer Reading	Filter	Filter Insert Loss		
AF	Antenna Factor	Corr.	Calculated Field Strength		
CL	Cable Loss	Limit	Field Strength Limit		

f MHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filter dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
307.331	3.0	42.7	13.5	1.5	28.1	0.0	0.0	29.7	46.0	-16.3	H	P	
612.264	3.0	40.2	18.6	2.3	27.5	0.0	0.0	33.5	46.0	-12.5	H	P	
918.397	3.0	45.4	22.0	2.8	27.8	0.0	0.0	42.4	46.0	-3.6	H	P	
918.400	3.0	40.5	22.0	2.8	27.8	0.0	0.0	37.5	46.0	-8.5	H	QP	
921.997	3.0	43.8	22.0	2.8	27.8	0.0	0.0	40.8	46.0	-5.2	H	P	
922.054	3.0	40.8	22.0	2.9	27.8	0.0	0.0	37.8	46.0	-8.2	H	QP	
940.718	3.0	43.0	22.1	2.9	27.8	0.0	0.0	40.1	46.0	-5.9	H	P	
55.201	3.0	45.9	8.1	0.7	28.4	0.0	0.0	26.4	40.0	-13.6	V	P	
307.331	3.0	41.3	13.5	1.5	28.1	0.0	0.0	28.3	46.0	-17.7	V	P	
482.899	3.0	39.1	16.4	2.0	27.9	0.0	0.0	29.6	46.0	-16.4	V	P	
526.340	3.0	37.9	17.2	2.1	27.7	0.0	0.0	29.4	46.0	-16.6	V	P	
614.784	3.0	37.4	18.6	2.3	27.5	0.0	0.0	30.7	46.0	-15.3	V	P	
921.997	3.0	41.9	22.0	2.8	27.8	0.0	0.0	38.9	46.0	-7.1	V	P	

Rev. 1.27.09
Note: No other emissions were detected above the system noise floor.

SPURIOUS EMISSIONS ABOVE 1000 MHz (WORST-CASE CONFIGURATION)

High Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber

Company: Samsung Electronic Co., LTD
Project #: 10I13236
Date: 5/24/2010
Test Engineer: MENGISTU MEKURIA
Configuration: EUT/AC Adapter
Mode: RX mode

Test Equipment:

Horn 1-18GHz	Pre-amplifer 1-26GHz	Pre-amplifer 26-40GHz	Horn > 18GHz	Limit
T73; S/N: 6717 @3m	T144 Miteq 3008A00931			RX RSS 210

Hi Frequency Cables

3' cable 22807700	12' cable 22807600	20' cable 22807500	HPF	Reject Filter
3' cable 22807700	12' cable 22807600	20' cable 22807500		

Peak Measurements
RBW=VBW=1MHz
Average Measurements
RBW=1MHz ; VBW=10Hz

f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
1.008	3.0	66.1	41.9	23.9	2.4	-39.5	0.0	0.0	52.9	28.7	74	54	-21.1	-25.3	H
1.333	3.0	65.4	41.8	25.0	2.8	-39.0	0.0	0.0	54.2	30.5	74	54	-19.8	-23.5	H
1.667	3.0	64.6	35.5	26.1	3.1	-38.5	0.0	0.0	55.2	26.1	74	54	-18.8	-27.9	H
2.650	3.0	51.2	35.3	29.0	4.1	-37.4	0.0	0.0	46.8	30.9	74	54	-27.2	-23.1	H
1.008	3.0	56.4	38.8	23.9	2.4	-39.5	0.0	0.0	43.2	25.6	74	54	-30.8	-28.4	V
1.333	3.0	66.1	41.5	25.0	2.8	-39.0	0.0	0.0	54.8	30.2	74	54	-19.2	-23.8	V
1.533	3.0	58.0	37.5	25.6	3.0	-38.7	0.0	0.0	47.9	27.4	74	54	-26.1	-26.6	V
2.500	3.0	56.1	34.3	28.5	3.9	-37.5	0.0	0.0	51.1	29.3	74	54	-22.9	-24.7	V
2.660	3.0	56.1	36.9	29.0	4.1	-37.4	0.0	0.0	51.7	32.5	74	54	-22.3	-21.5	V

Rev. 07.22.09

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

7.4. POWER LINE CONDUCTED EMISSION

LIMIT

RSS-Gen 7.2.2

Except when the requirements applicable to a given device state otherwise, for any licence-exempt radio communication device equipped to operate from the public utility AC power supply, either directly or indirectly, the radio frequency voltage that is conducted back onto the AC power lines in the frequency range of 0.15 MHz to 30 MHz shall not exceed the limits shown in Table 2. The tighter limit applies at the frequency range boundaries.

Table 2 – AC Power Lines Conducted Emission Limits

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

RESULTS

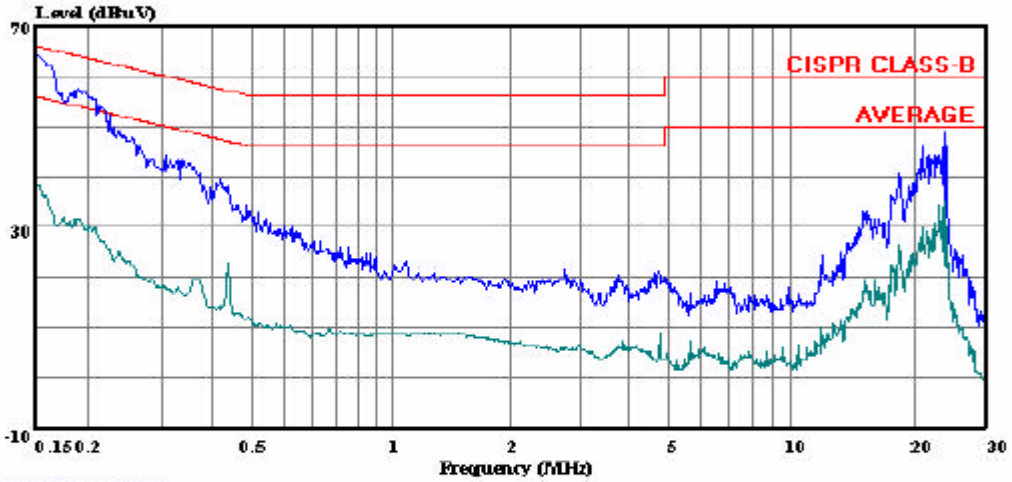
6 WORST EMISSIONS

CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	EN_B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.15	64.39	--	39.11	0.00	66.00	56.00	-1.61	-16.89	L1
0.19	57.42	--	31.69	0.00	64.08	54.08	-6.66	-22.39	L1
23.89	48.12	--	36.98	0.00	60.00	50.00	-11.88	-13.02	L1
0.15	64.35	--	38.35	0.00	66.00	56.00	-1.65	-17.65	L2
0.19	57.84	--	32.86	0.00	64.08	54.08	-6.24	-21.22	L2
23.89	46.90	--	35.04	0.00	60.00	50.00	-13.10	-14.96	L2
6 Worst Data									

LINE 1 RESULTS

Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538
Tel: (510) 771-1000
Fax: (510) 661-0888

Data#: 21 File#: 10U13236 LC.EMI Date: 05-24-2010 Time: 21:31:57



(Line Conduction)

Trace: 19 Ref Trace:

Condition: CISPR CLASS-B
Test Operator: : Mengistu Mekuria
Project #: : 10U13236
Company: : Samsung Electronics Co., Ltd.
EUT Description:: WWAN inside Mini Laptop
Configuration: : EUT and AC Adapter
Mode: : NORMAL
Target: : FCC Class B
Voltage: : 115V / 60Hz
: L1 Peak (Blue); Average (Green)

LINE 2 RESULTS