RADIATED SPURIOUS EMISSIONS PORTIONS OF

FCC CFR47 PART 22 SUBPART H
FCC CFR47 PART 24 SUBPART E

CERTIFICATION TEST REPORT

FOR

10.1” TABLET WITH LTE/CELLULAR AND WLAN RADIO WITH BLUETOOTH AND WLAN

MODEL NUMBER: TP00043A

FCC ID: PU5-TP00043ASF

REPORT NUMBER: 12U14463-1, Revision A

ISSUE DATE: NOVEMBER 12, 2012

Prepared for

WISTRON CORPORATION
21F, 88, SEC. 1, HSIN TAI WU RD., Hsichih Dist,
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
---	09/10/12	Initial Issue	T. Chan
A	11/12/12	Added Tested Transmitter and Antenna information on section 5.1	A. Zaffar

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	WISTRON CORPORATION 21F, 88, SEC. 1, HSIN TAI WU RD., Hsichih Dist, New Taipei City 221, TAIWAN R.O.C
EUT DESCRIPTION:	10.1" TABLET WITH LTE/CELLULAR AND WLAN RADIO WITH BLUETOOTH AND WLAN
MODEL:	TP00043A
SERIAL NUMBER:	R9-R4PMF
DATE TESTED:	SEPTEMBER 30 TO OCTOBE 09, 2012

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 22H AND 24E	Pass

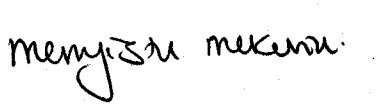
UL CCS tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL CCS based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and 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 UL CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL CCS will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL CCS By:

THU CHAN
ENGINEERING MANAGER
UL CCS

Tested By:



MENGISTU MEKURIA
EMC ENGINEER
UL CCS

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 and FCC CFR Part 24.

3. FACILITIES AND ACCREDITATION

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

UL 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 a 10.1" Tablet with LTE/WCDMA/HSDPA/HSUPA Radio with Bluetooth and WLAN functionality. The EUT is manufactured by Lenovo US.

LTE/WCDMA/HSDPA/HSUPA Radio is Sierra Model: EM7700.

Antenna tested:

Main Antenna	0C10069AA (Amphenol)
	0C10070AA (Foxconn)
Aux Antenna (Rx only)	0C10071AA (Amphenol)
	0C10072AA (Foxconn)

5.2. MAXIMUM OUTPUT POWER

The RF radiated measurement with maximum peak ERP / EIRP output powers are as follows:

Part 22 Cellular Band			
Frequency range (MHz)	Modulation	ERP	
		dBm	mW
826.4 – 846.6	UMTS, REL 99	25.69	370.7
	UMTS, HSUPA	25.22	332.7

Part 24 PCS Band			
Frequency range (MHz)	Modulation	EIRP	
		dBm	mW
1852.4-1907.6	UMTS, REL 99	28.14	651.6
	UMTS, HSUPA	27.00	501.2

5.3. SOFTWARE AND FIRMWARE

The EUT driver software installed during testing was Broadcom version 5.93.97.48.

The test utility software used during testing was Broadcom BT test mode tool, Win8DUTApp utility.

The EUT is linked with Agilent 8960 Communication, CMU200 and CMW500 Test Set.

5.4. WORST-CASE CONFIGURATION AND MODE

Based on the investigation results, the highest peak power and enhanced data rate is the worst-case scenario for all measurements.

Worst-case modes below:

- For Cellular and PCS band: UMTS, REL 99 and HSUPA

Since the EUT is a portable device. It has been investigated on X, Y and Z position, and the worst case among X, Y, and Z with Headset and an AC Adapter. After the investigations the worst-case was turned out to be Y-position and X position with headset and An AC Adapter for Cell and PCS bands respectively

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter (EUT)	LENOVO	ADP-10AWBCC:AA	11S45N0271Z1ZLD52VOXE	DoC
Headset	N/A	N/A	N/A	N/A

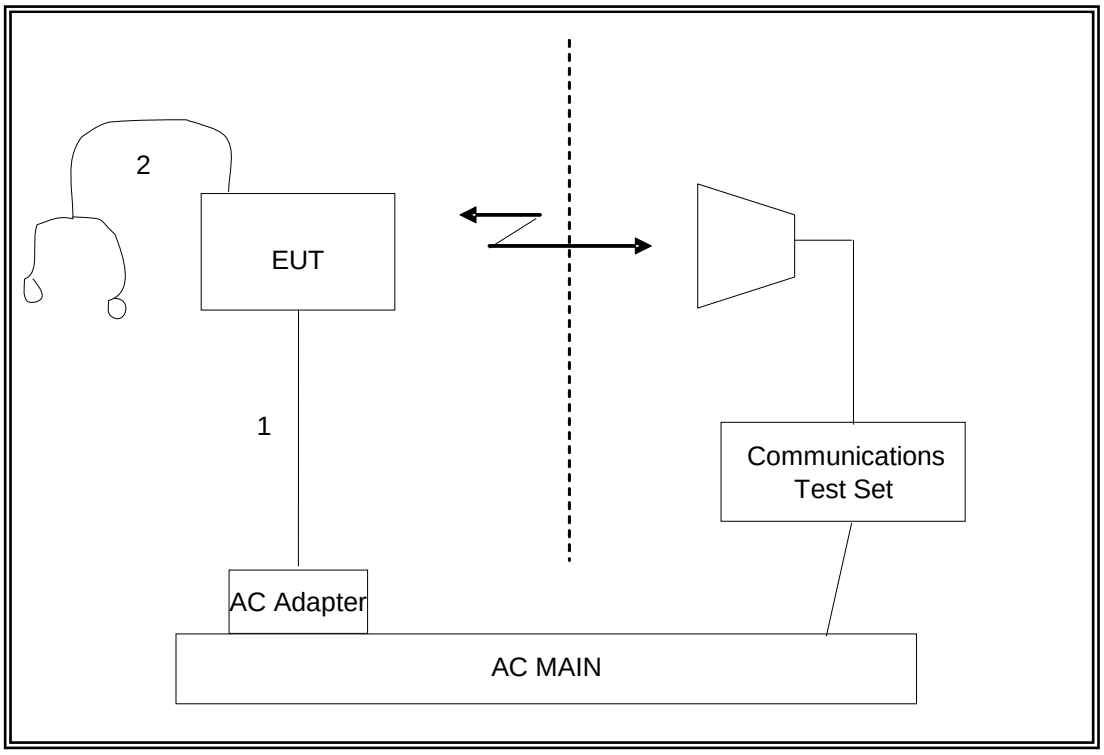
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	DC Input	1	Micro-USB	Shielded	1.0 m	NA
2	Audio	1	3.5 mm Audio Jack	Un-Shielded	1.2 m	Volume control on cable

TEST SETUP

The EUT is a stand-alone device. The Communication test set exercised the EUT.

SETUP DIAGRAM FOR RF RADIATED 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**
Spectrum Analyzer, 44 GHz	ETS	E4446A	C00986	03/22/13
Antenna, Horn, 18 GHz	EMCO	3115	C00783	10/25/13
Antenna, Horn, 18 GHz	ETS	3115	C00943	CNR
Antenna, Horn, 26.5 GHz	Agilent / HP	SWH-28	C01015	04/23/13
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01011	02/07/13
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00885	11/11/12
Communications Test Set	Agilent / HP	E5515C	1000732	02/24/13
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02689	CNR
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02687	CNR
Vector signal generator, 6 GHz	Agilent / HP	E4438C	None	07/06/13
Antenna, Tuned Dipole 400~1000 MHz	ETS	3121C DB4	C00993	07/16/13

7. RADIATED TEST RESULTS

7.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §22.913, §24.232.

LIMITS

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

24.232(c) - 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.

TEST PROCEDURE

ANSI / TIA / EIA 603C Clause 2.2.17

MODES TESTED

- UMTS, REL 99 and HSDPA

Mode	Channel	f (MHz)	ERP	
			dBm	mW
UMTS,REL 99	4357	826.40	25.03	318.42
	4405	836.00	24.09	256.45
	4455	846.00	**25.69**	370.68
UMTS, HSUPA	4357	826.40	24.69	294.44
	4405	836.00	23.77	238.23
	4455	846.00	**25.22**	332.66

Mode	Channel	f (MHz)	EIRP	
			dBm	mW
UMTS, REL 99	9662	1852.40	**28.14**	651.63
	9800	1880.00	27.71	590.20
	9938	1907.60	26.25	421.70
UMTS, HSUPA	9662	1852.40	**27.00**	501.19
	9800	1880.00	26.92	492.04
	9938	1907.60	26.02	399.94

UMTS REL 99 (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: LENOVO
Project #: 12U14463
Date: 10/03/12
Test Engineer: MENGISTU MEKURIA
Configuration: EUT WITH HEADSET AND AC ADAPTER
Mode: TX, 850 MHz BAND, WCDMA MODE

Test Equipment:
Receiving: Sunol T122, and 5m Chamber B N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 1629, 4ft SMA Cable (245182002) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
826.40	25.53	V	0.5	0.0	25.03	38.5	-13.4	
826.40	22.65	H	0.5	0.0	22.15	38.5	-16.3	
836.60	24.59	V	0.5	0.0	24.09	38.5	-14.4	
836.60	22.64	H	0.5	0.0	22.14	38.5	-16.3	
846.60	26.19	V	0.5	0.0	25.69	38.5	-12.8	
846.60	22.88	H	0.5	0.0	22.38	38.5	-16.1	

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UMTS HSUPA (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: LENOVO
Project #: 12U14463
Date: 10/04/12
Test Engineer: MENGISTU MEKURIA
Configuration: EUT WITH HEADSET AND AC ADAPTER
Mode: TX, 850 MHz BAND, HSUPA MODE

Test Equipment:
Receiving: Sunol T122, and 5m Chamber B N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 1629, 4ft SMA Cable (245182002) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
826.40	25.19	V	0.5	0.0	24.69	38.5	-13.8	
826.40	22.03	H	0.5	0.0	21.53	38.5	-16.9	
836.60	24.27	V	0.5	0.0	23.77	38.5	-14.7	
836.60	22.31	H	0.5	0.0	21.81	38.5	-16.6	
846.60	25.72	V	0.5	0.0	25.22	38.5	-13.2	
846.60	22.66	H	0.5	0.0	22.16	38.5	-16.3	

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UMTS REL 99 (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LENOVO
Project #: 12U14463
Date: 10/03/12
Test Engineer: MENGISTU MEKURIA
Configuration: EUT WITH HEADSET AND AC ADAPTER
Mode: TX, 1900 MHz BAND, WCDMA MODE

Test Equipment:
Receiving: Horn T59, and Camber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (245182002) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
1.852	14.6	V	0.85	8.62	22.41	33.0	-10.6	
1.852	20.5	H	0.85	8.47	28.14	33.0	-4.9	
1.880	12.7	V	0.85	8.46	20.34	33.0	-12.7	
1.880	20.2	H	0.85	8.36	27.71	33.0	-5.3	
1.908	10.5	V	0.85	8.30	17.96	33.0	-15.0	
1.908	18.9	H	0.85	8.25	26.25	33.0	-6.8	

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UMTS HSUPA (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LENOVO
Project #: 12U14463
Date: 10/03/12
Test Engineer: MENGISTU MEKURIA
Configuration: EUT WITH HEADSET AND AC ADAPTER
Mode: TX, 1900 MHz BAND, HSUPA MODE

Test Equipment:
Receiving: Horn T59, and Camber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (245182002) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
1.852	14.6	V	0.85	8.62	22.40	33.0	-10.6	
1.852	19.4	H	0.85	8.47	27.00	33.0	-6.0	
1.880	14.5	V	0.85	8.46	22.14	33.0	-10.9	
1.880	19.4	H	0.85	8.36	26.92	33.0	-6.1	
1.908	12.7	V	0.85	8.30	20.10	33.0	-12.9	
1.908	18.6	H	0.85	8.25	26.02	33.0	-7.0	

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7.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, & §24.238

LIMIT

§22.917 (e) and §24.238 (a): 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

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

MODES TESTED:

- UMTS, REL 99 and HSDPA

RESULTS

UMTS REL 99 (Cellular Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LENOVO
Project #: 12U14463
Date: 10/04/12
Test Engineer: MENGISTU MEKURIA
Configuration: EUT WITH AC ADAPTER AND HEADSET
Mode: TX, 850MHz BAND WCDMA MODE

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 22

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (826.4MHz)									
1.653	-17.5	V	3.0	35.5	1.0	-52.0	-13.0	-39.0	
2.479	-7.0	V	3.0	35.4	1.0	-41.4	-13.0	-28.4	
3.306	-11.0	V	3.0	35.5	1.0	-45.5	-13.0	-32.5	
4.132	-15.0	V	3.0	35.2	1.0	-49.3	-13.0	-36.3	
4.958	-18.8	V	3.0	35.3	1.0	-53.1	-13.0	-40.1	
1.653	-15.8	H	3.0	35.5	1.0	-50.3	-13.0	-37.3	
2.479	-7.3	H	3.0	35.4	1.0	-41.7	-13.0	-28.7	
3.306	-13.8	H	3.0	35.5	1.0	-48.3	-13.0	-35.3	
4.132	-12.3	H	3.0	35.2	1.0	-46.6	-13.0	-33.6	
4.958	-18.7	H	3.0	35.3	1.0	-53.0	-13.0	-40.0	
Mid Ch, (836.6MHz)									
1.673	-17.6	V	3.0	35.5	1.0	-52.2	-13.0	-39.2	
2.510	-6.8	V	3.0	35.4	1.0	-41.2	-13.0	-28.2	
3.346	-12.4	V	3.0	35.5	1.0	-47.0	-13.0	-34.0	
4.183	-14.7	V	3.0	35.2	1.0	-49.0	-13.0	-36.0	
5.020	-19.1	V	3.0	35.3	1.0	-53.4	-13.0	-40.4	
1.673	-13.9	H	3.0	35.5	1.0	-48.4	-13.0	-35.4	
2.510	-6.2	H	3.0	35.4	1.0	-40.6	-13.0	-27.6	
3.346	-15.7	H	3.0	35.5	1.0	-50.2	-13.0	-37.2	
4.183	-14.3	H	3.0	35.2	1.0	-48.5	-13.0	-35.5	
5.020	-18.2	H	3.0	35.3	1.0	-52.5	-13.0	-39.5	
High Ch, (846.6MHz)									
1.693	-15.4	V	3.0	35.5	1.0	-49.9	-13.0	-36.9	
2.540	-4.1	V	3.0	35.4	1.0	-38.5	-13.0	-25.5	
3.386	-14.0	V	3.0	35.5	1.0	-48.5	-13.0	-35.5	
4.233	-13.3	V	3.0	35.2	1.0	-47.6	-13.0	-34.6	
5.080	-18.5	V	3.0	35.3	1.0	-52.8	-13.0	-39.8	
1.693	-14.4	H	3.0	35.5	1.0	-48.9	-13.0	-35.9	
2.540	-8.8	H	3.0	35.4	1.0	-43.2	-13.0	-30.2	
3.386	-14.4	H	3.0	35.5	1.0	-48.9	-13.0	-35.9	
4.233	-12.4	H	3.0	35.2	1.0	-46.7	-13.0	-33.7	
5.080	-18.7	H	3.0	35.3	1.0	-53.0	-13.0	-40.0	

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

UMTS HSUPA (Cellular Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LENOVO
Project #: 12U14468
Date: 10/04/12
Test Engineer: MENGISTU MEKURIA
Configuration: EUT WITH AC ADAPTER AND HEADSET
Mode: TX, 850MHz BAND HSUPA MODE

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 22

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (826.4MHz)									
1.653	-14.3	V	3.0	35.5	1.0	-48.8	-13.0	-35.8	
2.479	-4.9	V	3.0	35.4	1.0	-39.3	-13.0	-26.3	
3.306	-12.3	V	3.0	35.5	1.0	-46.9	-13.0	-33.9	
4.132	-14.4	V	3.0	35.2	1.0	-48.7	-13.0	-35.7	
4.958	-19.0	V	3.0	35.3	1.0	-53.3	-13.0	-40.3	
1.653	-13.7	H	3.0	35.5	1.0	-48.3	-13.0	-35.3	
2.479	-2.0	H	3.0	35.4	1.0	-36.4	-13.0	-23.4	
3.306	-13.4	H	3.0	35.5	1.0	-48.0	-13.0	-35.0	
4.132	-11.9	H	3.0	35.2	1.0	-46.1	-13.0	-33.1	
4.958	-17.3	H	3.0	35.3	1.0	-51.6	-13.0	-38.6	
Mid Ch, (836.6MHz)									
1.673	-18.7	V	3.0	35.5	1.0	-53.2	-13.0	-40.2	
2.510	-5.8	V	3.0	35.4	1.0	-40.2	-13.0	-27.2	
3.346	-13.7	V	3.0	35.5	1.0	-48.2	-13.0	-35.2	
4.183	-16.8	V	3.0	35.2	1.0	-51.0	-13.0	-38.0	
5.020	-19.1	V	3.0	35.3	1.0	-53.4	-13.0	-40.4	
1.673	-15.3	H	3.0	35.5	1.0	-49.8	-13.0	-36.8	
2.510	-6.5	H	3.0	35.4	1.0	-40.9	-13.0	-27.9	
3.346	-17.2	H	3.0	35.5	1.0	-51.7	-13.0	-38.7	
4.183	-14.0	H	3.0	35.2	1.0	-48.3	-13.0	-35.3	
5.020	-18.3	H	3.0	35.3	1.0	-52.6	-13.0	-39.6	
High Ch, (846.6MHz)									
1.693	-16.8	V	3.0	35.5	1.0	-51.3	-13.0	-38.3	
2.540	-6.7	V	3.0	35.4	1.0	-41.1	-13.0	-28.1	
3.386	-14.3	V	3.0	35.5	1.0	-48.8	-13.0	-35.8	
4.233	-14.4	V	3.0	35.2	1.0	-48.7	-13.0	-35.7	
5.080	-17.3	V	3.0	35.3	1.0	-51.7	-13.0	-38.7	
1.693	-13.9	H	3.0	35.5	1.0	-48.4	-13.0	-35.4	
2.540	-7.1	H	3.0	35.4	1.0	-41.6	-13.0	-28.6	
3.386	-15.6	H	3.0	35.5	1.0	-50.1	-13.0	-37.1	
4.233	-13.0	H	3.0	35.2	1.0	-47.2	-13.0	-34.2	
5.080	-18.7	H	3.0	35.3	1.0	-53.0	-13.0	-40.0	

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

UMTS REL 99 (PCS Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LENOVO
Project #: 12U14468
Date: 10/04/12
Test Engineer: MENGISTU MEKURIA
Configuration: EUT WITH AC ADAPTER AND HEADSET
Mode: TX, 1900MHz BAND WCDMA MODE

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1852.40MHz)									
3.705	-8.4	V	3.0	35.4	1.0	-42.8	-13.0	-29.8	
5.557	-9.7	V	3.0	35.4	1.0	-44.2	-13.0	-31.2	
7.410	-16.0	V	3.0	35.7	1.0	-50.7	-13.0	-37.7	
9.262	-11.2	V	3.0	35.6	1.0	-45.8	-13.0	-32.8	
3.705	-3.9	H	3.0	35.4	1.0	-38.3	-13.0	-25.3	
5.557	-2.7	H	3.0	35.4	1.0	-37.1	-13.0	-24.1	
7.410	-14.6	H	3.0	35.7	1.0	-49.3	-13.0	-36.3	
9.262	-12.2	H	3.0	35.6	1.0	-46.8	-13.0	-33.8	
Mid Ch, (1880.00MHz)									
3.760	-8.5	V	3.0	35.3	1.0	-42.9	-13.0	-29.9	
5.640	-10.3	V	3.0	35.4	1.0	-44.7	-13.0	-31.7	
7.520	-15.0	V	3.0	35.7	1.0	-49.7	-13.0	-36.7	
9.400	-12.4	V	3.0	35.6	1.0	-47.0	-13.0	-34.0	
3.760	-4.6	H	3.0	35.3	1.0	-38.9	-13.0	-25.9	
5.640	-11.1	H	3.0	35.4	1.0	-45.6	-13.0	-32.6	
7.520	-13.8	H	3.0	35.7	1.0	-48.5	-13.0	-35.5	
9.400	-12.1	H	3.0	35.6	1.0	-46.7	-13.0	-33.7	
High Ch, (1907.60MHz)									
3.815	-9.8	V	3.0	35.3	1.0	-44.1	-13.0	-31.1	
5.723	-12.2	V	3.0	35.4	1.0	-46.7	-13.0	-33.7	
7.630	-9.0	V	3.0	35.7	1.0	-43.7	-13.0	-30.7	
9.538	-10.9	V	3.0	35.6	1.0	-45.5	-13.0	-32.5	
3.815	-3.6	H	3.0	35.3	1.0	-37.9	-13.0	-24.9	
5.723	-14.5	H	3.0	35.4	1.0	-49.0	-13.0	-36.0	
7.630	-11.7	H	3.0	35.7	1.0	-46.3	-13.0	-33.3	
9.538	-11.9	H	3.0	35.6	1.0	-46.4	-13.0	-33.4	

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

UMTS HSUPA (PCS Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company:	LENOVO
Project #:	12U14468
Date:	10/04/12
Test Engineer:	MENGISTU MEKURIA
Configuration:	EUT WITH AC ADAPTER AND HEADSET
Mode:	TX, 1900MHz BAND HSUPA MODE

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1852.40MHz)									
3.705	-9.4	V	3.0	35.4	1.0	-43.8	-13.0	-30.8	
5.557	-14.1	V	3.0	35.4	1.0	-48.5	-13.0	-35.5	
7.410	-15.3	V	3.0	35.7	1.0	-50.0	-13.0	-37.0	
9.262	-11.7	V	3.0	35.6	1.0	-46.2	-13.0	-33.2	
3.705	-4.0	H	3.0	35.4	1.0	-38.3	-13.0	-25.3	
5.557	-14.9	H	3.0	35.4	1.0	-49.3	-13.0	-36.3	
7.410	-12.7	H	3.0	35.7	1.0	-47.4	-13.0	-34.4	
9.262	-11.2	H	3.0	35.6	1.0	-45.8	-13.0	-32.8	
Mid Ch, (1880.00MHz)									
3.760	-10.2	V	3.0	35.3	1.0	-44.5	-13.0	-31.5	
5.640	-12.4	V	3.0	35.4	1.0	-46.8	-13.0	-33.8	
7.520	-15.2	V	3.0	35.7	1.0	-49.9	-13.0	-36.9	
9.400	-12.6	V	3.0	35.6	1.0	-47.2	-13.0	-34.2	
3.760	-4.4	H	3.0	35.3	1.0	-38.7	-13.0	-25.7	
5.640	-11.7	H	3.0	35.4	1.0	-46.1	-13.0	-33.1	
7.520	-13.8	H	3.0	35.7	1.0	-48.5	-13.0	-35.5	
9.400	-10.8	H	3.0	35.6	1.0	-45.4	-13.0	-32.4	
High Ch, (1907.60MHz)									
3.815	-10.4	V	3.0	35.3	1.0	-44.7	-13.0	-31.7	
5.723	-13.4	V	3.0	35.4	1.0	-47.9	-13.0	-34.9	
7.630	-9.7	V	3.0	35.7	1.0	-44.4	-13.0	-31.4	
9.538	-10.9	V	3.0	35.6	1.0	-45.5	-13.0	-32.5	
3.815	-4.0	H	3.0	35.3	1.0	-38.3	-13.0	-25.3	
5.723	-8.9	H	3.0	35.4	1.0	-43.3	-13.0	-30.3	
7.630	-11.0	H	3.0	35.7	1.0	-45.7	-13.0	-32.7	
9.538	-12.7	H	3.0	35.6	1.0	-47.2	-13.0	-34.2	

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