
FCC Test Report

Report No.: AGC07Z110901F1

FCC ID : GSS-VS14406
PRODUCT DESIGNATION : Tablet PC
BRAND NAME : ViewSonic
MODEL NAME : VS14406
CLIENT : ViewSonic Corporation
DATE OF ISSUE : Oct.27, 2011
STANDARD(S) : FCC Part 15 Rules

Attestation of **Global Compliance Co., Ltd.**

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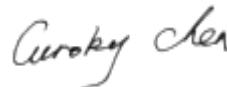
1. VERIFICATION OF COMPLIANCE

Applicant:	ViewSonic Corporation
	381 Brea Canyon Road, Walnut, CA 91789, USA
Manufacturer:	ViewSonic Corporation
	381 Brea Canyon Road, Walnut, CA 91789, USA
Product Designation:	Tablet PC
Brand name:	ViewSonic
Model Name:	VS14406
FCC ID:	GSS-VS14406
Measurement Procedure:	ANSI C63.4: 2003
File Number:	AGC07Z110901F1
Date of test:	Oct.24 to Oct.26, 2011
Deviation:	None
Condition of Test Sample:	Normal

The above equipment was tested by Attestation Of Global Compliance Co., Ltd. for compliance with the requirements set forth in the FCC Rules and Regulations Part 15, the measurement procedure according to ANSI C63.4:2003. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

The test results of this report relate only to the tested sample identified in this report.

Tested By :



Curoky Chen Oct.27, 2011

Reviewed By :



Forrest Lei Oct.27, 2011

Approved By:



Solger Zhang Oct.27, 2011

2. PRODUCT INFORMATION

Housing Type: Plastic and glass
EUT Rating Voltage: DC 10.8V by battery
Adapter Input AC100~240V,50/60Hz
Adapter output DC 19V, 2.1A

I/O Port Information (Applicable Not Applicable)

I/O Port of EUT			
I/O Port Type	Q'TY	Cable	Tested with
DC in	1	1.2m, unshielded	1
USB PORT	3	N/A	3
EARPHONE PORT	1	N/A	1
SD PORT	1	N/A	1

3. TEST FACILITY

Facility	Attestation of Global Compliance Co., Ltd.
Location:	1F, No.2 Building, Huafeng No.1 Technical, Industrial Park, Sanwei, Xixiang, Baoan District, Shenzhen, China
Description:	The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2003.
Site Filing:	The FCC Registration Number is 259865
Instrument Tolerance:	All measuring equipment is in accord with ANSI C63.4 requirements that meet industry regulatory agency and accreditation agency requirement.

4. SUPPORT EQUIPMENT LIST

Device Type	Manufacturer	Model Name	Serial No.	Data Cable	Power Cable
Monitor	TCL	L24P31	N/A	--	1.2m unshielded
PC	Lenovo	SL410K	LR-LGVPM	N/A	1.5m unshielded
Earphone	Sony	MDR-E9LP	--	--	--
SD CARD	Kingston	--	--	--	--
USB flash Disk	Kingston	Mini fun(4G)	--	--	--

**Note: All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

5. SYSTEM DESCRIPTION

EUT test procedure:

1. Connect EUT and peripheral devices (if need).
2. Power on the EUT, the EUT begins to work.
3. Make sure the EUT operates normally during the test.

Test Mode

- 1 Running data.(the screen keeps writing "H").
- 2 transfer information with SD CARD.
- 3 audio/video recording
- 4 audio/video playback
- 5 transfer information with U flash disk.

6 SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§15.107	Conduction Emission	Compliant
§15.109	Radiated Emission	Compliant

7. FCC LINE CONDUCTED EMISSION TEST

7.1. TEST EQUIPMENT OF LINE CONDUCTED EMISSION TEST

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	N/A	06/27/2011	06/26/2012
LISN	R&S	ESH3-Z5	N/A	06/27/2011	06/26/2012
AMN	R&S	ESH2-Z5	862060/020	06/27/2011	06/26/2012

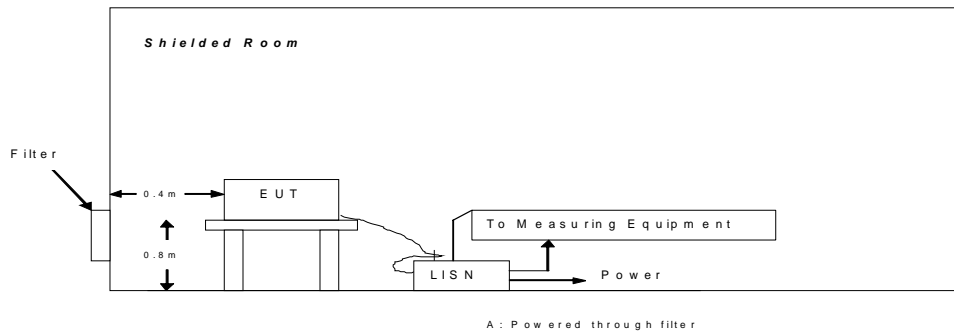
7.2 .LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P.(dBuV)	Average(dBuV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

**Note: 1. The lower limit shall apply at the transition frequency.

2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz

7.3. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST

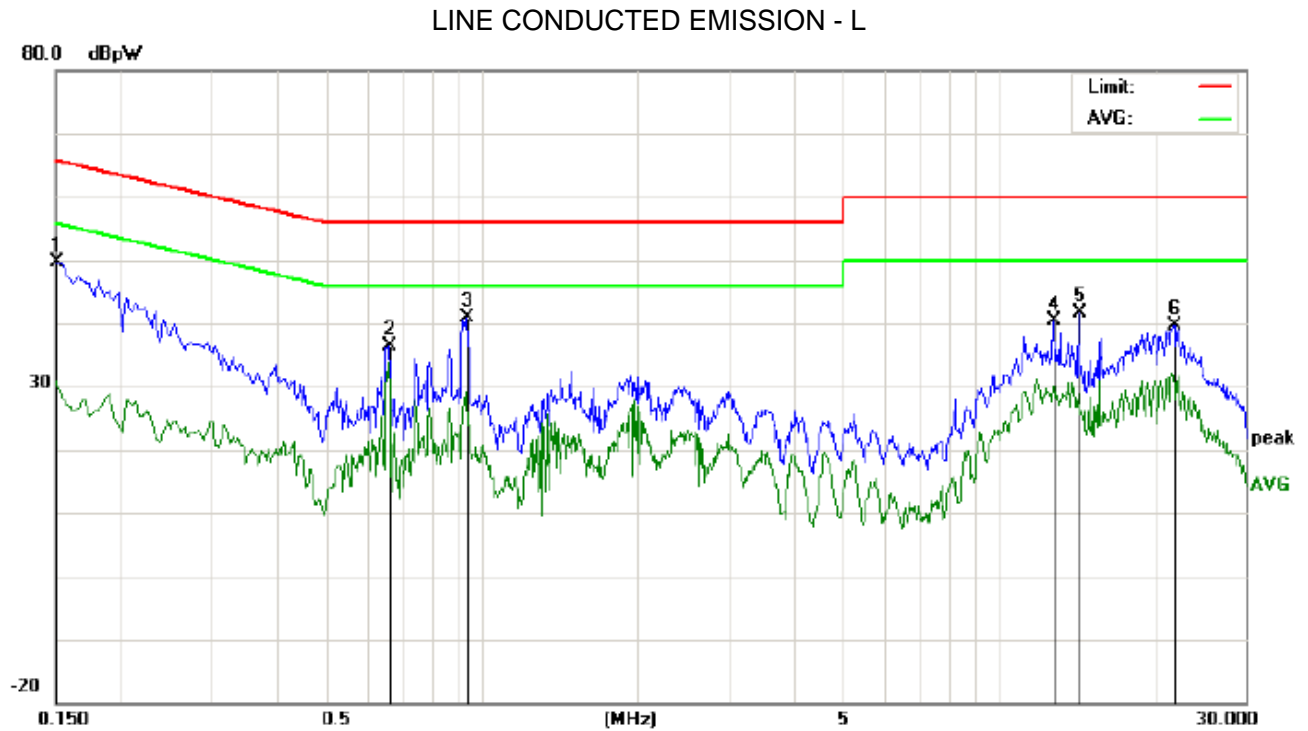


7.4. PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2) Support equipment, if needed, was placed as per ANSI C63.4.
- 3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- 4) The EUT received 120V/60Hz power from socket under the turntable through a LISN.
- 5) The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 6) Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 7) During the above scans, the emissions were maximized by cable manipulation.
- 8) A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions.
- 9) Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less -2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.

The test data of the worst case condition (mode 1) was reported on the Summary Data page.

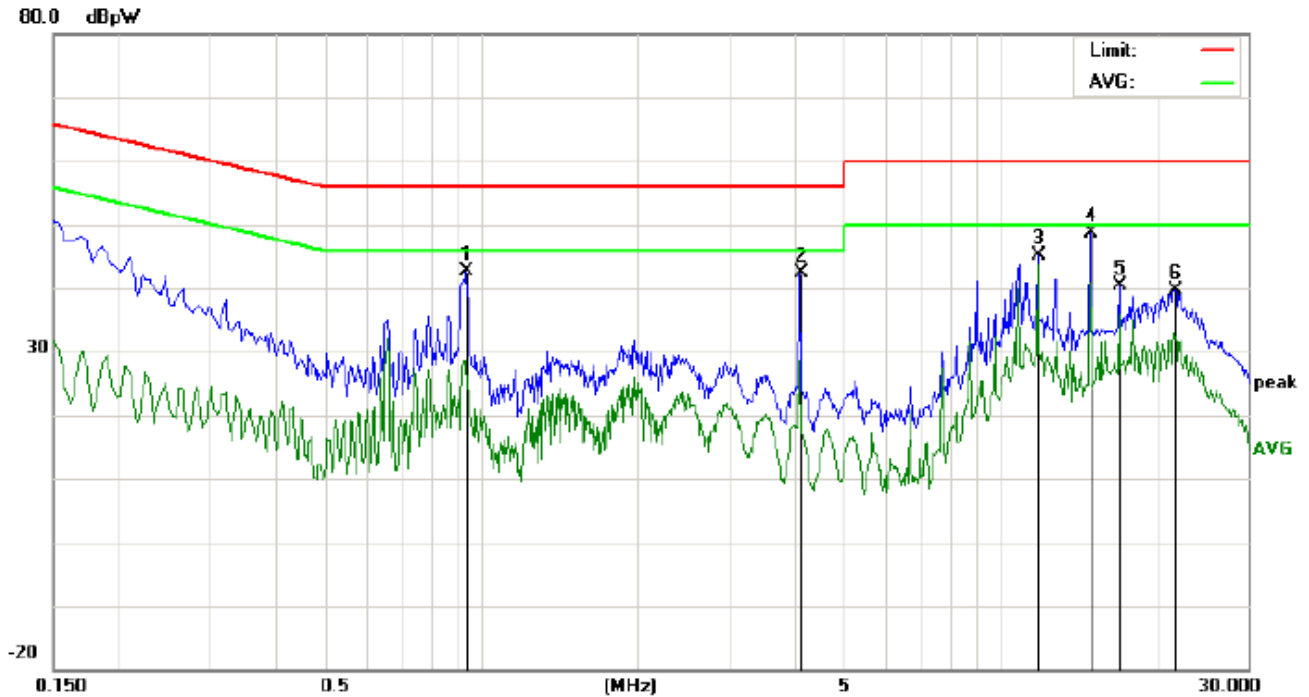
7.5 TEST RESULT OF LINE CONDUCTED EMISSION TEST



Site: Conduction L1 Temperature: 26
 Limit: FCC Class B Conduction(QP) Power: Humidity: 60 %
 EUT: Tablet PC
 M/N: VS 14406
 Mode: Mode 1
 Note:

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor (dB)	Measurement (dBpW)			Limit (dBpW)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1500	39.40		20.61	10.16	49.56		30.77	65.99	55.99	-16.43	-25.22	P	
2	0.6580	26.04		23.64	10.33	36.37		33.97	56.00	46.00	-19.63	-12.03	P	
3	0.9340	30.50		17.97	10.40	40.90		28.37	56.00	46.00	-15.10	-17.63	P	
4	12.7340	30.16		20.06	10.14	40.30		30.20	60.00	50.00	-19.70	-19.80	P	
5	14.2340	31.51		18.82	10.12	41.63		28.94	60.00	50.00	-18.37	-21.06	P	
6	21.7260	29.59		21.70	10.12	39.71		31.82	60.00	50.00	-20.29	-18.18	P	

LINE CONDUCTED EMISSION – N



Site: Conduction N Temperature: 26
Limit: FCC Class B Conduction(QP) Power: Humidity: 60 %
EUT: Tablet PC
M/N: VS 14406
Mode: Mode 1
Note:

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor (dB)	Measurement (dBpW)			Limit (dBpW)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.9340	32.28		17.92	10.40	42.68	28.32	56.00	46.00	-13.32	-17.68	P		
2	4.1139	31.90		16.00	10.38	42.28	26.38	56.00	46.00	-13.72	-19.62	P		
3	11.8459	35.06		33.56	10.13	45.19	43.69	60.00	50.00	-14.81	-6.31	P		
4	14.8978	38.55		30.75	10.12	48.67	40.87	60.00	50.00	-11.33	-9.13	P		
5	16.9979	30.17		25.86	10.13	40.30	35.99	60.00	50.00	-19.70	-14.01	P		
6	21.6939	29.44		22.72	10.12	39.56	32.84	60.00	50.00	-20.44	-17.16	P		

8. FCC RADIATED EMISSION TEST

8.1. TEST EQUIPMENT OF RADIATED EMISSION

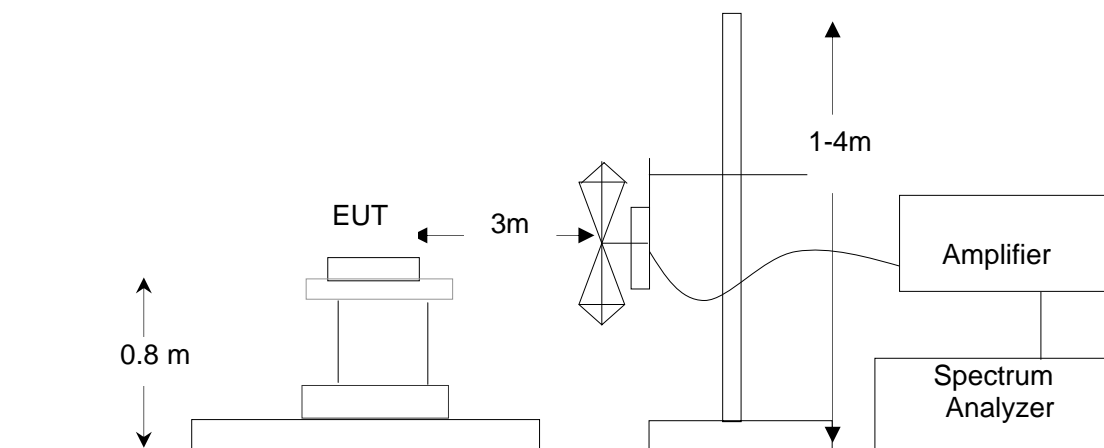
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
PSA SERIES SPECTRUM ANALYZER	AGILENT	E4440A	US41421290	06/27/2011	06/26/2012
ANTENNA	A.H.	SAS-521-4	128	06/27/2011	06/26/2012
HORN ANTENNA	EM	EM-AH-10180	N/A	06/27/2011	06/26/2012
AMPLIFIER	EM	EM30180	0607030	06/27/2011	06/26/2012
POSITIONING CONTROLLER	MF	MF-7802	MF780208147	06/27/2011	06/26/2012

8.2. LIMITS OF RADIATED EMISSION TEST

Frequency (MHz)	Distance (m)	Maximum Field Strength Limit (dBuV/m/ Q.P.)
30~88	3	40.0
88~216	3	43.5
216~960	3	46.0
Above 960	3	54.0

**Note: The lower limit shall apply at the transition frequency.

8.3 BLOCK DIAGRAM OF RADIATED EMISSION TEST



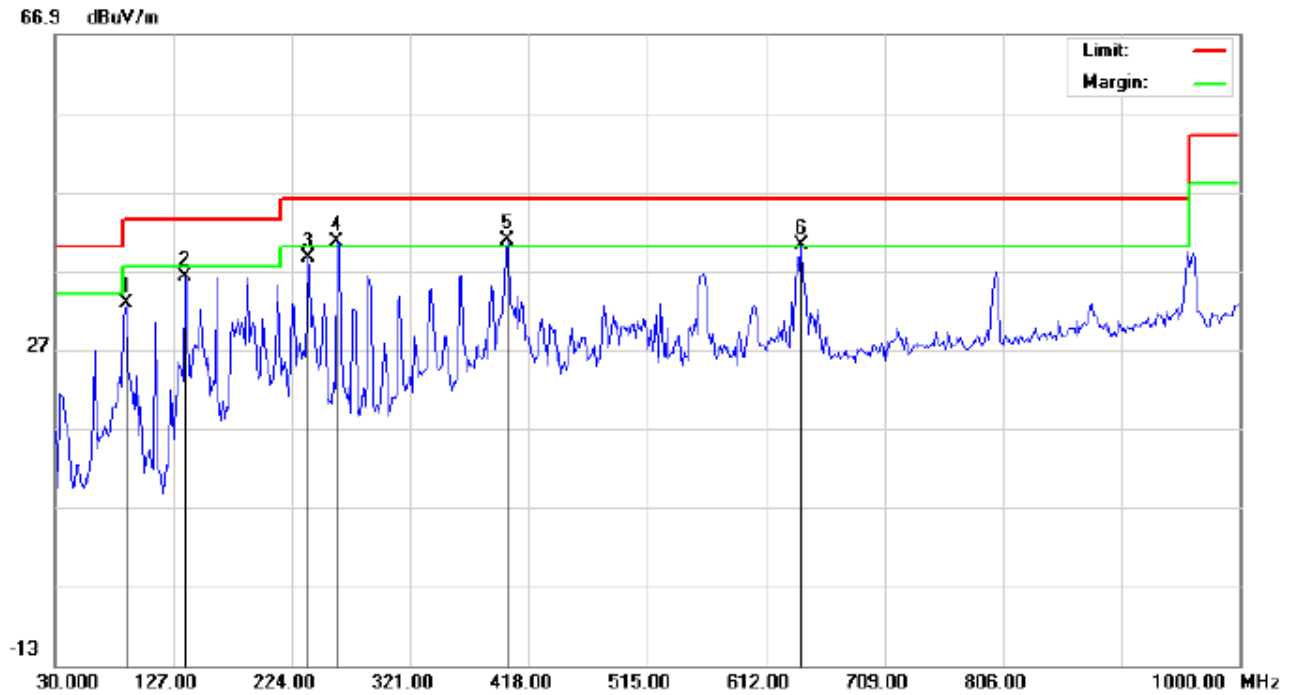
8.4 PROCEDURE OF RADIATED EMISSION TEST

- 1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2) Support equipment, if needed, was placed as per ANSI C63.4.
- 3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- 4) The EUT received 120V/60Hz power from socket under the turntable through a LISN.
- 5) The antenna was placed at 3 meter away from the EUT as stated in FCC Part 15. The antenna connected to the Analyzer via a cable and at times a pre-amplifier would be used.
- 6) The Analyzer / Receiver quickly scanned from 30MHz to 1000MHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- 7) The test mode(s) were scanned during the test:
- 8) Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and Q.P./Peak reading is presented.

The test data of the worst case condition (mode 1) was reported on the Summary Data page.

**8.5 TEST RESULT OF RADIATED EMISSION TEST
BELOW 1G**

Radiated Emission Test –Horizontal -3m



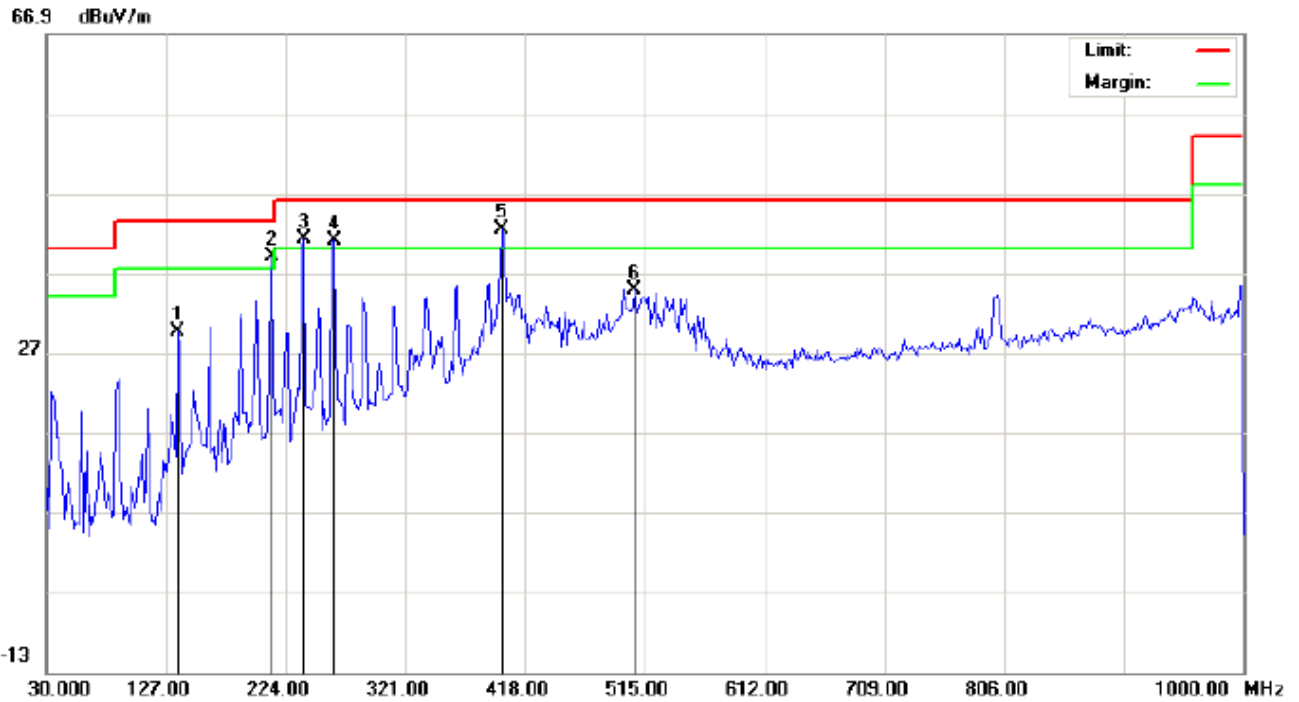
Site: site #1
Limit: FCC Class B 3M Radiation
EUT: Tablet PC
M/N: VS 14406
Mode: Mode 1
Note:

Polarization: *Horizontal*
Power:
Distance: 3m

Temperature: 26
Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		88.2000	25.90	6.91	32.81	43.50	-10.69	peak			
2		136.6999	22.24	13.89	36.13	43.50	-7.37	peak			
3		236.9333	23.11	15.51	38.62	46.00	-7.38	peak			
4	!	261.1831	23.32	17.23	40.55	46.00	-5.45	peak			
5	*	400.2167	19.98	20.84	40.82	46.00	-5.18	QP			
6	!	641.1000	15.35	24.80	40.15	46.00	-5.85	peak			

Radiated Emission Test –Vertical -3m



Site: site #1
Limit: FCC Class B 3M Radiation
EUT: Tablet PC
M/N: VS 14406
Mode: Mode 1
Note:

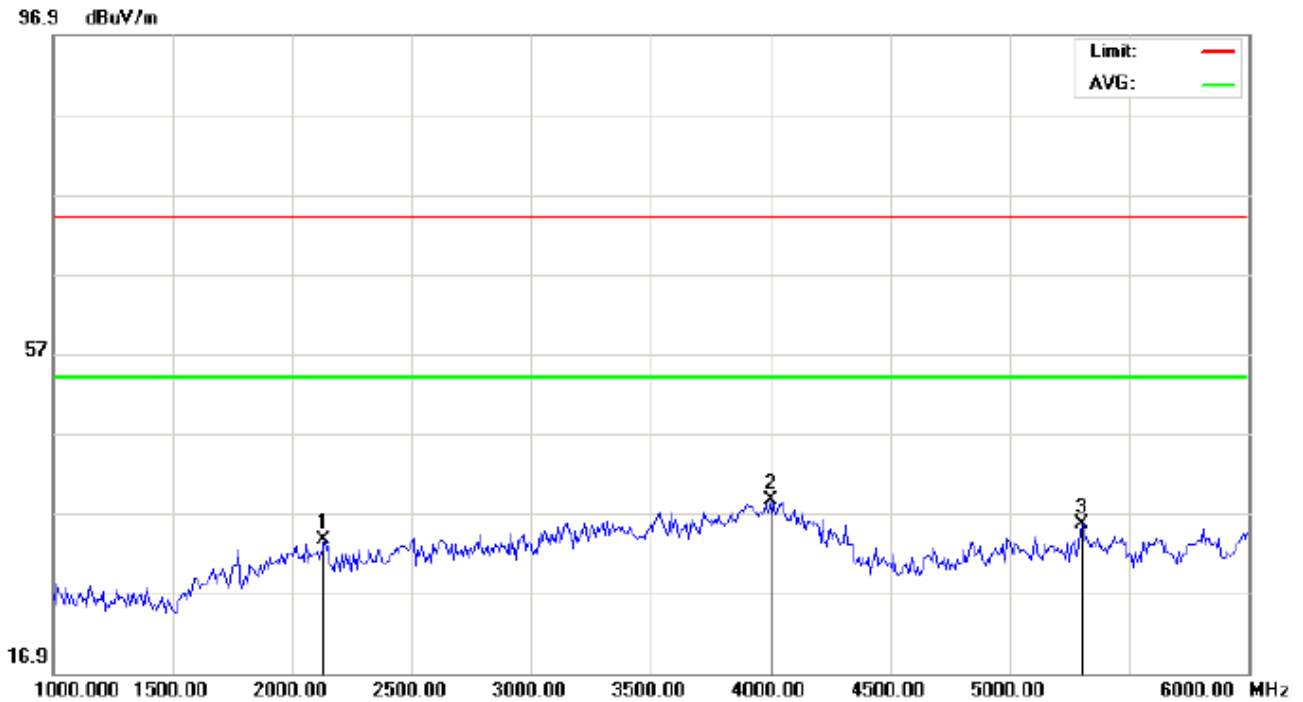
Polarization: **Vertical**
Power:
Distance: 3m

Temperature: 26
Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		136.7000	15.65	13.89	29.54	43.50	-13.96	peak			
2	!	212.6833	24.46	14.64	39.10	43.50	-4.40	QP			
3	!	238.5500	24.80	16.42	41.22	46.00	-4.78	peak			
4	!	262.8000	23.82	17.23	41.05	46.00	-4.95	peak			
5	*	398.6000	21.66	20.72	42.38	46.00	-3.62	QP			
6		506.9166	11.69	23.07	34.76	46.00	-11.24	peak			

ABOVE 1G

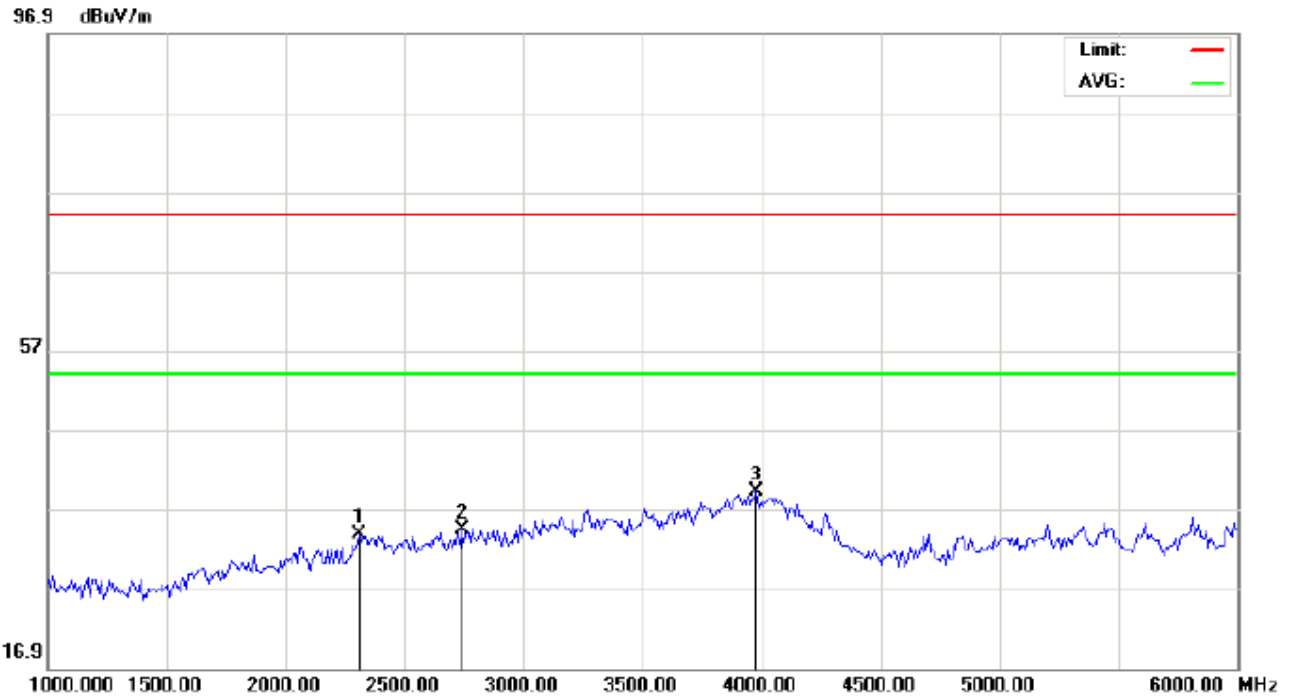
Radiated Emission Test –Horizontal



Site: site #1 Polarization: *Horizontal* Temperature: 26
 Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %
 EUT: Tablet PC Distance: 3m
 M/N: VS 14406
 Mode: Mode 1
 Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2133.333	33.49	0.03	33.52	74.00	-40.48	peak			
2	*	4000.000	33.47	5.19	38.66	74.00	-35.34	peak			
3		5300.000	37.47	-1.81	35.66	74.00	-38.34	peak			

Radiated Emission Test –Vertical



Site: site #1 Polarization: *Vertical* Temperature: 26
 Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: DC 5V Humidity: 60 %
 EUT: Tablet PC Distance: 3m
 M/N: VS 14406
 Mode: Mode 1
 Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2308.333	33.65	0.22	33.87	74.00	-40.13	peak			
2		2741.667	33.33	1.01	34.34	74.00	-39.66	peak			
3	*	3975.000	34.23	5.04	39.27	74.00	-34.73	peak			

Note: All Other modes above 1GHz have more than 20db margin, no recording in the report
 Measurement = Reading + Factor, Over = Measurement – Limit.

APPENDIX 1 PHOTOGRAPHS OF TEST SETUP

FCC LINE CONDUCTED EMISSION TEST SETUP



FCC RADIATED EMISSION TEST SETUP



APPENDIX 2 PHOTOGRAPHS OF EUT

TOTAL VIEW OF EUT



TOP VIEW OF EUT



BOTTOM VIEW OF EUT



FRONT VIEW OF EUT



BACK VIEW OF EUT



LEFT VIEW OF EUT



RIGHT VIEW OF EUT



OPEN VIEW OF EUT-1

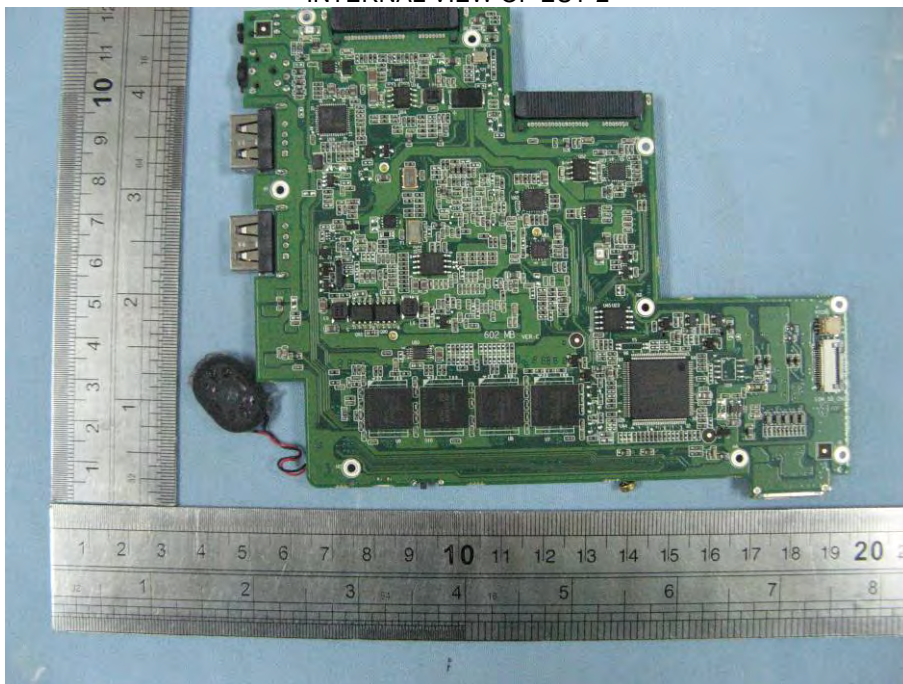


INTERNAL VIEW OF EUT-1

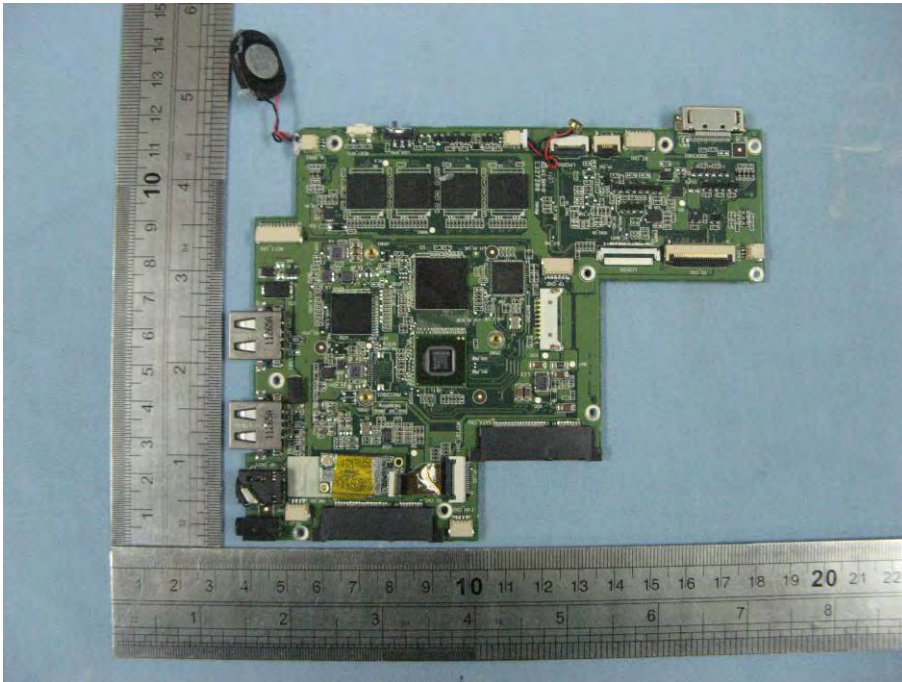


Wi-Fi
&
Bluetooth
Antenna

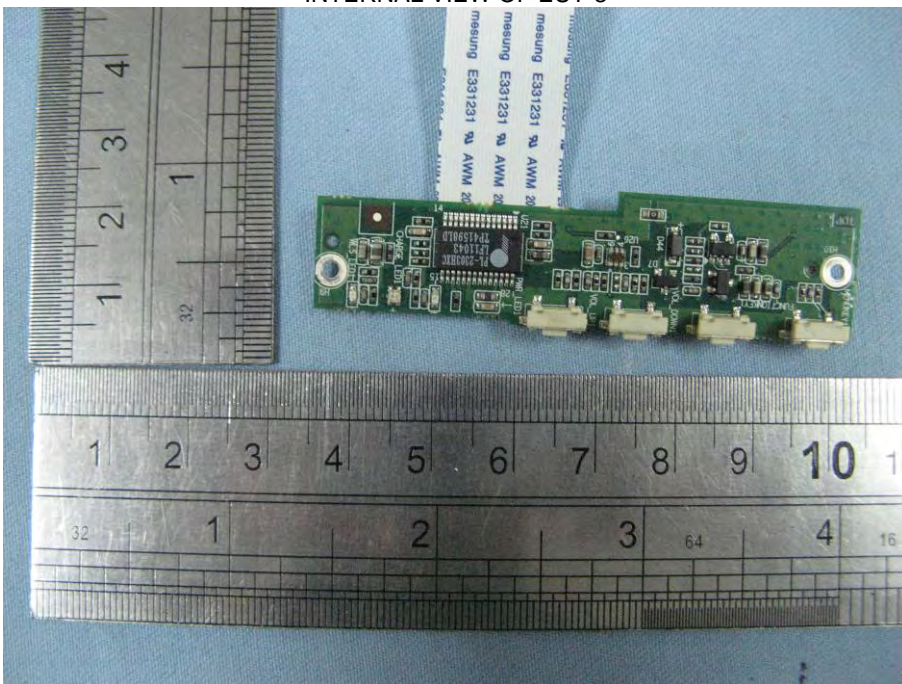
INTERNAL VIEW OF EUT-2



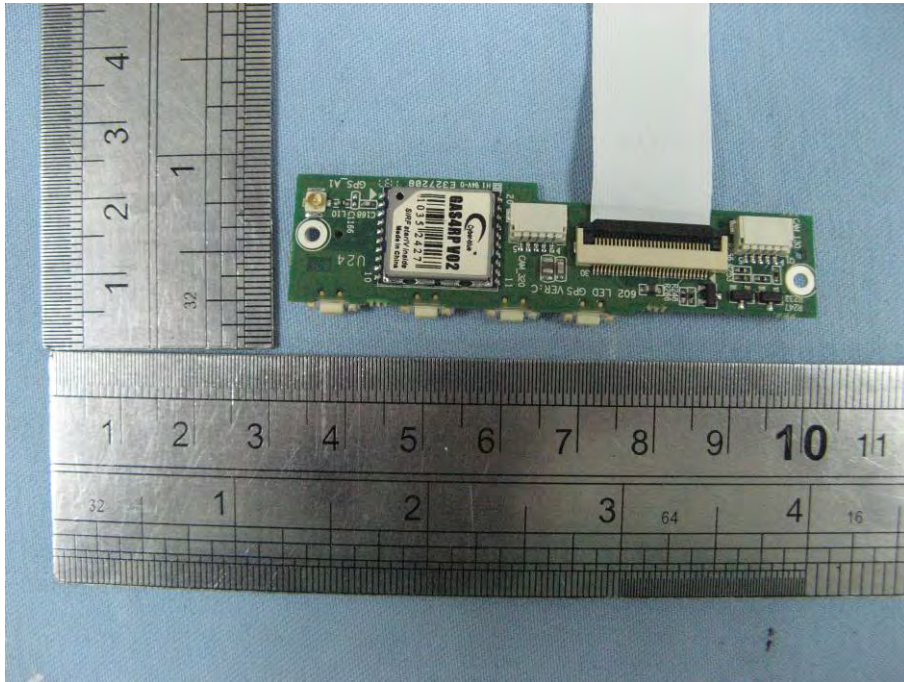
INTERNAL VIEW OF EUT-2



INTERNAL VIEW OF EUT-3



INTERNAL VIEW OF EUT-4



----END OF REPORT----