
FCC Test Report

Report No.: AGC07Z120101F1

FCC ID : GSS-VS14445G
PRODUCT DESIGNATION : Tablet PC
BRAND NAME : ViewSonic
MODEL NAME : VS14445
CLIENT : ViewSonic Corporation
DATE OF ISSUE : Mar. 10, 2012
STANDARD(S) : FCC Part 15 Rules

Attestation of Global Compliance Co., Ltd.

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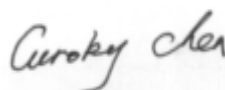
1. VERIFICATION OF COMPLIANCE

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:	VS14445
FCC ID:	GSS-VS14445G
Measurement Procedure:	ANSI C63.4: 2003
File Number:	AGC07Z120101F1
Date of test:	Mar. 04 to Mar. 09, 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.

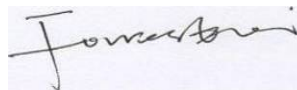
Tested By :



Curoky Chen

Mar. 10, 2012

Reviewed By :



Forrest Lei

Mar. 10, 2012

Approved By:



Solger Zhang

Mar. 10, 2012

2. PRODUCT INFORMATION

Housing Type: Plastic and metal

EUT Rating Voltage: DC 7.4V by battery(charged by adapter) or supplied by adapter

Adapter Input AC100~240V,50/60Hz

Adapter output DC 12V, 2A

I/O Port Information (☒Applicable ☐Not Applicable)

I/O Port of EUT			
I/O Port Type	Q'TY	Cable	Tested with
AC PORT	1	1.2m, unshielded	1
USB PORT	3	N/A	3
EARPHONE PORT	1	N/A	1
SD PORT	1	N/A	1
HDMI 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	DELL	Inspiron N5110	N/A	N/A	1.5m unshielded
Earphone	Sony	MDR-E9LP	--	--	--
SD CARD	Kingston	--	--	--	--

**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

- 11 USB + Adapter(transfer information with PC).
- 2 audio/video recording + Adapter
- 3 audio/video playback + Adapter
- 4 HDMI + Adapter

6 SUMMARY OF TEST RESULTS

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

Measurement uncertainty:

Conducted measurement: +/- 2.75dB

Radiated measurement: +/- 3.2dB

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

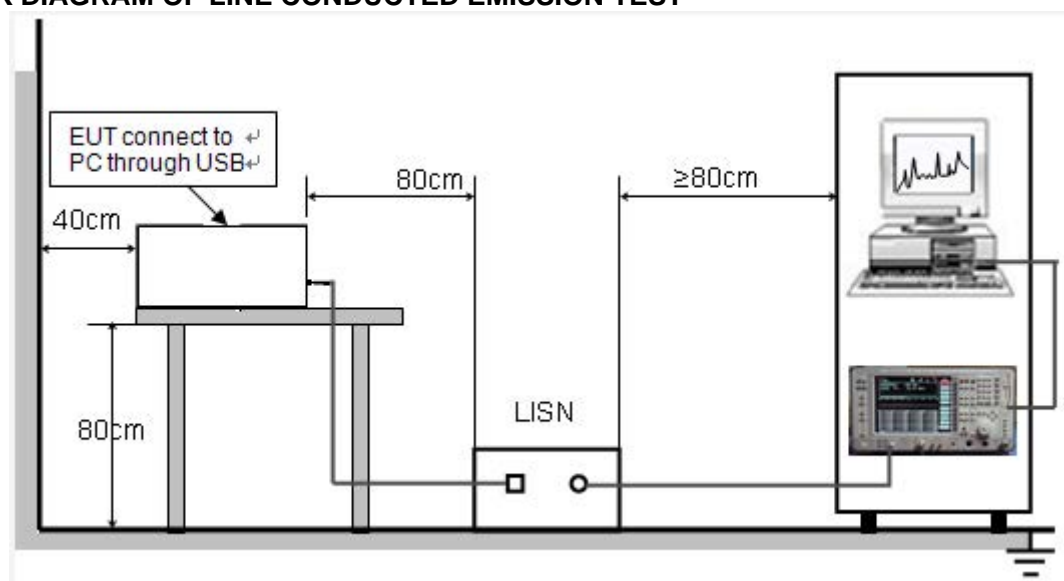
7.2 .LIMITS OF LINE CONDUCTED EMISSION TEST

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



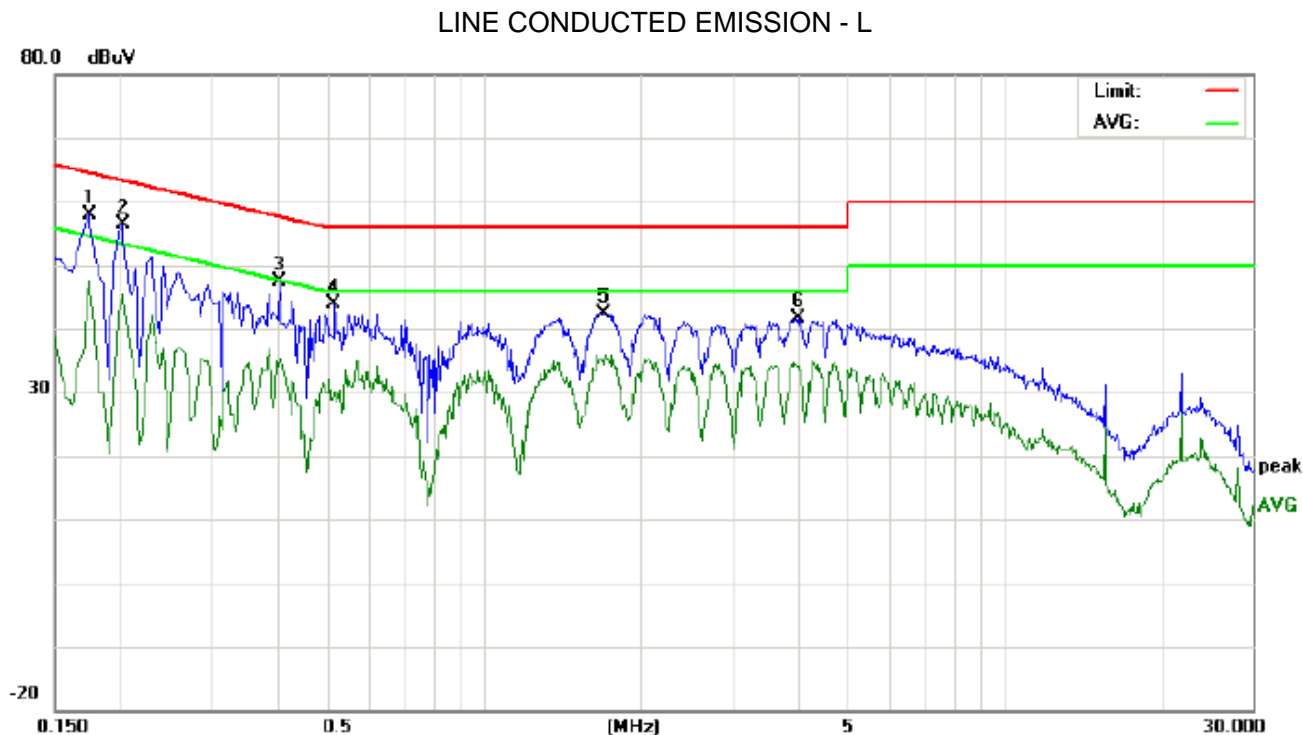
7.4. PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 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 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.

Note: only result the worst case(with APD adapter) in this part.

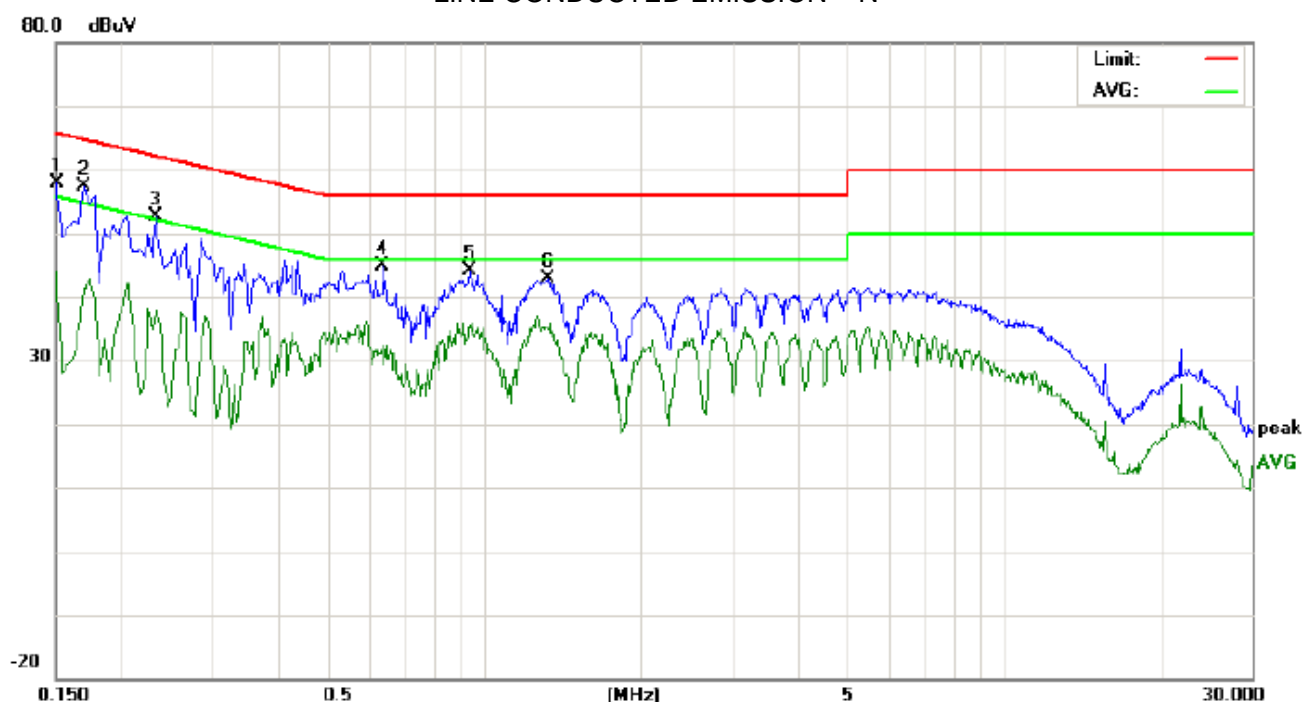
7.5 TEST RESULT OF LINE CONDUCTED EMISSION TEST



Site: Conduction	Phase: L1	Temperature: 26
Limit: FCC Class B Conduction(QP)	Power: AC 120V/60Hz	Humidity: 60 %
EUT: Tablet PC		
M/N: VS14445		
Mode: USB		
Note: APD		

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1740	47.65		37.55	10.19	57.84		47.74	64.76	54.76	-6.92	-7.02	P	
2	0.2020	46.06		35.07	10.22	56.28		45.29	63.52	53.52	-7.24	-8.23	P	
3	0.4060	36.96		25.17	10.33	47.29		35.50	57.73	47.73	-10.44	-12.23	P	
4	0.5180	33.40		19.83	10.38	43.78		30.21	56.00	46.00	-12.22	-15.79	P	
5	1.7020	32.12		24.13	10.32	42.44		34.45	56.00	46.00	-13.56	-11.55	P	
6	4.0180	31.11		23.59	10.42	41.53		34.01	56.00	46.00	-14.47	-11.99	P	

LINE CONDUCTED EMISSION – N



Site: Conduction

Phase: **N**

Temperature: 26

Limit: FCC Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Tablet PC

M/N: VS14445

Mode: USB

Note: APD

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1500	47.68		33.88	10.16	57.84		44.04	65.99	55.99	-8.15	-11.95	P	
2	0.1700	47.27		31.10	10.18	57.45		41.28	64.96	54.96	-7.51	-13.68	P	
3	0.2340	47.59		33.79	10.25	57.84		44.04	62.30	52.30	-4.46	-8.26	P	
4	0.6380	34.48		21.35	10.33	44.81		31.68	56.00	46.00	-11.19	-14.32	P	
5	0.9420	33.66		25.13	10.39	44.05		35.52	56.00	46.00	-11.95	-10.48	P	
6	1.3260	32.38		24.81	10.38	42.76		35.19	56.00	46.00	-13.24	-10.81	P	

8. FCC RADIATED EMISSION TEST

8.1. TEST EQUIPMENT OF RADIATED EMISSION

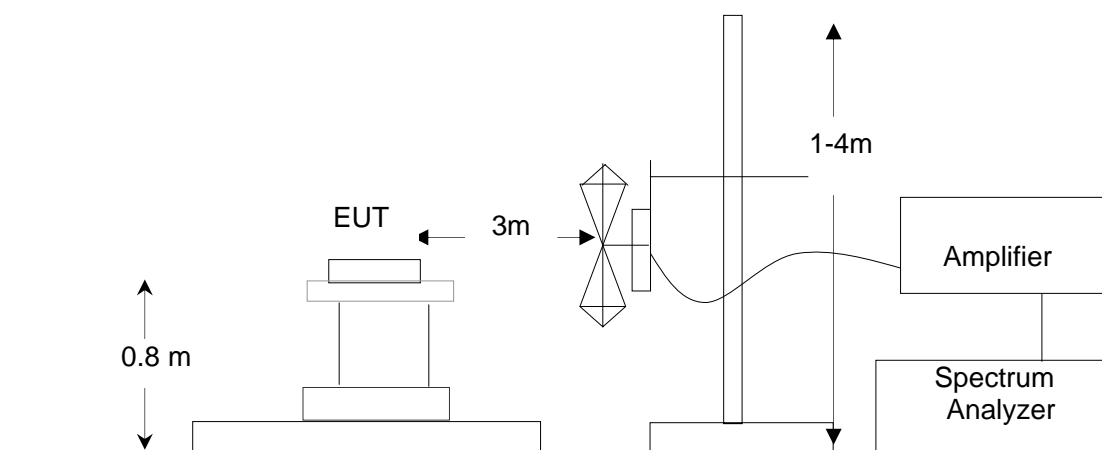
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
PSA SERIES SPECTRUM ANALYZER	AGILENT	E4440A	US41421290	06/27/2011	06/26/2012
ANTENNA	A.H.	SAS-521-4	128	06/27/2011	06/26/2012
HORN ANTENNA	EM	EM-AH-10180	N/A	06/27/2011	06/26/2012
AMPLIFIER	EM	EM30180	0607030	06/27/2011	06/26/2012
POSITIONING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

Note: only result the worst case(with APD adapter) in this part.

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: VS14445

Mode: USB

Note: with APD adapter

Polarization: *Horizontal*

Power: AC 120V/60Hz

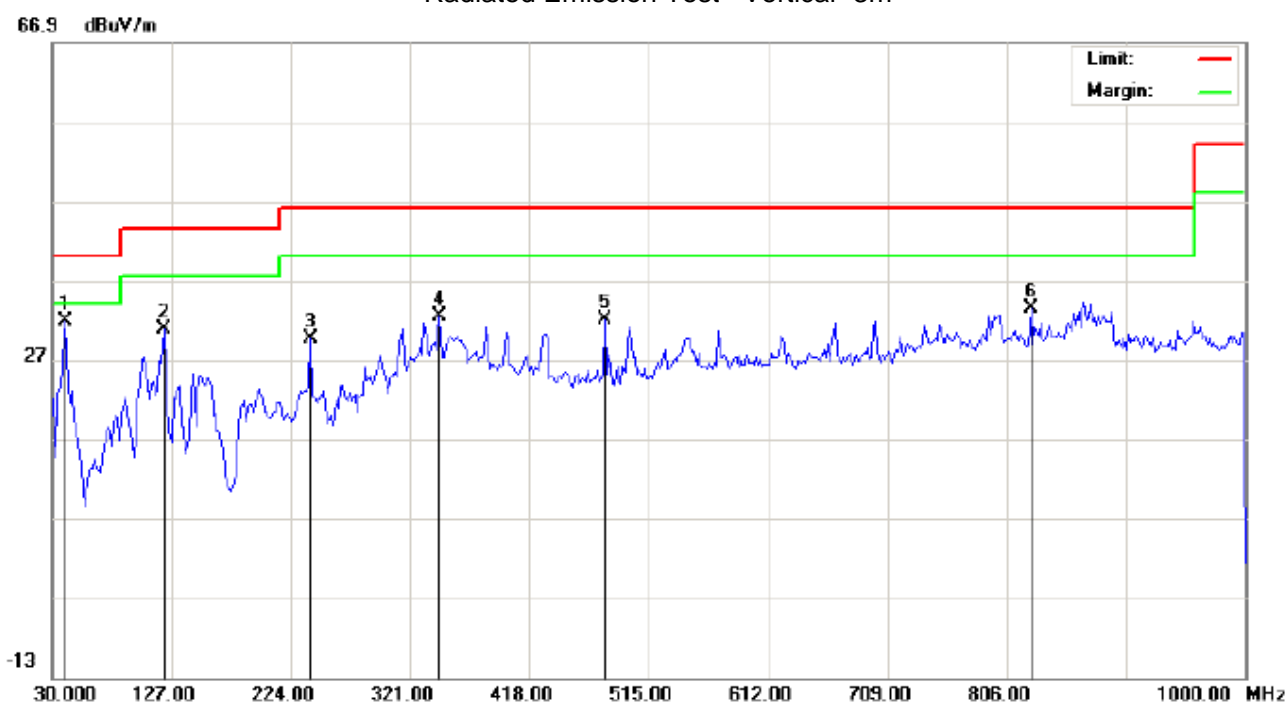
Distance: 3m

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		232.0833	17.71	12.44	30.15	46.00	-15.85	peak			
2		299.9833	14.85	17.00	31.85	46.00	-14.15	peak			
3		358.1833	16.84	19.10	35.94	46.00	-10.06	peak			
4		498.8333	12.23	22.88	35.11	46.00	-10.89	peak			
5		720.3167	11.01	24.15	35.16	46.00	-10.84	peak			
6	*	818.9333	10.20	28.07	38.27	46.00	-7.73	peak			

Radiated Emission Test –Vertical -3m



Site: site #1

Polarization: **Vertical**

Temperature: 26

Limit: FCC Class B 3M Radiation

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Tablet PC

Distance: 3m

M/N: VS14445

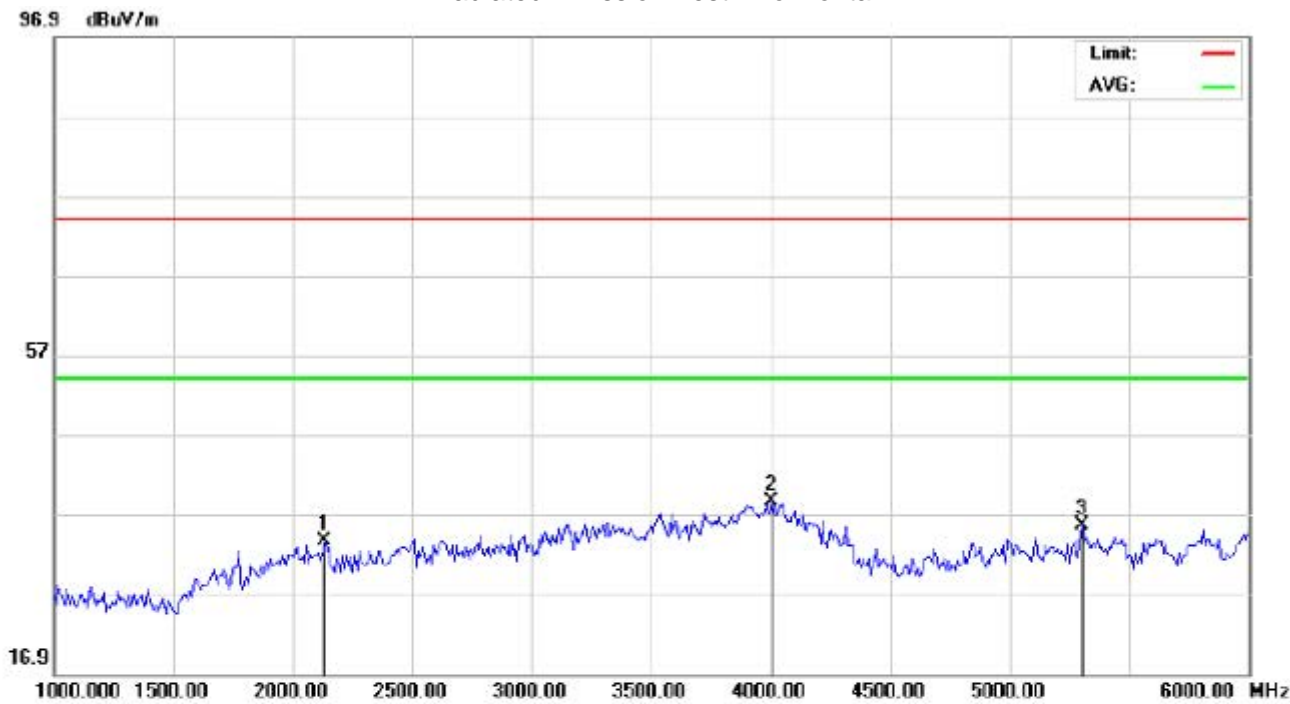
Mode: USB

Note: with APD adapter

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	*	41.3167	26.56	5.32	31.88	40.00	-8.12	peak			
2		120.5333	25.34	5.46	30.80	43.50	-12.70	peak			
3		240.1667	15.31	14.23	29.54	46.00	-16.46	peak			
4		345.2500	13.45	19.01	32.46	46.00	-13.54	peak			
5		479.4333	10.25	21.67	31.92	46.00	-14.08	peak			
6		825.4000	5.07	28.27	33.34	46.00	-12.66	peak			

ABOVE 1G

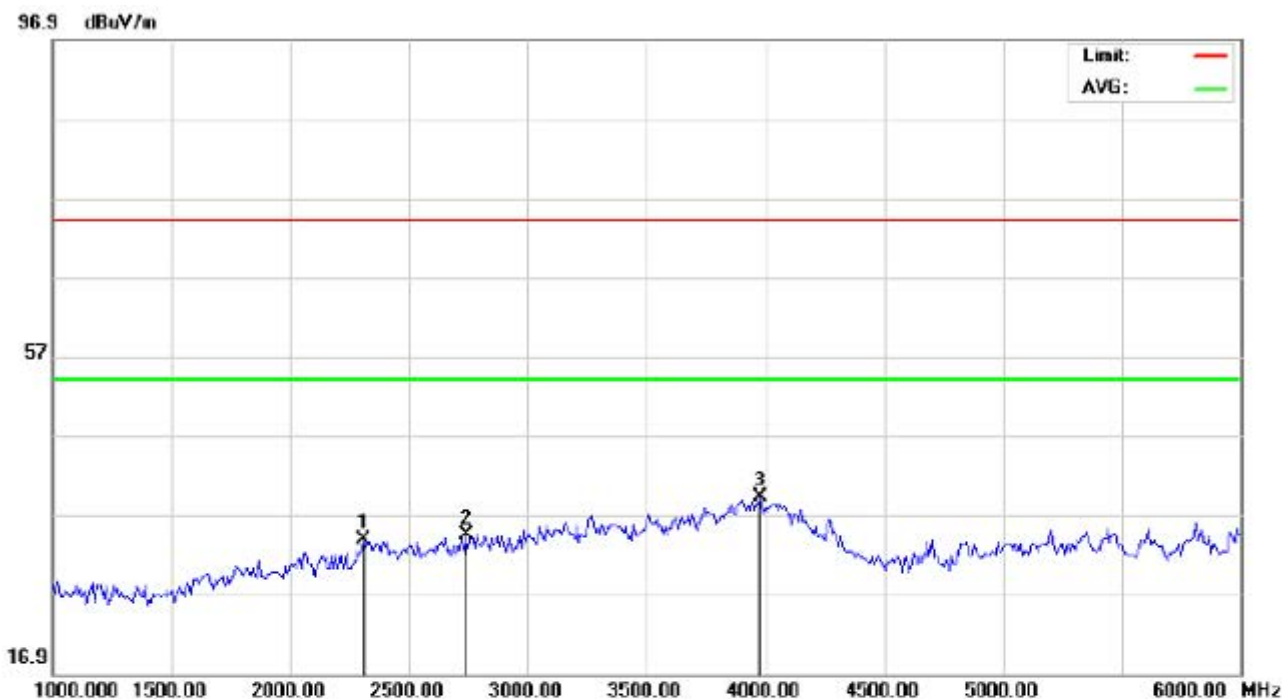
Radiated Emission Test –Horizontal



Site: site #1	Polarization: <i>Horizontal</i>	Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK)	Power:	Humidity: 60 %
EUT: Tablet PC	Distance: 3m	
M/N: VS14445		
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
Limit: FCC Class B 3M Radiation above 1GHZ(PK)
EUT: Tablet PC
M/N: VS14445
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		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			

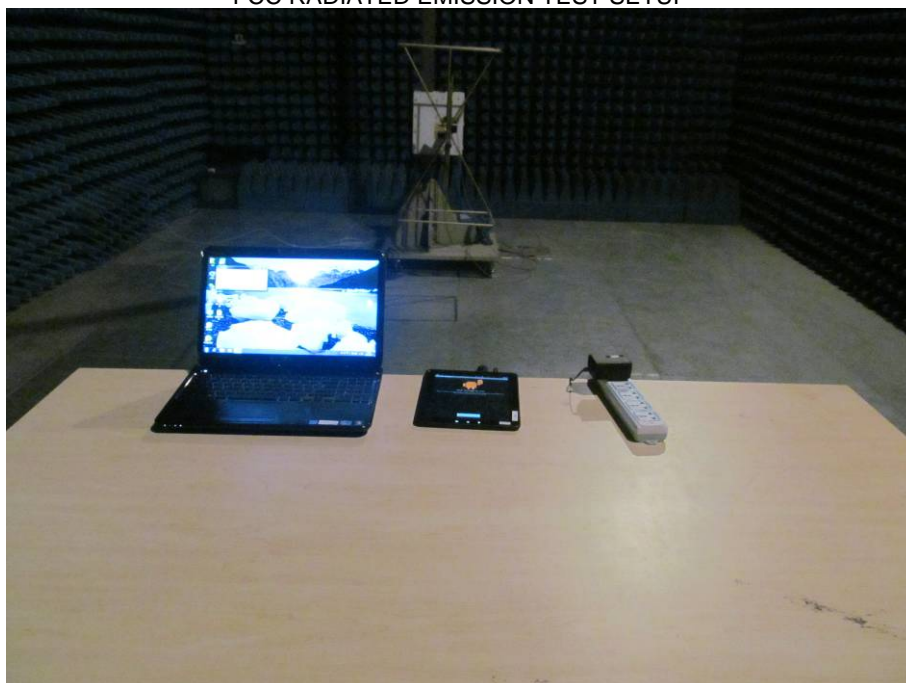
Note: All Other modes above 1GHz have more than 20db margin, no recording in the report
Measurement = Reading + Factor, Over = Measurement – Limit.

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



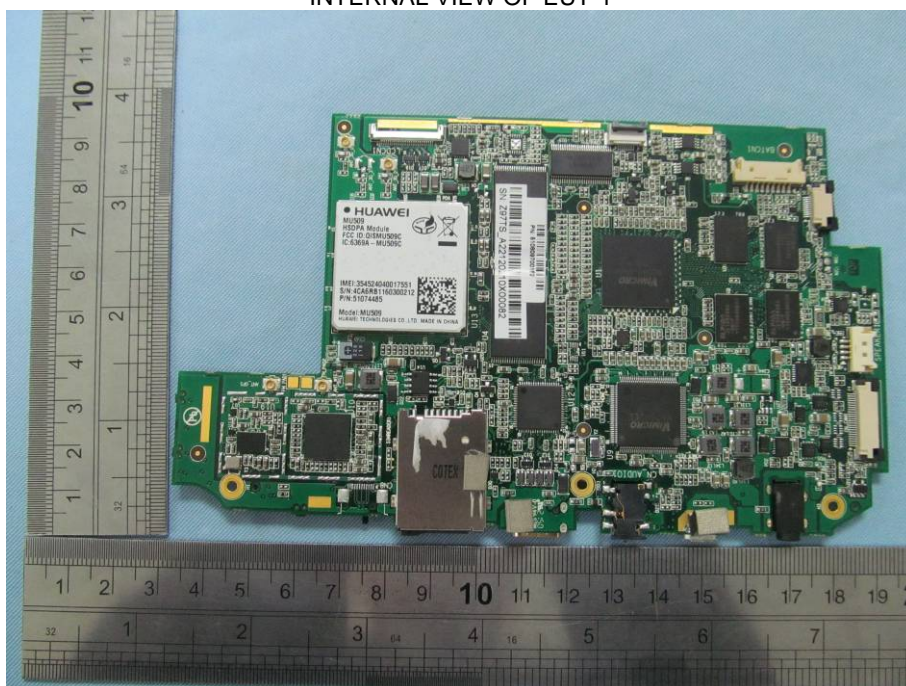
OPEN VIEW OF EUT-1



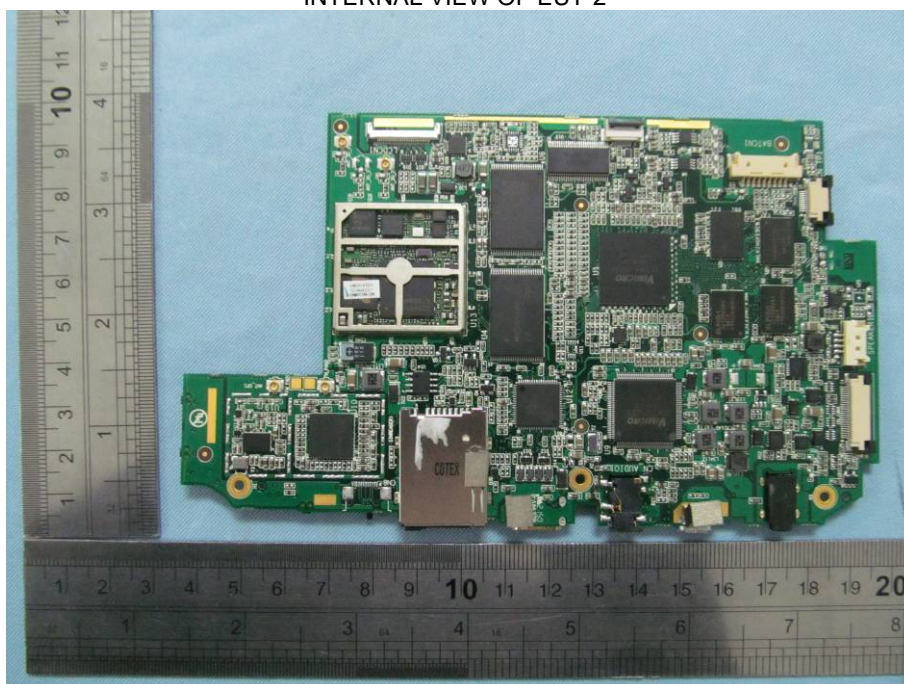
OPEN VIEW OF EUT-2



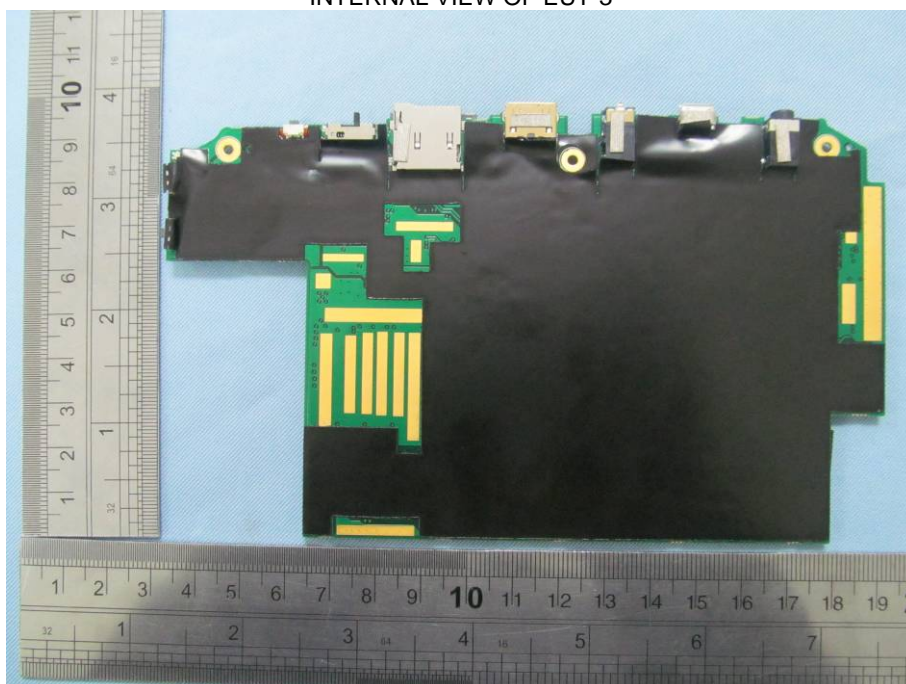
INTERNAL VIEW OF EUT-1



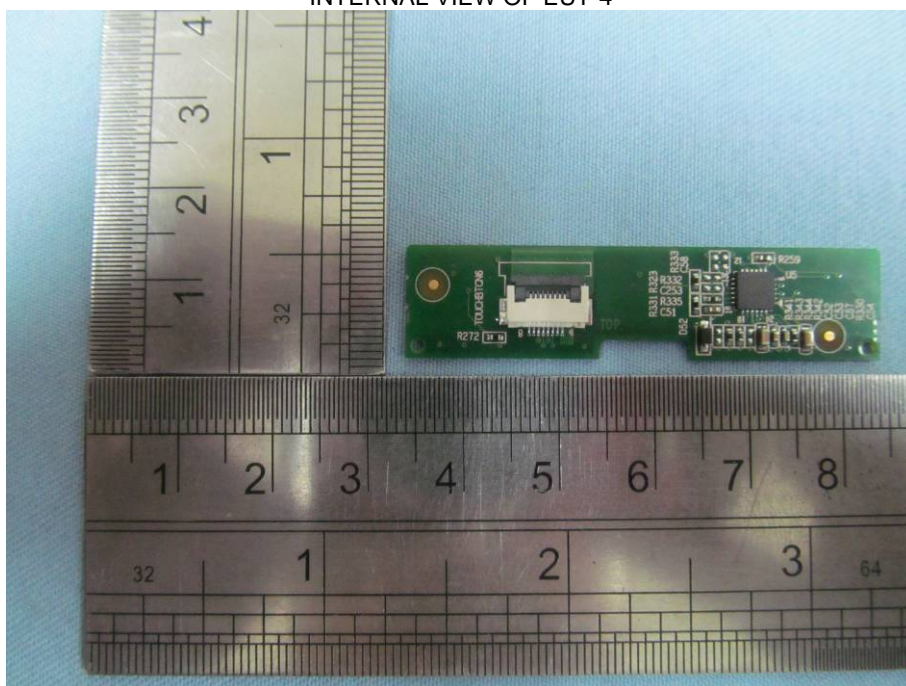
INTERNAL VIEW OF EUT-2



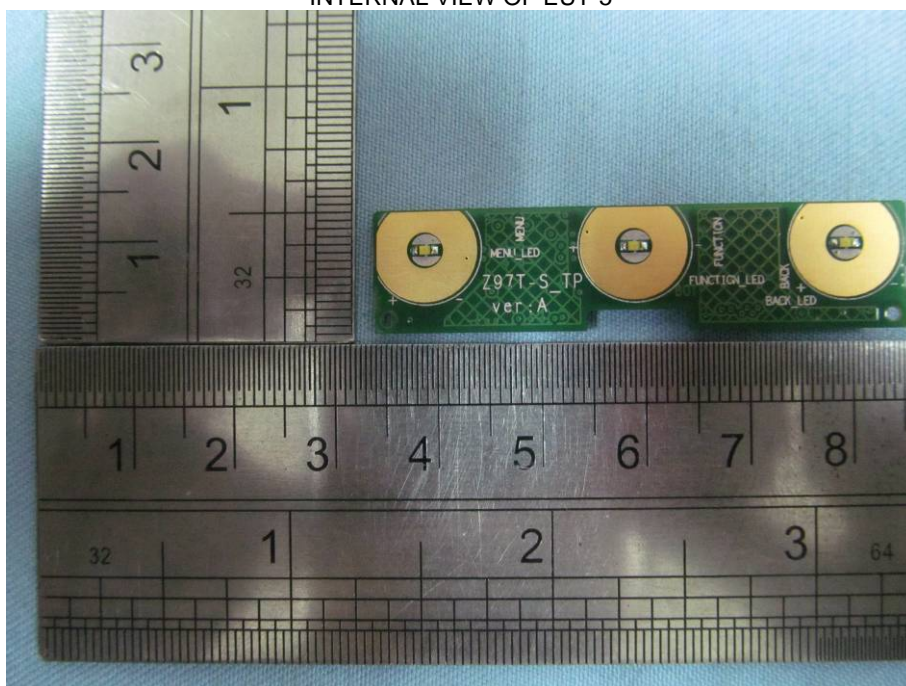
INTERNAL VIEW OF EUT-3



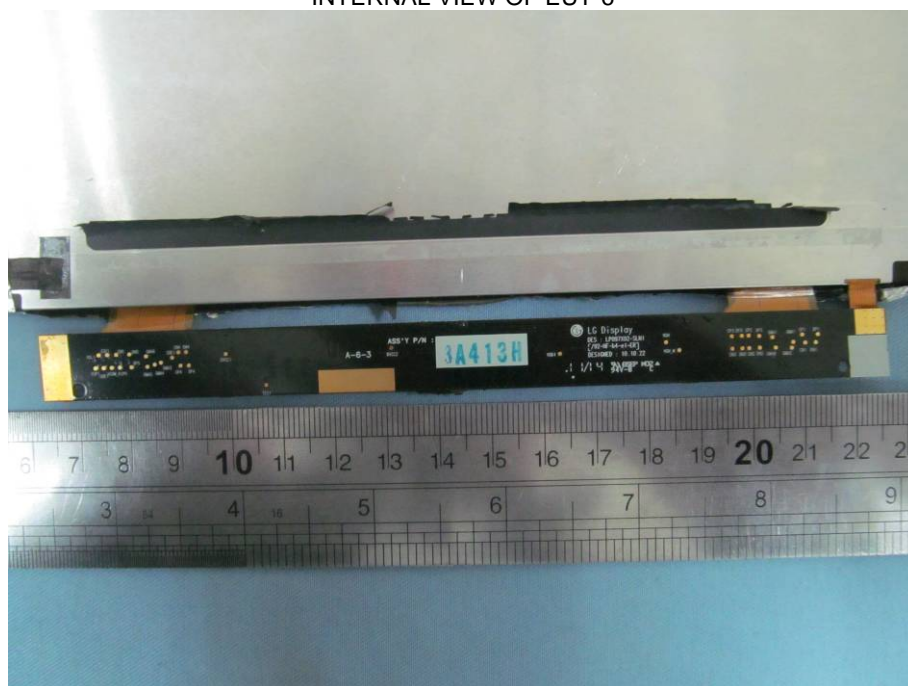
INTERNAL VIEW OF EUT-4



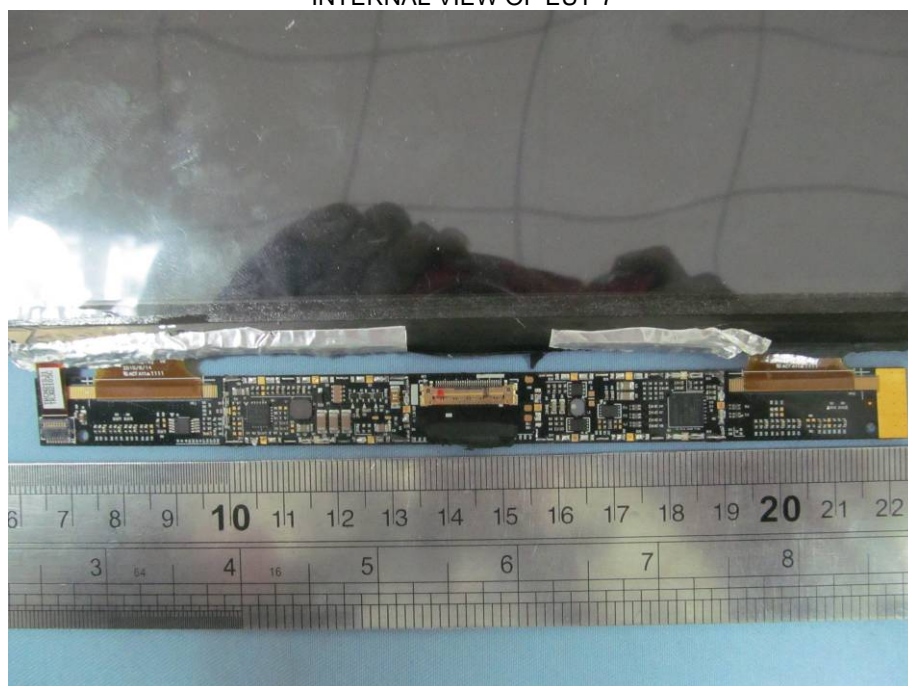
INTERNAL VIEW OF EUT-5



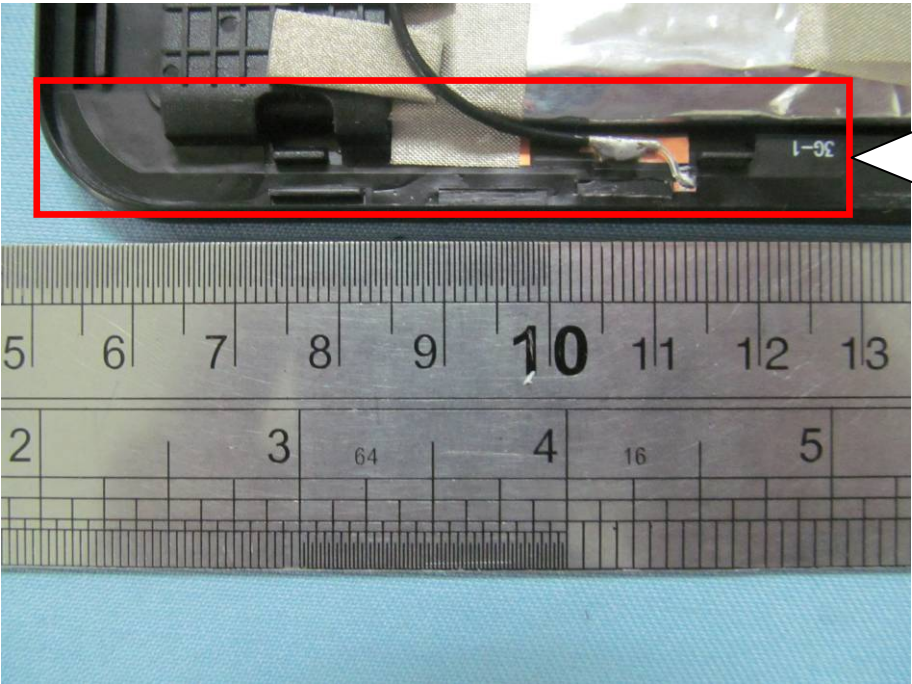
INTERNAL VIEW OF EUT-6



INTERNAL VIEW OF EUT-7

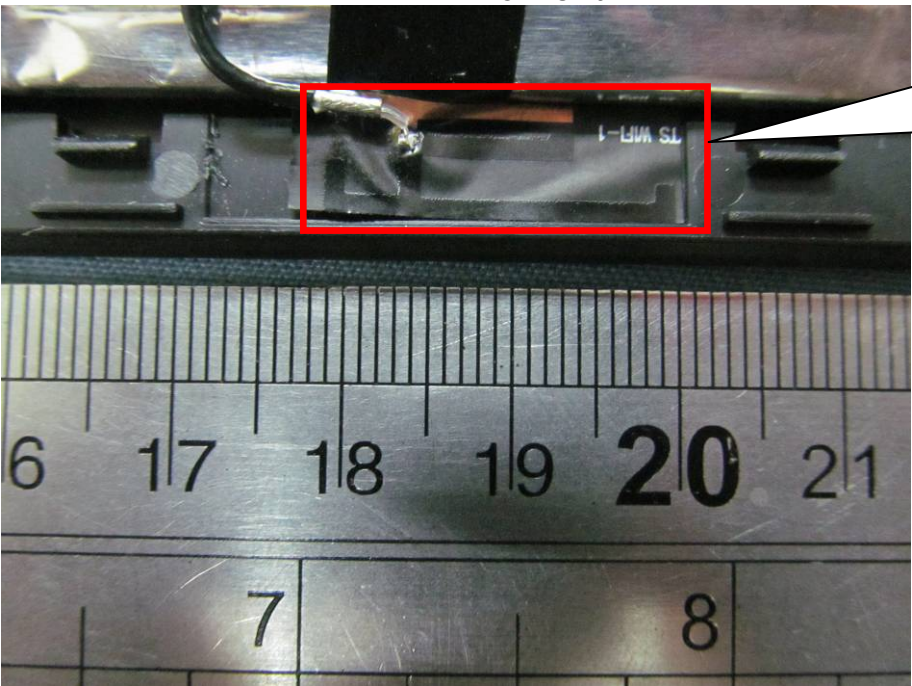


INTERNAL VIEW OF EUT-8



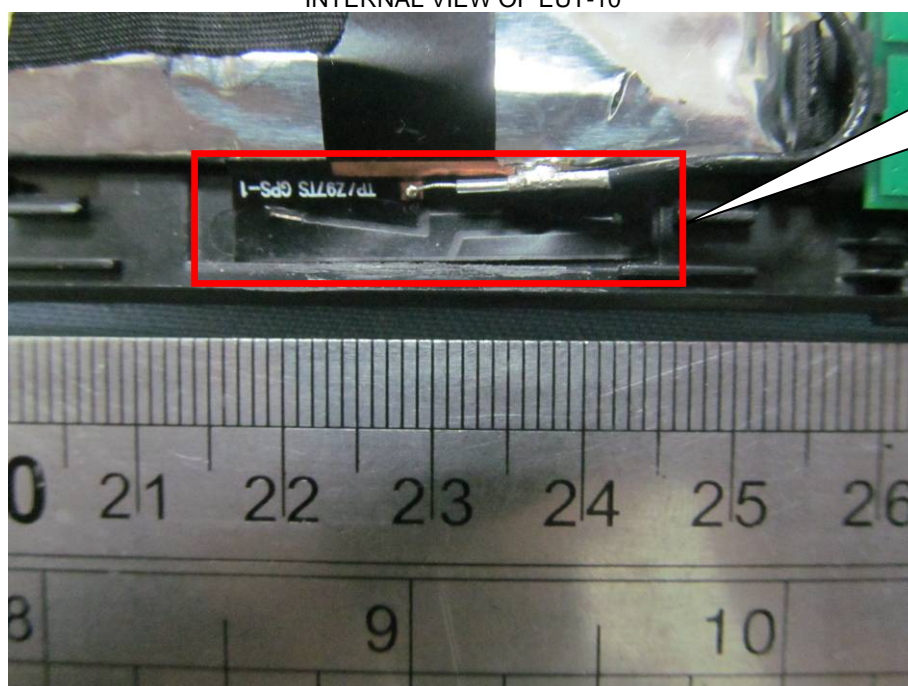
GSM
&
WCDMA
Antenna

INTERNAL VIEW OF EUT-9



Wifi
&
BT

INTERNAL VIEW OF EUT-10



GPS
Antenna

----END OF REPORT----