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FCC TEST REPORT

Under
FCC Part 2, 22 Subpart H

Prepared For :

ILIFE TECHNOLOGY (HK) LIMITED

3rd Floor,Bld.3,LiJinChen Industrial Park,The East of Gong Ye Road, Longhua,shenzhen,China

FCC ID: OI2K707G
EUT: Tablet PC
Model: K707G

February 16, 2013 **Issue Date:**
Original Report **Report Type:**
Eric Guo **Test Engineer:** Eric Guo
Apollo Liu **Review By:** Apollo Liu / Manager

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1. General Information

1. 1 Notes

The test results of this report relate exclusively to the test item specified in 1.5. The KMO Lab does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of the KMO Lab.

1. 2 Testing Laboratory

Site on File with the Federal Communications Commission – United Sates
Registration Number: 963441

Site Listed with Industry Canada of Ottawa, Canada
Registration Number: 7353A

1. 3 Details of Applicant

Name : ILIFE TECHNOLOGY (HK) LIMITED
Address : 3rd Floor,Bld.3,LiJinChen Industrial Park,The East of Gong Ye Road, Longhua,shenzhen,China
Contact : Chris Yu
Tel : 86 755 22200901
Fax : N/A

1. 4 Application Details

Date of Receipt of Application : December 20, 2012
Date of Receipt of Test Item : December 24, 2012
Date of Test : January 16~February 5, 2013

1. 5 Test Item

Manufacturer :ILIFE TECHNOLOGY (HK) LIMITED
Address : 3rd Floor,Bld.3,LiJinChen Industrial Park,The East of Gong Ye Road, Longhua,shenzhen,China
Trade Name : N/A
Model No.(Base) : K707G
Model No.(Extension) :K977G,K978G,K101G,Q802G,Q971G,Q101G,M702,Q803G,Q973G,Q103G,Q972G,Q102G
Description : Tablet PC

Additional Information

Frequency : See below table
RF Power : See below table
Number of Channels : See below table
Type of Modulation : See below table
Power Supply : DC 12V
Dimension : N/A
Weight : N/A

General Product Specification	
Tx Frequency	WCDMA Band V: 826.4 MHz ~ 846.6 MHz
Rx Frequency	WCDMA Band V: 871.4 MHz ~ 891.6 MHz
Maximum Output Power to	WCDMA Band V : 23.61 dBm
Antenna Type	Embedded Antenna
Type of Modulation	WCDMA: QPSK (Uplink) HSDPA: QPSK (Uplink) HSUPA: QPSK (Uplink)

FCC Rule	System	Type of Modulation	Maximum ERP/EIRP (W)	Frequency Tolerance (%, Hz, ppm)	Emission Designator
Part 22	WCDMA Band V RMC 12.2Kbps	QPSK	0.23	0.01 ppm	4M20F9W

1. 6 Test Standards

FCC Part 22 Subpart H & 24 Subpart E

Note: All radiated measurements were made in all three orthogonal planes. The values reported are the maximum values.

2. Technical Test

2. 1 Summary of Test Results

The EUT has been tested according to the following specifications:

FCC Rule	IC Rule	Test Type	Limit	Result	Notes
§2.1046	N/A	Conducted Output Power	N/A	**PASS**	Complies
§24.232(d)	RSS-133(6.4)	Peak-to-Average Ratio	< 13 dB	**PASS**	Complies
§22.913(a)(2)	RSS-132(4.4)SRS P-503(5.1.3)	Effective Radiated Power	< 7 Watts	**PASS**	Complies
§24.232(c)	RSS-133 (6.4) SRSP-510(5.1.2)	Equivalent Isotropic Radiated Power	< 2 Watts	**PASS**	Complies
§2.1049 §22.917(a) §24.238(a)	N/A	Occupied Bandwidth	N/A	**PASS**	Complies
§2.1051 §22.917(a) §24.238(a)	RSS-132 (4.5.1) RSS-133 (6.5.1)	Band Edge Measurement	< 43+10log10(P[Watts])	**PASS**	Complies
§2.1051 §22.917(a) §24.238(a)	RSS-132 (4.5.1) RSS-133 (6.5.1)	Conducted Spurious Emission	< 43+10log10(P[Watts])	**PASS**	Complies
§2.1053 §22.917(a) §24.238(a)	RSS-132 (4.5.1) RSS-133 (6.5.1)	Field Strength of Spurious Radiation	< 43+10log10(P[Watts])	**PASS**	Complies
§2.1055 §22.355 §24.235	RSS-132(4.3) RSS-133(6.3)	Frequency Stability for Temperature & Voltage	< 2.5 ppm	**PASS**	Complies

Note:

a. All test items were verified and recorded according to the standards and without any deviation during the test.

b. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

c. Per the section 2.2.3 of Notice of 2012-DRS0126, " Receivers Excluded from Industry Canada Requirements", only radio communication receivers operating in stand-alone mode within the band 30-960 MHz and scanner receivers are subject to Industry Canada requirements.

2. 2 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:
*Preliminary Guidance for Receiving Applications for Certification of 3G Device. May 9, 2006.
*FCC 47 CFR Part 2, 22(H), 24(E)
*ANSI / TIA / EIA-603-C-2004
*FCC KDB 971168 D01 Power Meas. License Digital Systems v01
*IC RSS-132 Issue 2
*IC RSS-133 Issue 5
*IC RSS-Gen Issue 3
*NOTICE 2012-DRS0126

2. 3 EUT Modification

No modification by test lab.

2. 4 SYSTEM TEST CONFIGURATION

2. 4.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

A. EUT

Device	Manufacturer	Model #	FCC ID
Tablet PC	ILIFE TECHNOLOGY (HK) LIMITED	K707G	OI2K707G

B. Internal Devices

Device	Manufacturer	Model #	FCC ID
N/A			

C. Peripherals

Device	Manufacturer	Model # Serial #	FCC ID/ DoC	Cable
Printer	HP	HP930C	DoC	1.5m unshielded power cord 1.2m unshielded data cable.
Modem	GVC	N/A	DoC	1.5m unshielded power cord 1.2m unshielded data cable.
Notebook	DELL	PP10L	DoC	1.5m unshielded power cord
PC	Dell	2400n	DoC	1.5m unshielded power cord

2. 4.2 EUT Exercise

The EUT (Transmitter) was operated in the engineering mode to fix the Tx frequency which was for the purpose of the measurements

2. 4.3 Test Procedure

a. Conducted Measurement at Antenna Port: According to measurement procured TIA/EIA 603C, the EUT is placed on a turn table which is 0.8 m above ground plane. A low loss of RF cable was used to connect the antenna port of EUT to measurement equipment.

b. Radiated Emissions (ERP/EIRP):

According to measurement procured TIA/EIA 603C and RSS-Gen Issue 3, The EUT is a placed on as turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both Horizontal and Vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna according to the requirements in Section 8 and 13 of ANSI C63.4:2003.

2. 4.4 Test Mode

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

Frequency range investigated for radiated emission is as follows:

a. 30 MHz to 9000 MHz for GSM850 and WCDMA Band V.

b. 30 MHz to 19000 MHz for GSM1900 and WCDMA Band II.

Test Modes		
Band	**Radiated TCs**	**Conducted TCs**
WCDMA Band V	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link

Note:

a. The maximum power levels are GSM mode for GMSK link, EDGE multi-slot class 8 mode for 8PSK link, RMC 12.2Kbps mode for WCDMA band V, and RMC 12.2Kbps mode for WCDMA band II, only these modes were used for all tests.

b. Because there are individual antennas for each WWAN, WLAN, and Bluetooth, the co-location test modes are not required.

2.4.5 EUT Operating Condition

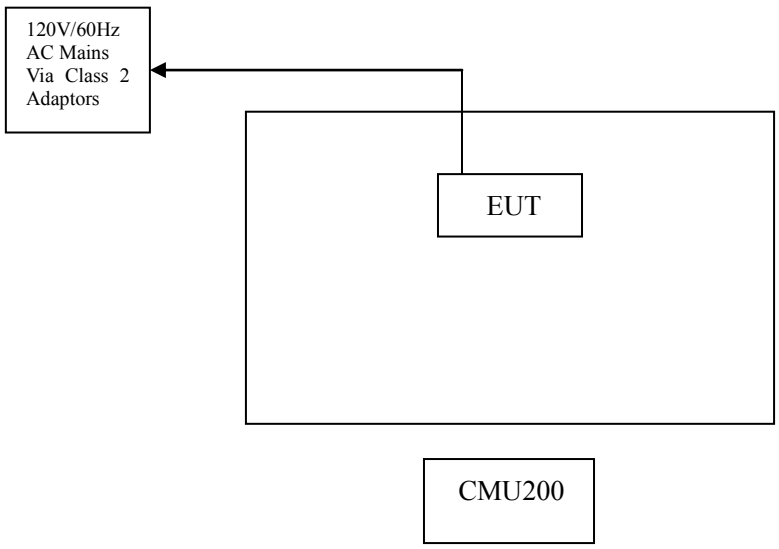
Operating condition is according to ANSI C63.4 - 2003.

A. Setup the EUT and simulators as shown on follow.

B. Enable RF signal and confirm EUT active.

C. Modulate output capacity of EUT up to specification.

Configuration of Tested System (Fixed Channel)



3. Technical Characteristics Test

3. 1 Conducted Output Power

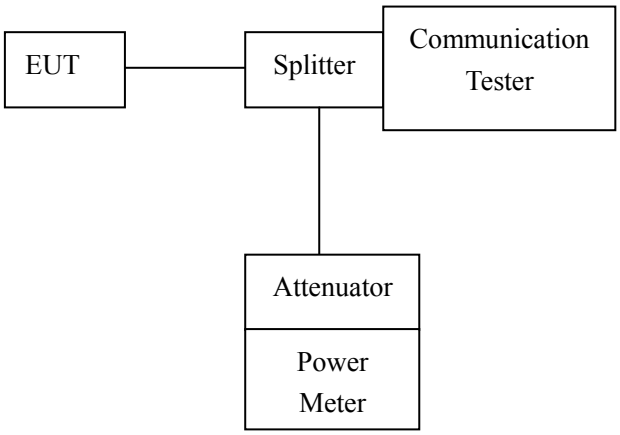
3.1.1 Test Equipment

Please refer to section 6 this report.

3.1.2 Test Procedure

The transmitter output was connected to a calibrated attenuator, the other end of which was connected to a power meter. Transmitter output was read off the power meter in dBm. The power output at the transmitter antenna port was determined by adding the value of the attenuator to the power meter reading. The Procedure of KDB941225 (SAR Measurement Procedures for 3G devices, WCDMA/HSDPA) was used for EUT and Base station setting. RMC 12.2kps is used for this testing

3.1.3 Test Setup



3.1.4 Configuration of The EUT

Same as section 2.4.1 of this report

3.1.5 EUT Operating Condition

Same as section 2.4.5 of this report

3.1.6 Limit

According to FCC 2.1046, FCC 22.913(a) Mobile station are limited to 7W; FCC 24.232(b) Mobile stations are limited to 2W eirp peak power, 3GPP Power limitation for HSDPA and HSUPA

Maximum Output Powers for HSDPA

Sub-test in table C.11.1.3	Power Class 3		Power Class 4	
	Power (dBm)	Tol (dB)	Power (dBm)	Tol (dB)
1	+24	+1.7/-3.7	+21	+2.7/-2.7
2	+22	+1.7/-3.7	+21	+2.7/-2.7
3	+23.5	+2.2/-3.7	+20.5	+3.2/-2.7
4	+23.5	+2.2/-3.7	+20.5	+3.2/-2.7

Maximum Output Powers for HSUPA

Sub-test in table C.11.1.3	Power Class 3		Power Class 4	
	Power (dBm)	Tol (dB)	Power (dBm)	Tol (dB)
1	+24	+1.7/-6.7	+21	+2.7/-5.7
2	+22	+3.7/-5.2	+19	+4.7/-4.2
3	+23	+2.7/-5.2	+20	+3.7/-4.2
4	+22	+3.7/-5.2	+19	+4.7/-4.2
5	+24	+1.7/-6.7	+21	+2.7/-5.7

3.1.7 RF Output Power Test Result

Product	: Tablet PC	Test Mode	: CH Low ~ CH High
Test Item	: RF Output Power	Temperature	: 25 ℃
Test Voltage	: DC 12V (External Power Supply)	Humidity	: 56%RH
Test Result	: **PASS**		

Cellular Band									
Modes	**GSM850 (GSM)**			**GSM850 (EDGE 8)**			**WCDMA Band V (RMC 12.2Kbps)**		
Channel	**128 (Low)**	**189 (Mid)**	**251 (High)**	**128 (Low)**	**189 (Mid)**	**251 (High)**	**4132 (Low)**	**4182 (Mid)**	**4233 (High)**
Frequency (MHz)	**824.2**	**836.4**	**848.8**	**824.2**	**836.4**	**848.8**	**826.4**	**836.4**	**846.6**
Conducted Power (dBm)	-	-	-	-	-	-	23.50	23.32	23.61
Conducted Power (Watts)	-	-	-	-	-	-	0.22	0.21	0.23

Note: maximum burst average power for GSM, and maximum average power for WCDMA

3. 2 ERP / EIRP Measurement

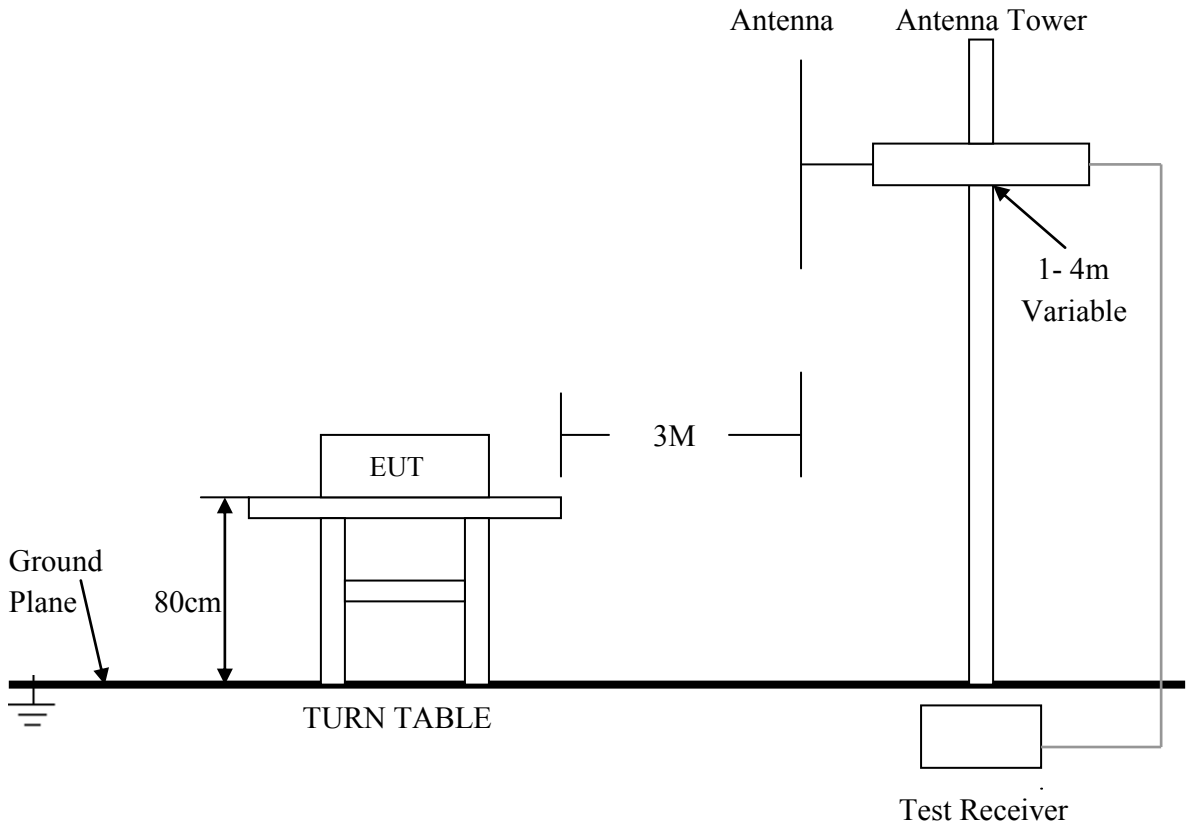
3.2.1 Test Equipment

Please refer to section 6 this report.

3.2.2 Test Procedure

1. The EUT was placed on an non-conductive rotating platform with 0.8 meter height in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RBW= 1MHz, VBW= 3MHz for GSM, RBW= 100 KHz, VBW= 300 KHz, used channel power option with bandwidth=5MHz for WCDMA, and RMS detector settings per section 4.0 of KDB 971168 D01
2. During the measurement, the EUT was enforced in maximum power and linked with a base station. The highest emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
3. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by dipole antenna (substitution antenna) at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor, EIRP= LVL + Correction factor and ERP = EIRP – 2.15 .
4. ERP in frequency band 824.2 –848.80MHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated as follows:
   ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB)
   EIRP in frequency band 1710-1755MHz and 1850.2 –1909.8MHz were measured using a substitution method. The EUT was replaced by a horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:
   EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable Loss (dB)

3.2.3 Test Setup



For the actual test configuration, please refer to the related items – Photos of Testing.

3.2.4 Configuration of The EUT

Same as section 2.4.1 of this report

3.2.5 EUT Operating Condition

Same as section 2.4.5 of this report

3.3.6 Limit

According to FCC 2.1046, FCC 22.913(a) Mobile station are limited to 7W; FCC 24.232(b) Mobile stations are limited to 2W eirp peak power.
According to IC RSS-133 §6.4; The peak e.i.r.p. for transmitters operating in the band 1850-1910 MHz shall not exceed the limits 2W which given in SRSP-510.
According to issue 2 of RSS 132, section 4.4. The transmitter output power shall not exceed the limits given in SRSP-503.

3.3.7 Test Result

Product	: Tablet PC	Test Mode	: CH Low ~ CH High
Test Item	: ERP/EIRP Measurement	Temperature	: 25 ℃
Test Voltage	: DC 12V (External Power Supply)	Humidity	: 56%RH
Test Result	: **PASS**		

ERP Results

WCDMA Band V (RMC 12.2Kbps) Radiated Power ERP				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
826.40	-11.19	31.44	18.10	0.0646
836.40	-11.14	32.04	18.75	0.0750
846.60	-12.20	32.63	18.28	0.0673
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
826.40	-21.79	32.78	8.84	0.0077
836.40	-20.46	32.82	10.21	0.0105
846.60	-22.18	33.40	9.07	0.0081

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

3. 3 99% Occupied Bandwidth and 26dB Bandwidth Measurement

3.3.1 Test Equipment

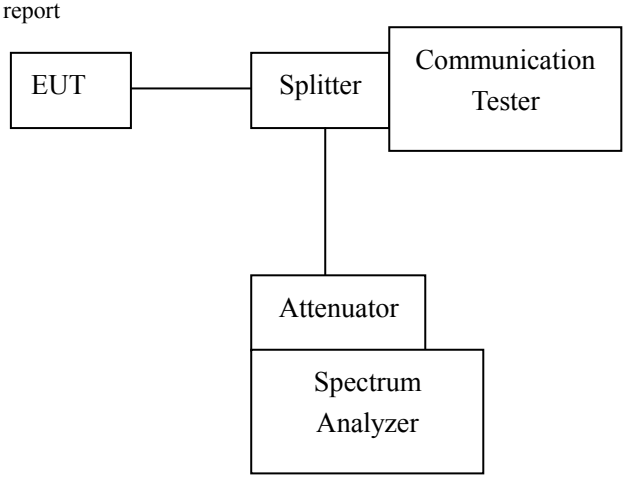
Please refer to section 6 this report.

3.3.2 Test Procedure

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The 99% occupied bandwidth and 26 dB bandwidth of the middle channel for the highest RF powers were measured.

3.3.3 Test Setup

Same as section 2.4.1 of this report



3.3.4 Configuration of The EUT

Same as section 2.4.1 of this report

3.3.5 EUT Operating Condition

Same as section 2.4.5 of this report

3.3.6 Limit

According to FCC 2.1053, FCC 22.917(a) & 24.238(a)
According to IC RSS-Gen Issue 3 §4.6.1
According to IC RSS-133 §2.3

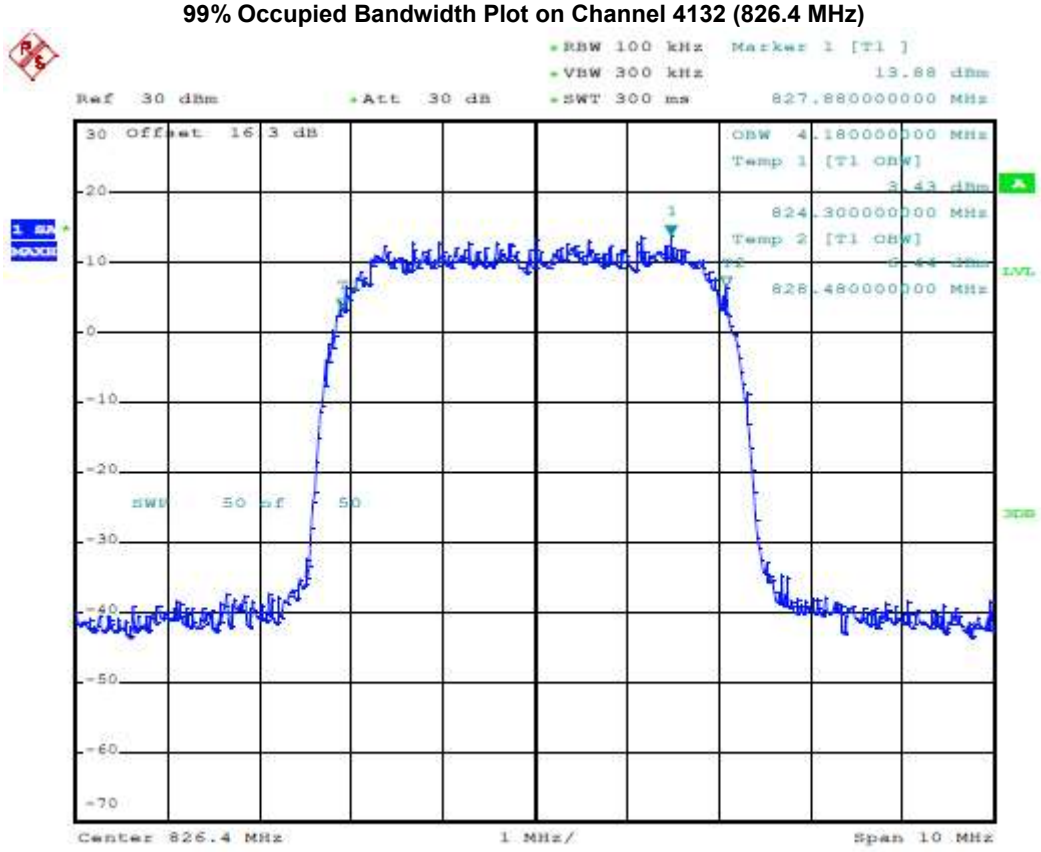
3.3.7 Occupied Bandwidth Test Result

Occupied Bandwidth and 26dB Bandwidth

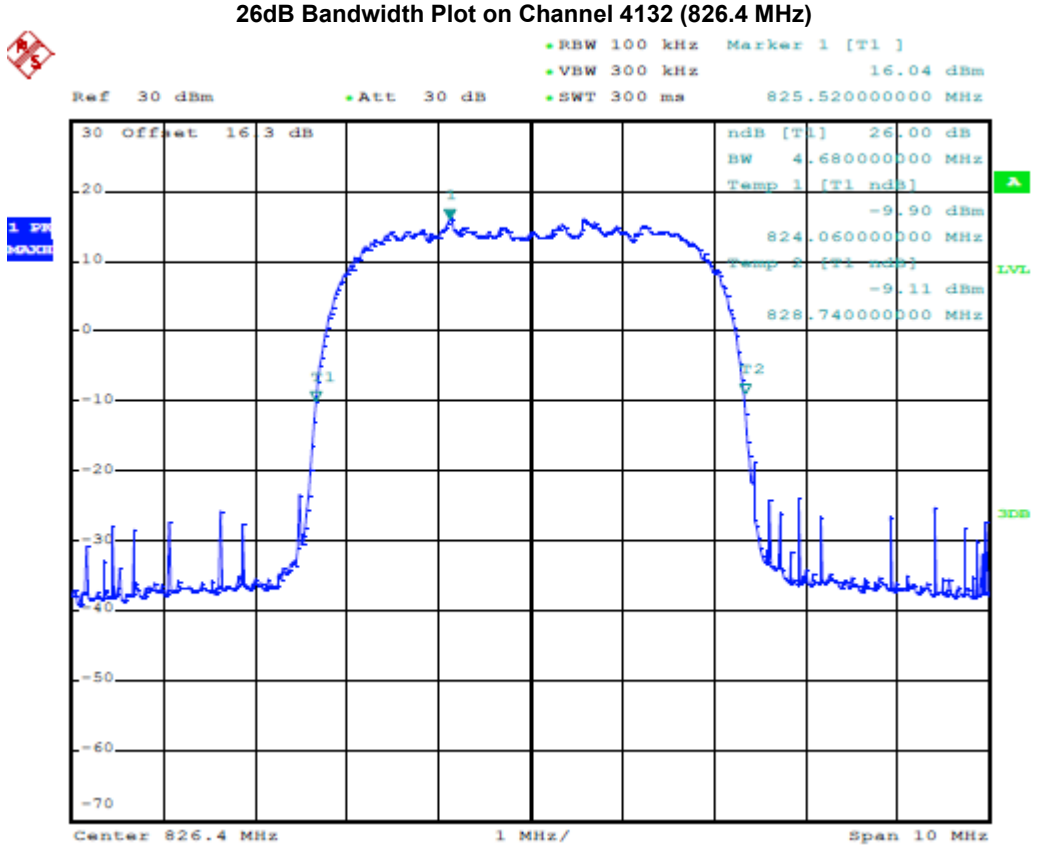
Cellular Band			
Modes	**WCDMA Band V (RMC 12.2Kbps)**		
Channel	**4132 (Low)**	**4182 (Mid)**	**4233 (High)**
Frequency (MHz)	**826.4**	**836.4**	**846.6**
99% OBW (MHz)	4.18	4.20	4.20
26dB BW (MHz)	4.68	4.68	4.68

Band:	WCDMA Band V	Test Mode:	RMC 12.2Kbps Link

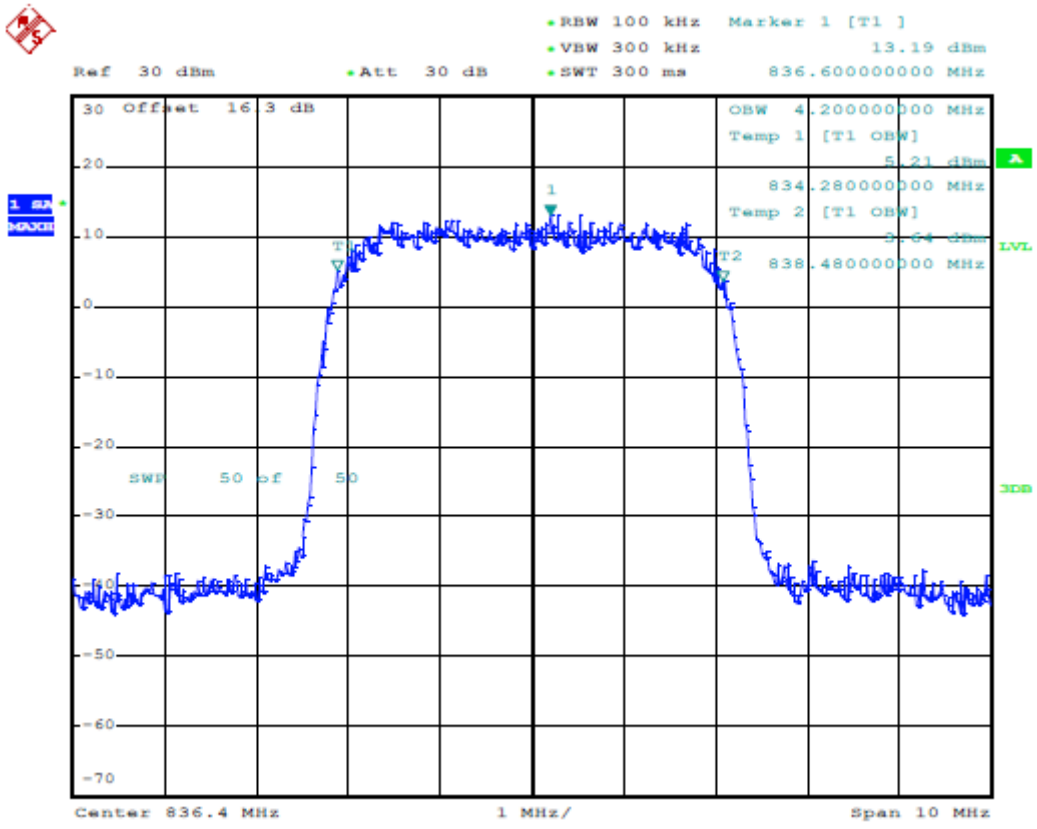
99% Occupied Bandwidth Plot on Channel 4132 (826.4 MHz)



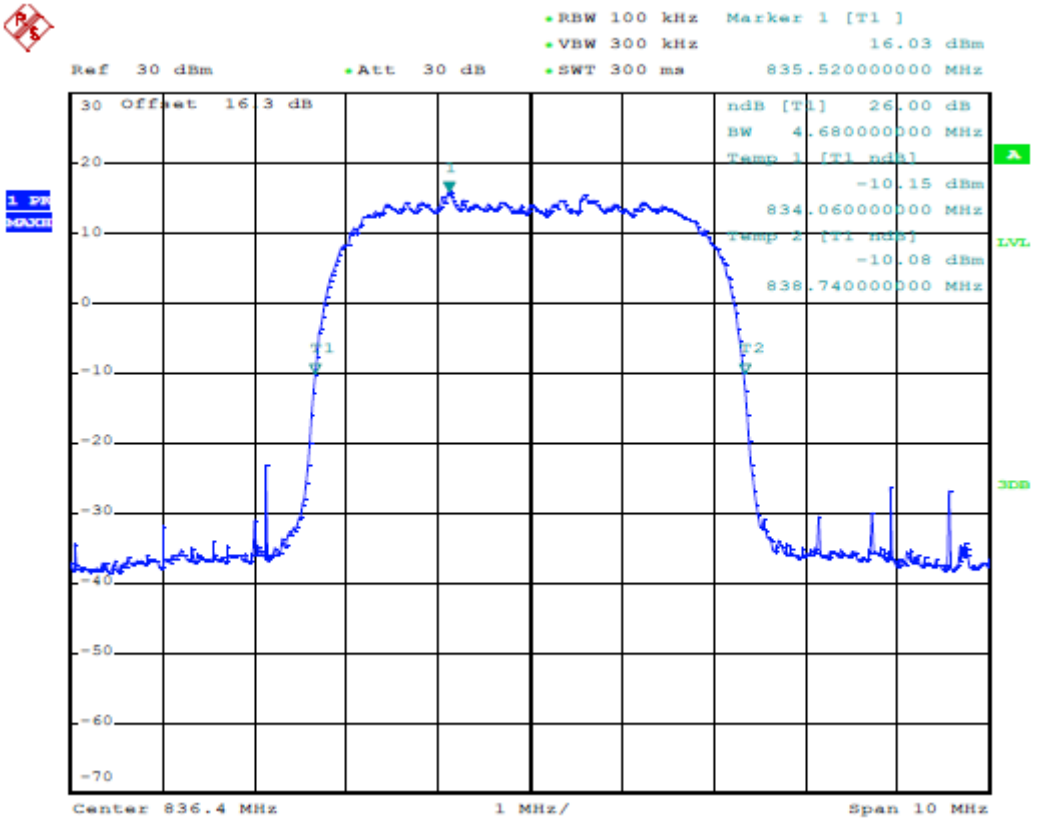
26dB Bandwidth Plot on Channel 4132 (826.4 MHz)



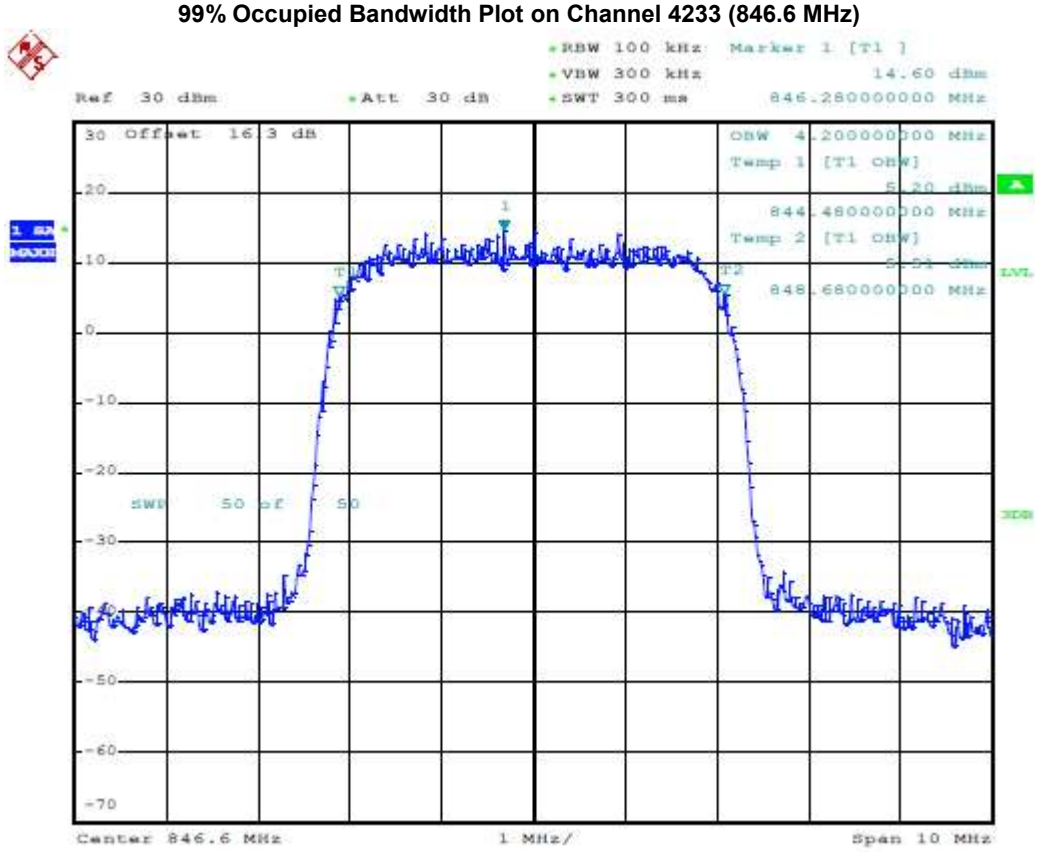
99% Occupied Bandwidth Plot on Channel 4182 (836.4 MHz)



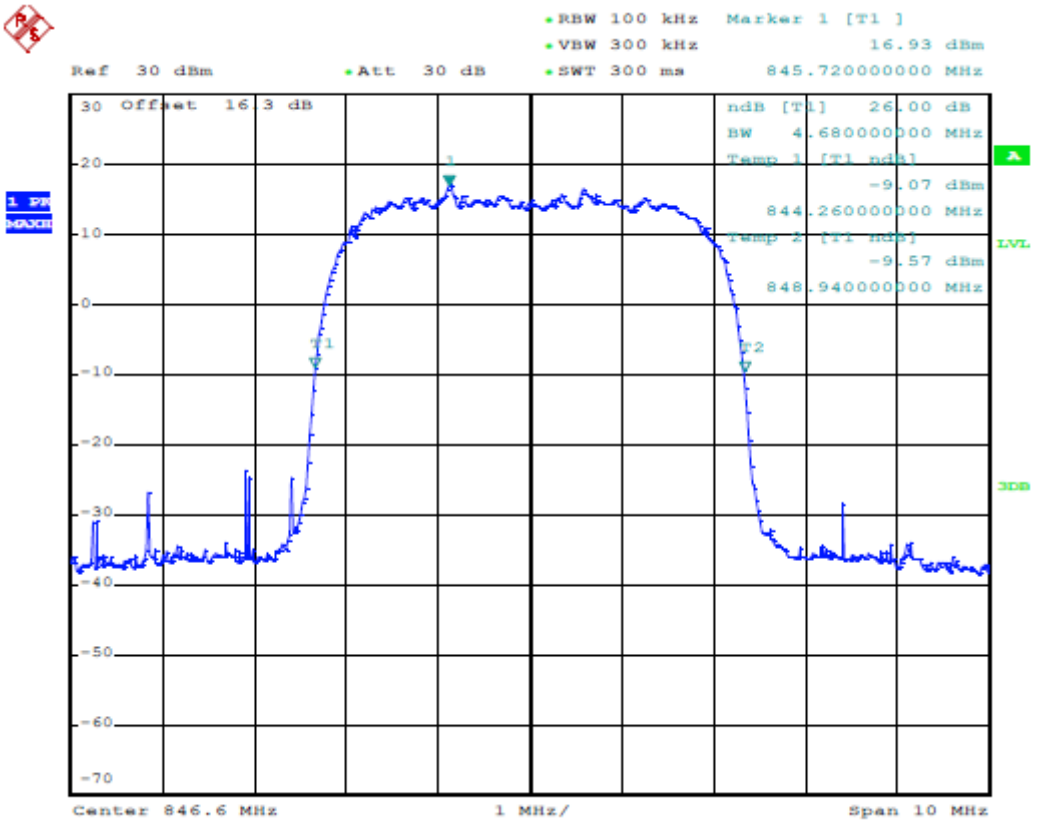
26dB Bandwidth Plot on Channel 4182 (836.4 MHz)



99% Occupied Bandwidth Plot on Channel 4233 (846.6 MHz)



26dB Bandwidth Plot on Channel 4233 (846.6 MHz)



3. 4 Band Edge Measurement

3.4.1 Test Equipment

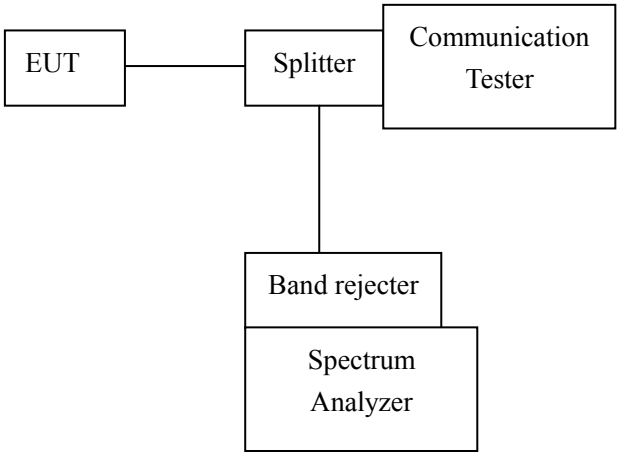
Please refer to section 6 this report.

3.4.2 Test Procedure

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The band edges of low and high channels for the highest RF powers were measured. Setting RBW as roughly BW/100.

3.4.3 Test Setup

Band Edge



3.4.4 Configuration of The EUT

Same as section 2.4.1 of this report

3.4.5 EUT Operating Condition

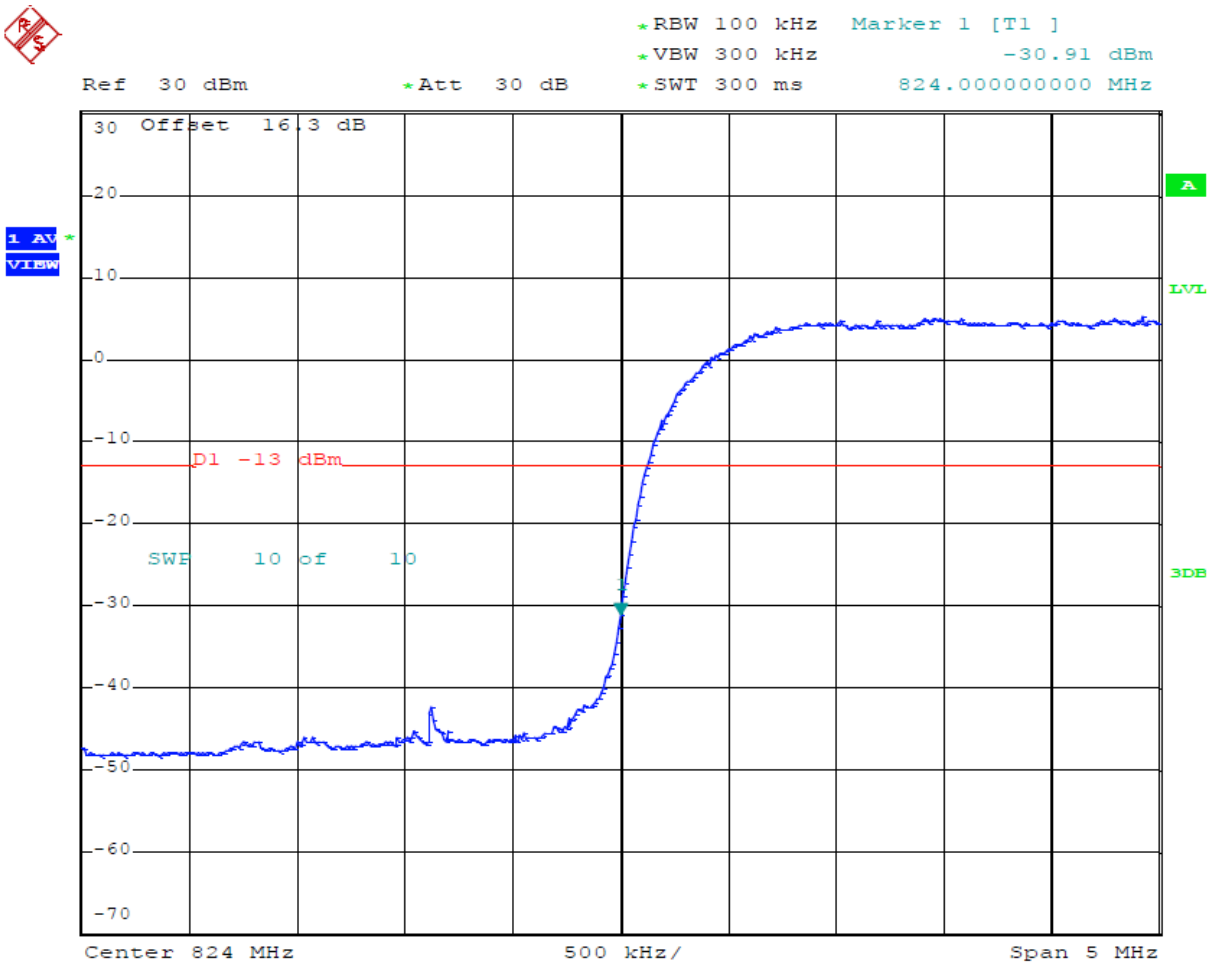
Same as section 2.4.5 of this report

3.4.6 Limit

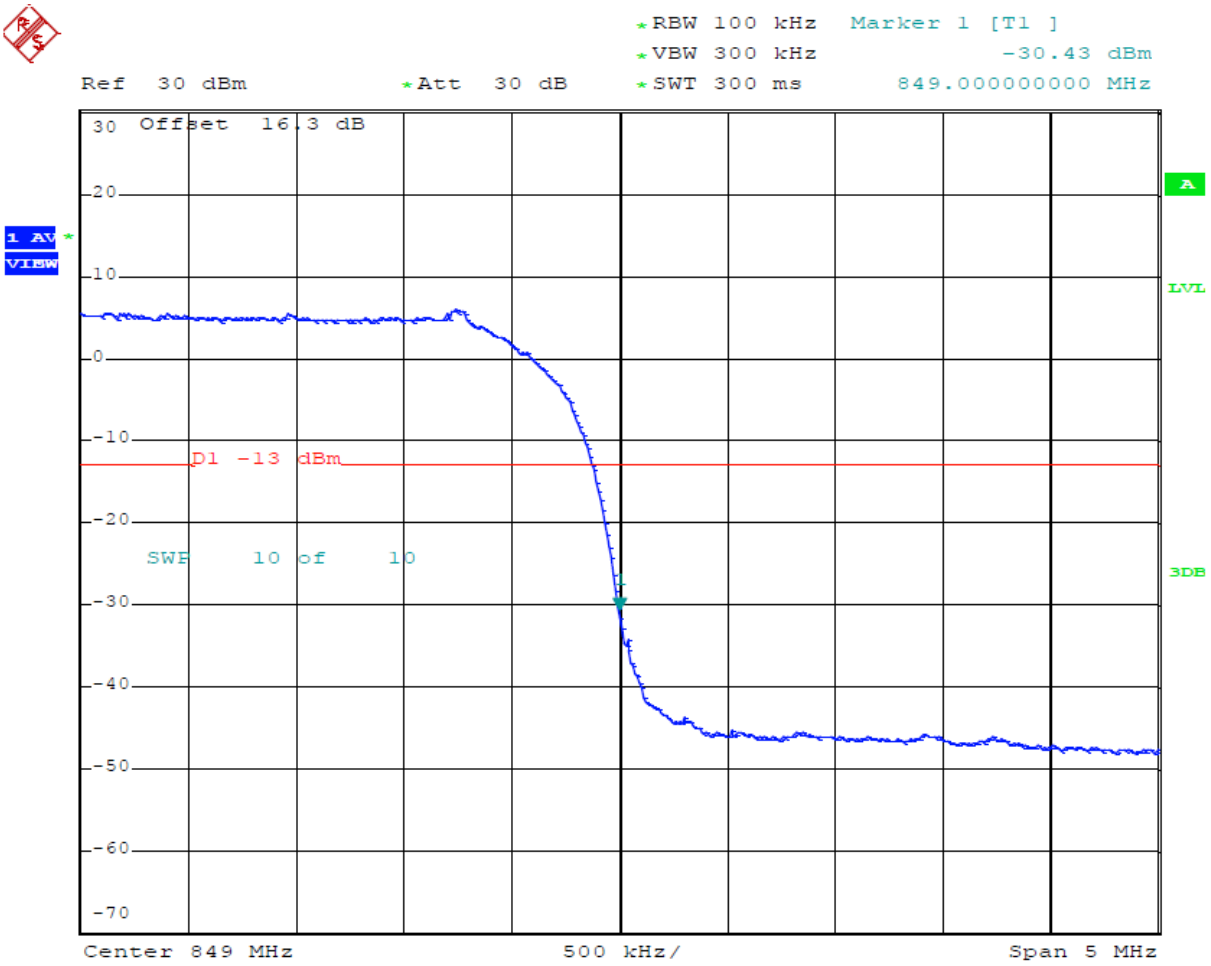
The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

3.4.7 Conducted Band Edge Test Result

Band :	WCDMA Band V	**Test Mode :**	RMC 12.2Kbps Link
Correction Factor :	-3.30dB	**Maximum 26dB Bandwidth :**	4.68MHz
Band Edge :	-34.21dBm	**Measurement Value :**	-30.91dBm



Band :	WCDMA Band V	Test Mode :	RMC 12.2Kbps Link
Correction Factor :	-3.30dB	Maximum 26dB Bandwidth :	4.68MHz
Band Edge :	-33.73dBm	Measurement Value :	-30.43dBm



3. 5 Radiated Spurious Emission

3.5.1 Test Equipment

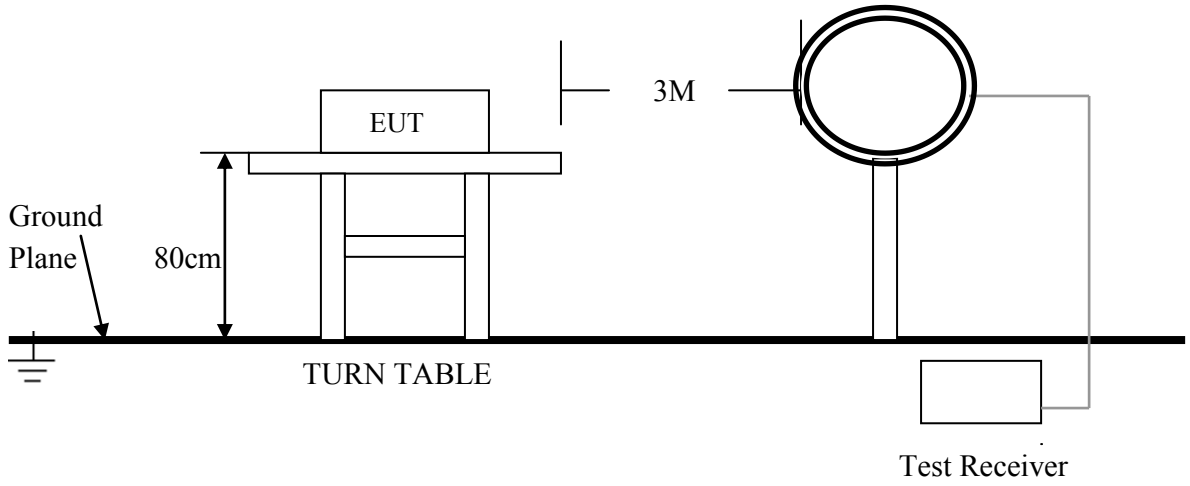
Please refer to section 6 this report.

3.5.2 Test Procedure

1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10 The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
11. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)
= P(W) - [43 + 10log(P)] (dB)
= [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
= -13dBm.
12. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
13.ERP (dBm) = EIRP - 2.15

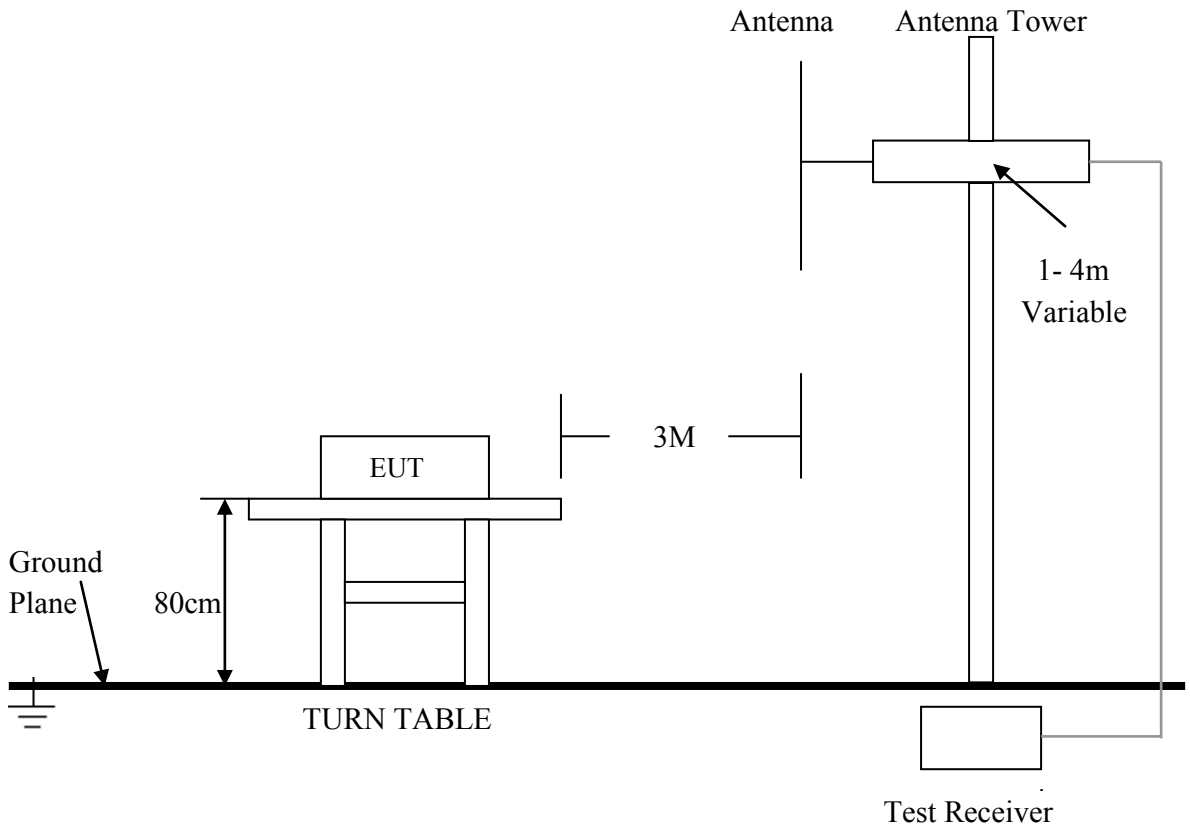
3.5.3 Test Setup

For Frequencies below 30 MHz



For the actual test configuration , please refer to the related items – Photos of Testing

For Frequencies above 30 MHz



For the actual test configuration , please refer to the related items – Photos of Testing

3.5.4 Configuration of The EUT

Same as section 2.4.1 of this report

3.5.5 EUT Operating Condition

Same as section 2.4.5 of this report

3.5.6 Limit

According to FCC §2.1053,
FCC §22.917(a), §24.238(a), the magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the instruction manual and/ or alignment procedure, shall not be less than 43 + 10 log (mean output power in watts) dBc below the mean power output outside a license's frequency block (-13dBm)

According to RSS-132 §4.5
4.5.1 Out-of-block Emissions
Mobile and base station equipment with emission bandwidth less than or equal to 4 MHz shall comply with 4.5.1.1. Mobile station equipment with emission bandwidth greater than 4 MHz shall comply with 4.5.1.2. Base station equipment with emission bandwidth greater than 4 MHz shall comply with either 4.5.1.2 or 4.5.1.3.

4.5.1.1 In the first 1.0 MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P), dB. After the first 1.0 MHz, the power of emissions shall be attenuated below the transmitter output power by at least 43 + 10 log (P), dB, in any 100 kHz bandwidth.

4.5.1.2 In the first 1.0 MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P), dB. After the first 1.0 MHz, the power of emissions shall be attenuated below the transmitter output power by at least 43 + 10 log (P), dB, in any 1 MHz bandwidth

According to RSS-133 §6.5
6.5.1 Out-of-Block Emissions
a. Mobile stations must comply with subsection i. below.
In the first 1.0MHz band immediately outside and adjacent to the licensee's frequency block. The power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P) dB.
b. After the first 1.0 MHz (for equipment that complies with a.i. of this subsection) or 1.5 MHz (for equipment that complies with all of this subsection), the power of emissions shall be attenuated below the transmitter output power by at least 43 + 10 log (P), dB, per any MHz of bandwidth.
(Note: If the test result using 1% of the emission bandwidth is used, then power integration over 1.0 MHz is required; alternatively, the spectrum analyzer resolution and video bandwidths can be increased to 1.0 MHz for this measurement).
6.5.2 Out-of-Sub-band Emissions
Outside the sub-bands 1850-1910 MHz and 1930-1990 MHz, the attenuation shall be equal to or greater than the ut-of-block emission limits in Section 6.5.1

3.5.7 Radiated Spurious Emission Test Result

Product	: Tablet PC	Test Mode	: CH Low ~ CH High
Test Item	: Radiated Spurious Emission	Temperature	: 25 ℃
Test Voltage	: DC 12V (External Power Supply)	Humidity	: 56%RH
Test Result	: **PASS**		

WCDMA Band V RMC 12.2Kbps Link

Frequency (MHz)	Result (dBm) Hori. / Vert.		Limit (dBm)	Margin (dB) Hori. / Vert.	
849.0	-17.90	-23.97	-13	-4.90	-10.97
1697.7	-41.73	-40.48	-13	-28.73	-27.48
2546.6	-51.48	-49.99	-13	-38.48	-36.99
3395.5	-55.27	-50.10	-13	-42.27	-37.10
-			-13		
-			-13		

Note: "-" means that the emission level is too low to be measured or at least 20 dB down than the limit.

3. 6 Conducted Spurious Emission Measurement

3.6.1 Test Equipment

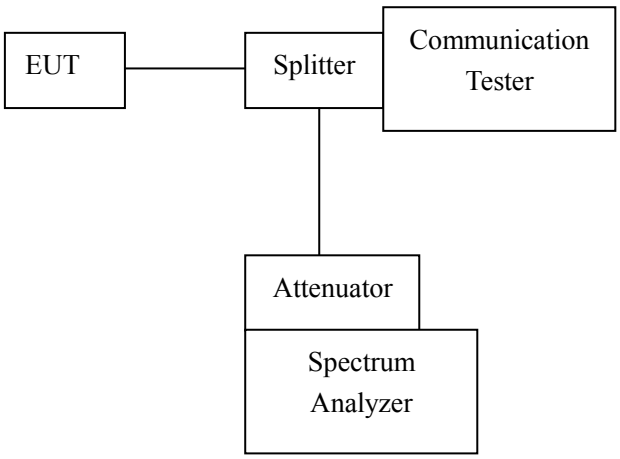
Please refer to section 6 this report.

3.6.2 Test Procedure

The EUT was connected to spectrum analyzer and base station via power divider. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. The middle channel for the highest RF power within the transmitting frequency was measured. The conducted spurious emission for the whole frequency range was taken.

3.6.3 Test Setup

Out of band emission



3.6.4 Configuration of The EUT

Same as section 2.4.1 of this report

3.6.5 EUT Operating Condition

Same as section 2.4.5 of this report

3.6.6 Limit

According to FCC §2.1051
FCC §22.917(a), §24.238(a), the magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the instruction manual and/ or alignment procedure, shall not be less than 43 + 10 log (mean output power in watts) dBc below the mean power output outside a license's frequency block (-13dBm)
According to RSS-132 §4.5
4.5.1 Out-of-block Emissions
Mobile and base station equipment with emission bandwidth less than or equal to 4 MHz shall comply with 4.5.1.1. Mobile station equipment with emission bandwidth greater than 4 MHz shall comply with 4.5.1.2. Base station equipment with emission bandwidth greater than 4 MHz shall comply with either 4.5.1.2 or 4.5.1.3.

4.5.1.1 In the first 1.0 MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P), dB. After the first 1.0 MHz, the power of emissions shall be attenuated below the transmitter output power by at least

43 + 10 log (P), dB, in any 100 kHz bandwidth.

4.5.1.2 In the first 1.0 MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P), dB. After the first 1.0 MHz, the power of emissions shall be attenuated below the transmitter output power by at least
43 + 10 log (P), dB, in any 1 MHz bandwidth

According to RSS-133 §6.5

6.5.1 Out-of-Block Emissions

a. Mobile stations must comply with subsection i. below.
In the first 1.0MHz band immediately outside and adjacent to the licensee's frequency block. The power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P) dB.

b. After the first 1.0 MHz (for equipment that complies with a.i. of this subsection) or 1.5 MHz (for equipment that complies with all of this subsection), the power of emissions shall be attenuated below the transmitter output power by at least 43 + 10 log (P), dB, per any MHz of bandwidth.

(Note: If the test result using 1% of the emission bandwidth is used, then power integration over 1.0 MHz is required; alternatively, the spectrum analyzer resolution and video bandwidths can be increased to 1.0 MHz for this measurement).

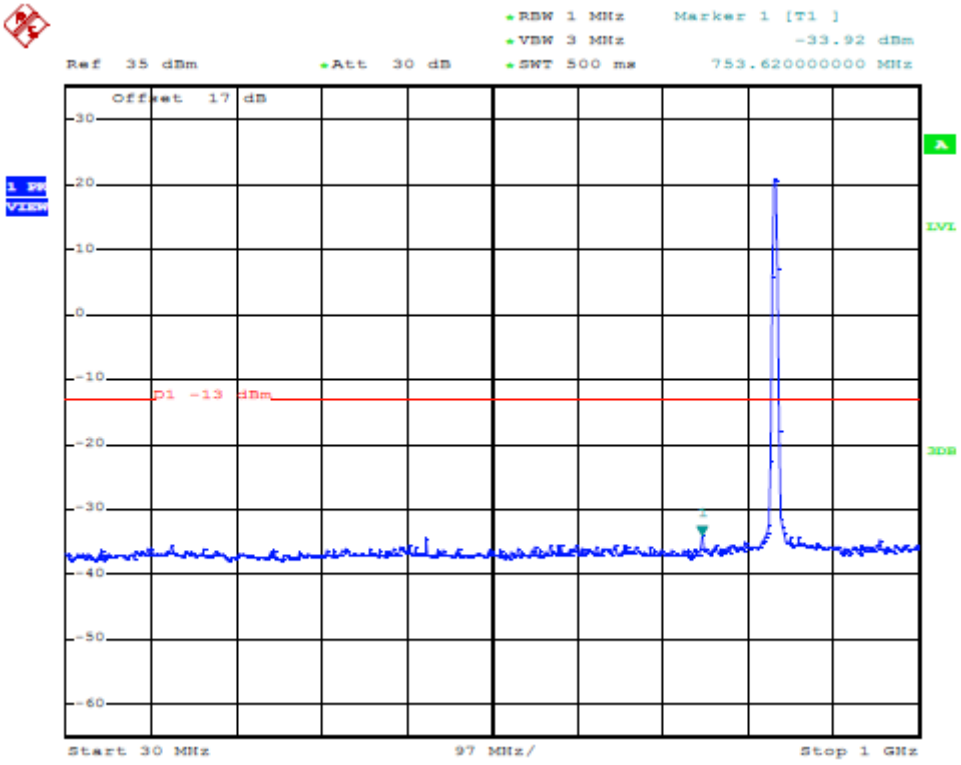
6.5.2 Out-of-Sub-band Emissions

Outside the sub-bands 1850-1910 MHz and 1930-1990 MHz, the attenuation shall be equal to or greater than the out-of-block emission limits in Section 6.5.1.

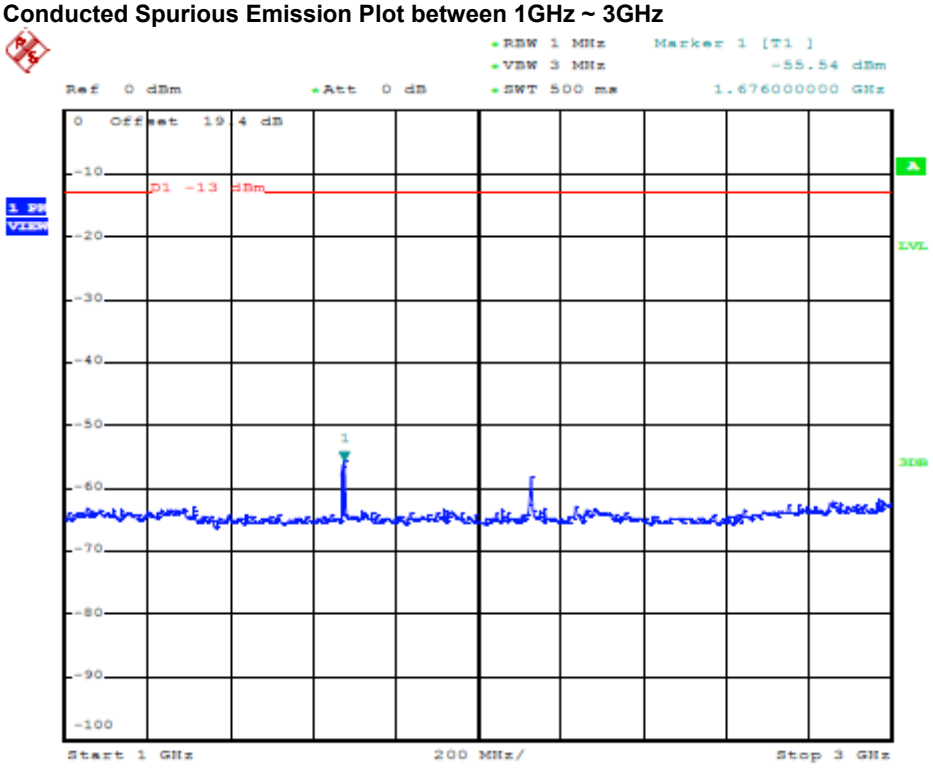
3.6.7 Conducted Spurious Emission Test Result

Band :	WCDMA Band V	**Channel :**	CH4182
Test Mode :	RMC 12.2Kbps Link	**Frequency :**	836.4 MHz

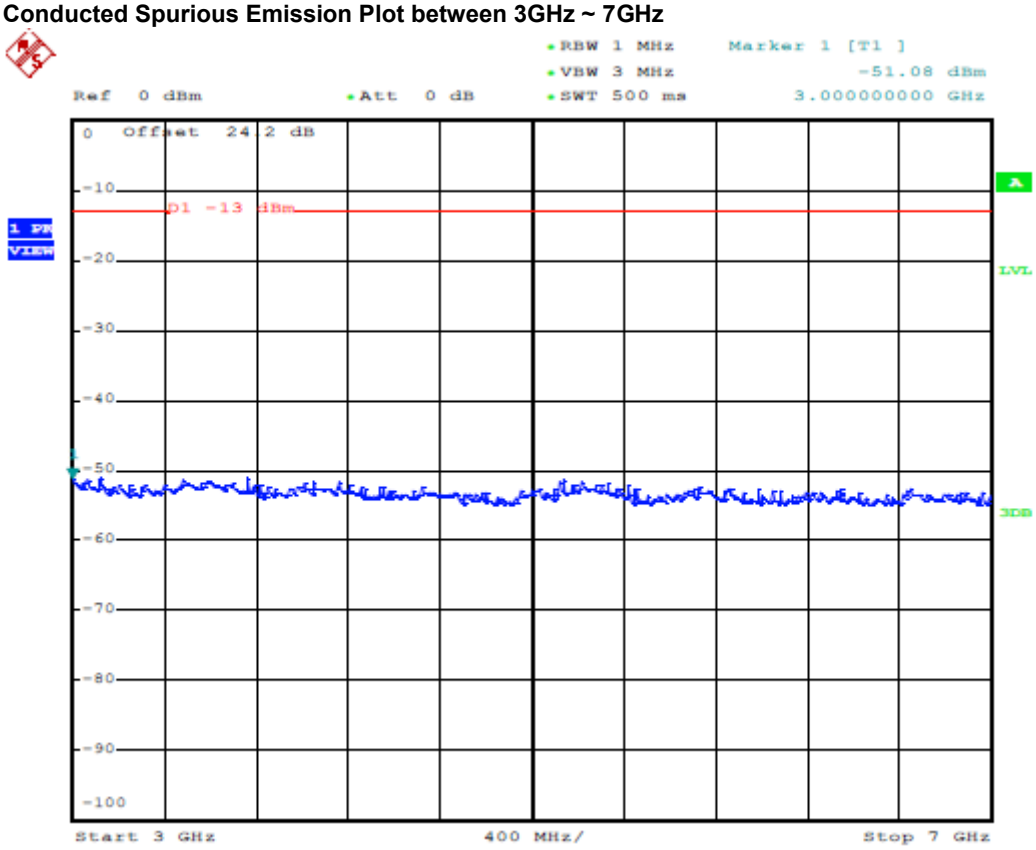
Conducted Spurious Emission Plot between 30MHz ~ 1GHz



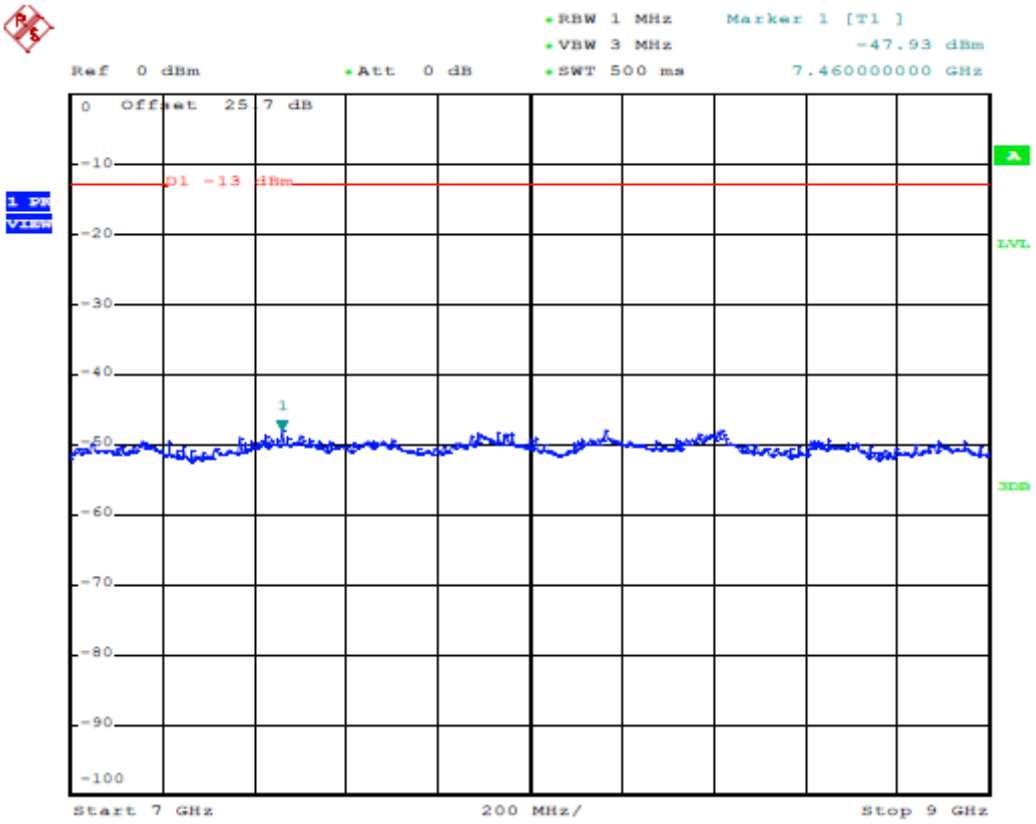
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Conducted Spurious Emission Plot between 7GHz ~ 9GHz



3. 7 Frequency Stability

3.7.1 Test Equipment

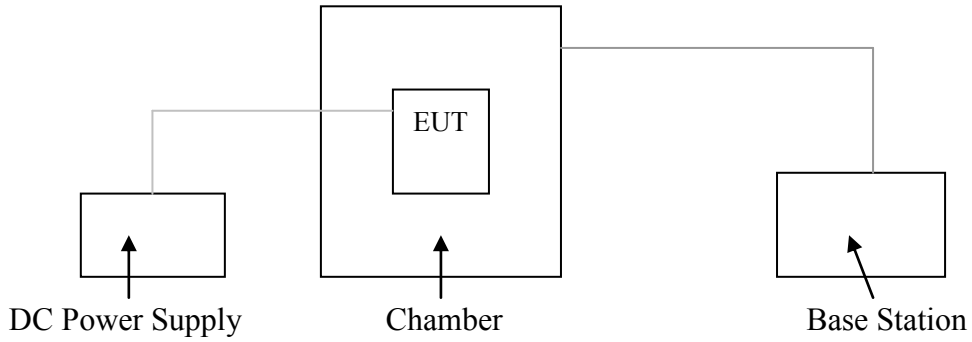
Please refer to section 6 this report.

3.7.2 Test Procedure

a. The EUT was set up in the thermal chamber and connected with the base station. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute. If the EUT cannot be turned on at -30°C, the testing lowest temperature will be raised in 10°C step until the EUT can be turned on.

b. The EUT was placed in a temperature chamber at 25±5° C and connected with the base station. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT. The variation in frequency was measured for the worst case.

3.7.3 Test Setup



3.7.4 Configuration of The EUT

Same as section 2.4.1 of this report

3.7.5 EUT Operating Condition

Same as section 2.4.5 of this report

3.7.6 Limit

According to FCC §2.1055(a) (1)
Frequency Tolerance: +/-2.5ppm for 850MHz band; +/-2.5ppm for 1900MHz band
According to RSS-133 §6.3, RSS-132 §4.3
The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations

3.7.7 Frequency Stability Test Result

Test Result of Temperature Variation

Reference Frequency: WCDMA V Mid Channel 836.6 MHz				
Limit: +/- 2.5 ppm = 2091 Hz				
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)
Vdc	Temperature (℃)	(MHz)		
3.7	55	836600008	9	2091
3.7	50	836600005	6	2091
3.7	40	836600003	4	2091
3.7	30	836599998	-1	2091
3.7	20	836599999	0	2091
3.7	10	836600004	5	2091
3.7	0	836599999	0	2091
3.7	-10	836599996	-3	2091
3.7	-20	836600006	7	2091
3.7	-30	836600006	7	2091

Test Result of Voltage Variation

Band & Channel	Mode	Voltage (Volt)	Freq. Dev. (Hz)	Deviation (ppm)	Limit (ppm)	Result
GSM 850CH189	GSM	-	-	-	2.5	Pass
		-	-	-		
		-	-	-		
	GSM 850	-	-	-		
		-	-	-		
		-	-	-		
GSM 1900CH661	GSM	-	-	-		
		-	-	-		
		-	-	-		
	GSM 1900	-	-	-		
		-	-	-		
		-	-	-		
WCDMA Band VCH4182	RMC 12.2Kbps	3.7	-7	-0.01		
		BEP	-5	-0.01		
		4.2	-4	0.00		
WCDMA Band IICH9400	RMC 12.2Kbps	-	-	-		
		-	-	-		
		-	-	-		

Note:
1. Normal Voltage = 3.7V.
2. Battery End Point (BEP) = 2.9 V.

3. 8 Peak-to-Average Ratio

3.8.1 Test Equipment

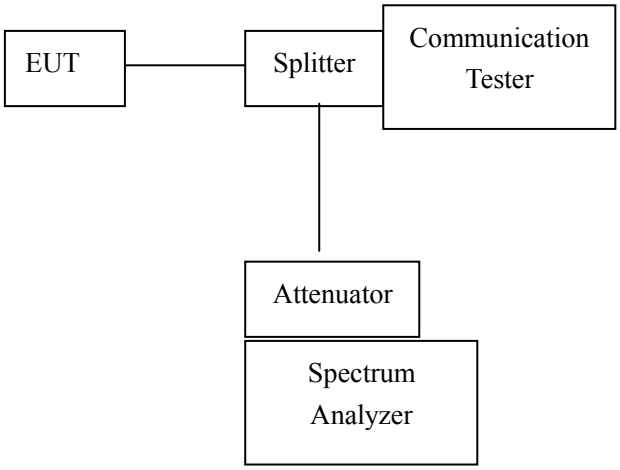
Please refer to section 6 this report.

3.8.2 Test Procedure

a. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
b. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
c. For GSM/EGPRS operating modes:
a). Set the RBW = 1MHz, VBW = 1MHz, Peak detector in spectrum analyzer.
b). Set EUT in maximum power output, and triggered the burst signal.

c). Measured respectively the Peak level and Mean level, and the deviation was recorded as Peak to Average Ratio.
c.. For UMTS operating modes:
a). Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
b). The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.

3.8.3 Test Setup



3.8.4 Configuration of The EUT

Same as section 2.4.1 of this report

3.8.5 EUT Operating Condition

Same as section 2.4.5 of this report

3.8.6 Limit

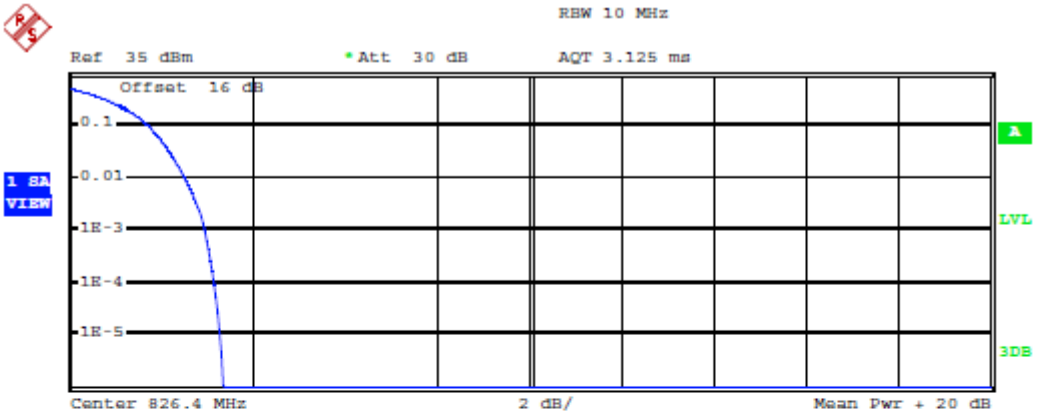
The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.8.7 Peak-to-Average Ratio Test Result

Cellular Band									
Modes	**GSM850 (GPRS 8)**			**GSM850 (EDGE 8)**			**WCDMA Band V (RMC 12.2Kbps)**		
Channel	**128 (Low)**	**189 (Mid)**	**251 (High)**	**128 (Low)**	**189 (Mid)**	**251 (High)**	**4132 (Low)**	**4182 (Mid)**	**4233 (High)**
Frequency (MHz)	**824.2**	**836.4**	**848.8**	**824.2**	**836.4**	**848.8**	**826.4**	**836.4**	**846.6**
Peak-to-Average Ratio (dB)	-	-	-	-	-	-	2.96	2.76	2.84

Band :	WCDMA Band V	Test Mode :	RMC 12.2Kbps Link

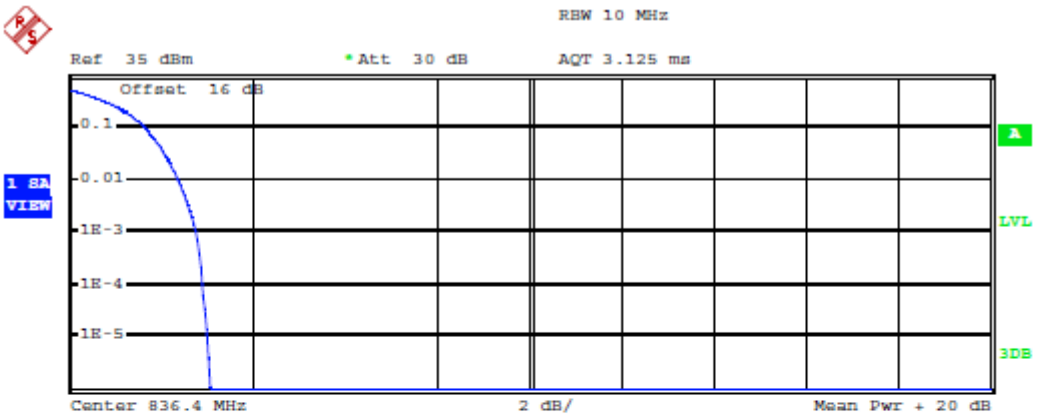
Peak-to-Average Ratio on Channel 4132 (826.4 MHz)



Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	20.41 dBm
Peak	23.75 dBm
Crest	3.35 dB
10 %	1.76 dB
1 %	2.52 dB
.1 %	2.96 dB
.01 %	3.16 dB

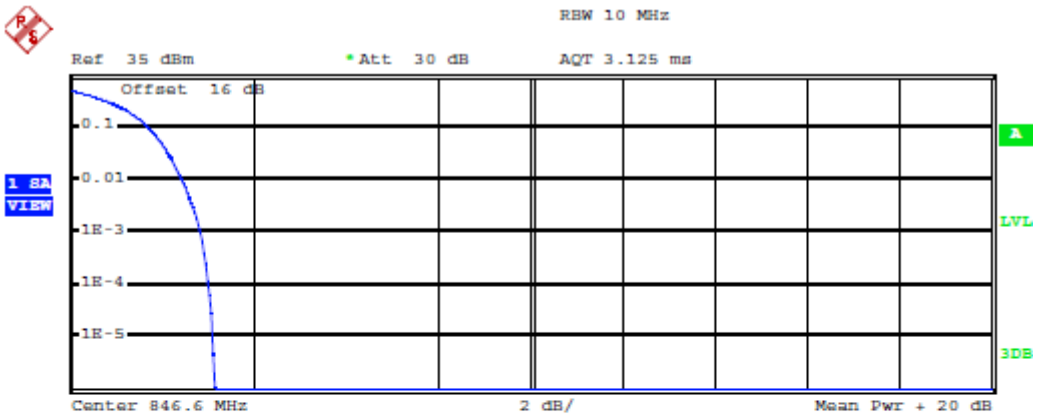
Peak-to-Average Ratio on Channel 4182 (836.4 MHz)



Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	19.44 dBm
Peak	22.48 dBm
Crest	3.05 dB
10 %	1.68 dB
1 %	2.40 dB
.1 %	2.76 dB
.01 %	2.92 dB

Peak-to-Average Ratio on Channel 4233 (846.6 MHz)



Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	20.28 dBm
Peak	23.40 dBm
Crest	3.12 dB
10 %	1.72 dB
1 %	2.44 dB
.1 %	2.84 dB
.01 %	3.00 dB

4. Photos of Testing

4. 1 EUT Test Photographs

Conducted emission test view

Radiated emission test view

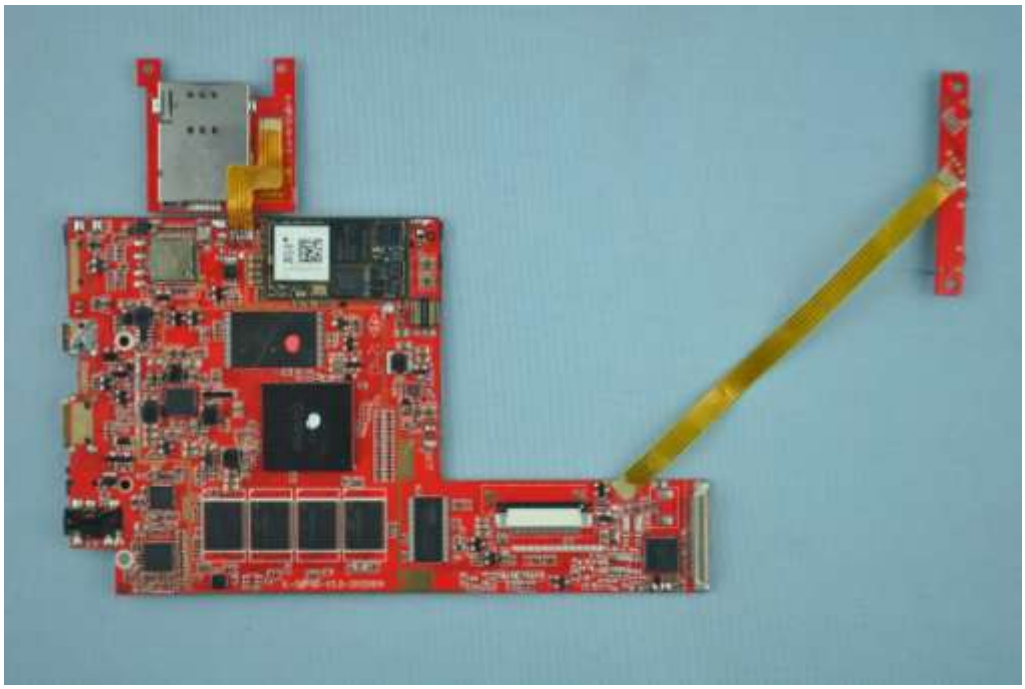
4. 2 EUT Detailed Photographs

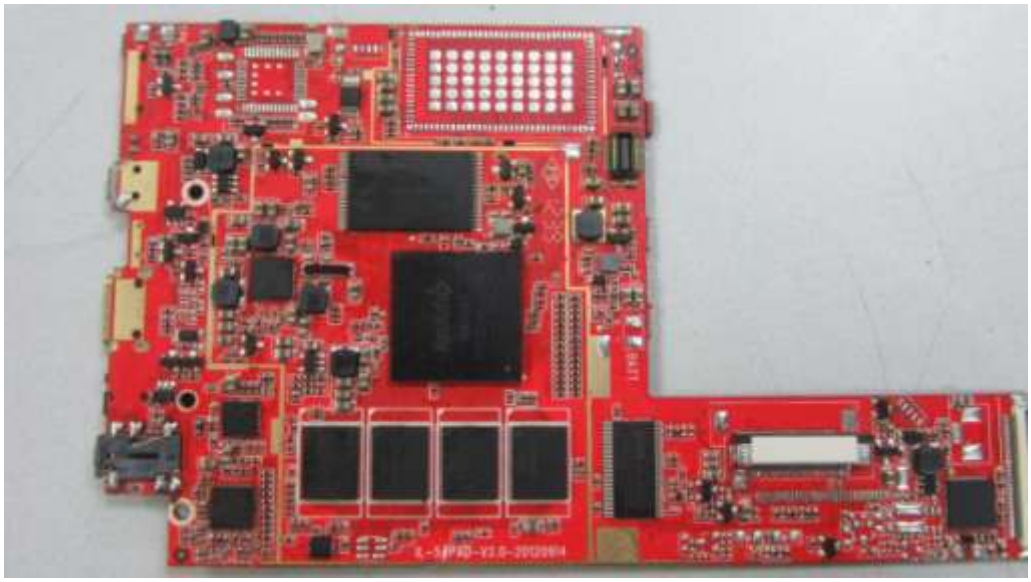
EUT top view

EUT bottom view

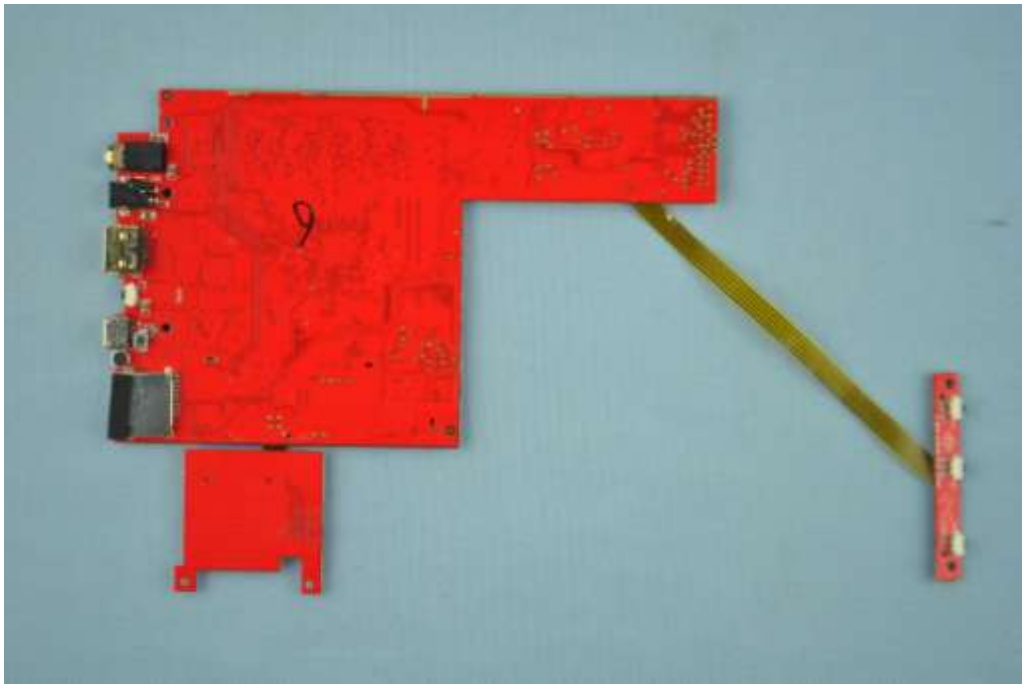
EUT inside whole view

Main &RF board component side





Main & RF board solder side

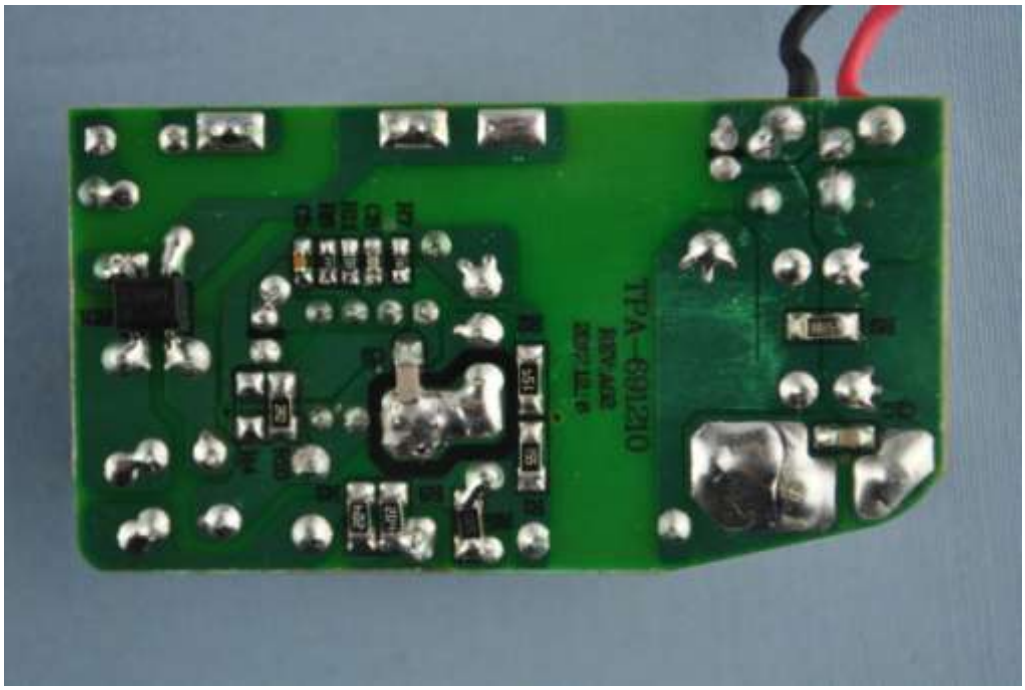


Adapter top view

Adapter side view

Adapter inside whole view

Adapter inside rear view



5. FCC ID Label

FCC ID: OI2K707G

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The Label must not be a stick-on paper label. The Label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Proposed Label Location on EUT

EUT Bottom View/Proposed FCC ID Label Location

6. Test Equipment

The following test equipments were used during the radiated & conducted emission test:

Equipment/ Facilities	Manufacturer	Model #	Serial No.	Due Date
Turntable	SinTek	N/A	N/A	NCR
Antenna Tower	SinTek	N/A	N/A	NCR
OATS	SinTek	N/A	N/A	Sep.28, 2013
Bilog Antenna	SCHAFFNER	CBL6111C	2775	June 12, 2013
Pre-Amplifier	HP	8449B	3008B00965	June 12, 2013
Horn Antenna	EMCO	3115	9602-4659	June 12, 2013
Horn Antenna	Rohde & Schwarz	AT4560	SB3435/03	May 4, 2013
EMI Test Receiver	Rohde & Schwarz	ESPI7	100013	June 01, 2013
Spectrum Analyzer	Rohde & Schwarz	FSP40	100273	May 27, 2013
Communication Tester	Rohde & Schwarz	CMU200	KMO-SZ165	Sep. 4, 2013
Signal Generator	FLUKE	PM5418+Y/C	LO747012	May 27, 2013
Loop Antenna	Rohde & Schwarz	HFH2-Z2	872096/16	Jan. 30, 2013
Trilog-Super Broadband Antenna	SCHWARZBECK	VULB9161	9161-4079	Sep.18, 2013
Trilog-Super Broadband Antenna	SCHWARZBECK	VULB9161	9161-4080	Sep.18, 2013
Broad-Band Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-564	Sep.18, 2013
Broad-Band Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-565	Sep.18, 2013
AMN	Rohde & Schwarz	ESH3-Z5	100197	May 27, 2013
Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9604	Nov.29, 2013
ISN	SCHWARZBECK	NTFM 8158 CAT3	CAT 3 8158-0010	Nov.19, 2013
ISN	SCHWARZBECK	NTFM 8158 CAT5	CAT 5 8158-0009	Nov.19, 2013
ISN	SCHWARZBECK	NTFM 8158 CAT6	CAT 6 8158-0012	Nov.19, 2013
KMO Shielded Room	KMO	KMO-001	N/A	N/A
Coaxial Cable with N-Connectors	SCHWARZBECK	AK9515H	95549	Sep.18, 2013
SOHO Telephone Switching System	IKE	2000-108C	N/A	NCR
3m Anechoic Chamber	Sintek	KMO-3AC	KMO-3AC-1	May 29, 2013
Temperature Chamber	TABAI	PSL-4GTW	N/A	Feb.10, 2013