



FCC RF Test Report

APPLICANT : HTC Corporation
EQUIPMENT : Smartphone
MODEL NAME : 0PKV100
FCC ID : NM80PKV100
STANDARD : 47 CFR Part 2, 22(H), 27
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Jan. 12, 2015 and completely tested on Mar. 03, 2015. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA / EIA-603-C-2004 and the testing has shown the tested sample to be in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager



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FCC ID : NM80PKV100

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG511222B	Rev. 01	Initial issue of report	Mar. 17, 2015

**SUMMARY OF TEST RESULT**

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
3.5	N/A	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049 §22.917(b) §27.53(m)(6)	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §22.917(a) §27.53(m)(4)	Conducted Band Edge Measurement (Band 5) (Band 7)	$< 43+10\log_{10}(P[\text{Watts}])$	PASS	-
3.8	§2.1051 §22.917(a)	Conducted Spurious Emission (Band 5)	$< 43+10\log_{10}(P[\text{Watts}])$	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 7)	$< 55+10\log_{10}(P[\text{Watts}])$		
3.9	§2.1055 §22.355 §27.54	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22 Within Authorized Band	PASS	-
4.4	§22.913(a)(2)	Effective Radiated Power (Band 5)	ERP < 7 Watt	PASS	-
	§27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 7)	EIRP < 2Watt		
4.5	§2.1053 §22.917(a)	Radiated Spurious Emission (Band 5)	$< 43+10\log_{10}(P[\text{Watts}])$	PASS	Under limit 16.53 dB at 7500.000 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 7)	$< 55+10\log_{10}(P[\text{Watts}])$		



1 General Description

1.1 Applicant

HTC Corporation

1F, 6-3 Baoqiang Road, Xindian District, New Taipei City, Taiwan 231

1.2 Manufacturer

HTC Corporation

1F, 6-3 Baoqiang Road, Xindian District, New Taipei City, Taiwan 231

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Smartphone
Model Name	OPKV100
FCC ID	NM80PKV100
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE/NFC WLAN 11b/g/n (HT20) WLAN 11a/n (HT20/HT40) WLAN 11ac (VHT20/VHT40/VHT80) Bluetooth v4.0 EDR/LE
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification subjective to this standard

Product Specification subjective to this standard	
Tx Frequency	LTE Band 5 : 824.7 MHz ~ 848.3 MHz LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz
Rx Frequency	LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 7 : 2622.5MHz ~ 2687.5 MHz
Bandwidth	LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 7 : 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 5 : 22.88 dBm LTE Band 7 : 22.48 dBm
Type of Modulation	QPSK / 16QAM

1.5 Modification of EUT

No modifications are made to the EUT during all test items.



1.6 Emission Designator

LTE Band 5		QPSK			16QAM			
BW(MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)		Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	
			Ant. 1	Ant. 2			Ant. 1	Ant. 2
1.4	1M10G7D	-	0.0796	0.0309	1M10W7D	-	0.0723	0.0227
3	2M73G7D	-	0.0830	0.0294	2M73W7D	-	0.0695	0.0258
5	4M50G7D	-	0.0767	0.0289	4M50W7D	-	0.0644	0.0239
10	9M10G7D	0.0140	0.0817	0.0303	9M06W7D	-	0.0723	0.0248
LTE Band 7		QPSK			16QAM			
BW(MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)		Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	
			Ant. 1	Ant. 2			Ant. 1	Ant. 2
5	4M52G7D	-	0.2515	0.0771	4M50W7D	-	0.2113	0.0659
10	9M08G7D	0.0082	0.2612	0.0899	9M06W7D	-	0.2234	0.0773
15	13M5G7D	-	0.2600	0.0820	13M5W7D	-	0.2188	0.0643
20	18M6G7D	-	0.2559	0.0773	18M5W7D	-	0.2188	0.0597

1.7 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978	
Test Site No.	Sporton Site No.	
	TH02-HY	03CH07-HY

1.8 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR Part 2, 22(H), 27
- ♦ ANSI / TIA / EIA-603-C-2004
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v02r02
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



2 Test Configuration of Equipment Under Test

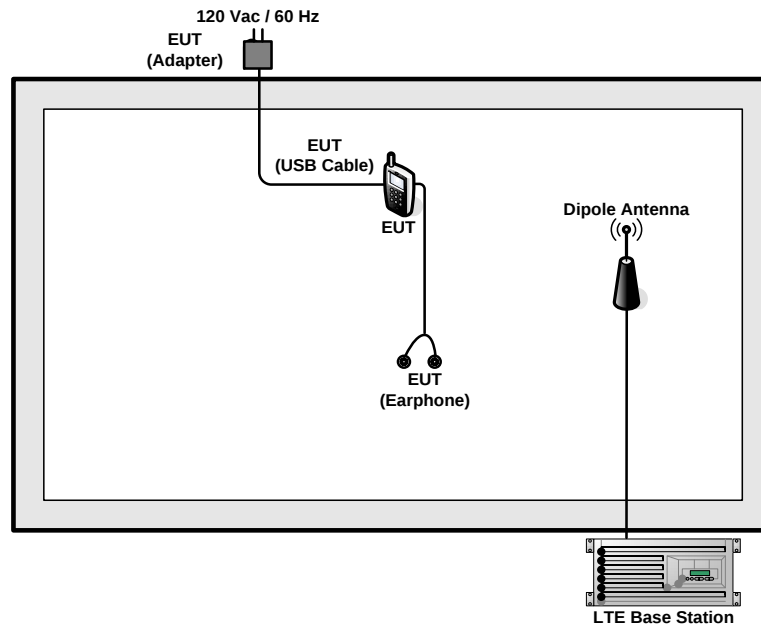
2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r02 with maximum output power.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Max. Output Power	5	✓	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓
	7	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Peak-to-Average Ratio	5				✓	-	-	✓	✓	✓		✓	✓	✓	✓
	7	-	-				✓	✓	✓	✓		✓	✓	✓	✓
26dB and 99% Bandwidth	5	✓	✓	✓	✓	-	-	✓	✓			✓	✓	✓	✓
	7	-	-	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓
Conducted Band Edge	5	✓	✓	✓	✓	-	-	✓	✓	✓		✓	✓		✓
	7	-	-	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
Conducted Spurious Emission	5	✓	✓	✓	✓	-	-	✓	✓	✓			✓	✓	✓
	7	-	-	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
Frequency Stability	5				✓	-	-	✓				✓		✓	
	7	-	-		✓			✓				✓		✓	
E.R.P./ E.I.R.P.	5	✓	✓	✓	✓	-	-	✓	✓	✓			✓	✓	✓
	7	-	-	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
Radiated Spurious Emission	5	✓	✓	✓	✓	-	-	✓		✓			✓	✓	✓
	7	-	-	✓	✓	✓	✓	✓		✓			✓	✓	✓
Note	1. The mark "✓" means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. For E.R.P./E.I.R.P. measurement, the widest bandwidth of each band is chosen for testing due to highest conducted power. Besides, the lowest bandwidth of each band is also measured for reporting only. 4. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.														

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Example :

$$\begin{aligned}
 \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\
 &= 4.2 + 10 = 14.2 \text{ (dB)}
 \end{aligned}$$

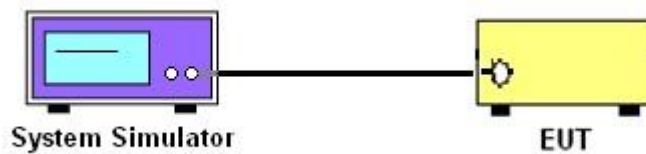
3 Conducted Test Items

3.1 Measuring Instruments

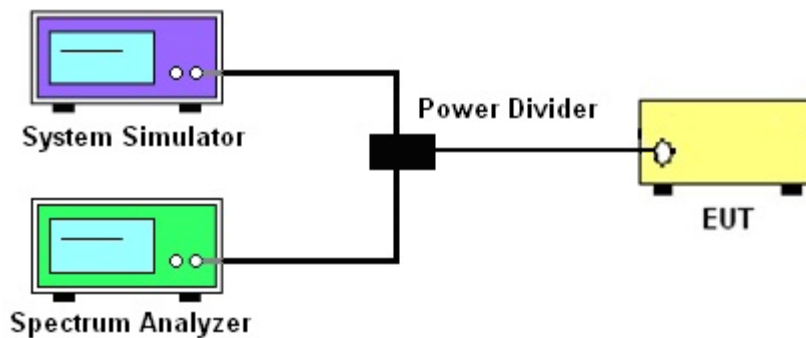
See list of measuring instruments of this test report.

3.2 Test Setup

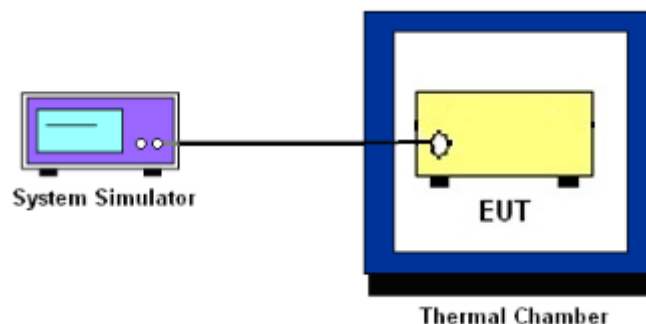
3.2.1 Conducted Output Power



3.2.2 Peak-to-Average Ratio, Occupied Bandwidth ,Conducted Band-Edge and Conducted Spurious Emission



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.



3.4 Conducted Output Power and ERP/EIRP

3.4.1 Description of the Conducted Output Power Measurement and ERP/EIRP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

3.4.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.



3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.5.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 5.7.1.
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.



3.6 Occupied Bandwidth

3.6.1 Description of Occupied Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.6.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 4.2.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53(m)(4)

For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

3.7.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 6.0.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Set spectrum analyzer with RMS detector.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power $P(\text{Watts})$
 $= P(\text{W}) - [43 + 10\log(P)] \text{ (dB)}$
 $= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
 $= -13\text{dBm}.$

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

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.

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 $55 + 10 \log (P)$ dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

3.8.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 6.0.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. 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.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13$ dBm.
9. The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)



3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

3.9.2 Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. 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.
3. 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.

3.9.3 Test Procedures for Voltage Variation

1. The testing follows FCC KDB 971168 v02r02 Section 9.0.
2. The EUT was placed in a temperature chamber at $25\pm 5^{\circ}\text{C}$ and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
4. The variation in frequency was measured for the worst case.

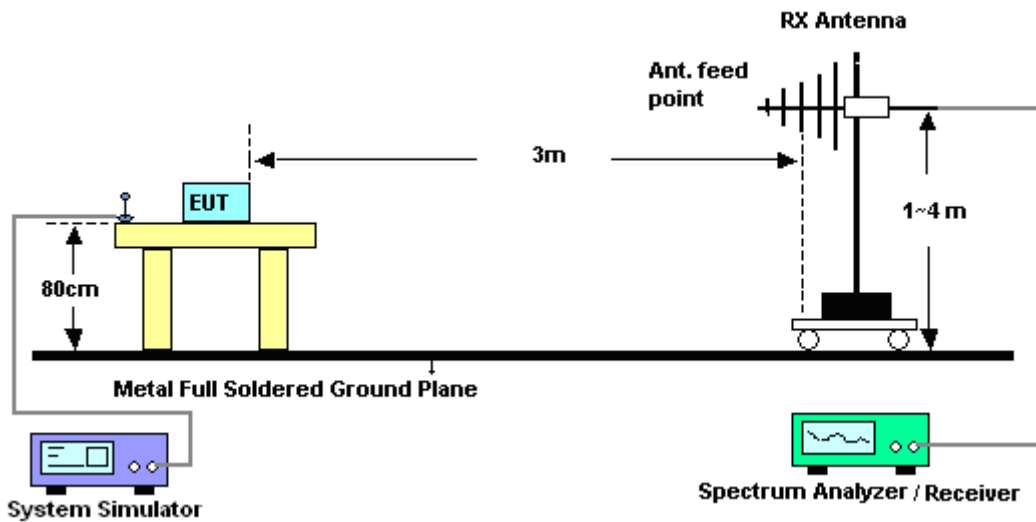
4 Radiated Test Items

4.1 Measuring Instruments

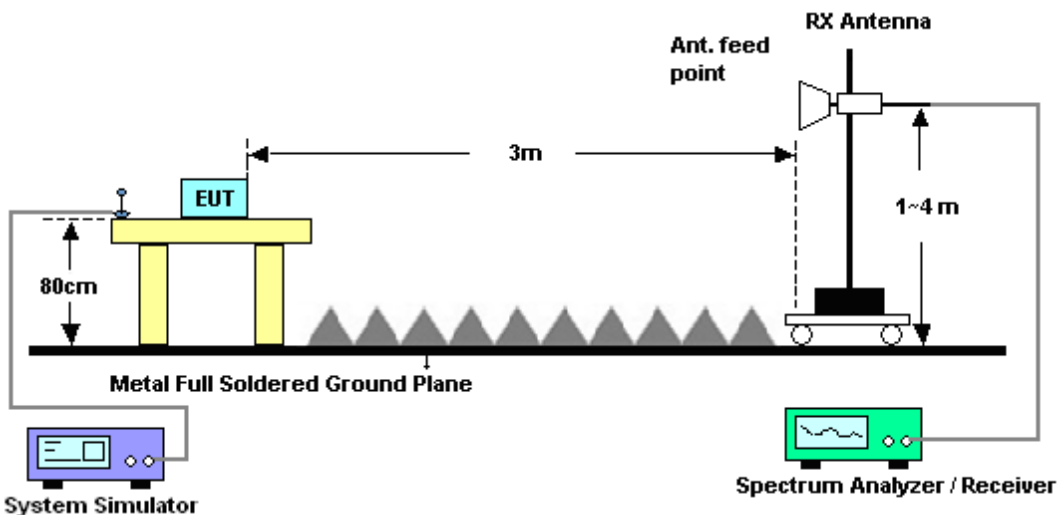
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

4.4 Effective Radiated Power and Effective Isotropic Radiated Power

4.4.1 Description of the ERP/EIRP Measurement

Effective radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-C-2004, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r02. Mobile and portable (hand-held) stations operating are limited to average ERP of 7 watts with LTE band 5.

Equivalent isotropic radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-C-2004, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r02. Mobile and portable (hand-held) stations operating are limited to average EIRP of 2 watts with LTE band 7.

4.4.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 5.2.1. (for CDMA/WCDMA), Section 5.2.2.2 (for GSM/GPRS/EDGE) and ANSI / TIA-603-C-2004 Section 2.2.17.
2. The EUT was placed on a non-conductive rotating platform 0.8 meters high 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 RMS detector.
3. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power. The maximum 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.
4. 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, $EIRP = LVL + \text{Correction factor}$ and $ERP = EIRP - 2.15$.



	LTE					
LTE BW	1.4M	3M	5M	10M	15M	20M
Span	3MHz	6MHz	10MHz	20MHz	30MHz	40MHz
RBW	30kHz	100kHz	100kHz	300kHz	300kHz	300kHz
VBW	100kHz	300kHz	300kHz	1MHz	1MHz	1MHz
Detector	RMS	RMS	RMS	RMS	RMS	RMS
Trace	Average	Average	Average	Average	Average	Average
Average Type	Power	Power	Power	Power	Power	Power
Sweep Count	100	100	100	100	100	100



4.5 Radiated Spurious Emission

4.5.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-C-2004. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For Band 7

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.5.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 5.8 and ANSI / TIA-603-C-2004 Section 2.2.12.
2. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. 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.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$$

$$= -13\text{dBm.}$$

For Band 7:

12. The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)
13. $\text{EIRP (dBm)} = \text{S.G. Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$
14. $\text{ERP (dBm)} = \text{EIRP} - 2.15$



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
LTE Base Station	Anritsu	MT8820C	6201026480	30MHz~2.7GHz SISO	Jan. 08, 2015	Feb. 09, 2015 ~ Feb. 25, 2015	Jan. 07, 2016	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 09, 2014	Feb. 09, 2015 ~ Feb. 25, 2015	Jun. 08, 2015	Conducted (TH02-HY)
Thermal Chamber	Ten Billion	TTH-D3SP	TBN-930701	N/A	Jul. 17, 2014	Feb. 09, 2015 ~ Feb. 25, 2015	Jul. 16, 2015	Conducted (TH02-HY)
Signal Analyzer	Rohde & Schwarz	FSV 30	100895	9kHz ~ 30GHz	Apr. 11, 2014	Feb. 09, 2015 ~ Mar. 03, 2015	Apr. 10, 2015	Radiation (03CH07-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz ~ 1GHz	Sep. 27, 2014	Feb. 09, 2015 ~ Mar. 03, 2015	Sep. 26, 2015	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	75962	1GHz~18GHz	Aug. 19, 2014	Feb. 09, 2015 ~ Mar. 03, 2015	Aug. 18, 2015	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10 MHz ~ 1000MHz	Mar. 17, 2014	Feb. 09, 2015 ~ Mar. 03, 2015	Mar. 16, 2015	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1 GHz~26.5 GHz	Oct. 21, 2014	Feb. 09, 2015 ~ Mar. 03, 2015	Oct. 20, 2015	Radiation (03CH07-HY)
Turn Table	ChainTek	ChainTek 3000	N/A	0 ~ 360 degree	N/A	Feb. 09, 2015 ~ Mar. 03, 2015	N/A	Radiation (03CH07-HY)
Antenna Mast	ChainTek	M-400-0	114/8000604/L	N/A	N/A	Feb. 09, 2015 ~ Mar. 03, 2015	N/A	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Oct. 02, 2014	Feb. 09, 2015 ~ Mar. 03, 2015	Oct. 01, 2015	Radiation (03CH07-HY)



6 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.54
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.72
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.74	22.66	22.67
1.4	1	2		22.73	22.55	22.50
1.4	1	5		22.42	22.50	22.52
1.4	3	0		22.72	22.56	22.63
1.4	3	1		22.70	22.65	22.66
1.4	3	2		22.60	22.51	22.53
1.4	6	0		21.66	21.50	21.47
1.4	1	0	16-QAM	21.95	21.94	21.88
1.4	1	2		21.56	21.80	21.07
1.4	1	5		21.68	21.91	21.50
1.4	3	0		21.88	21.70	21.78
1.4	3	1		21.94	21.64	21.52
1.4	3	2		21.73	21.66	21.54
1.4	6	0		20.54	20.26	20.27
3	1	0	QPSK	22.45	22.40	22.52
3	1	7		22.33	22.39	22.51
3	1	14		22.35	22.28	22.22
3	8	0		21.57	21.51	21.48
3	8	4		21.61	21.57	21.43
3	8	7		21.57	21.44	21.53
3	15	0		21.53	21.51	21.46
3	1	0	16-QAM	21.75	21.75	21.70
3	1	7		21.66	21.26	21.69
3	1	14		21.60	21.10	21.42
3	8	0		20.56	20.59	20.46
3	8	4		20.57	20.50	20.28
3	8	7		20.40	20.59	20.40
3	15	0		20.46	20.75	20.47



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.55	22.45	22.52
5	1	12		22.40	22.44	22.51
5	1	24		22.44	22.37	22.22
5	12	0		21.59	21.52	21.48
5	12	6		21.66	21.60	21.48
5	12	11		21.62	21.52	21.53
5	25	0		21.57	21.58	21.53
5	1	0	16-QAM	21.78	21.78	21.79
5	1	12		21.75	21.36	21.78
5	1	24		21.62	21.19	21.50
5	12	0		20.56	20.66	20.54
5	12	6		20.62	20.59	20.35
5	12	11		20.46	20.62	20.43
5	25	0		20.53	20.77	20.52
10	1	0	QPSK	22.88	22.66	22.74
10	1	24		22.72	22.35	22.73
10	1	49		22.51	22.39	22.45
10	25	0		21.68	21.54	21.49
10	25	12		21.57	21.53	21.52
10	25	24		21.62	21.55	21.51
10	50	0		21.57	21.56	21.52
10	1	0	16-QAM	21.70	21.72	21.82
10	1	24		21.69	21.37	21.81
10	1	49		21.64	21.71	21.72
10	25	0		20.63	20.94	20.74
10	25	12		20.81	20.83	20.81
10	25	24		20.65	20.46	20.52
10	50	0		20.62	20.70	20.51



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.32	21.59	21.71
5	1	12		22.02	21.49	21.64
5	1	24		21.88	21.23	21.44
5	12	0		21.32	20.50	20.74
5	12	6		21.19	20.30	20.70
5	12	11		21.24	20.52	20.78
5	25	0		21.24	20.49	20.76
5	1	0	16-QAM	21.62	21.05	21.37
5	1	12		21.69	20.74	21.61
5	1	24		21.54	20.71	20.96
5	12	0		20.24	19.40	19.70
5	12	6		20.12	19.27	19.76
5	12	11		20.13	19.19	19.73
5	25	0		20.17	19.27	19.91
10	1	0	QPSK	22.26	21.52	21.71
10	1	24		21.99	21.35	21.72
10	1	49		21.98	21.18	21.58
10	25	0		21.32	20.55	20.76
10	25	12		21.23	20.30	20.79
10	25	24		21.23	20.30	20.71
10	50	0		21.30	20.38	20.63
10	1	0	16-QAM	21.76	20.89	21.03
10	1	24		21.12	20.34	20.98
10	1	49		21.14	20.36	20.95
10	25	0		20.27	19.78	19.74
10	25	12		20.26	19.43	19.78
10	25	24		20.26	19.46	19.80
10	50	0		20.13	19.35	19.59



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.47	21.66	21.69
15	1	37		22.24	21.30	21.71
15	1	74		22.06	21.24	21.76
15	36	0		21.31	20.59	20.79
15	36	18		21.27	20.31	20.66
15	36	37		21.12	20.33	20.72
15	75	0		21.22	20.42	20.76
15	1	0	16-QAM	21.70	21.08	20.80
15	1	37		21.31	20.67	20.50
15	1	74		20.85	20.67	20.55
15	36	0		20.34	19.66	19.74
15	36	18		20.30	19.36	19.73
15	36	37		20.17	19.27	19.78
15	75	0		20.18	19.36	19.60
20	1	0	QPSK	22.48	21.92	21.71
20	1	49		22.20	21.50	21.75
20	1	99		21.79	21.24	21.65
20	50	0		21.30	20.68	20.71
20	50	24		21.12	20.49	20.71
20	50	49		20.98	20.31	20.79
20	100	0		21.21	20.51	20.68
20	1	0	16-QAM	21.76	21.08	20.90
20	1	49		21.41	20.63	20.92
20	1	99		21.11	20.81	21.01
20	50	0		20.37	19.76	19.65
20	50	24		20.15	19.57	19.67
20	50	49		20.12	19.32	19.74
20	100	0		20.15	19.45	19.64



Appendix B. Test Results of Radiated Test

ERP/EIRP



<Ant. 1>

LTE Band 5 / 1.4MHz							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	18.99	0.0793	9.85	0.0097
Middle		1	0	19.01	0.0796	10.12	0.0103
Highest		1	0	18.68	0.0738	10.59	0.0115
Lowest	16QAM	1	0	18.59	0.0723	9.06	0.0081
Middle		1	0	17.96	0.0625	9.80	0.0095
Highest		1	0	17.71	0.0590	10.17	0.0104
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 3MHz							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	19.18	0.0828	10.14	0.0103
Middle		1	0	19.19	0.0830	10.49	0.0112
Highest		1	0	18.50	0.0708	10.19	0.0104
Lowest	16QAM	1	0	18.42	0.0695	9.27	0.0085
Middle		1	0	17.76	0.0597	8.76	0.0075
Highest		1	0	17.44	0.0555	9.25	0.0084
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 5MHz							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	18.81	0.0760	9.59	0.0091
Middle		1	0	18.72	0.0745	10.07	0.0102
Highest		1	0	18.85	0.0767	10.10	0.0102
Lowest	16QAM	1	0	17.63	0.0579	9.26	0.0084
Middle		1	0	18.01	0.0632	9.45	0.0088
Highest		1	0	18.09	0.0644	9.58	0.0091
Limit	ERP < 7W			Result		PASS	



LTE Band 5 / 10MHz							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	19.07	0.0807	10.08	0.0102
Middle		1	0	19.12	0.0817	10.32	0.0108
Highest		1	0	19.06	0.0805	10.36	0.0109
Lowest	16QAM	1	0	17.45	0.0556	9.36	0.0086
Middle		1	0	17.69	0.0587	8.63	0.0073
Highest		1	0	18.59	0.0723	8.88	0.0077
Limit	ERP < 7W			Result		PASS	

<Ant. 2>

LTE Band 5 / 1.4MHz							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	14.64	0.0291	1.91	0.0016
Middle		1	0	14.89	0.0309	2.49	0.0018
Highest		1	0	14.66	0.0293	0.82	0.0012
Lowest	16QAM	1	0	13.46	0.0222	1.39	0.0014
Middle		1	0	13.56	0.0227	0.67	0.0012
Highest		1	0	12.94	0.0197	0.27	0.0011
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 3MHz							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	14.68	0.0294	1.71	0.0015
Middle		1	0	14.56	0.0286	2.38	0.0017
Highest		1	0	13.82	0.0241	1.21	0.0013
Lowest	16QAM	1	0	13.70	0.0234	0.30	0.0011
Middle		1	0	14.12	0.0258	0.70	0.0012
Highest		1	0	12.61	0.0182	0.01	0.0010
Limit	ERP < 7W			Result		PASS	



LTE Band 5 / 5MHz							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	14.61	0.0289	1.43	0.0014
Middle		1	0	14.36	0.0273	2.29	0.0017
Highest		1	0	13.69	0.0234	1.57	0.0014
Lowest	16QAM	1	0	13.22	0.0210	0.89	0.0012
Middle		1	0	13.78	0.0239	1.69	0.0015
Highest		1	0	13.45	0.0221	-0.03	0.0010
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 10MHz							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	14.55	0.0285	1.05	0.0013
Middle		1	0	14.81	0.0303	2.28	0.0017
Highest		1	0	14.13	0.0259	1.65	0.0015
Lowest	16QAM	1	0	13.12	0.0205	0.17	0.0010
Middle		1	0	13.95	0.0248	1.93	0.0016
Highest		1	0	13.46	0.0222	0.32	0.0011
Limit	ERP < 7W			Result		PASS	

**<Ant. 1>**

LTE Band 7 / 5MHz							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	23.09	0.2036	20.86	0.1218
Middle		1	0	23.86	0.2433	21.30	0.1348
Highest		1	0	24.01	0.2515	21.67	0.1469
Lowest	16QAM	1	0	22.58	0.1811	20.17	0.1040
Middle		1	0	23.11	0.2046	19.75	0.0944
Highest		1	0	23.25	0.2113	19.98	0.0995
Limit	EIRP < 2W			Result		PASS	

LTE Band 7 / 10MHz							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	23.41	0.2193	21.15	0.1303
Middle		1	0	23.97	0.2495	21.67	0.1469
Highest		1	0	24.17	0.2612	21.40	0.1380
Lowest	16QAM	1	0	22.88	0.1941	19.81	0.0957
Middle		1	0	23.49	0.2234	19.83	0.0962
Highest		1	0	23.39	0.2183	20.48	0.1117
Limit	EIRP < 2W			Result		PASS	



LTE Band 7 / 15MHz							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	23.89	0.2449	21.86	0.1535
Middle		1	0	24.14	0.2594	21.81	0.1517
Highest		1	0	24.15	0.2600	21.46	0.1400
Lowest	16QAM	1	0	22.68	0.1854	20.27	0.1064
Middle		1	0	23.28	0.2128	20.66	0.1164
Highest		1	0	23.40	0.2188	20.97	0.1250
Limit	EIRP < 2W			Result		PASS	

LTE Band 7 / 20MHz							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	23.82	0.2410	21.45	0.1396
Middle		1	0	23.97	0.2495	21.61	0.1449
Highest		1	0	24.08	0.2559	21.71	0.1483
Lowest	16QAM	1	0	22.98	0.1986	20.60	0.1148
Middle		1	0	23.40	0.2188	20.70	0.1175
Highest		1	0	23.20	0.2089	20.81	0.1205
Limit	EIRP < 2W			Result		PASS	

<Ant. 2>

LTE Band 7 / 5MHz							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	18.61	0.0727	17.53	0.0567
Middle		1	0	18.87	0.0771	18.01	0.0633
Highest		1	0	18.56	0.0717	17.70	0.0589
Lowest	16QAM	1	0	17.73	0.0593	16.72	0.0470
Middle		1	0	18.19	0.0659	16.45	0.0442
Highest		1	0	17.82	0.0605	17.51	0.0564
Limit	EIRP < 2W			Result		PASS	

LTE Band 7 / 10MHz							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	19.37	0.0865	17.82	0.0605
Middle		1	0	19.42	0.0875	18.06	0.0640
Highest		1	0	19.54	0.0899	18.38	0.0689
Lowest	16QAM	1	0	18.88	0.0773	16.78	0.0476
Middle		1	0	18.23	0.0665	17.12	0.0515
Highest		1	0	17.70	0.0589	15.72	0.0374
Limit	EIRP < 2W			Result		PASS	



LTE Band 7 / 15MHz							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	18.36	0.0685	17.03	0.0505
Middle		1	0	18.22	0.0664	17.60	0.0575
Highest		1	0	19.14	0.0820	18.09	0.0644
Lowest	16QAM	1	0	18.08	0.0643	16.30	0.0427
Middle		1	0	16.07	0.0404	15.27	0.0336
Highest		1	0	17.91	0.0618	17.12	0.0515
Limit	EIRP < 2W			Result		PASS	

LTE Band 7 / 20MHz							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	18.83	0.0764	17.72	0.0592
Middle		1	0	17.88	0.0614	17.46	0.0557
Highest		1	0	18.88	0.0773	17.44	0.0555
Lowest	16QAM	1	0	17.20	0.0525	15.76	0.0377
Middle		1	0	17.76	0.0597	16.98	0.0499
Highest		1	0	17.70	0.0589	16.79	0.0478
Limit	EIRP < 2W			Result		PASS	



Radiated Spurious Emission



<Ant. 1>

LTE Band 5 / 1.4MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-47.90	-13	-34.90	-59.12	-49.66	0.98	4.89	H
	2472	-51.66	-13	-38.66	-68.11	-53.54	1.28	5.32	H
	3296	-48.53	-13	-35.53	-65.96	-51.94	1.54	7.10	H
									H
									H
									H
	1648	-51.89	-13	-38.89	-63.89	-53.65	0.98	4.89	V
	2472	-56.24	-13	-43.24	-74.1	-58.12	1.28	5.32	V
	3296	-47.33	-13	-34.33	-66.44	-50.74	1.54	7.10	V
									V
									V
									V
Middle	1672	-49.79	-13	-36.79	-61.04	-51.47	0.99	4.82	H
	2504	-49.42	-13	-36.42	-66.22	-51.38	1.29	5.40	H
	3344	-49.69	-13	-36.69	-67.3	-53.3	1.56	7.31	H
									H
									H
									H
	1672	-54.10	-13	-41.10	-66.08	-55.78	0.99	4.82	V
	2504	-53.92	-13	-40.92	-71.99	-55.88	1.29	5.40	V
	3344	-50.08	-13	-37.08	-69.14	-53.69	1.56	7.31	V
									V
									V
									V
Highest	1696	-48.46	-13	-35.46	-60.25	-50.06	1.00	4.75	H
	2544	-51.49	-13	-38.49	-68.24	-53.47	1.30	5.44	H
	3392	-50.22	-13	-37.22	-67.96	-54.02	1.57	7.52	H
									H
									H
									H
	1696	-53.86	-13	-40.86	-66.37	-55.46	1.00	4.75	V
	2544	-54.54	-13	-41.54	-72.79	-56.52	1.30	5.44	V
	3392	-51.28	-13	-38.28	-70.28	-55.08	1.57	7.52	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 5 / 3MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-47.58	-13	-34.58	-58.8	-49.34	0.98	4.89	H
	2472	-51.87	-13	-38.87	-68.36	-53.75	1.28	5.32	H
	3296	-48.79	-13	-35.79	-66.35	-52.2	1.54	7.10	H
									H
									H
									H
	1648	-51.67	-13	-38.67	-63.59	-53.43	0.98	4.89	V
	2472	-55.67	-13	-42.67	-73.52	-57.55	1.28	5.32	V
	3296	-46.69	-13	-33.69	-65.79	-50.1	1.54	7.10	V
									V
									V
									V
Middle	1672	-49.03	-13	-36.03	-60.31	-50.71	0.99	4.82	H
	2504	-50.73	-13	-37.73	-67.4	-52.69	1.29	5.40	H
	3344	-49.80	-13	-36.80	-67.53	-53.41	1.56	7.31	H
									H
									H
									H
	1672	-53.20	-13	-40.20	-65.18	-54.88	0.99	4.82	V
	2504	-54.04	-13	-41.04	-72.11	-56	1.29	5.40	V
	3344	-48.77	-13	-35.77	-67.91	-52.38	1.56	7.31	V
									V
									V
									V
Highest	1688	-49.74	-13	-36.74	-61.27	-51.37	1.00	4.77	H
	2536	-54.09	-13	-41.09	-70.82	-56.07	1.30	5.43	H
	3384	-50.34	-13	-37.34	-68.21	-54.11	1.57	7.49	H
									H
									H
									H
	1688	-54.35	-13	-41.35	-66.37	-55.98	1.00	4.77	V
	2536	-55.53	-13	-42.53	-73.76	-57.51	1.30	5.43	V
	3384	-50.67	-13	-37.67	-69.82	-54.44	1.57	7.49	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 5 / 5MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-48.48	-13	-35.48	-59.68	-50.24	0.98	4.89	H
	2472	-51.76	-13	-38.76	-68.27	-53.64	1.28	5.32	H
	3296	-48.30	-13	-35.30	-65.75	-51.71	1.54	7.10	H
									H
									H
									H
	1648	-52.84	-13	-39.84	-64.71	-54.6	0.98	4.89	V
	2472	-56.70	-13	-43.70	-74.54	-58.58	1.28	5.32	V
	3296	-47.71	-13	-34.71	-66.85	-51.12	1.54	7.10	V
									V
									V
									V
Middle	1664	-48.93	-13	-35.93	-60.22	-50.64	0.98	4.84	H
	2504	-51.10	-13	-38.10	-67.79	-53.06	1.29	5.40	H
	3336	-48.86	-13	-35.86	-66.38	-52.44	1.55	7.28	H
									H
									H
									H
	1664	-53.54	-13	-40.54	-65.69	-55.25	0.98	4.84	V
	2504	-55.05	-13	-42.05	-73.14	-57.01	1.29	5.40	V
	3336	-48.63	-13	-35.63	-67.76	-52.21	1.55	7.28	V
									V
									V
									V
Highest	1688	-52.67	-13	-39.67	-64.12	-54.3	1.00	4.77	H
	2536	-53.34	-13	-40.34	-70.08	-55.32	1.30	5.43	H
	3376	-50.20	-13	-37.20	-67.75	-53.94	1.57	7.45	H
									H
									H
									H
	1688	-55.72	-13	-42.72	-67.82	-57.35	1.00	4.77	V
	2536	-55.57	-13	-42.57	-73.76	-57.55	1.30	5.43	V
	3376	-50.72	-13	-37.72	-69.71	-54.46	1.57	7.45	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 5 / 10MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-48.60	-13	-35.60	-59.83	-50.36	0.98	4.89	H
	2472	-52.56	-13	-39.56	-69.03	-54.44	1.28	5.32	H
	3296	-49.08	-13	-36.08	-66.57	-52.49	1.54	7.10	H
									H
									H
									H
	1648	-52.86	-13	-39.86	-64.71	-54.62	0.98	4.89	V
	2472	-56.28	-13	-43.28	-74.14	-58.16	1.28	5.32	V
	3296	-48.06	-13	-35.06	-67.14	-51.47	1.54	7.10	V
									V
									V
									V
Middle	1664	-48.94	-13	-35.94	-60.25	-50.65	0.98	4.84	H
	2496	-48.89	-13	-35.89	-65.67	-50.84	1.29	5.39	H
	3328	-48.56	-13	-35.56	-66.17	-52.1	1.55	7.24	H
									H
									H
									H
	1664	-52.86	-13	-39.86	-64.97	-54.57	0.98	4.84	V
	2496	-53.67	-13	-40.67	-71.65	-55.62	1.29	5.39	V
	3328	-47.91	-13	-34.91	-67.07	-51.45	1.55	7.24	V
									V
									V
									V
Highest	1680	-50.22	-13	-37.22	-61.69	-51.87	0.99	4.80	H
	2520	-50.26	-13	-37.26	-66.98	-52.23	1.30	5.42	H
	3360	-50.93	-13	-37.93	-68.56	-54.6	1.56	7.38	H
									H
									H
									H
	1680	-55.53	-13	-42.53	-67.62	-57.18	0.99	4.80	V
	2520	-53.79	-13	-40.79	-71.95	-55.76	1.30	5.42	V
	3360	-51.33	-13	-38.33	-70.43	-55	1.56	7.38	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



<Ant. 2>

LTE Band 5 / 1.4MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-51.48	-13	-38.48	-62.73	-53.24	0.98	4.89	H
	2472	-48.90	-13	-35.90	-65.39	-50.78	1.28	5.32	H
	3296	-53.69	-13	-40.69	-71.2	-57.1	1.54	7.10	H
									H
									H
									H
	1648	-48.74	-13	-35.74	-60.67	-50.5	0.98	4.89	V
	2472	-48.35	-13	-35.35	-66.28	-50.23	1.28	5.32	V
	3296	-52.76	-13	-39.76	-71.81	-56.17	1.54	7.10	V
									V
									V
									V
Middle	1672	-51.32	-13	-38.32	-62.54	-53	0.99	4.82	H
	2504	-49.40	-13	-36.40	-66.01	-51.36	1.29	5.40	H
	3344	-52.51	-13	-39.51	-70.29	-56.12	1.56	7.31	H
									H
									H
									H
	1672	-48.51	-13	-35.51	-60.55	-50.19	0.99	4.82	V
	2504	-46.08	-13	-33.08	-64.13	-48.04	1.29	5.40	V
	3344	-53.72	-13	-40.72	-72.79	-57.33	1.56	7.31	V
									V
									V
									V
Highest	1696	-50.82	-13	-37.82	-62.61	-52.42	1.00	4.75	H
	2544	-54.76	-13	-41.76	-71.48	-56.74	1.30	5.44	H
	3392	-53.27	-13	-40.27	-71.03	-57.07	1.57	7.52	H
									H
									H
									H
	1696	-46.83	-13	-33.83	-59.34	-48.43	1.00	4.75	V
	2544	-51.69	-13	-38.69	-70.11	-53.67	1.30	5.44	V
	3392	-54.02	-13	-41.02	-73.02	-57.82	1.57	7.52	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 5 / 3MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-51.38	-13	-38.38	-62.54	-53.14	0.98	4.89	H
	2472	-50.21	-13	-37.21	-66.65	-52.09	1.28	5.32	H
	3296	-53.10	-13	-40.10	-70.7	-56.51	1.54	7.10	H
									H
									H
									H
	1648	-49.29	-13	-36.29	-61.22	-51.05	0.98	4.89	V
	2472	-47.80	-13	-34.80	-65.73	-49.68	1.28	5.32	V
	3296	-53.20	-13	-40.20	-72.14	-56.61	1.54	7.10	V
									V
									V
									V
Middle	1672	-50.38	-13	-37.38	-61.69	-52.06	0.99	4.82	H
	2504	-51.29	-13	-38.29	-68.09	-53.25	1.29	5.40	H
	3344	-53.66	-13	-40.66	-71.21	-57.27	1.56	7.31	H
									H
									H
									H
	1672	-48.35	-13	-35.35	-60.36	-50.03	0.99	4.82	V
	2504	-48.26	-13	-35.26	-66.43	-50.22	1.29	5.40	V
	3344	-53.86	-13	-40.86	-73.08	-57.47	1.56	7.31	V
									V
									V
									V
Highest	1688	-51.52	-13	-38.52	-62.91	-53.15	1.00	4.77	H
	2536	-54.70	-13	-41.70	-71.46	-56.68	1.30	5.43	H
	3384	-55.08	-13	-42.08	-72.77	-58.85	1.57	7.49	H
									H
									H
									H
	1688	-47.65	-13	-34.65	-59.82	-49.28	1.00	4.77	V
	2536	-52.18	-13	-39.18	-70.47	-54.16	1.30	5.43	V
	3384	-55.73	-13	-42.73	-74.88	-59.5	1.57	7.49	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 5 / 5MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-51.98	-13	-38.98	-63.19	-53.74	0.98	4.89	H
	2472	-51.26	-13	-38.26	-67.75	-53.14	1.28	5.32	H
	3296	-53.16	-13	-40.16	-70.56	-56.57	1.54	7.10	H
									H
									H
									H
	1648	-49.94	-13	-36.94	-61.88	-51.7	0.98	4.89	V
	2472	-47.31	-13	-34.31	-65.23	-49.19	1.28	5.32	V
	3296	-52.92	-13	-39.92	-72.09	-56.33	1.54	7.10	V
									V
									V
									V
Middle	1664	-50.60	-13	-37.60	-61.97	-52.31	0.98	4.84	H
	2504	-50.84	-13	-37.84	-67.5	-52.8	1.29	5.40	H
	3336	-52.86	-13	-39.86	-70.45	-56.44	1.55	7.28	H
									H
									H
									H
	1664	-48.95	-13	-35.95	-60.97	-50.66	0.98	4.84	V
	2504	-48.05	-13	-35.05	-66.14	-50.01	1.29	5.40	V
	3336	-53.15	-13	-40.15	-72.11	-56.73	1.55	7.28	V
									V
									V
									V
Highest	1688	-53.37	-13	-40.37	-64.8	-55	1.00	4.77	H
	2536	-55.50	-13	-42.50	-72.35	-57.48	1.30	5.43	H
	3376	-55.31	-13	-42.31	-73.05	-59.05	1.57	7.45	H
									H
									H
									H
	1688	-50.55	-13	-37.55	-62.7	-52.18	1.00	4.77	V
	2536	-52.38	-13	-39.38	-70.6	-54.36	1.30	5.43	V
	3376	-56.03	-13	-43.03	-75.13	-59.77	1.57	7.45	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 5 / 10MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-55.24	-13	-42.24	-66.39	-57	0.98	4.89	H
	2473	-54.77	-13	-41.77	-71.26	-56.66	1.28	5.32	H
	3298	-56.43	-13	-43.43	-73.94	-59.85	1.54	7.11	H
									H
									H
									H
	1648	-52.93	-13	-39.93	-65.01	-54.69	0.98	4.89	V
	2473	-49.86	-13	-36.86	-67.85	-51.75	1.28	5.32	V
	3298	-56.39	-13	-43.39	-75.37	-59.81	1.54	7.11	V
									V
									V
									V
Middle	1663	-49.69	-13	-36.69	-60.97	-51.4	0.98	4.84	H
	2497	-50.73	-13	-37.73	-67.65	-52.68	1.29	5.39	H
	3328	-55.57	-13	-42.57	-73.27	-59.11	1.55	7.24	H
									H
									H
									H
	1663	-49.84	-13	-36.84	-61.9	-51.55	0.98	4.84	V
	2497	-44.83	-13	-31.83	-62.92	-46.78	1.29	5.39	V
	3328	-56.47	-13	-43.47	-75.53	-60.01	1.55	7.24	V
									V
									V
									V
Highest	1678	-54.69	-13	-41.69	-66.23	-56.35	0.99	4.80	H
	2518	-54.31	-13	-41.31	-71.06	-56.28	1.30	5.41	H
	3358	-57.47	-13	-44.47	-75.08	-61.14	1.56	7.38	H
									H
									H
									H
	1678	-53.23	-13	-40.23	-65.38	-54.89	0.99	4.80	V
	2518	-54.18	-13	-41.18	-72.25	-56.15	1.30	5.41	V
	3358	-57.83	-13	-44.83	-76.9	-61.5	1.56	7.38	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



<Ant. 1>

LTE Band 7 / 5MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5004	-50.97	-25	-25.97	-74.48	-58.33	2.34	9.70	H
	7500	-50.50	-25	-25.50	-77.18	-59.87	2.43	11.80	H
	10008	-51.86	-25	-26.86	-79.8	-61.37	2.70	12.20	H
									H
									H
									H
	5004	-53.69	-25	-28.69	-78.01	-61.05	2.34	9.70	V
	7500	-47.99	-25	-22.99	-76.56	-57.36	2.43	11.80	V
	10008	-49.61	-25	-24.61	-80.02	-59.12	2.70	12.20	V
									V
									V
									V
Middle	5064	-52.06	-25	-27.06	-74.46	-59.39	2.37	9.70	H
	7596	-51.65	-25	-26.65	-79.01	-61.11	2.40	11.86	H
	10128	-51.66	-25	-26.66	-79.71	-61.22	2.70	12.25	H
									H
									H
									H
	5064	-54.03	-25	-29.03	-78.45	-61.36	2.37	9.70	V
	7596	-47.80	-25	-22.80	-77.02	-57.26	2.40	11.86	V
	10128	-49.35	-25	-24.35	-80.22	-58.91	2.70	12.25	V
									V
									V
									V
Highest	5136	-49.08	-25	-24.08	-72.55	-56.36	2.42	9.70	H
	7704	-51.51	-25	-26.51	-78.71	-61.07	2.36	11.92	H
	10272	-50.86	-25	-25.86	-79.64	-60.47	2.69	12.31	H
									H
									H
									H
	5136	-52.83	-25	-27.83	-77.34	-60.11	2.42	9.70	V
	7704	-49.46	-25	-24.46	-78.43	-59.02	2.36	11.92	V
	10272	-48.51	-25	-23.51	-79.62	-58.12	2.69	12.31	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 7 / 10MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5004	-50.77	-25	-25.77	-74.11	-58.13	2.34	9.70	H
	7506	-50.99	-25	-25.99	-77.82	-60.37	2.43	11.80	H
	10008	-50.97	-25	-25.97	-78.78	-60.48	2.70	12.20	H
									H
									H
									H
	5004	-54.05	-25	-29.05	-78.19	-61.41	2.34	9.70	V
	7506	-48.97	-25	-23.97	-77.25	-58.35	2.43	11.80	V
	10008	-49.36	-25	-24.36	-79.81	-58.87	2.70	12.20	V
									V
									V
									V
Middle	5064	-51.78	-25	-26.78	-74.94	-59.11	2.37	9.70	H
	7584	-46.61	-25	-21.61	-73.7	-56.06	2.40	11.85	H
	10128	-51.77	-25	-26.77	-79.96	-61.33	2.70	12.25	H
									H
									H
									H
	5064	-52.78	-25	-27.78	-77.2	-60.11	2.37	9.70	V
	7584	-46.96	-25	-21.96	-75.84	-56.41	2.40	11.85	V
	10128	-49.35	-25	-24.35	-80.09	-58.91	2.70	12.25	V
									V
									V
									V
Highest	5124	-50.04	-25	-25.04	-73.43	-57.33	2.41	9.70	H
	7680	-48.92	-25	-23.92	-76.38	-58.46	2.37	11.91	H
	10248	-49.27	-25	-24.27	-78.89	-58.87	2.69	12.30	H
									H
									H
									H
	5124	-53.48	-25	-28.48	-77.95	-60.77	2.41	9.70	V
	7680	-46.79	-25	-21.79	-75.76	-56.33	2.37	11.91	V
	10248	-48.57	-25	-23.57	-79.7	-58.17	2.69	12.30	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 7 / 15MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5004	-51.11	-25	-26.11	-74.57	-58.47	2.34	9.70	H
	7500	-48.22	-25	-23.22	-75.08	-57.59	2.43	11.80	H
	10008	-51.10	-25	-26.10	-78.89	-60.61	2.70	12.20	H
									H
									H
									H
	5004	-53.95	-25	-28.95	-78.21	-61.31	2.34	9.70	V
	7500	-47.54	-25	-22.54	-76.02	-56.91	2.43	11.80	V
	10008	-49.82	-25	-24.82	-80.09	-59.33	2.70	12.20	V
									V
									V
									V
Middle	5052	-52.16	-25	-27.16	-75.53	-59.49	2.37	9.70	H
	7584	-50.24	-25	-25.24	-77.43	-59.69	2.40	11.85	H
	10104	-51.78	-25	-26.78	-79.97	-61.33	2.70	12.24	H
									H
									H
									H
	5052	-54.03	-25	-29.03	-78.36	-61.36	2.37	9.70	V
	7584	-47.52	-25	-22.52	-76.45	-56.97	2.40	11.85	V
	10104	-49.56	-25	-24.56	-80.12	-59.11	2.70	12.24	V
									V
									V
									V
Highest	5112	-52.03	-25	-27.03	-75.49	-59.33	2.40	9.70	H
	7668	-49.86	-25	-24.86	-77.18	-59.39	2.38	11.90	H
	10224	-51.30	-25	-26.30	-79.72	-60.89	2.69	12.29	H
									H
									H
									H
	5112	-53.79	-25	-28.79	-77.97	-61.09	2.40	9.70	V
	7668	-45.64	-25	-20.64	-74.41	-55.17	2.38	11.90	V
	10224	-48.98	-25	-23.98	-80.07	-58.57	2.69	12.29	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 7 / 20MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5004	-51.51	-25	-26.51	-74.72	-58.87	2.34	9.70	H
	7500	-49.69	-25	-24.69	-76.36	-59.06	2.43	11.80	H
	10008	-51.75	-25	-26.75	-79.62	-61.26	2.70	12.20	H
									H
									H
									H
	5004	-54.01	-25	-29.01	-78.37	-61.37	2.34	9.70	V
	7500	-48.44	-25	-23.44	-76.8	-57.81	2.43	11.80	V
	10008	-49.60	-25	-24.60	-79.87	-59.11	2.70	12.20	V
									V
									V
									V
Middle	5052	-51.78	-25	-26.78	-74.96	-59.11	2.37	9.70	H
	7584	-49.46	-25	-24.46	-76.81	-58.91	2.40	11.85	H
	10104	-50.84	-25	-25.84	-79.08	-60.39	2.70	12.24	H
									H
									H
									H
	5052	-54.08	-25	-29.08	-78.49	-61.41	2.37	9.70	V
	7584	-47.36	-25	-22.36	-76.31	-56.81	2.40	11.85	V
	10104	-49.51	-25	-24.51	-80.05	-59.06	2.70	12.24	V
									V
									V
									V
Highest	5100	-51.91	-25	-26.91	-75.32	-59.22	2.39	9.70	H
	7656	-48.85	-25	-23.85	-76.26	-58.36	2.38	11.89	H
	10200	-51.75	-25	-26.75	-80.04	-61.33	2.70	12.28	H
									H
									H
									H
	5100	-53.78	-25	-28.78	-78.02	-61.09	2.39	9.70	V
	7656	-45.30	-25	-20.30	-74.35	-54.81	2.38	11.89	V
	10200	-47.68	-25	-22.68	-79.81	-57.26	2.70	12.28	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



<Ant. 2>

LTE Band 7 / 5MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5000	-53.54	-25	-28.54	-77.54	-60.9	2.34	9.70	H
	7500	-48.03	-25	-23.03	-75.32	-57.4	2.43	11.80	H
	10000	-51.10	-25	-26.10	-79.37	-60.6	2.70	12.20	H
									H
									H
									H
	5004	-47.74	-25	-22.74	-72.23	-55.1	2.34	9.70	V
	7500	-41.53	-25	-16.53	-70.27	-50.9	2.43	11.80	V
	10000	-47.60	-25	-22.60	-78.39	-57.1	2.70	12.20	V
									V
									V
									V
Middle	5065	-54.07	-25	-29.07	-78.08	-61.4	2.37	9.70	H
	7598	-47.14	-25	-22.14	-74.84	-56.6	2.40	11.86	H
	10130	-51.34	-25	-26.34	-79.77	-60.9	2.70	12.25	H
									H
									H
									H
	5064	-48.77	-25	-23.77	-73.25	-56.1	2.37	9.70	V
	7596	-44.24	-25	-19.24	-73.55	-53.7	2.40	11.86	V
	10130	-48.54	-25	-23.54	-79.62	-58.1	2.70	12.25	V
									V
									V
									V
Highest	5130	-52.91	-25	-27.91	-76.33	-60.2	2.41	9.70	H
	7692	-44.95	-25	-19.95	-72.73	-54.5	2.37	11.92	H
	10260	-50.19	-25	-25.19	-79.18	-59.8	2.69	12.30	H
									H
									H
									H
	5130	-48.91	-25	-23.91	-73.5	-56.2	2.41	9.70	V
	7692	-44.35	-25	-19.35	-73.61	-53.9	2.37	11.92	V
	10260	-49.39	-25	-24.39	-80.48	-59	2.69	12.30	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 7 / 10MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5000	-53.44	-25	-28.44	-77.02	-60.8	2.34	9.70	H
	7500	-47.03	-25	-22.03	-74.38	-56.4	2.43	11.80	H
	10000	-51.10	-25	-26.10	-79.68	-60.6	2.70	12.20	H
									H
									H
									H
	5004	-47.14	-25	-22.14	-71.9	-54.5	2.34	9.70	V
	7500	-43.03	-25	-18.03	-72.03	-52.4	2.43	11.80	V
	10000	-48.70	-25	-23.70	-79.36	-58.2	2.70	12.20	V
									V
									V
									V
Middle	5058	-53.57	-25	-28.57	-76.88	-60.9	2.37	9.70	H
	7590	-49.55	-25	-24.55	-77.21	-59	2.40	11.85	H
	10120	-51.35	-25	-26.35	-79.93	-60.9	2.70	12.25	H
									H
									H
									H
	5058	-48.87	-25	-23.87	-73.23	-56.2	2.37	9.70	V
	7590	-45.35	-25	-20.35	-75.35	-54.8	2.40	11.85	V
	10120	-48.55	-25	-23.55	-79.85	-58.1	2.70	12.25	V
									V
									V
									V
Highest	5120	-53.61	-25	-28.61	-77.42	-60.9	2.41	9.70	H
	7680	-45.26	-25	-20.26	-72.68	-54.8	2.37	11.91	H
	10240	-50.90	-25	-25.90	-79.83	-60.5	2.69	12.30	H
									H
									H
									H
	5124	-49.91	-25	-24.91	-74.73	-57.2	2.41	9.70	V
	7680	-42.76	-25	-17.76	-72.06	-52.3	2.37	11.91	V
	10240	-48.20	-25	-23.20	-79.63	-57.8	2.69	12.30	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 7 / 15MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5000	-54.88	-25	-29.88	-77.89	-62.24	2.34	9.70	H
	7500	-49.84	-25	-24.84	-76.16	-59.21	2.43	11.80	H
	10000	-52.07	-25	-27.07	-79.78	-61.57	2.70	12.20	H
									H
									H
									H
	5004	-48.86	-25	-23.86	-72.56	-56.22	2.34	9.70	V
	7500	-44.34	-25	-19.34	-72.84	-53.71	2.43	11.80	V
	10000	-48.97	-25	-23.97	-79.36	-58.47	2.70	12.20	V
									V
									V
									V
Middle	5052	-55.86	-25	-30.86	-78.87	-63.19	2.37	9.70	H
	7584	-47.57	-25	-22.57	-74.59	-57.02	2.40	11.85	H
	10110	-51.72	-25	-26.72	-79.81	-61.27	2.70	12.24	H
									H
									H
									H
	5052	-50.94	-25	-25.94	-74.88	-58.27	2.37	9.70	V
	7584	-46.03	-25	-21.03	-75.17	-55.48	2.40	11.85	V
	10110	-49.14	-25	-24.14	-79.27	-58.69	2.70	12.24	V
									V
									V
									V
Highest	5112	-54.93	-25	-29.93	-78.1	-62.23	2.40	9.70	H
	7665	-49.49	-25	-24.49	-76.64	-59.01	2.38	11.90	H
	10220	-51.58	-25	-26.58	-80.02	-61.17	2.69	12.29	H
									H
									H
									H
	5112	-51.79	-25	-26.79	-75.76	-59.09	2.40	9.70	V
	7665	-44.72	-25	-19.72	-73.21	-54.24	2.38	11.90	V
	10220	-48.88	-25	-23.88	-80.02	-58.47	2.69	12.29	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 7 / 20MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5004	-53.22	-25	-28.22	-76.55	-60.58	2.34	9.70	H
	7500	-47.82	-25	-22.82	-74.34	-57.19	2.43	11.80	H
	9996	-51.96	-25	-26.96	-79.57	-61.47	2.70	12.20	H
									H
									H
									H
	5004	-47.92	-25	-22.92	-72.05	-55.28	2.34	9.70	V
	7500	-43.12	-25	-18.12	-71.21	-52.49	2.43	11.80	V
	9996	-49.43	-25	-24.43	-79.53	-58.94	2.70	12.20	V
									V
									V
									V
Middle	5052	-54.99	-25	-29.99	-78.14	-62.32	2.37	9.70	H
	7578	-49.03	-25	-24.03	-76.13	-58.47	2.40	11.85	H
	10100	-51.95	-25	-26.95	-80.04	-61.49	2.70	12.24	H
									H
									H
									H
	5052	-50.91	-25	-25.91	-74.91	-58.24	2.37	9.70	V
	7578	-44.92	-25	-19.92	-73.71	-54.36	2.40	11.85	V
	10100	-49.49	-25	-24.49	-80.06	-59.03	2.70	12.24	V
									V
									V
									V
Highest	5100	-54.22	-25	-29.22	-77.41	-61.53	2.39	9.70	H
	7656	-48.70	-25	-23.70	-75.84	-58.21	2.38	11.89	H
	10200	-51.50	-25	-26.50	-79.83	-61.08	2.70	12.28	H
									H
									H
									H
	5100	-50.78	-25	-25.78	-74.83	-58.09	2.39	9.70	V
	7656	-43.91	-25	-18.91	-72.81	-53.42	2.38	11.89	V
	10200	-48.83	-25	-23.83	-79.54	-58.41	2.70	12.28	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.