

Variant FCC RF Test Report

APPLICANT : ZTE CORPORATION
EQUIPMENT : WCDMA/CDMA/LTE Multi-Mode Digital Mobile Phone
BRAND NAME : ZTE
MODEL NAME : ZTE A2017U
FCC ID : SRQ-ZTEA2017U
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(L), 27(H), 27(F)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

This is a variant report which is only valid together with the original test report. The product was received on Sep. 01, 2016 and testing was completed on Sep. 21, 2016. 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-D-2010 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.



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG631604-03B	Rev. 01	This is a variant report for ZTE A2017U. The product equality declaration could be referred to Appendix D. Based on the similarity between two models, only verified the conducted power,ERP/EIRP of top antenna, and worst case of spurious emission from original test report (Sporton Report Number FG631604-01B) were verified for the differences.	Oct. 11, 2016

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
4.4	§22.913(a)(2)	Effective Radiated Power (Band 5) (Band 26)	ERP < 7 Watt	PASS	-
	§27.50(b)(10) §27.50(c)(10)	Effective Radiated Power (Band 12) (Band 13) (Band 17)	ERP < 3 Watt		
	§24.232(c) §27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 2)(Band 25)	EIRP < 2Watt		
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4)	EIRP < 1Watt		
4.5	§2.1053 §22.917(a) §24.238(a) §27.53(c)(2) §27.53(f) §27.53(g) §27.53(h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 17) (Band 25) (Band 26)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 27.59 dB at 1560.000 MHz



1 General Description

1.1 Applicant

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057,
P. R. China

1.2 Manufacturer

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057,
P. R. China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	WCDMA/CDMA/LTE Multi-Mode Digital Mobile Phone
Brand Name	ZTE
Model Name	ZTE A2017U
FCC ID	SRQ-ZTEA2017U
EUT supports Radios application	CDMA/EV-DO/GSM/GPRS/EGPRS/WCDMA/HSPA/HSPA+(16QAM uplink is not supported)/DC-HSDPA/LTE/NFC WLAN2.4GHz 802.11b/g/n HT20/HT40 WLAN5GHz 802.11a/n HT20/HT40 WLAN5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth v3.0+EDR Bluetooth v4.1 LE Bluetooth v4.2 LE
IMEI Code	Conducted: 990006780015052 Radiation: NA ERP/EIRP: NA
HW Version	wwdB
SW Version	A2017UV1.0.0B07
EUT Stage	Production Unit



1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 5 : 824.7 MHz ~ 848.3 MHz LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz LTE Band 12 : 699.7 MHz ~ 715.3 MHz LTE Band 13 : 779.5 MHz ~ 784.5 MHz LTE Band 17 : 706.5 MHz ~ 713.5 MHz LTE Band 25 : 1850.7MHz ~ 1914.3 MHz LTE Band 26 : 824.7 MHz ~ 848.3 MHz LTE Band 41 : 2498.5 MHz ~ 2687.5 MHz
Rx Frequency	LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 7 : 2622.5MHz ~ 2687.5 MHz LTE Band 12 : 729.7 MHz ~ 745.3 MHz LTE Band 13 : 748.5 MHz ~ 753.5 MHz LTE Band 17 : 736.5 MHz ~ 743.5 MHz LTE Band 25 : 1930.7MHz ~ 1994.3 MHz LTE Band 26 : 869.7 MHz ~ 893.3 MHz LTE Band 41 : 2498.5 MHz ~ 2687.5 MHz
Bandwidth	LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 7 : 5MHz / 10MHz / 15MHz / 20MHz LTE Band 12 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 13 : 5MHz / 10MHz LTE Band 17 : 5MHz / 10MHz LTE Band 25 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 26 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz LTE Band 41 : 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Top Antenna	LTE Band 2 : 23.50 dBm LTE Band 4 : 22.69 dBm LTE Band 5 : 23.86 dBm LTE Band 13 : 23.82 dBm LTE Band 12 : 23.91 dBm LTE Band 17 : 23.71 dBm LTE Band 25 : 23.45 dBm LTE Band 26 : 23.75 dBm
Type of Modulation	QPSK / 16QAM

1.5 Modification of EUT

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

1.6 Maximum ERP/EIRP Power

LTE Band 2	QPSK	16QAM
BW(MHz)	Maximum EIRP(W)	Maximum EIRP(W)
1.4	0.0766	0.0643
3	0.0780	0.0653
5	0.0818	0.0698
10	0.0977	0.0839
15	0.0785	0.0718
20	0.0855	0.0769
LTE Band 25	QPSK	16QAM
BW(MHz)	Maximum EIRP(W)	Maximum EIRP(W)
1.4	0.0807	0.0700
3	0.0804	0.0664
5	0.0789	0.0675
10	0.1026	0.0804
15	0.1042	0.0889
20	0.0955	0.0871
LTE Band 4	QPSK	16QAM
BW(MHz)	Maximum EIRP(W)	Maximum EIRP(W)
1.4	0.0658	0.0557
3	0.0649	0.0552
5	0.0713	0.0593
10	0.0710	0.0597
15	0.0783	0.0659
20	0.0849	0.0700



LTE Band 5	QPSK	16QAM
BW(MHz)	Maximum ERP(W)	Maximum ERP(W)
1.4	0.0249	0.0219
3	0.0251	0.0210
5	0.0249	0.0212
10	0.0274	0.0236
LTE Band 12	QPSK	16QAM
BW(MHz)	Maximum ERP(W)	Maximum ERP(W)
1.4	0.0152	0.0128
3	0.0156	0.0131
5	0.0146	0.0124
10	0.0177	0.0148
LTE Band 13	QPSK	16QAM
BW(MHz)	Maximum ERP(W)	Maximum ERP(W)
5	0.0194	0.0163
10	0.0186	0.0155
LTE Band 17	QPSK	16QAM
BW(MHz)	Maximum ERP(W)	Maximum ERP(W)
5	0.0145	0.0122
10	0.0162	0.0138
LTE Band 26	QPSK	16QAM
BW(MHz)	Maximum ERP(W)	Maximum ERP(W)
1.4	0.0237	0.0207
3	0.0270	0.0231
5	0.0249	0.0203
10	0.0244	0.0212
15	0.0267	0.0223
Ch26765	0.0222	0.0193

1.7 Testing Location

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.	FCC Registration No.
	03CH12-HY	TW1098

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), 24(E), 27(L), 27(H), 27(F)
- ♦ ANSI / TIA / EIA-603-D-2010
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v02r02

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



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	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	5	✓	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓
	12	✓	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓
	13	-	-	✓		-	-	✓	✓	✓	✓	✓	✓	✓	✓
	13	-	-		✓	-	-	✓	✓	✓	✓	✓		✓	
	17	-	-	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓
	25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	26	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓
E.R.P./ E.I.R.P.	2	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
	5	✓	✓	✓	✓	-	-	✓	✓	✓	✓		✓	✓	✓
	12	✓	✓	✓	✓	-	-	✓	✓	✓	✓		✓	✓	✓
	13	-	-	✓		-	-	✓	✓	✓			✓	✓	✓
	13	-	-		✓	-	-	✓	✓	✓				✓	
	17	-	-	✓	✓	-	-	✓	✓	✓			✓	✓	✓
	25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
	26	✓	✓	✓	✓	✓	-	✓	✓	✓	✓		✓	✓	✓

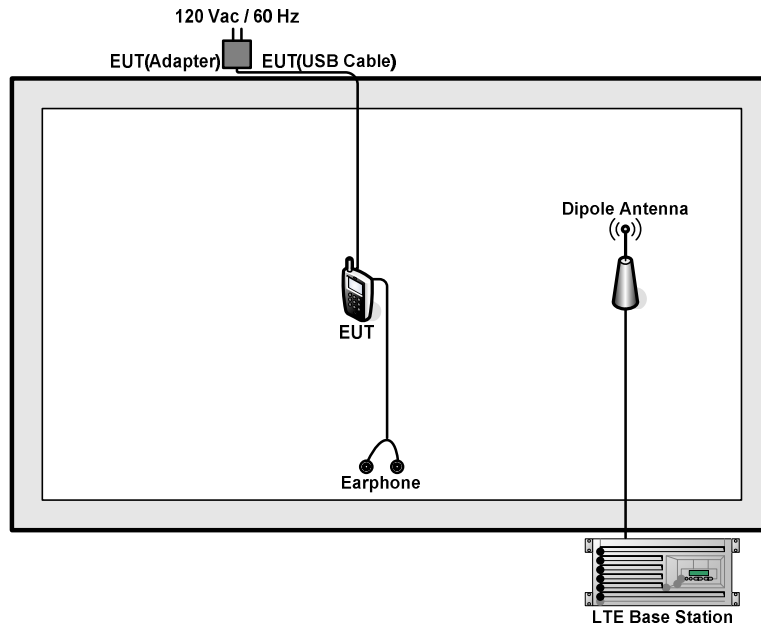


Radiated Spurious Emission	2		v					v		v				v	
	4				v			v		v				v	
	5	v				-	-	v		v				v	
	12				v	-	-	v		v				v	
	13	-	-	v		-	-	v		v				v	
	17	-	-	v		-	-	v		v				v	
	25	v						v		v				v	
	26			v			-	v		v				v	
Note	1. The mark "v " means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. 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

Top Antenna

LTE Band 2 / 4 / 5 / 12 / 13 / 17 / 25 / 26



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	Earphone	Apple	MC690ZP/A	N/A	Shielded, 1.0 m	N/A

2.4 Frequency List of Low/Middle/High Channels

LTE Band 2 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	18700	18900	19100
	Frequency	1860	1880	1900
15	Channel	18675	18900	19125
	Frequency	1857.5	1880	1902.5
10	Channel	18650	18900	19150
	Frequency	1855	1880	1905
5	Channel	18625	18900	19175
	Frequency	1852.5	1880	1907.5
3	Channel	18615	18900	19185
	Frequency	1851.5	1880	1908.5
1.4	Channel	18607	18900	19193
	Frequency	1850.7	1880	1909.3

LTE Band 4 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	20050	20175	20300
	Frequency	1720	1732.5	1745
15	Channel	20025	20175	20325
	Frequency	1717.5	1732.5	1747.5
10	Channel	20000	20175	20350
	Frequency	1715	1732.5	1750
5	Channel	19975	20175	20375
	Frequency	1712.5	1732.5	1752.5
3	Channel	19965	20175	20385
	Frequency	1711.5	1732.5	1753.5
1.4	Channel	19957	20175	20393
	Frequency	1710.7	1732.5	1754.3

LTE Band 5 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	20450	20525	20600
	Frequency	829	836.5	844
5	Channel	20425	20525	20625
	Frequency	826.5	836.5	846.5
3	Channel	20415	20525	20635
	Frequency	825.5	836.5	847.5
1.4	Channel	20407	20525	20643
	Frequency	824.7	836.5	848.3

LTE Band 12 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	23060	23095	23130
	Frequency	704	707.5	711
5	Channel	23035	23095	23155
	Frequency	701.5	707.5	713.5
3	Channel	23025	23095	23165
	Frequency	700.5	707.5	714.5
1.4	Channel	23017	23095	23173
	Frequency	699.7	707.5	715.3

LTE Band 13 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	-	23230	-
	Frequency	-	782	-
5	Channel	23205	23230	23255
	Frequency	779.5	782	784.5



LTE Band 17 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	23780	23790	23800
	Frequency	709	710	711
5	Channel	23755	23790	23825
	Frequency	706.5	710	713.5

LTE Band 25 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	26140	26340	26590
	Frequency	1860	1880	1905
15	Channel	26115	26340	26615
	Frequency	1857.5	1880	1907.5
10	Channel	26090	26340	26640
	Frequency	1855	1880	1910
5	Channel	26065	26340	26665
	Frequency	1852.5	1880	1912.5
3	Channel	26055	26340	26675
	Frequency	1851.5	1880	1913.5
1.4	Channel	26047	26340	26683
	Frequency	1850.7	1880	1914.3

LTE Band 26 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
15	Channel	26865	26915	26965
	Frequency	831.5	836.5	841.5
10	Channel	26840	26915	26990
	Frequency	829	836.5	844
5	Channel	26815	26915	27015
	Frequency	826.5	836.5	846.5
3	Channel	26805	26915	27025
	Frequency	825.5	836.5	847.5
1.4	Channel	26797	26915	27033
	Frequency	824.7	836.5	848.3

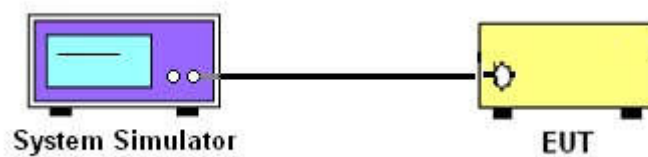
3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.2 Test Setup

3.2.1 Conducted Output Power



3.3 Test Result of Conducted Test

Please refer to Appendix A.



3.4 Conducted Output Power

3.4.1 Description of the Conducted Output Power 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.

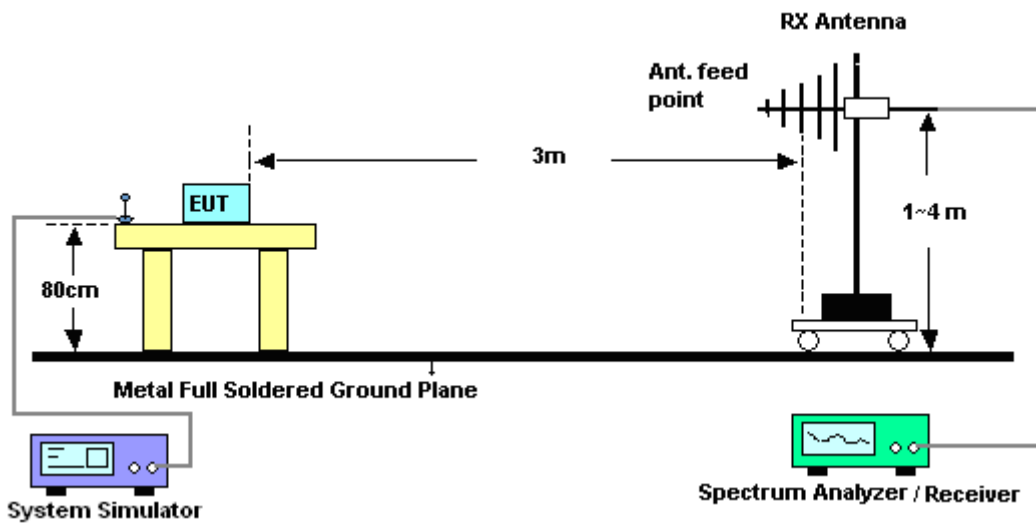
4 Radiated Test Items

4.1 Measuring Instruments

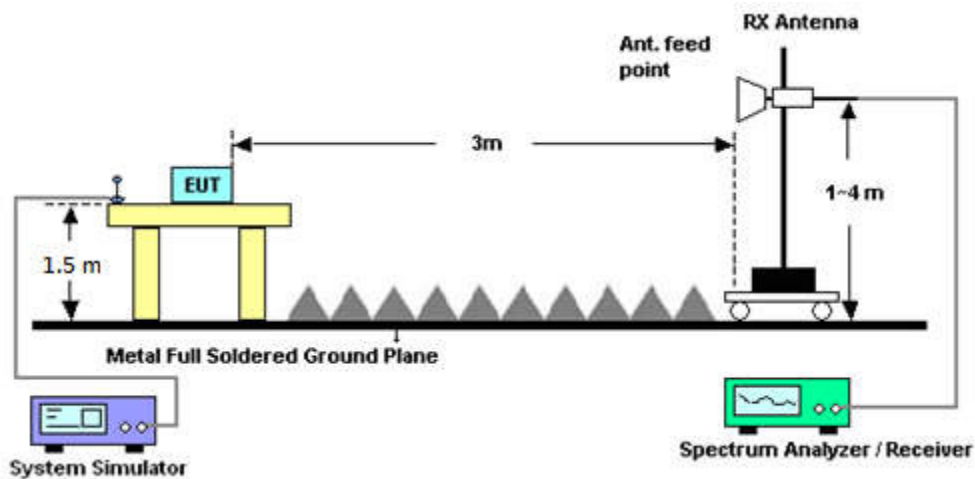
See list of measuring instruments of this test report.

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-D-2010, 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 / 26 and 3 watts with LTE band 12 / 13 / 17.

Equivalent isotropic radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-D-2010, 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 2 / 25 and 1 watt with LTE band 4.

4.4.2 Test Procedures

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RMS detector per section 5. of KDB 971168 D01.
2. 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.
3. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-D. The EUT was replaced by the 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 $ERP = EIRP - 2.15$. Take the record of the output power at substitution antenna.



	LTE Average					
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-D-2010. 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 LTE Band 12,13,17

For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

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-D-2010 Section 2.2.12.
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively 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)

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

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

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



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Bilog Antenna	TESEQ	CBL 6111D	37059	30MHz~1GHz	Dec. 29, 2015	Sep. 20, 2016~ Sep. 21, 2016	Dec. 28, 2016	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz ~ 18GHz	Oct. 08, 2015	Sep. 20, 2016~ Sep. 21, 2016	Oct. 07, 2016	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz ~ 40GHz	Apr. 15, 2016	Sep. 20, 2016~ Sep. 21, 2016	Apr. 14, 2017	Radiation (03CH12-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Nov. 20, 2015	Sep. 20, 2016~ Sep. 21, 2016	Nov. 19, 2016	Radiation (03CH12-HY)
Preamplifier	MITEQ	AMF-7D-00 101800-30-1	1815698	1GHz~18GHz	Dec. 14, 2015	Sep. 20, 2016~ Sep. 21, 2016	Dec. 13, 2016	Radiation (03CH12-HY)
Preamplifier	MITEQ	TTA0204	1872107	2GHz~40GHz	Feb. 15, 2016	Sep. 20, 2016~ Sep. 21, 2016	Feb. 14, 2017	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1328	1GHz ~ 18GHz	Nov. 02, 2015	Sep. 20, 2016~ Sep. 21, 2016	Nov. 01, 2016	Radiation (03CH12-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100390	20Hz~26.5GHz	Dec. 21, 2015	Sep. 20, 2016~ Sep. 21, 2016	Dec. 20, 2016	Radiation (03CH12-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz ~ 44GHZ	Sep. 24, 2015	Sep. 20, 2016~ Sep. 21, 2016	Sep. 23, 2016	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	NCR	Sep. 20, 2016~ Sep. 21, 2016	NCR	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-450 0-B	N/A	1m~4m	NCR	Sep. 20, 2016~ Sep. 21, 2016	NCR	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	NCR	Sep. 20, 2016~ Sep. 21, 2016	NCR	Radiation (03CH12-HY)

NCR: No Calibration Required

6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.4 dB
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Uncertainty of Radiated Emission Measurement (1GHz ~ 18GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.7 dB
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Uncertainty of Radiated Emission Measurement (18GHz ~ 40GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	4.0 dB
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

Top Antenna

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.54	23.34	23.41
20	1	49		22.94	23.16	22.63
20	1	99		23.02	23.50	23.48
20	50	0		21.74	22.17	22.38
20	50	24		21.68	22.17	22.30
20	50	50		21.81	22.42	22.40
20	100	0		21.35	21.93	21.92
20	1	0	16-QAM	21.55	22.26	22.36
20	1	49		21.91	22.17	21.63
20	1	99		22.32	22.43	21.96
20	50	0		20.93	21.37	21.48
20	50	24		21.02	21.30	21.43
20	50	50		21.06	21.27	21.31
20	100	0		20.86	21.31	21.25
15	1	0	QPSK	22.65	23.36	23.46
15	1	37		22.90	23.20	23.03
15	1	74		23.07	23.42	23.13
15	36	0		21.71	22.42	22.41
15	36	20		21.79	22.49	22.42
15	36	39		21.84	22.40	22.02
15	75	0		21.66	22.15	22.43
15	1	0	16-QAM	22.47	22.44	22.45
15	1	37		21.92	22.14	22.20
15	1	74		22.21	22.42	22.28
15	36	0		21.38	21.50	21.40
15	36	20		21.05	21.41	21.43
15	36	39		20.93	21.29	21.31
15	75	0		20.90	21.49	21.41



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.41	23.23	22.86
10	1	25		22.73	23.24	23.15
10	1	49		22.85	23.26	22.88
10	25	0		21.58	22.41	22.17
10	25	12		21.82	22.50	22.38
10	25	25		21.74	22.29	22.13
10	50	0		21.75	22.27	22.33
10	1	0	16-QAM	21.51	22.13	21.91
10	1	25		21.64	22.25	22.36
10	1	49		22.21	22.33	22.02
10	25	0		20.83	21.50	21.46
10	25	12		20.91	21.49	21.35
10	25	25		20.95	21.37	21.33
10	50	0		20.82	21.36	21.41
5	1	0	QPSK	22.48	23.18	22.83
5	1	12		22.61	23.21	22.89
5	1	24		22.68	23.31	22.65
5	12	0		21.75	22.36	22.27
5	12	7		21.97	22.39	22.49
5	12	13		21.68	22.39	22.23
5	25	0		21.58	22.27	21.97
5	1	0	16-QAM	21.47	22.16	21.88
5	1	12		21.64	22.31	21.96
5	1	24		21.56	22.25	21.78
5	12	0		20.91	21.44	21.44
5	12	7		21.00	21.45	21.41
5	12	13		20.81	21.41	21.30
5	25	0		20.83	21.37	21.25



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.84	23.22	23.17
3	1	8		22.95	23.36	23.16
3	1	14		22.91	23.22	22.92
3	8	0		21.65	22.37	22.19
3	8	4		21.59	22.34	22.16
3	8	7		21.76	22.32	21.99
3	15	0		21.63	22.41	21.92
3	1	0	16-QAM	21.24	22.08	22.21
3	1	8		21.41	22.31	22.23
3	1	14		21.44	22.29	21.99
3	8	0		20.99	21.26	21.48
3	8	4		20.96	21.45	21.19
3	8	7		21.05	21.48	21.42
3	15	0		21.25	21.42	21.28
1.4	1	0	QPSK	22.49	23.18	23.11
1.4	1	3		22.56	23.30	23.13
1.4	1	5		22.49	23.16	23.02
1.4	3	0		22.45	23.19	23.13
1.4	3	1		22.51	23.25	23.16
1.4	3	3		22.52	23.36	23.13
1.4	6	0		21.80	22.49	22.02
1.4	1	0	16-QAM	21.72	22.27	22.35
1.4	1	3		21.64	22.38	22.06
1.4	1	5		21.78	22.24	21.91
1.4	3	0		21.58	22.26	21.88
1.4	3	1		21.63	22.21	21.91
1.4	3	3		21.64	22.22	21.88
1.4	6	0		20.83	21.34	21.28



LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	23.08	23.19	23.25
20	1	49		22.05	22.25	22.51
20	1	99		22.41	22.68	22.69
20	50	0		21.56	21.65	21.93
20	50	24		21.39	21.49	21.75
20	50	50		21.45	21.63	21.74
20	100	0		21.58	21.74	21.89
20	1	0	16-QAM	22.47	22.45	22.46
20	1	49		21.39	21.58	21.85
20	1	99		21.77	22.01	22.04
20	50	0		20.72	20.76	20.90
20	50	24		20.37	20.53	20.75
20	50	50		20.47	20.62	20.66
20	100	0		20.46	20.64	20.82
15	1	0	QPSK	23.11	23.39	23.45
15	1	37		22.61	22.63	22.78
15	1	74		22.75	22.99	23.10
15	36	0		21.83	21.99	22.22
15	36	20		21.65	21.81	21.96
15	36	39		21.59	21.84	21.84
15	75	0		21.74	21.88	22.09
15	1	0	16-QAM	22.41	22.48	22.49
15	1	37		21.76	21.89	22.01
15	1	74		21.94	22.17	22.28
15	36	0		20.84	20.99	21.15
15	36	20		20.64	20.79	20.95
15	36	39		20.59	20.81	20.97
15	75	0		20.70	20.84	20.98



LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.58	22.73	22.78
10	1	25		22.23	22.41	22.48
10	1	49		22.29	22.54	22.52
10	25	0		21.57	21.74	21.92
10	25	12		21.43	21.61	21.89
10	25	25		21.47	21.63	21.92
10	50	0		21.45	21.64	22.11
10	1	0	16-QAM	21.94	22.06	22.11
10	1	25		21.63	21.76	21.99
10	1	49		21.56	21.86	22.04
10	25	0		20.54	20.76	20.89
10	25	12		20.43	20.61	20.88
10	25	25		20.46	20.67	20.85
10	50	0		20.45	20.68	20.90
5	1	0	QPSK	22.35	22.52	22.70
5	1	12		22.39	22.44	22.55
5	1	24		22.20	22.40	22.73
5	12	0		21.52	21.57	21.90
5	12	7		21.43	21.58	21.89
5	12	13		21.40	21.52	21.77
5	25	0		21.38	21.56	21.61
5	1	0	16-QAM	21.47	21.81	22.03
5	1	12		21.67	21.75	21.87
5	1	24		21.55	21.64	22.04
5	12	0		20.51	20.59	20.85
5	12	7		20.43	20.57	20.91
5	12	13		20.42	20.54	20.76
5	25	0		20.41	20.56	20.77



LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.26	22.50	22.58
3	1	8		22.46	22.54	23.06
3	1	14		22.18	22.43	22.83
3	8	0		21.51	21.59	21.83
3	8	4		21.40	21.59	21.78
3	8	7		21.36	21.61	21.69
3	15	0		21.48	21.58	21.74
3	1	0	16-QAM	21.63	21.79	21.91
3	1	8		21.87	21.80	22.08
3	1	14		21.59	21.75	22.28
3	8	0		20.59	20.65	20.94
3	8	4		20.52	20.66	20.92
3	8	7		20.49	20.54	20.82
3	15	0		20.47	20.59	20.80
1.4	1	0	QPSK	22.31	22.41	22.73
1.4	1	3		22.49	22.51	22.73
1.4	1	5		22.11	22.42	22.70
1.4	3	0		22.37	22.51	22.57
1.4	3	1		22.36	22.53	22.90
1.4	3	3		22.42	22.56	22.85
1.4	6	0		21.42	21.52	21.74
1.4	1	0	16-QAM	21.45	21.64	21.80
1.4	1	3		21.60	21.74	22.08
1.4	1	5		21.64	21.62	21.98
1.4	3	0		21.37	21.52	21.96
1.4	3	1		21.66	21.60	21.92
1.4	3	3		21.41	21.60	21.89
1.4	6	0		20.46	20.72	20.83



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.69	22.34	22.38
20	1	49		21.61	21.54	21.59
20	1	99		21.64	21.63	21.55
20	50	0		21.07	20.83	20.86
20	50	24		20.61	20.53	20.61
20	50	50		20.66	20.61	20.65
20	100	0		20.74	20.73	20.73
20	1	0	16-QAM	21.95	21.59	21.65
20	1	49		20.77	20.75	20.68
20	1	99		20.85	20.88	20.82
20	50	0		20.05	19.85	19.88
20	50	24		19.61	19.59	19.58
20	50	50		19.56	19.50	19.53
20	100	0		19.68	19.66	19.74
15	1	0	QPSK	22.40	22.01	22.05
15	1	37		21.65	21.56	21.48
15	1	74		21.61	21.54	21.48
15	36	0		20.99	20.74	20.73
15	36	20		20.71	20.58	20.57
15	36	39		20.51	20.58	20.41
15	75	0		20.77	20.72	20.63
15	1	0	16-QAM	21.67	21.20	21.29
15	1	37		20.84	20.62	20.60
15	1	74		20.88	20.82	20.72
15	36	0		19.95	19.69	19.66
15	36	20		19.69	19.52	19.51
15	36	39		19.52	19.44	19.43
15	75	0		19.70	19.55	19.56



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	21.75	21.64	21.71
10	1	25		21.47	21.42	21.48
10	1	49		21.42	21.47	21.35
10	25	0		20.70	20.70	20.71
10	25	12		20.55	20.53	20.61
10	25	25		20.43	20.38	20.47
10	50	0		20.59	20.54	20.64
10	1	0	16-QAM	21.10	20.92	21.00
10	1	25		20.72	20.66	20.72
10	1	49		20.69	20.67	20.64
10	25	0		19.68	19.64	19.61
10	25	12		19.55	19.55	19.61
10	25	25		19.44	19.41	19.48
10	50	0		19.53	19.55	19.61
5	1	0	QPSK	21.52	21.59	21.47
5	1	12		21.41	21.43	21.44
5	1	24		21.41	21.35	21.39
5	12	0		20.51	20.49	20.52
5	12	7		20.47	20.52	20.54
5	12	13		20.54	20.52	20.54
5	25	0		20.45	20.50	20.52
5	1	0	16-QAM	20.72	20.78	20.71
5	1	12		20.67	20.70	20.73
5	1	24		20.67	20.59	20.62
5	12	0		19.53	19.54	19.54
5	12	7		19.47	19.54	19.56
5	12	13		19.53	19.53	19.54
5	25	0		19.46	19.49	19.54



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	21.43	21.45	21.48
3	1	8		21.52	21.32	21.47
3	1	14		21.38	21.40	21.36
3	8	0		20.48	20.51	20.57
3	8	4		20.47	20.54	21.12
3	8	7		20.41	20.50	20.45
3	15	0		20.44	20.49	20.45
3	1	0	16-QAM	20.74	20.05	20.69
3	1	8		20.70	21.47	20.75
3	1	14		20.65	20.77	20.62
3	8	0		19.54	19.56	19.63
3	8	4		19.54	19.61	19.55
3	8	7		19.46	19.58	19.52
3	15	0		19.49	19.54	19.50
1.4	1	0	QPSK	21.35	21.38	21.36
1.4	1	3		21.40	21.50	21.44
1.4	1	5		21.32	21.40	21.38
1.4	3	0		21.43	21.46	21.05
1.4	3	1		21.46	21.51	21.40
1.4	3	3		21.47	21.53	21.49
1.4	6	0		20.44	20.48	20.45
1.4	1	0	16-QAM	20.55	20.05	20.64
1.4	1	3		20.65	21.41	20.70
1.4	1	5		20.49	20.64	20.65
1.4	3	0		20.42	20.49	20.43
1.4	3	1		20.49	20.55	20.50
1.4	3	3		20.48	20.55	20.49
1.4	6	0		19.51	19.54	19.55



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	23.64	23.65	23.64
10	1	25		23.58	23.55	23.60
10	1	49		23.63	23.45	23.40
10	25	0		22.85	22.85	22.83
10	25	12		22.77	22.72	22.78
10	25	25		22.76	22.71	22.74
10	50	0		22.73	22.87	22.73
10	1	0	16-QAM	22.65	22.69	22.58
10	1	25		22.76	22.82	22.52
10	1	49		22.58	22.60	22.28
10	25	0		21.86	21.67	21.84
10	25	12		21.83	21.79	21.84
10	25	25		21.78	21.78	21.79
10	50	0		21.87	21.76	21.77
5	1	0	QPSK	23.79	23.65	23.68
5	1	12		23.74	23.64	23.63
5	1	24		23.71	23.61	23.52
5	12	0		22.76	22.81	22.78
5	12	7		22.88	22.81	22.74
5	12	13		22.89	22.81	22.82
5	25	0		22.86	22.73	22.65
5	1	0	16-QAM	22.73	22.61	22.61
5	1	12		22.81	22.52	22.51
5	1	24		22.71	22.57	22.50
5	12	0		21.77	21.80	21.76
5	12	7		21.84	21.80	21.76
5	12	13		21.65	21.80	21.82
5	25	0		21.90	21.75	21.74



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	23.69	23.63	23.57
3	1	8		23.86	23.83	23.71
3	1	14		23.55	23.55	23.26
3	8	0		22.71	22.65	22.64
3	8	4		22.86	22.70	22.76
3	8	7		22.92	22.66	22.64
3	15	0		22.80	22.75	22.70
3	1	0	16-QAM	22.77	22.59	22.53
3	1	8		22.69	22.62	22.69
3	1	14		22.58	22.44	22.27
3	8	0		21.98	21.83	21.95
3	8	4		21.85	21.84	21.85
3	8	7		21.97	21.95	21.84
3	15	0		21.79	21.82	21.80
1.4	1	0	QPSK	23.57	23.55	23.39
1.4	1	3		23.75	23.60	23.32
1.4	1	5		23.52	23.61	23.01
1.4	3	0		23.69	23.66	23.31
1.4	3	1		23.75	23.70	23.28
1.4	3	3		23.78	23.77	23.21
1.4	6	0		22.74	22.64	22.59
1.4	1	0	16-QAM	22.62	22.48	22.41
1.4	1	3		22.93	22.55	22.34
1.4	1	5		22.51	22.53	22.06
1.4	3	0		22.80	22.85	22.52
1.4	3	1		22.86	22.89	22.49
1.4	3	3		22.88	22.79	22.42
1.4	6	0		21.65	21.47	21.56



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	23.55	23.62	23.54
10	1	25		23.74	23.79	23.77
10	1	49		23.64	23.68	23.67
10	25	0		22.86	22.79	22.78
10	25	12		22.88	22.90	22.84
10	25	25		22.85	22.85	22.83
10	50	0		22.82	22.92	22.81
10	1	0	16-QAM	22.95	23.02	22.94
10	1	25		23.05	23.06	23.04
10	1	49		22.93	22.98	22.93
10	25	0		21.82	21.75	21.73
10	25	12		21.83	21.84	21.76
10	25	25		21.80	21.78	21.75
10	50	0		21.86	21.78	21.75
5	1	0	QPSK	23.65	23.65	23.60
5	1	12		23.79	23.76	23.61
5	1	24		23.74	23.81	23.63
5	12	0		22.84	22.80	22.71
5	12	7		22.91	22.86	22.71
5	12	13		22.83	22.81	22.61
5	25	0		22.86	22.80	22.62
5	1	0	16-QAM	22.99	23.02	22.85
5	1	12		23.09	23.11	22.89
5	1	24		23.00	23.06	22.85
5	12	0		21.83	21.78	21.67
5	12	7		21.86	21.83	21.65
5	12	13		21.79	21.77	21.60
5	25	0		21.84	21.77	21.61



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	23.65	23.65	23.56
3	1	8		23.89	23.83	23.65
3	1	14		23.76	23.68	23.55
3	8	0		22.86	22.82	22.59
3	8	4		22.84	22.82	22.70
3	8	7		22.89	22.77	22.67
3	15	0		22.82	22.78	22.59
3	1	0	16-QAM	22.99	23.00	22.95
3	1	8		23.14	23.16	23.04
3	1	14		23.00	22.94	22.92
3	8	0		21.88	21.85	21.74
3	8	4		21.90	21.83	21.85
3	8	7		21.94	21.76	21.82
3	15	0		21.82	21.79	21.70
1.4	1	0	QPSK	23.61	23.64	23.60
1.4	1	3		23.74	23.79	23.67
1.4	1	5		23.74	23.69	22.81
1.4	3	0		23.80	23.82	23.65
1.4	3	1		23.81	23.87	23.76
1.4	3	3		23.91	23.84	23.75
1.4	6	0		22.76	22.29	22.68
1.4	1	0	16-QAM	22.91	23.46	22.86
1.4	1	3		23.00	22.95	22.92
1.4	1	5		22.98	22.88	22.79
1.4	3	0		22.78	22.76	22.72
1.4	3	1		23.45	22.81	22.78
1.4	3	3		22.86	22.80	22.78
1.4	6	0		21.72	21.77	21.00



LTE Band 13 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK		23.76	
10	1	25			23.82	
10	1	49			23.61	
10	25	0			22.88	
10	25	12			22.91	
10	25	25			22.89	
10	50	0			22.75	
10	1	0	16-QAM		22.93	
10	1	25			23.07	
10	1	49			22.90	
10	25	0			21.83	
10	25	12			21.82	
10	25	25			21.78	
10	50	0			21.83	
5	1	0	QPSK	23.61	23.62	23.70
5	1	12		23.67	23.65	23.64
5	1	24		23.68	23.72	23.67
5	12	0		22.86	22.84	22.71
5	12	7		22.92	22.95	22.79
5	12	13		22.87	22.91	22.77
5	25	0		22.92	22.83	22.75
5	1	0	16-QAM	22.93	22.90	22.97
5	1	12		23.20	22.93	22.91
5	1	24		23.02	22.96	22.84
5	12	0		21.71	21.89	21.74
5	12	7		21.88	21.83	21.77
5	12	13		21.74	21.96	21.73
5	25	0		21.97	21.92	21.81



LTE Band 17 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	23.53	23.57	23.58
10	1	25		23.64	23.62	23.60
10	1	49		23.62	23.61	23.58
10	25	0		22.88	22.86	22.77
10	25	12		23.03	22.92	22.93
10	25	25		22.82	22.88	22.82
10	50	0		22.86	22.93	22.83
10	1	0	16-QAM	22.89	22.95	22.83
10	1	25		23.03	23.07	23.00
10	1	49		22.89	22.85	22.79
10	25	0		21.85	21.83	21.79
10	25	12		21.98	21.84	21.85
10	25	25		21.77	21.79	21.89
10	50	0		21.92	21.91	21.76
5	1	0	QPSK	23.59	23.67	23.55
5	1	12		23.66	23.65	23.68
5	1	24		23.71	23.66	23.56
5	12	0		22.89	22.84	22.66
5	12	7		22.92	22.94	22.88
5	12	13		22.91	22.84	22.81
5	25	0		22.82	22.89	22.75
5	1	0	16-QAM	22.86	22.97	22.93
5	1	12		22.93	22.99	23.04
5	1	24		23.03	22.93	22.84
5	12	0		21.93	21.71	21.77
5	12	7		21.87	21.93	21.74
5	12	13		21.88	21.78	21.82
5	25	0		21.75	21.85	21.83



LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.68	23.62	23.55
15	1	37		23.70	23.66	23.71
15	1	74		23.46	23.43	23.52
15	36	0		22.72	22.67	22.59
15	36	20		22.72	22.64	22.64
15	36	39		22.58	22.58	22.63
15	75	0		22.70	22.65	22.65
15	1	0	16-QAM	22.93	22.82	22.80
15	1	37		22.85	22.81	22.79
15	1	74		22.69	22.63	22.79
15	36	0		21.69	21.63	21.55
15	36	20		21.71	21.64	21.59
15	36	39		21.51	21.56	21.58
15	75	0		21.65	21.60	21.57
10	1	0	QPSK	23.72	23.70	23.59
10	1	25		23.70	23.52	23.62
10	1	49		23.57	23.48	23.49
10	25	0		22.74	22.68	22.63
10	25	12		22.79	22.62	22.73
10	25	25		22.66	22.65	22.66
10	50	0		22.69	22.60	22.72
10	1	0	16-QAM	23.01	22.89	22.85
10	1	25		23.02	22.78	22.87
10	1	49		22.83	22.70	22.82
10	25	0		21.76	21.62	21.61
10	25	12		21.74	21.60	21.68
10	25	25		21.63	21.61	21.62
10	50	0		21.68	21.57	21.68



LTE Band 26 Maximum Average Power [dBm]						
5	1	0	QPSK	23.75	23.56	23.60
5	1	12		23.71	23.50	23.58
5	1	24		23.68	23.53	23.52
5	12	0		22.66	22.56	22.63
5	12	7		22.75	22.55	22.65
5	12	13		22.65	22.58	22.61
5	25	0		22.68	22.49	22.61
5	1	0	16-QAM	22.94	22.79	22.81
5	1	12		23.00	22.80	22.85
5	1	24		22.90	22.71	22.75
5	12	0		21.69	21.55	21.59
5	12	7		21.72	21.53	21.61
5	12	13		21.66	21.61	21.62
5	25	0		21.67	21.48	21.59
3	1	0	QPSK	23.58	23.39	23.51
3	1	8		23.66	23.53	23.61
3	1	14		23.51	23.44	23.45
3	8	0		22.63	22.48	22.55
3	8	4		22.61	22.47	22.58
3	8	7		22.65	22.44	22.53
3	15	0		22.56	22.44	22.56
3	1	0	16-QAM	22.88	22.71	22.77
3	1	8		22.90	22.82	22.88
3	1	14		22.83	22.71	22.69
3	8	0		21.73	21.53	21.62
3	8	4		21.74	21.53	21.66
3	8	7		21.73	21.49	21.59
3	15	0		21.63	21.48	21.58



LTE Band 26 Maximum Average Power [dBm]						
1.4	1	0	QPSK	22.51	23.26	23.40
1.4	1	3		22.51	23.38	23.50
1.4	1	5		23.41	23.27	23.38
1.4	3	0		23.59	23.42	23.53
1.4	3	1		23.63	23.45	23.52
1.4	3	3		23.61	23.43	23.52
1.4	6	0		23.61	22.36	22.42
1.4	1	0	16-QAM	23.61	22.58	22.68
1.4	1	3		23.60	22.63	22.74
1.4	1	5		23.60	22.56	22.65
1.4	3	0		23.60	22.41	22.51
1.4	3	1		23.60	22.46	22.55
1.4	3	3		23.60	22.43	22.53
1.4	6	0		21.60	21.39	21.48

Appendix B. Test Results of Radiated Test

ERP/EIRP

<Top Antenna>

LTE Band 2 / 1.4MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	3	18.47	0.0703	17.53	0.0566
Middle		1	3	18.84	0.0766	17.22	0.0527
Highest		1	3	18.78	0.0755	18.25	0.0668
Lowest	16QAM	1	5	17.82	0.0605	16.83	0.0482
Middle		1	3	17.95	0.0624	16.32	0.0429
Highest		1	0	18.08	0.0643	16.71	0.0469
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 3MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	8	18.55	0.0716	17.71	0.0590
Middle		1	8	18.92	0.0780	17.46	0.0557
Highest		1	0	18.92	0.0780	17.53	0.0566
Lowest	16QAM	1	14	17.98	0.0628	17.09	0.0512
Middle		1	8	18.15	0.0653	16.70	0.0468
Highest		1	8	18.00	0.0631	16.74	0.0472
Limit	EIRP < 2W			Result		PASS	



LTE Band 2 / 5MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	24	18.58	0.0721	17.70	0.0589
Middle		1	24	18.75	0.0750	17.40	0.0550
Highest		1	12	19.13	0.0818	17.85	0.0610
Lowest	16QAM	1	12	17.69	0.0587	16.88	0.0488
Middle		1	12	18.15	0.0653	16.73	0.0471
Highest		1	12	18.44	0.0698	17.15	0.0519
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 10MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	49	19.35	0.0861	18.28	0.0673
Middle		1	49	19.46	0.0883	18.40	0.0692
Highest		1	25	19.90	0.0977	18.76	0.0752
Lowest	16QAM	1	49	18.68	0.0738	17.60	0.0575
Middle		1	49	18.68	0.0738	17.63	0.0579
Highest		1	25	19.24	0.0839	18.08	0.0643
Limit	EIRP < 2W			Result		PASS	



LTE Band 2 / 15MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	74	18.59	0.0723	17.19	0.0524
Middle		1	74	18.95	0.0785	17.50	0.0562
Highest		1	0	18.91	0.0778	17.34	0.0542
Lowest	16QAM	1	0	16.73	0.0471	16.09	0.0406
Middle		1	0	18.56	0.0718	17.10	0.0513
Highest		1	0	18.19	0.0659	16.65	0.0462
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 20MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	99	18.47	0.0703	16.96	0.0497
Middle		1	99	19.10	0.0813	17.68	0.0586
Highest		1	99	19.32	0.0855	18.38	0.0689
Lowest	16QAM	1	99	17.75	0.0596	16.24	0.0421
Middle		1	99	18.42	0.0695	17.50	0.0562
Highest		1	0	18.86	0.0769	17.64	0.0581
Limit	EIRP < 2W			Result		PASS	



LTE Band 4 / 1.4MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	3	3	16.18	0.0415	13.02	0.0200
Middle		3	3	17.97	0.0627	15.04	0.0319
Highest		3	3	18.18	0.0658	15.08	0.0322
Lowest	16QAM	1	3	15.48	0.0353	12.39	0.0173
Middle		1	3	17.26	0.0532	14.28	0.0268
Highest		1	3	17.46	0.0557	14.45	0.0279
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 3MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	8	16.27	0.0424	13.11	0.0205
Middle		1	0	18.11	0.0647	14.85	0.0305
Highest		1	0	18.12	0.0649	15.26	0.0336
Lowest	16QAM	1	0	15.37	0.0344	12.27	0.0169
Middle		1	8	17.20	0.0525	14.07	0.0255
Highest		1	8	17.42	0.0552	14.44	0.0278
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 5MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	16.33	0.0430	13.18	0.0208
Middle		1	0	18.53	0.0713	15.10	0.0324
Highest		1	0	18.04	0.0637	15.23	0.0333
Lowest	16QAM	1	0	15.48	0.0353	12.35	0.0172
Middle		1	0	17.73	0.0593	14.36	0.0273
Highest		1	12	17.41	0.0551	14.47	0.0280
Limit	EIRP < 1W			Result		PASS	



LTE Band 4/ 10MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	16.35	0.0432	13.24	0.0211
Middle		1	0	18.51	0.0710	14.79	0.0301
Highest		1	0	18.13	0.0650	14.98	0.0315
Lowest	16QAM	1	0	15.59	0.0362	12.40	0.0174
Middle		1	0	17.76	0.0597	14.04	0.0254
Highest		1	0	17.46	0.0557	14.30	0.0269
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 15MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	17.15	0.0519	14.11	0.0258
Middle		1	0	18.94	0.0783	15.44	0.0350
Highest		1	0	18.35	0.0684	15.62	0.0365
Lowest	16QAM	1	0	16.52	0.0449	13.28	0.0213
Middle		1	0	18.19	0.0659	14.61	0.0289
Highest		1	0	17.57	0.0571	14.88	0.0308
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 20MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	17.34	0.0542	14.22	0.0264
Middle		1	0	19.29	0.0849	15.77	0.0378
Highest		1	0	18.71	0.0743	15.69	0.0371
Lowest	16QAM	1	0	16.64	0.0461	13.49	0.0223
Middle		1	0	18.45	0.0700	14.92	0.0310
Highest		1	0	17.92	0.0619	14.93	0.0311
Limit	EIRP < 1W			Result		PASS	



LTE Band 5 / 1.4MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	3	3	13.96	0.0249	4.72	0.0030
Middle		3	3	13.94	0.0248	4.88	0.0031
Highest		1	0	13.70	0.0234	5.67	0.0037
Lowest	16QAM	1	3	13.40	0.0219	4.05	0.0025
Middle		3	1	13.07	0.0203	3.99	0.0025
Highest		3	0	13.16	0.0207	5.00	0.0032
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 3MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	8	13.94	0.0248	4.61	0.0029
Middle		1	8	13.99	0.0251	4.85	0.0031
Highest		1	8	13.94	0.0248	5.88	0.0039
Lowest	16QAM	1	0	13.18	0.0208	3.74	0.0024
Middle		1	8	13.21	0.0209	4.12	0.0026
Highest		1	8	13.22	0.0210	5.17	0.0033
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 5MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	13.97	0.0249	4.60	0.0029
Middle		1	0	13.84	0.0242	4.92	0.0031
Highest		1	0	13.84	0.0242	6.02	0.0040
Lowest	16QAM	1	12	13.27	0.0212	3.97	0.0025
Middle		1	0	13.07	0.0203	4.12	0.0026
Highest		1	0	13.11	0.0205	5.26	0.0034
Limit	ERP < 7W			Result		PASS	



LTE Band 5 / 10MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	14.35	0.0272	5.72	0.0037
Middle		1	0	14.34	0.0272	5.98	0.0040
Highest		1	0	14.37	0.0274	7.18	0.0052
Lowest	16QAM	1	25	13.64	0.0231	4.99	0.0032
Middle		1	25	13.73	0.0236	5.38	0.0035
Highest		1	0	13.66	0.0232	6.52	0.0045
Limit	ERP < 7W			Result		PASS	

LTE Band 12 / 1.4MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	3	3	10.66	0.0116	3.33	0.0022
Middle		3	1	11.81	0.0152	4.00	0.0025
Highest		3	1	11.81	0.0152	3.77	0.0024
Lowest	16QAM	3	1	10.13	0.0103	2.62	0.0018
Middle		1	0	10.89	0.0123	3.08	0.0020
Highest		1	3	11.06	0.0128	3.05	0.0020
Limit	ERP < 3W			Result		PASS	

LTE Band 12 / 3MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	8	11.27	0.0134	3.79	0.0024
Middle		1	8	11.93	0.0156	4.01	0.0025
Highest		1	8	11.72	0.0149	3.77	0.0024
Lowest	16QAM	1	8	10.56	0.0114	3.06	0.0020
Middle		1	8	11.16	0.0131	3.22	0.0021
Highest		1	8	11.04	0.0127	3.10	0.0020
Limit	ERP < 3W			Result		PASS	



LTE Band 12 / 5MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	12	11.16	0.0131	3.71	0.0023
Middle		1	24	11.63	0.0146	3.74	0.0024
Highest		1	24	11.64	0.0146	3.67	0.0023
Lowest	16QAM	1	12	10.48	0.0112	3.04	0.0020
Middle		1	12	10.92	0.0124	3.11	0.0020
Highest		1	12	10.54	0.0113	2.89	0.0019
Limit	ERP < 3W			Result		PASS	

LTE Band 12 / 10MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	25	11.95	0.0157	4.77	0.0030
Middle		1	25	12.49	0.0177	4.70	0.0030
Highest		1	25	11.97	0.0157	4.28	0.0027
Lowest	16QAM	1	25	11.20	0.0132	3.94	0.0025
Middle		1	25	11.71	0.0148	4.01	0.0025
Highest		1	25	11.21	0.0132	3.58	0.0023
Limit	ERP < 3W			Result		PASS	



LTE Band 13 / 5MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	24	12.83	0.0192	5.37	0.0034
Middle		1	24	12.82	0.0191	5.19	0.0033
Highest		1	0	12.88	0.0194	5.36	0.0034
Lowest	16QAM	1	12	11.90	0.0155	4.34	0.0027
Middle		1	24	12.12	0.0163	4.53	0.0028
Highest		1	0	12.02	0.0159	4.54	0.0028
Limit	ERP < 3W			Result		PASS	

LTE Band 13 / 10MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	-	-	-	-	-	-
Middle		1	25	12.70	0.0186	4.89	0.0031
Highest		-	-	-	-	-	-
Lowest	16QAM	-	-	-	-	-	-
Middle		1	25	11.89	0.0155	4.20	0.0026
Highest		-	-	-	-	-	-
Limit	ERP < 3W			Result		PASS	



LTE Band 17 / 5MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	24	11.35	0.0136	3.75	0.0024
Middle		1	0	11.14	0.0130	3.97	0.0025
Highest		1	12	11.61	0.0145	4.17	0.0026
Lowest	16QAM	1	24	10.16	0.0104	2.84	0.0019
Middle		1	12	10.28	0.0107	3.11	0.0020
Highest		1	12	10.86	0.0122	3.45	0.0022
Limit	ERP < 3W			Result		PASS	

LTE Band 17 / 10MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	25	12.10	0.0162	4.45	0.0028
Middle		1	25	12.01	0.0159	4.30	0.0027
Highest		1	25	12.00	0.0158	4.32	0.0027
Lowest	16QAM	1	25	11.39	0.0138	3.70	0.0023
Middle		1	25	11.24	0.0133	3.64	0.0023
Highest		1	25	11.23	0.0133	3.54	0.0023
Limit	ERP < 3W			Result		PASS	

LTE Band 25 / 1.4MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	3	18.58	0.0721	17.10	0.0513
Middle		3	3	18.21	0.0662	15.74	0.0375
Highest		3	1	19.07	0.0807	17.43	0.0553
Lowest	16QAM	3	1	17.83	0.0607	16.56	0.0453
Middle		1	3	17.49	0.0561	15.07	0.0321
Highest		1	3	18.45	0.0700	16.82	0.0481
Limit	EIRP < 2W			Result		PASS	

LTE Band 25 / 3MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	8	18.84	0.0766	17.40	0.0550
Middle		1	8	18.38	0.0689	15.89	0.0388
Highest		1	8	19.05	0.0804	17.40	0.0550
Lowest	16QAM	1	8	17.80	0.0603	16.48	0.0445
Middle		1	8	17.54	0.0568	15.07	0.0321
Highest		1	14	18.22	0.0664	16.86	0.0485
Limit	EIRP < 2W			Result		PASS	

LTE Band 25 / 5MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	12	18.60	0.0724	17.24	0.0530
Middle		1	0	18.37	0.0687	15.86	0.0385
Highest		1	0	18.97	0.0789	17.60	0.0575
Lowest	16QAM	1	12	17.84	0.0608	16.54	0.0451
Middle		1	0	17.56	0.0570	15.01	0.0317
Highest		1	24	18.29	0.0675	16.66	0.0463
Limit	EIRP < 2W			Result		PASS	



LTE Band 25 / 10MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	19.27	0.0845	19.02	0.0798
Middle		1	0	18.57	0.0719	17.67	0.0585
Highest		1	0	20.11	0.1026	19.28	0.0847
Lowest	16QAM	1	0	17.86	0.0611	18.40	0.0692
Middle		1	0	17.81	0.0604	16.79	0.0478
Highest		1	0	19.05	0.0804	18.26	0.0670
Limit	EIRP < 2W			Result		PASS	

LTE Band 25 / 15MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	19.78	0.0951	18.71	0.0743
Middle		1	0	19.05	0.0804	16.49	0.0446
Highest		1	0	20.18	0.1042	17.81	0.0604
Lowest	16QAM	1	0	19.40	0.0871	17.70	0.0589
Middle		1	0	18.41	0.0693	15.90	0.0389
Highest		1	0	19.49	0.0889	16.86	0.0485
Limit	EIRP < 2W			Result		PASS	

LTE Band 25 / 20MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	19.76	0.0946	18.69	0.0740
Middle		1	0	19.38	0.0867	16.64	0.0461
Highest		1	0	19.80	0.0955	17.74	0.0594
Lowest	16QAM	1	0	19.40	0.0871	18.34	0.0682
Middle		1	0	18.93	0.0782	16.28	0.0425
Highest		1	0	19.29	0.0849	17.21	0.0526
Limit	EIRP < 2W			Result		PASS	



LTE Band 26 / 1.4MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	3	1	12.63	0.0183	3.50	0.0022
Middle		3	1	13.51	0.0224	5.26	0.0034
Highest		3	0	13.74	0.0237	5.79	0.0038
Lowest	16QAM	1	0	11.67	0.0147	2.54	0.0018
Middle		1	3	13.16	0.0207	4.95	0.0031
Highest		1	3	12.98	0.0199	5.08	0.0032
Limit	ERP < 7W			Result		PASS	

LTE Band 26 / 3MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	8	13.20	0.0209	4.77	0.0030
Middle		1	8	14.31	0.0270	6.79	0.0048
Highest		1	8	14.09	0.0256	7.03	0.0050
Lowest	16QAM	1	8	12.48	0.0177	4.12	0.0026
Middle		1	8	13.64	0.0231	6.14	0.0041
Highest		1	8	13.24	0.0211	6.30	0.0043
Limit	ERP < 7W			Result		PASS	

LTE Band 26 / 5MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	13.97	0.0249	5.85	0.0038
Middle		1	0	13.80	0.0240	5.77	0.0038
Highest		1	0	13.38	0.0218	5.59	0.0036
Lowest	16QAM	1	0	13.03	0.0201	4.93	0.0031
Middle		1	0	13.07	0.0203	4.94	0.0031
Highest		1	0	12.92	0.0196	4.83	0.0030
Limit	ERP < 7W			Result		PASS	



LTE Band 26/ 10MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	13.61	0.0230	5.60	0.0036
Middle		1	0	13.87	0.0244	5.72	0.0037
Highest		1	25	13.48	0.0223	5.64	0.0037
Lowest	16QAM	1	25	13.23	0.0210	4.90	0.0031
Middle		1	0	13.27	0.0212	5.13	0.0033
Highest		1	25	12.88	0.0194	5.11	0.0032
Limit	ERP < 7W			Result		PASS	

LTE Band 26 / 15MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
26765	QPSK	1	0	13.47	0.0222	3.97	0.0025
Lowest		1	37	14.27	0.0267	5.76	0.0038
Middle		1	37	13.82	0.0241	5.67	0.0037
Highest		1	37	13.17	0.0207	5.19	0.0033
26765	16QAM	1	0	12.85	0.0193	3.81	0.0024
Lowest		1	0	13.49	0.0223	5.44	0.0035
Middle		1	0	13.18	0.0208	5.24	0.0033
Highest		1	0	12.36	0.0172	4.78	0.0030
Limit	ERP < 7W			Result		PASS	

Radiated Spurious Emission

<Top Antenna>

LTE Band 2 / 3MHz / 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)
Middle	3756	-61.62	-13	-48.62	-55.49	-68.24	1.68	8.31	H
	5636	-63.63	-13	-50.63	-64.44	-70.68	2.70	9.75	H
	7514	-59.50	-13	-46.50	-65.73	-68.88	2.42	11.81	H
	3756	-59.46	-13	-46.46	-53.11	-66.08	1.68	8.31	V
	5636	-63.66	-13	-50.66	-64.41	-70.71	2.70	9.75	V
	7514	-58.78	-13	-45.78	-65.3	-68.16	2.42	11.81	V

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

LTE Band 4 / 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)
Middle	3455	-66.11	-13	-53.11	-59.57	-72.32	1.59	7.80	H
	5184	-53.57	-13	-40.57	-53.21	-60.83	2.44	9.70	H
	6913	-59.88	-13	-46.88	-64.47	-67.96	2.62	10.70	H
	3455	-68.23	-13	-55.23	-61.4	-74.44	1.59	7.80	V
	5184	-52.83	-13	-39.83	-52.32	-60.09	2.44	9.70	V
	6913	-59.18	-13	-46.18	-64.04	-67.26	2.62	10.70	V

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



LTE Band 5 / 1.4MHz / 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)
Middle	1672	-66.73	-13	-53.73	-53.67	-68.41	0.99	4.82	H
	2507	-54.47	-13	-41.47	-45.31	-56.43	1.29	5.41	H
	3344	-68.17	-13	-55.17	-61.42	-71.78	1.56	7.31	H
	4178	-65.21	-13	-52.21	-60.24	-69.83	1.86	8.64	H
	5016	-64.55	-13	-51.55	-63.77	-69.75	2.35	9.70	H
	1672	-66.01	-13	-53.01	-53.05	-67.69	0.99	4.82	V
	2507	-58.58	-13	-45.58	-49.46	-60.54	1.29	5.41	V
	3344	-67.65	-13	-54.65	-60.65	-71.26	1.56	7.31	V
	4178	-63.74	-13	-50.74	-58.56	-68.36	1.86	8.64	V
	5016	-63.01	-13	-50.01	-62.01	-68.21	2.35	9.70	V

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

LTE Band 12 / 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)
Middle	1408	-58.94	-13.00	-45.94	-44.46	-60.65	0.87	4.73	H
	2112	-45.97	-13.00	-32.97	-34.89	-46.89	1.17	4.24	H
	2808	-68.26	-13.00	-55.26	-60.11	-70.37	1.39	5.65	H
	3512	-66.23	-13.00	-53.23	-59.81	-70.49	1.61	8.01	H
	4216	-64.61	-13.00	-51.61	-59.79	-69.22	1.89	8.64	H
	4920	-63.96	-13.00	-50.96	-62.77	-69.06	2.29	9.54	H
	1408	-59.31	-13.00	-46.31	-45.07	-61.02	0.87	4.73	V
	2112	-44.82	-13.00	-31.82	-33.37	-45.74	1.17	4.24	V
	2808	-69.29	-13.00	-56.29	-61.10	-71.40	1.39	5.65	V
	3512	-66.69	-13.00	-53.69	-59.97	-70.95	1.61	8.01	V
	4216	-61.82	-13.00	-48.82	-56.78	-66.43	1.89	8.64	V
	4920	-64.18	-13.00	-51.18	-62.74	-69.28	2.29	9.54	V

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



LTE Band 13 / 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)
Middle	1560	-69.74	-42.15	-27.59	-56.13	-71.78	0.94	5.13	H
	2336	-55.29	-13	-42.29	-45.35	-56.81	1.24	4.91	H
	3120	-68.19	-13	-55.19	-60.99	-70.88	1.49	6.33	H
	3896	-60.98	-13	-47.98	-55.02	-65.58	1.73	8.48	H
	4680	-62.33	-13	-49.33	-59.76	-67.09	2.15	9.06	H
	1560	-70.70	-42.15	-28.55	-57.41	-72.74	0.94	5.13	V
	2336	-56.30	-13	-43.30	-46.23	-57.82	1.24	4.91	V
	3120	-68.43	-13	-55.43	-61.09	-71.12	1.49	6.33	V
	3896	-64.16	-13	-51.16	-58.02	-68.76	1.73	8.48	V
	4680	-62.82	-13	-49.82	-59.96	-67.58	2.15	9.06	V

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

LTE Band 17 / 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)
Middle	1416	-59.70	-13	-46.70	-45.22	-61.45	0.87	4.78	H
	2120	-47.99	-13	-34.99	-37.00	-48.93	1.17	4.26	H
	2832	-69.52	-13	-56.52	-61.49	-71.64	1.39	5.67	H
	3536	-67.33	-13	-54.33	-60.93	-71.61	1.62	8.04	H
	4248	-60.45	-13	-47.45	-55.78	-65.05	1.90	8.65	H
	4952	-62.71	-13	-49.71	-61.61	-67.85	2.31	9.60	H
	1416	-62.89	-13	-49.89	-48.65	-64.64	0.87	4.78	V
	2120	-52.62	-13	-39.62	-41.27	-53.56	1.17	4.26	V
	2832	-69.18	-13	-56.18	-61.10	-71.30	1.39	5.67	V
	3536	-65.44	-13	-52.44	-58.74	-69.72	1.62	8.04	V
	4248	-60.16	-13	-47.16	-55.26	-64.76	1.90	8.65	V
	4952	-60.45	-13	-47.45	-59.12	-65.59	2.31	9.60	V

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



LTE Band 25 / 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)
Middle	3756	-62.16	-13	-49.16	-56.03	-68.78	1.68	8.31	H
	5639	-62.40	-13	-49.40	-63.21	-69.45	2.71	9.76	H
	7517	-59.78	-13	-46.78	-66.01	-69.17	2.42	11.81	H
	3756	-60.88	-13	-47.88	-54.53	-67.50	1.68	8.31	V
	5639	-62.44	-13	-49.44	-63.19	-69.49	2.71	9.76	V
	7517	-58.78	-13	-45.78	-65.3	-68.17	2.42	11.81	V

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

LTE Band 26 / 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)
Middle	1664	-69.52	-13	-56.52	-56.38	-71.23	0.98	4.84	H
	2504	-55.80	-13	-42.80	-46.58	-57.76	1.29	5.40	H
	3336	-68.00	-13	-55.00	-61.21	-71.58	1.55	7.28	H
	1664	-70.58	-13	-57.58	-57.58	-72.29	0.98	4.84	V
	2504	-59.80	-13	-46.80	-50.62	-61.76	1.29	5.40	V
	3336	-67.80	-13	-54.80	-60.78	-71.38	1.55	7.28	V

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



Appendix D. Product Equality Declaration

ZTE CORPORATION

Product Change Description

As the applicant of the below model, [ZTE Corporation] declares that the product,

[ZTE A2017U]

[ZTE Corporation]

is the variant of the initial certified product,

[ZTE A2017U]

[ZTE Corporation]

[Project Number:16ZTE285]

SOFTWARE MODIFICATIONS:

Protocol Stack changes: NO

MMS/STK changes: NO

JAVA changes: NO

Other changes detailed: Yes, ZTE A2017U now using P-sensor to control transmitter power when top antenna works.

HARDWARE MODIFICATION:

Band changes: NO

Power Amplifier changes: NO

Antenna changes: NO

PCB Layout changes: NO

Components on PCB changes: NO

LCD changes: NO

Speaker changes: NO

Camera changes: NO

Vibrator changes: NO
Bluetooth changes: NO
FM changes: NO
Other changes: NO

MECHANICAL MODIFICATIONS:

Use new metal front/back cover or keypad: NO
Mechanical shell changes: NO
Other changes detailed: NO

ACCESSORY MODIFICATIONS:

Battery changes:NO
AC Adaptor changes:NO
Earphone changes:NO



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