



# Variant FCC RF Test Report

**APPLICANT** : ZTE CORPORATION  
**EQUIPMENT** : CDMA/LTE Digital Mobile Handset  
**BRAND NAME** : ZTE  
**MODEL NAME** : ZTE FLASH 4G LTE  
**FCC ID** : Q78-ZTEN9500  
**STANDARD** : FCC Part 15 Subpart C §15.247  
**CLASSIFICATION** : (DTS) Digital Transmission System

The product was received on Nov. 01, 2012 and completely tested on Jan. 11, 2013. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown the 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 (KUNSHAN) INC., the test report shall not be reproduced except in full.

Reviewed by:

Jones Tsai / Manager



**SPORTON INTERNATIONAL (KUNSHAN) INC.**  
**No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C.**



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### SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(b)	A8.4	Power Output Measurement	≤ 30dBm	Pass	-
3.2	15.247(d)	A8.5	Radiated Band Edges	15.209(a) & 15.247(d)	Pass	-
			Radiated Spurious Emission		Pass	Under limit 1.35 dB at 2399.000 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 Feature of Equipment Under Test

Product Feature	
<b>Equipment</b>	CDMA/LTE Digital Mobile Handset
<b>Brand Name</b>	ZTE
<b>Model Name</b>	ZTE FLASH 4G LTE
<b>FCC ID</b>	Q78-ZTEN9500
<b>EUT supports Radios application</b>	CDMA/EV-DO/LTE/WLAN 11bgn/Bluetooth/Bluetooth4.0 – LE/NFC
<b>HW Version</b>	c7zB
<b>SW Version</b>	N9500V1.0.0B13
<b>EUT Stage</b>	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 of Equipment Under Test

Product Specification subjective to this standard	
<b>Tx/Rx Frequency Range</b>	2412 MHz ~ 2462 MHz
<b>Number of Channels</b>	11
<b>Carrier Frequency of Each Channel</b>	2412+(n-1)*5 MHz; n=1~11
<b>Maximum Output Power to Antenna</b>	802.11b : 17.96 dBm (0.0625 W) 802.11g : 20.62 dBm (0.1153 W) 802.11n HT20 : 20.67 dBm (0.1167 W)
<b>Antenna Type</b>	PIFA Antenna with gain 0 dBi
<b>Type of Modulation</b>	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)



### 1.5 Testing Site

<b>Test Site</b>	SPORTON INTERNATIONAL (KUNSHAN) INC.		
<b>Test Site Location</b>	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C. TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958		
<b>Test Site No.</b>	<b>Sporton Site No.</b>		<b>FCC/IC Registration No.</b>
	TH01-KS	03CH01-KS	149928/4086E-1

### 1.6 Applied Standards

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

- ♦ FCC Part 15 Subpart C §15.247
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v02
- ♦ ANSI C63.4-2003 and ANSI C63.10-2009
- ♦ IC RSS-210 Issue 8
- ♦ IC RSS-Gen Issue 3
- ♦ NOTICE 2012-DRS0126

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



## 2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 KHz to 30 MHz) and radiated emission (9 KHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane) were recorded in this report.

The final configuration from all the combinations and the worst-case data rates were investigated by measuring the maximum power across all the data rates and modulation modes under section 2.2.

Based on the worst configuration found above, the RF power setting is set individually to meet FCC compliance limit for the final conducted and radiated tests shown in section 2.3.

### 2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437		



## 2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and antenna configurations as following table and the highest power data rates were chosen for full test in the following tables. Final Output Power equals to Measured Output Power adds the duty factor.

Channel	Frequency	2.4GHz 802.11b mode			
		DSSS Data Rate			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412 MHz	17.96	17.89	17.81	17.92
CH 06	2437 MHz	17.85	17.82	17.79	17.83
CH 11	2462 MHz	17.81	17.76	17.78	17.79

Channel	Frequency	2.4GHz 802.11g mode							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 01	2412 MHz	20.13	20.21	20.22	20.29	20.36	20.12	20.19	20.16
CH 06	2437 MHz	20.62	20.45	20.39	20.35	20.51	20.38	20.33	20.34
CH 11	2462 MHz	20.54	20.31	20.43	20.51	20.46	20.28	20.29	20.23

Channel	Frequency	2.4GHz 802.11n HT20 mode							
		OFDM Data Rate							
		MCS=0	MCS=1	MCS=2	MCS=3	MCS=4	MCS=5	MCS=6	MCS=7
CH 01	2412 MHz	20.56	20.41	20.48	20.31	20.26	20.41	20.45	20.42
CH 06	2437 MHz	20.62	20.61	20.58	20.51	20.66	20.51	20.58	20.51
CH 11	2462 MHz	20.67	20.61	20.56	20.46	20.41	20.43	20.61	20.61



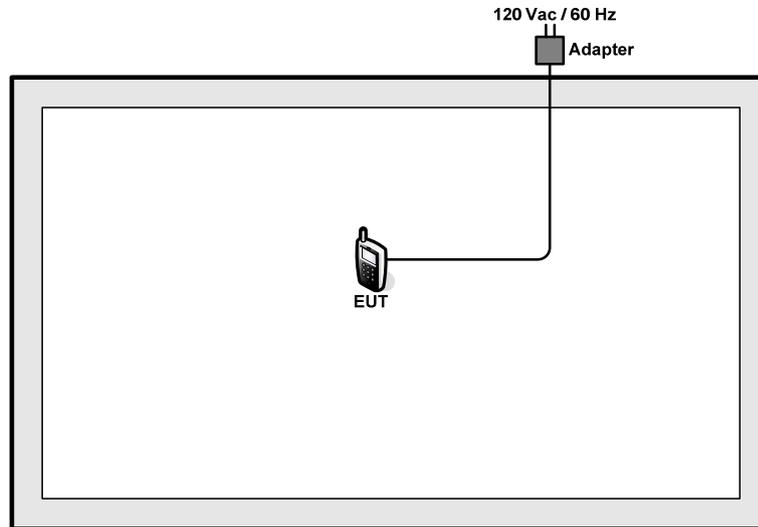
### 2.3 Test Mode

Final results of test modes, data rates and test channels are shown as following table.

Test Cases				
	Test Items	Mode	Data Rate	Test Channel
Conducted TCs	Output Power	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	6.5 Mbps	1/6/11
Radiated TCs	Radiated Band Edge	802.11b	1 Mbps	11
		802.11g	6 Mbps	11
		802.11n HT20	6.5 Mbps	1/11
	Radiated Spurious Emission	802.11b	1 Mbps	11
		802.11g	6 Mbps	11
		802.11n HT20	6.5 Mbps	6

## 2.4 Connection Diagram of Test System

<WLAN Tx Mode>



## 2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	DC Power Supply	GWINSTEK	GPS-3030D	N/A	N/A	Unshielded, 1.8 m

## 2.6 RF Utility

For WLAN function, turn on “FCC Test” on the EUT directly. Then, the EUT will get into the engineering modes to contact with WLAN AP for continuous transmitting and receiving signals.



## **2.7 Measurement Results Explanation Example**

**For conducted test items:**

The offset level is set in the spectrum analyzer to compensate the RF cable loss and 10dB attenuator 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 10dB attenuator factor.

*Offset = RF cable loss + attenuator factor.*

Following table shows an offset computation example with cable loss 5.6 dB.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 5.6 + 10 = 15.6 \text{ (dB)} \end{aligned}$$

### 3 Test Result

#### 3.1 Output Power Measurement

##### 3.1.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting antenna of directional gain greater than 6dBi are used the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

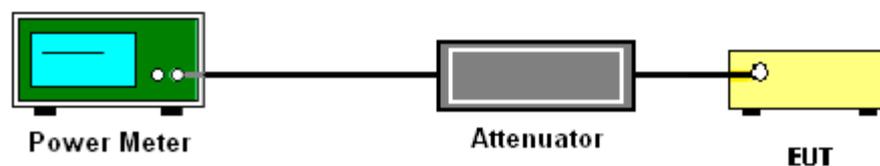
##### 3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

##### 3.1.3 Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v02.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.

##### 3.1.4 Test Setup





### 3.1.5 Test Result of Peak Output Power

Test Mode :	802.11b	Temperature :	23~24°C
Test Engineer :	Lizy Li	Relative Humidity :	47~48%

Channel	Frequency (MHz)	802.11b Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	17.96	30	Pass
06	2437	17.85	30	Pass
11	2462	17.81	30	Pass

Test Mode :	802.11g	Temperature :	23~24°C
Test Engineer :	Lizy Li	Relative Humidity :	47~48%

Channel	Frequency (MHz)	802.11g Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	20.13	30	Pass
06	2437	20.62	30	Pass
11	2462	20.54	30	Pass

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Engineer :	Lizy Li	Relative Humidity :	47~48%

Channel	Frequency (MHz)	2.4GHz 802.11n HT20 Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	20.56	30	Pass
06	2437	20.62	30	Pass
11	2462	20.67	30	Pass



3.1.6 Test Result of Average output Power (Reporting Only)

Test Mode :	802.11b	Temperature :	23~24°C
Test Engineer :	Lizy Li	Relative Humidity :	47~48%
Duty Cycle:	97.67%	Duty Factor:	0.10dB

Channel	Frequency (MHz)	802.11b Average Output Power (dBm)
01	2412	15.28
06	2437	15.22
11	2462	15.14

Test Mode :	802.11g	Temperature :	23~24°C
Test Engineer :	Lizy Li	Relative Humidity :	47~48%
Duty Cycle:	86.79%	Duty Factor:	0.62dB

Channel	Frequency (MHz)	802.11g Average Output Power (dBm)
01	2412	10.67
06	2437	11.38
11	2462	10.87

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Engineer :	Lizy Li	Relative Humidity :	47~48%
Duty Cycle:	86.67%	Duty Factor:	0.62dB

Channel	Frequency (MHz)	802.11n HT20 Average Output Power (dBm)
01	2412	10.90
06	2437	11.33
11	2462	11.58



### 3.2 Radiated Emission Measurement

#### 3.2.1 Limit of Radiated Emission

In any 100 KHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(KHz)	300
0.490 – 1.705	24000/F(KHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

#### 3.2.2 Measuring Instruments

See list of measuring instruments of this test report.



3.2.3 Test Procedures

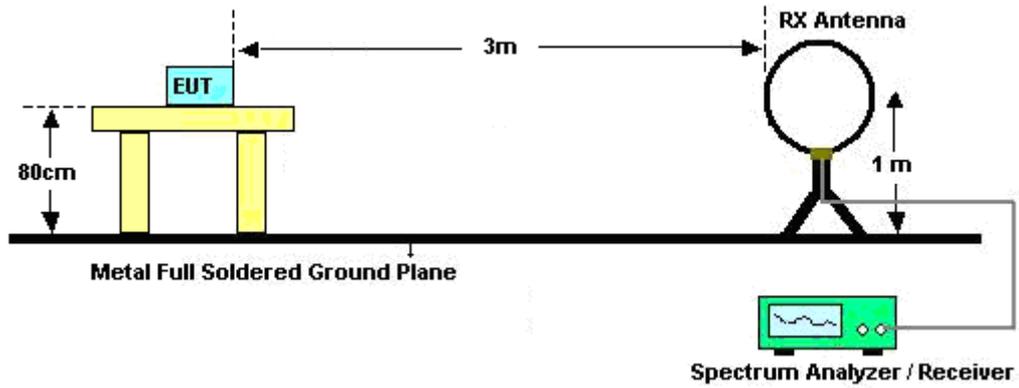
1. The testing follows the guidelines in ANSI C63. 10-2009
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Set RBW=100 KHz for  $f < 1$  GHz;  $VBW \geq RBW$ ; Sweep = auto; Detector function = peak; Trace = max hold;
  - (3) Set RBW = 1 MHz,  $VBW = 3MHz$  for  $f \geq 1$  GHz for peak measurement.  
 For average measurement:
    - $VBW = 10$  Hz, when duty cycle is no less than 98 percent.
    - $VBW \geq 1/T$ , when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Band	Duty Cycle(%)	T(us)	1/T(KHz)	VBW Setting
802.11b	97.67	8.4	0.12	300Hz
802.11g	86.79	1.38	0.72	1KHz
802.11n HT20	86.67	1.3	0.77	1KHz

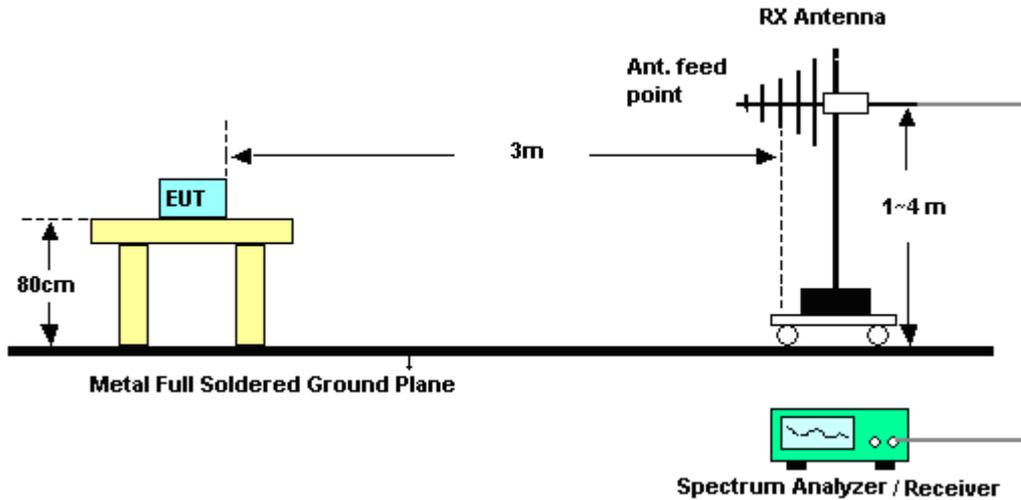
Note: For average measurement with duty cycle < 98%, use reduced VBW measurement method 4.2.3.2.3 in ANSI C63.10.

### 3.2.4 Test Setup

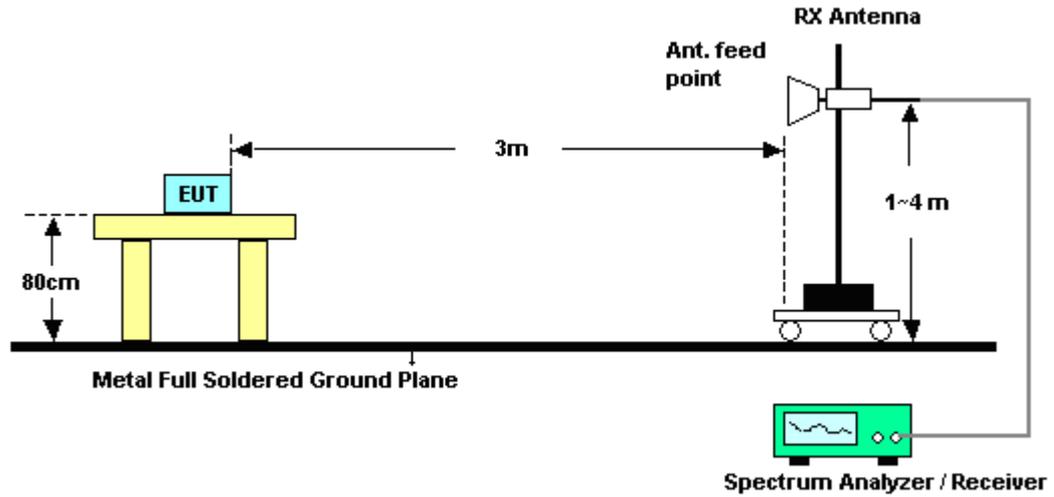
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



### 3.2.5 Test Results of Radiated Emissions (9 KHz ~ 30 MHz)

The low frequency, which started from 9 KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.



3.2.6 Test Result of Radiated Band Edges

Test Mode :	802.11b	Temperature :	23~25°C
Test Band :	Low	Relative Humidity :	42~43%
Test Channel :	01	Test Engineer :	Steven Hao

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2384.61	56.59	-17.41	74	53.18	32.83	2.09	31.51	110	49	Peak
2387.31	40.25	-13.75	54	36.79	32.86	2.11	31.51	110	52	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2385.51	53.98	-20.02	74	50.52	32.86	2.11	31.51	100	231	Peak
2387.13	37.98	-16.02	54	34.52	32.86	2.11	31.51	100	231	Average

Test Mode :	802.11b	Temperature :	23~25°C
Test Band :	High	Relative Humidity :	42~43%
Test Channel :	11	Test Engineer :	Steven Hao

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2489.71	56.09	-17.91	74	52.38	33.05	2.17	31.51	140	44	Peak
2483.5	37.3	-16.7	54	33.64	33.01	2.16	31.51	140	44	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2488.63	54.49	-19.51	74	50.78	33.05	2.17	31.51	100	289	Peak
2483.5	36.79	-17.21	54	33.13	33.01	2.16	31.51	100	289	Average



Test Mode :	802.11g	Temperature :	23~25°C
Test Band :	Low	Relative Humidity :	42~43%
Test Channel :	01	Test Engineer :	Steven Hao

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBµV/m )	Over Limit ( dB )	Limit Line ( dBµV/m )	Read Level ( dBµV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2390	59.23	-14.77	74	55.77	32.86	2.11	31.51	145	26	Peak
2390	42.75	-11.25	54	39.29	32.86	2.11	31.51	145	26	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBµV/m )	Over Limit ( dB )	Limit Line ( dBµV/m )	Read Level ( dBµV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2390	55.29	-18.71	74	51.83	32.86	2.11	31.51	100	78	Peak
2390	39.75	-14.25	54	36.29	32.86	2.11	31.51	100	78	Average

Test Mode :	802.11g	Temperature :	23~25°C
Test Band :	High	Relative Humidity :	42~43%
Test Channel :	11	Test Engineer :	Steven Hao

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBµV/m )	Over Limit ( dB )	Limit Line ( dBµV/m )	Read Level ( dBµV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2486.35	51.95	-22.05	74	48.29	33.01	2.16	31.51	106	360	Peak
2483.59	36.15	-17.85	54	32.49	33.01	2.16	31.51	106	360	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBµV/m )	Over Limit ( dB )	Limit Line ( dBµV/m )	Read Level ( dBµV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2489.68	56.24	-17.76	74	52.53	33.05	2.17	31.51	100	221	Peak
2483.5	36.92	-17.08	54	33.26	33.01	2.16	31.51	100	221	Average



Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Band :	Low	Relative Humidity :	42~43%
Test Channel :	01	Test Engineer :	Steven Hao

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2388.03	57.69	-16.31	74	54.23	32.86	2.11	31.51	147	57	Peak
2389.92	40.7	-13.3	54	37.24	32.86	2.11	31.51	147	57	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2388.66	56.1	-17.9	74	52.64	32.86	2.11	31.51	100	225	Peak
2389.83	38.57	-15.43	54	35.11	32.86	2.11	31.51	100	225	Average

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Band :	High	Relative Humidity :	42~43%
Test Channel :	11	Test Engineer :	Steven Hao

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2484.4	58.65	-15.35	74	54.99	33.01	2.16	31.51	186	62	Peak
2483.65	37.66	-16.34	54	34	33.01	2.16	31.51	186	62	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2483.71	59.47	-14.53	74	55.81	33.01	2.16	31.51	100	41	Peak
2483.56	38.47	-15.53	54	34.81	33.01	2.16	31.51	100	41	Average



**3.2.7 Test Result of Radiated Emission (30 MHz ~ 10<sup>th</sup> Harmonic)**

**Note:** Below 1GHz for radiated emission measurement, pre-scanned all test modes and only choose the worst case mode was recorded in the report.

<b>Test Mode :</b>	802.11b	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 2412 MHz is fundamental signal which can be ignored. 2. 2398.29 MHz and 7236 MHz are not within a restricted band, and their limit lines are 20dB below the highest emission level. For example, 103.53 dBuV/m - 20dB = 83.53 dBuV/m. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2398.29	67.3	-16.23	83.53	63.84	32.86	2.11	31.51	110	47	Peak
2412	103.53	-	-	100.03	32.89	2.12	31.51	110	47	Peak
2412	98.9	-	-	95.4	32.89	2.12	31.51	110	47	Average
4824	49.95	-24.05	74	43.22	35.17	3.09	31.53	100	20	Peak
7236	50.14	-33.39	83.53	41.67	36.18	3.24	30.95	100	308	Peak



<b>Test Mode :</b>	802.11b	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 2412 MHz is fundamental signal which can be ignored. 2. 2398.2 MHz and 7236 MHz are not within a restricted band, and their limit lines are 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2398.2	63.7	-16.35	80.05	60.24	32.86	2.11	31.51	100	231	Peak
2412	100.05	-	-	96.55	32.89	2.12	31.51	100	231	Peak
2412	95.25	-	-	91.75	32.89	2.12	31.51	100	231	Average
4824	48.81	-25.19	74	42.08	35.17	3.09	31.53	200	352	Peak
7236	51.4	-28.65	80.05	42.93	36.18	3.24	30.95	200	136	Peak



<b>Test Mode :</b>	802.11b	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2437	104.4	-	-	100.82	32.95	2.14	31.51	140	60	Peak
2437	99.61	-	-	96.03	32.95	2.14	31.51	140	60	Average
4874	49.46	-24.54	74	42.68	35.18	3.12	31.52	156	200	Peak
7312	49.97	-24.03	74	41.5	36.2	3.21	30.94	100	56	Peak

<b>Test Mode :</b>	802.11b	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2437	101.65	-	-	98.07	32.95	2.14	31.51	100	108	Peak
2437	97.06	-	-	93.48	32.95	2.14	31.51	100	108	Average
4874	48.3	-25.7	74	41.52	35.18	3.12	31.52	200	136	Peak
7312	50.21	-23.79	74	41.74	36.2	3.21	30.94	200	129	Peak



<b>Test Mode :</b>	802.11b	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2462	103.99	-	-	100.37	32.98	2.15	31.51	141	44	Peak
2462	99.5	-	-	95.88	32.98	2.15	31.51	141	44	Average
4924	49.93	-24.07	74	43.1	35.19	3.15	31.51	100	300	Peak
7386	50.42	-23.58	74	41.92	36.24	3.19	30.93	200	315	Peak

<b>Test Mode :</b>	802.11b	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2462	101.35	-	-	97.73	32.98	2.15	31.51	100	289	Peak
2462	96.77	-	-	93.15	32.98	2.15	31.51	100	289	Average
4924	49.5	-24.5	74	42.67	35.19	3.15	31.51	100	0	Peak
7386	49.13	-24.87	74	40.63	36.24	3.19	30.93	100	251	Peak



<b>Test Mode :</b>	802.11g	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 2412 MHz is fundamental signal which can be ignored. 2. 2398.47 MHz and 7236 MHz are not within a restricted band, and their limit lines are 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
33.211	22.39	-17.61	40	39.94	16.04	0	33.59	-	-	Peak
129.015	23.76	-19.74	43.5	45.64	11.71	0	33.59	-	-	Peak
357.929	24.75	-21.25	46	43.43	14.67	0	33.35	-	-	Peak
423.54	25.3	-20.7	46	42.42	16.14	0	33.26	-	-	Peak
875.247	33.28	-12.72	46	45.38	20.48	0	32.58	-	-	Peak
955.438	35.15	-10.85	46	46.83	20.76	0	32.44	100	22	Peak
2398.47	69.09	-10.29	79.38	65.63	32.86	2.11	31.51	145	26	Peak
2412	99.38	-	-	95.88	32.89	2.12	31.51	145	48	Peak
2412	87.76	-	-	84.26	32.89	2.12	31.51	145	48	Average
4824	49.4	-24.6	74	42.67	35.17	3.09	31.53	100	92	Peak
7236	50.1	-29.28	79.38	41.63	36.18	3.24	30.95	100	102	Peak



<b>Test Mode :</b>	802.11g	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 2412 MHz is fundamental signal which can be ignored. 2. 2398.11 MHz and 7236 MHz are not within a restricted band, and their limit lines are 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
37.155	27.8	-12.2	40	47.23	14.19	0	33.62	-	-	Peak
97.115	23.15	-20.35	43.5	46.74	10.03	0	33.62	-	-	Peak
129.015	25.18	-18.32	43.5	47.06	11.71	0	33.59	-	-	Peak
460.727	26.29	-19.71	46	43.03	16.45	0	33.19	-	-	Peak
878.322	34.98	-11.02	46	47.06	20.47	0	32.55	-	-	Peak
952.094	36.22	-9.78	46	47.92	20.74	0	32.44	125	0	Peak
2398.11	65.04	-10.23	75.27	61.58	32.86	2.11	31.51	100	78	Peak
2412	95.27	-	-	91.77	32.89	2.12	31.51	100	78	Peak
2412	83.69	-	-	80.19	32.89	2.12	31.51	100	78	Average
4824	49.09	-24.91	74	42.36	35.17	3.09	31.53	200	16	Peak
7236	49.89	-25.38	75.27	41.42	36.18	3.24	30.95	100	181	Peak



<b>Test Mode :</b>	802.11g	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2437	100.64	-	-	97.06	32.95	2.14	31.51	143	52	Peak
2437	89.29	-	-	85.71	32.95	2.14	31.51	143	52	Average
4874	49.37	-24.63	74	42.59	35.18	3.12	31.52	100	29	Peak
7311	51.27	-22.73	74	42.8	36.2	3.21	30.94	100	199	Peak

<b>Test Mode :</b>	802.11g	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2437	97.65	-	-	94.07	32.95	2.14	31.51	100	75	Peak
2437	87.19	-	-	83.61	32.95	2.14	31.51	100	75	Average
4874	49.65	-24.35	74	42.87	35.18	3.12	31.52	100	206	Peak
7311	51.75	-22.25	74	43.28	36.2	3.21	30.94	100	90	Peak



<b>Test Mode :</b>	802.11g	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2462	101.69	-	-	98.07	32.98	2.15	31.51	114	65	Peak
2462	90.51	-	-	86.89	32.98	2.15	31.51	114	65	Average
4924	49.34	-24.66	74	42.51	35.19	3.15	31.51	102	46	Peak
7386	50.65	-23.35	74	42.15	36.24	3.19	30.93	100	278	Peak

<b>Test Mode :</b>	802.11g	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2462	97.67	-	-	94.05	32.98	2.15	31.51	100	278	Peak
2462	86.82	-	-	83.2	32.98	2.15	31.51	100	278	Average
4924	56.55	-17.45	74	49.72	35.19	3.15	31.51	100	220	Peak
4924	40.45	-13.55	54	33.62	35.19	3.15	31.51	100	220	Average
7386	51.53	-22.47	74	43.03	36.24	3.19	30.93	100	236	Peak



<b>Test Mode :</b>	802.11n HT20	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	<ol style="list-style-type: none"> <li>2412 MHz is fundamental signal which can be ignored.</li> <li>2399 MHz and 7236 MHz are not within a restricted band, and their limit lines are 20dB below the highest emission level.</li> <li>Average measurement was not performed if peak level went lower than the average limit.</li> </ol>		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2399	73.89	-1.35	75.24	70.43	32.86	2.11	31.51	147	57	Peak
2412	95.24	-	-	91.74	32.89	2.12	31.51	138	134	Peak
2412	83.66	-	-	80.16	32.89	2.12	31.51	138	134	Average
4824	48.84	-25.16	74	42.11	35.17	3.09	31.53	100	10	Peak
7236	49.88	-25.36	75.24	41.41	36.18	3.24	30.95	100	16	Peak

<b>Test Mode :</b>	802.11n HT20	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Vertical
<b>Remark :</b>	<ol style="list-style-type: none"> <li>2412 MHz is fundamental signal which can be ignored.</li> <li>2399 MHz and 7236 MHz are not within a restricted band, and their limit lines are 20dB below the highest emission level.</li> <li>Average measurement was not performed if peak level went lower than the average limit.</li> </ol>		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2399	70.13	-5.24	75.37	66.67	32.86	2.11	31.51	100	225	Peak
2412	95.37	-	-	91.87	32.89	2.12	31.51	159	270	Peak
2412	83.89	-	-	80.39	32.89	2.12	31.51	159	270	Average
4824	50.29	-23.71	74	43.56	35.17	3.09	31.53	100	106	Peak
7236	50.27	-25.1	75.37	41.8	36.18	3.24	30.95	100	210	Peak



<b>Test Mode :</b>	802.11n HT20	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2437	100.92	-	-	97.34	32.95	2.14	31.51	114	50	Peak
2437	90.1	-	-	86.52	32.95	2.14	31.51	114	50	Average
4874	49.32	-24.68	74	42.54	35.18	3.12	31.52	100	109	Peak
7311	49.61	-24.39	74	41.14	36.2	3.21	30.94	100	108	Peak

<b>Test Mode :</b>	802.11n HT20	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2437	97.83	-	-	94.25	32.95	2.14	31.51	165	280	Peak
2437	85.97	-	-	82.39	32.95	2.14	31.51	165	280	Average
4874	49.1	-24.9	74	42.32	35.18	3.12	31.52	100	289	Peak
7311	50.15	-23.85	74	41.68	36.2	3.21	30.94	100	175	Peak



<b>Test Mode :</b>	802.11n HT20	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2462	100.96	-	-	97.34	32.98	2.15	31.51	191	51	Peak
2462	89.14	-	-	85.52	32.98	2.15	31.51	191	51	Average
4924	49.22	-24.78	74	42.39	35.19	3.15	31.51	100	35	Peak
7386	51.06	-22.94	74	42.56	36.24	3.19	30.93	100	0	Peak

<b>Test Mode :</b>	802.11n HT20	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	42~43%
<b>Test Engineer :</b>	Steven Hao	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2462	99.03	-	-	95.41	32.98	2.15	31.51	132	134	Peak
2462	87.47	-	-	83.85	32.98	2.15	31.51	132	134	Average
4924	49.35	-24.65	74	42.52	35.19	3.15	31.51	100	122	Peak
7386	50.33	-23.67	74	41.83	36.24	3.19	30.93	100	311	Peak



## 4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100319	9kHz~40GHz	Dec. 30, 2011	Nov. 13, 2012	Dec. 29, 2012	Conducted (TH01-KS)
Power Meter	Agilent	E4416A	MY45101555	N/A	Aug. 22, 2012	Nov. 13, 2012	Aug. 21, 2013	Conducted (TH01-KS)
Power Sensor	Agilent	E9327A	MY44421198	N/A	Aug. 22, 2012	Nov. 13, 2012	Aug. 21, 2013	Conducted (TH01-KS)
DC Power Supply	GWINSTEK	GPS-3030D	E1884515	N/A	Aug. 22, 2012	Nov. 13, 2012	Aug. 21, 2013	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	N/A	Dec. 30, 2011	Nov. 13, 2012	Dec. 29, 2012	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESCI	100534	9kHz~3GHz	Nov. 08, 2012	Jan. 11, 2013	Nov. 07, 2013	Radiation (03CH01-KS)
Spectrum Analyzer	R&S	FSP30	100400	9kHz~30GHz	Jun. 01, 2012	Jan. 11, 2013	May 31, 2013	Radiation (03CH01-KS)
Bilog Antenna	SCHAFFNER	CBL6112D	23182	25MHz~2GHz	Dec. 07, 2012	Jan. 11, 2013	Dec. 06, 2013	Radiation (03CH01-KS)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz~30 MHz	Jul. 03, 2012	Jan. 11, 2013	Jul. 02, 2014	Radiation (03CH01-KS)
Double Ridge Horn Antenna	EMCO	3117	00075959	1GHz~18GHz	Jan. 06, 2013	Jan. 11, 2013	Jan. 05, 2014	Radiation (03CH01-KS)
Amplifier	com-power	PA-103A	161069	1MHz~1GHz	Jun. 01, 2012	Jan. 11, 2013	May 31, 2013	Radiation (03CH01-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Dec. 29, 2012	Jan. 11, 2013	Dec. 28, 2013	Radiation (03CH01-KS)
Active Horn Antenna	com-power	AHA-118	701023	1GHz~18GHz	Nov. 07, 2012	Jan. 11, 2013	Nov. 06, 2013	Radiation (03CH01-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	9170249	15GHz~40GHz	Nov. 23, 2012	Jan. 11, 2013	Nov. 22, 2013	Radiation (03CH01-KS)



## 5 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. Photographs of EUT**

Please refer to Sporton report number EP270201-03 as below.



## **Appendix C. Product Equality Declaration**

**ZTE CORPORATION****Product Change Description**

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

[ZTE N9500]  
[ZTE Corporation]

is the variant of the initial certified product,

[ZTE N9500]  
[ZTE Corporation]  
[Project Number: 12ZTE132]  
FCC ID: Q78-ZTEN9500

**SOFTWARE MODIFICATIONS:**

Protocol Stack changes: NO  
MMS/STK changes: NO  
JAVA changes: NO  
Other changes detailed: NO

**HARDWARE MODIFICATION:**

Band changes: NO  
Power Amplifier changes: NO  
Antenna changes: YES, new WIFI/Bluetooth antenna with higher gain (1dB up).  
PCB Layout changes: NO  
Components on PCB changes: Yes

**A: Optimize PDN and change below filter capacitances from top layer to bottom.**

VREG\_S6\_1P05: C271  
VREG\_L27\_1P05: C238  
VREG\_L26\_1P05: C279  
VREG\_L28\_1P05: C242

**B: Delete redundant components:**

S4200, C4221, C4220, L4215, L4210, L4216, L4208, L5121, L5120, L5119, C5121, C5122, S5100, C5118.

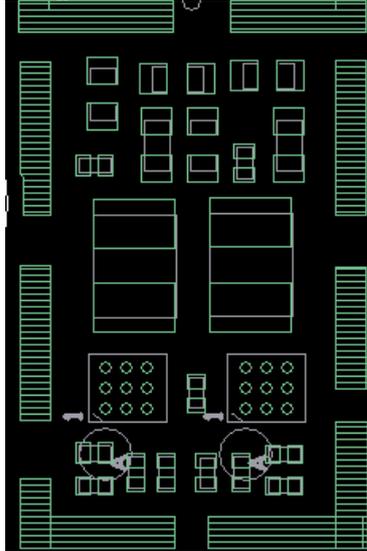
**C: Component packaging updated:**

L5101 now be packaged with 0402 instead of 0201.

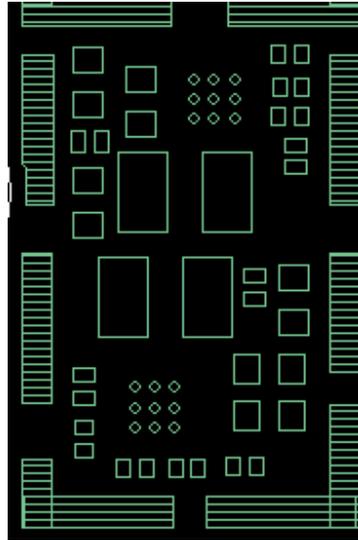
**D: Optimize ADP components layout.**

Please notice that only change components layout but PCB layout is same.

Original:



Now:



,  
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

*Min Zhang*

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