

# Global United Technology Services Co., Ltd.

Report No: GTSE12070084602

# FCC REPORT (WiFi)

Corporativo Lanix S.A. de C.V. Applicant:

Address of Applicant: Carrtera internacional Hermosillo-Nogale Km 8.5 Hermosillo

**Equipment Under Test (EUT)** 

Product Name: **GSM GPRS Digital Mobile Phone** 

Model No.: **LX14** 

**Brand Name:** LANIX

FCC ID: ZC4LX14

FCC CFR Title 47 Part 15 Subpart C Section 15.247: 2010 Applicable standards:

Date of sample receipt: July 27, 2012

Date of Test: July 27-August 08, 2012

Date of report issued: August 10, 2012

**Test Result:** PASS \*

In the configuration tested, the EUT complied with the standards specified above.

# Authorized Signature:



Robinson Lo Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the GTS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of GTS International Electrical Approvals or testing done by GTS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by GTS International Electrical Approvals in writing.

This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."



# 2 Version

Version No.	Date	Description
00	August 10, 2012	Original

	1 Jun-	_	
Prepared By:	hank. I	Date:	August 10, 2012

Project Engineer

Check By: Date: August 10, 2012

Reviewer

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



# 3 Contents

		Page
1	COVER PAGE	1
2	VERSION	2
3	CONTENTS	3
4	TEST SUMMARY	4
_		
5	GENERAL INFORMATION	
	.1 CLIENT INFORMATION	
	.2 GENERAL DESCRIPTION OF E.U.T.	
	.3 TEST MODE	
	.4 TEST FACILITY	
	.5 TEST LOCATION	
	.6 OTHER INFORMATION REQUESTED BY THE CUSTOMER	
	.7 TEST INSTRUMENTS LIST	
6	TEST RESULTS AND MEASUREMENT DATA	9
	.1 Antenna requirement:	9
	.2 CONDUCTED EMISSIONS	
	.3 CONDUCTED PEAK OUTPUT POWER	
	.4 Emission Bandwidth	
	.5 Power Spectral Density	
	.6 BAND EDGES	
	6.6.1 Conducted Emission Method	
	6.6.2 Radiated Emission Method	
	.7 Spurious Emission	
	6.7.1 Conducted Emission Method	
	6.7.2 Radiated Emission Method	
7	TEST SETUP PHOTO	39
0	EUT CONSTRUCTIONAL DETAILS	40

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



# 4 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203/15.247 (c)	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.247 (b)(3)	Pass
Emission Bandwidth	15.247 (a)(2)	Pass
Power Spectral Density	15.247 (e)	Pass
Band Edge	15.247(d)	Pass
Spurious Emission	15.205/15.209	Pass

Pass: The EUT complies with the essential requirements in the standard.

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960

Page 4 of 40



# 5 General Information

# 5.1 Client Information

Applicant:	Corporativo Lanix S.A. de C.V.
Address of Applicant:	Carrtera internacional Hermosillo-Nogale Km 8.5 Hermosillo Mexico
Manufacturer:	Shenzhen Xiangyue Perfect Digital Science & Technology Co., Ltd
Address of Manufacturer/	Building A1, jiujiutongxin Industrial zone II, Xinbu, Tongle, Longgong, Shenzhen
Factory:	Shenzhen Xiangyue Perfect Digital Science & Technology Co., Ltd
Address of Factory:	Building A1, jiujiutongxin Industrial zone II, Xinbu, Tongle, Longgong, Shenzhen

# 5.2 General Description of E.U.T.

Product Name:	GSM GPRS Digital Mobile Phone
Model No.:	LX14
Operation Frequency:	2412MHz~2462MHz (802.11b/802.11g)
Channel numbers:	11 for 802.11b/802.11g
Channel separation:	5MHz
Modulation technology:	Direct Sequence Spread Spectrum (DSSS)
(IEEE 802.11b)	
Modulation technology:	Orthogonal Frequency Division Multiplexing(OFDM)
(IEEE 802.11g)	
Data speed (IEEE 802.11b):	1Mbps, 2Mbps, 5.5Mbps, 11Mbps
Data speed (IEEE 802.11g):	6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps,54Mbps
Antenna Type:	PIFA
Antenna gain:	2dBi(declare by Applicant)
Power supply:	Trade mark: LANIX
	Model No.: LX14-C
	Input: 100-240VAC, 50/60Hz, 0.15A
	Output: 5VDC, 500mA
	DC 3.7V Li-ion Battery

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



Operation Frequency each of channel							
Channel Frequency Channel Frequency Channel Frequency Channel Frequency							Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

#### Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

# 802.11b/802.11g

Channel	Frequency
The lowest channel	2412MHz
The middle channel	2437MHz
The Highest channel	2462MHz

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



Project No.: GTSE120700846RF

#### 5.3 Test mode

WIFI mode	Keep the EUT in communicating mode with wireless router device.
Transmitting mode	Keep the EUT in transmitting mode

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

# Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.

Mode	Data rate
802.11b	1Mbps
802.11g	6Mbps

#### **Final Test Mode:**

According to ANSI C63.4 standards, the test results are both the "worst case" and "worst setup" 1Mbps for 802.11b, 6Mbps for 802.11g.

#### 5.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

#### • FCC —Registration No.: 600491

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and

fuly described in a report filed with the (FCC) Federal Communications Commission.

The acceptance letter from the FCC is maintained in out files. Registration 600491, July 20, 2010.

#### • Industry Canada (IC)

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. Has been

Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-1.

#### 5.5 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Address: 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China

Tel: 0755-27798480 Fax: 0755-27798960

# 5.6 Other Information Requested by the Customer

None.

Global United Technology Services Co., Ltd. 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China 518102

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960 Page 7 of 40



# 5.7 Test Instruments list

Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	Mar. 30 2011	Mar. 29 2013
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	Jul. 03 2012	Jul. 02 2013
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	Feb. 25 2012	Feb. 24 2013
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS208	June 29 2012	June 28 2013
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	Mar. 30 2011	Mar. 29 2013
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	Mar. 31 2012	Mar. 30 2013
9	Coaxial Cable	GTS	N/A	GTS211	Mar. 31 2012	Mar. 30 2013
10	Coaxial cable	GTS	N/A	GTS210	Mar. 31 2012	Mar. 30 2013
11	Coaxial Cable	GTS	N/A	GTS212	Mar. 31 2012	Mar. 30 2013
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	Jul. 03 2012	Jul. 02 2013
13	Amplifier(2GHz-20GHz)	HP	8349B	GTS206	Jul. 03 2012	Jul. 02 2013
14	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June 29 2012	June 28 2013
15	Band filter	Amindeon	82346	GTS219	Mar. 31 2012	Mar. 30 2013
16	Universal radio communication tester	Rohde & Schwarz	CMU200	GTS235	May 11 2012	May 10 2013
17	Signal Generator	Rohde & Schwarz	SML03	GTS236	May 11 2012	May 10 2013
18	Temp. Humidity/ Barometer	Oregon Scientific	BA-888	GTS248	May 11 2012	May 10 2013
19	D.C. Power Supply	Instek	PS-3030	GTS232	NA	NA
20	Splitter	Agilent	11636B	GTS237	May 11 2012	May 10 2013

Conducted Emission:						
Item	Test Equipment	Manufacturer	Model No.	Cal.Date	Cal.Due date	
iteiii	rest Equipment	Manufacturer	woder No.	No.	(mm-dd-yy)	(mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.0(L)x3.0(W)x3.0(H)	GTS252	Jul. 03 2012	Jul. 02 2013
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS223	Jul. 03 2012	Jul. 02 2013
3	10dB Pulse Limita	Rohde & Schwarz	N/A	GTS224	Jul. 03 2012	Jul. 02 2013
4 LISN	SCHWARZBECK	NSLK 8127	GTS226	Jul. 03 2012	Jul. 02 2013	
4	LION	MESS-ELEKTRONIK	NOLK 0121	G13220	Jul. 03 2012	Jul. 02 2013
5	Coaxial Cable	GTS	N/A	GTS227	Mar. 31 2012	Mar. 30 2013
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



# 6 Test results and Measurement Data

# 6.1 Antenna requirement:

Standard requirement: FCC Part15 C Section 15.203 /247(c)

#### 15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

#### 15.247(c) (1)(i) requirement:

(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

#### E.U.T Antenna:

The antenna is PIFA antenna. The best case gain of the antenna is 2dBi.



Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



# 6.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207				
Test Method:	ANSI C63.4:2003				
Test Frequency Range:	150KHz to 30MHz				
Class / Severity:	Class B				
Receiver setup:	RBW=9KHz, VBW=30KHz, Swee	p time=auto			
Limit:	Limit (dBuV)				
	Frequency range (MHz)  Quasi-peak  Average				
	0.15-0.5	66 to 56*	56 to 46*		
	0.5-5	56	46		
	5-30	60	50		
	* Decreases with the logarithm of	the frequency.			
Test setup:	Reference Plane		_		
	AUX Equipment E.U.T  Test table/Insulation plane  Remark E.U.T. Equipment Under Test LISN: Line Impedence Stabilization Network Test table height=0.8m	Filter — AC pow	rer		
Test procedure:	<ol> <li>The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment.</li> <li>The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).</li> <li>Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.</li> </ol>				
Test Instruments:	Refer to section 5.7 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Pass				

#### Measurement data:

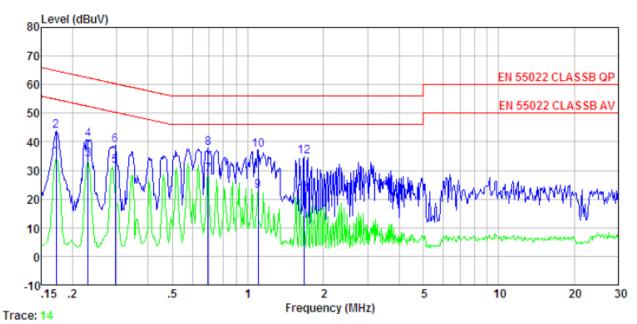
Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960

Page 10 of 40



Project No.: GTSE120700846RF

# Line:



Site : Shielded room

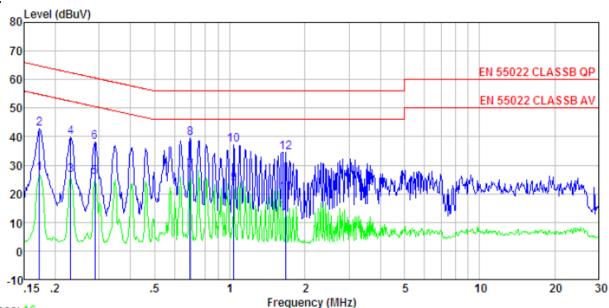
Condition : EN 55022 CLASSB QP LISN-2012 LINE

Job No. : 846RF Test Mode : WIFI mode Test Engineer: HuXiaohe

1050	DIISTITUTE	Read	LISN	Cable		Limit	Over	
	Freq		Factor		Level	Line		Remark
	MHz	dBu∀	dB	dB	dBu₹	dBu∇	dB	
1	0.172	34.50	-0.05	0.10	34.55	54.86	-20.31	Average
2	0.172	43.89	-0.05	0.10	43.94	64.86	-20.92	QP
3	0.230	33.62	-0.05	0.10	33.67	52.44	-18.77	Average
4	0.230	40.84	-0.05	0.10	40.89	62.44	-21.55	QP
4 5 6	0.296	31.42	-0.05	0.10	31.47	50.37	-18.90	Average
6	0.296	38.88	-0.05	0.10	38.93	60.37	-21.44	QP
7	0.694	28.60	-0.05	0.10	28.65	46.00	-17.35	Average
8	0.694	37.73	-0.05	0.10	37.78	56.00	-18.22	QP
9	1.100	22.75	-0.06	0.10	22.79	46.00	-23.21	Average
10	1.100	37.04	-0.06	0.10	37.08	56.00	-18.92	QP
11	1.680	21.57	-0.08	0.10	21.59	46.00	-24.41	Average
12	1, 680	34, 92	-0.08	0.10	34, 94	56, 00	-21.06	ΩP



#### Neutral:



Trace: 16

Site : Shielded room

Condition : EN 55022 CLASSB QP LISN-2012 NEUTRAL

Job No. : 846RF Test Mode : WIFI mode Test Engineer: HuXiaohe

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBu∜	dB	dB	dBu₹	dBu∜	dB	
1 2 3 4 5	0.173 0.173 0.230 0.230 0.288 0.288	27. 30 42. 65 26. 45 39. 80 25. 95 38. 18	-0.05 -0.05 -0.05 -0.05 -0.05 -0.05	0.10 0.10 0.10 0.10 0.10 0.10	27.35 42.70 26.50 39.85 26.00 38.23	64.81 52.44 62.44 50.59	-22.11 -25.94 -22.59 -24.59 -22.36	Average QP Average QP
7 8 9	0.694 0.694 1.037	28. 04 39. 31 23. 47	-0.05 -0.05 -0.06	0.10 0.10 0.10	28.09 39.36 23.51	56.00	-16.64	Average QP Average
10 11 12	1.037 1.680 1.680	36.96 20.32 34.59	-0.06 -0.08 -0.08	0.10 0.10 0.10	37.00 20.34 34.61	56.00 46.00	-19.00	QP Average

#### Notes:

- 1. An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3. Final Level =Receiver Read level + LISN Factor + Cable Loss

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960 Page 12 of 40



# 6.3 Conducted Peak Output Power

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.4:2003 and KDB558074 D01 Meas Guidance
Limit:	30dBm
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane
Test Instruments:	Refer to section 5.7 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

#### **Measurement Data**

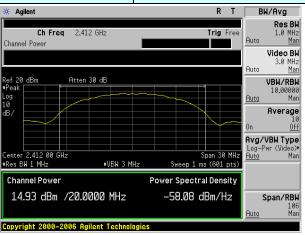
Test CH	Peak Output Po	Limit(dBm)	Result		
Test CIT	802.11b	802.11g	Lillit(QBIII)	Result	
Lowest	14.93	16.43		Pass	
Middle	15.44	16.93	30.00		
Highest	15.77	16.92			

# Test plot as follows:

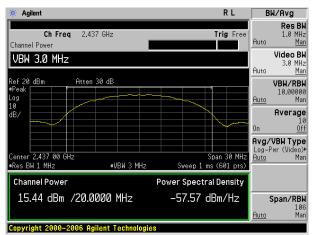
Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960 Page 13 of 40



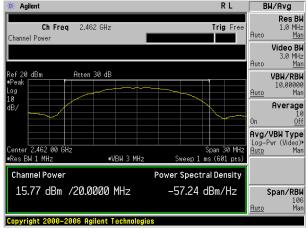
Test mode: 802.11b



#### Lowest channel



# Middle channel

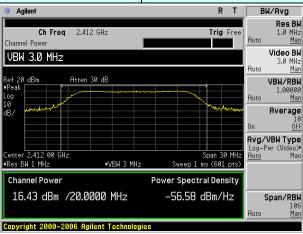


Highest channel

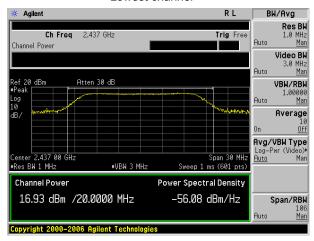
Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



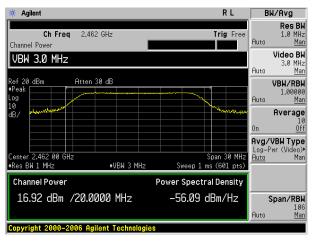
Test mode: 802.11g



#### Lowest channel



#### Middle channel



Highest channel

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



# 6.4 Emission Bandwidth

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)			
Test Method:	ANSI C63.4:2003 and KDB558074 D01 Meas Guidance			
Limit:	>500KHz			
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane			
Test Instruments:	Refer to section 5.7 for details			
Test mode:	Refer to section 5.3 for details			
Test results:	Pass			

# **Measurement Data**

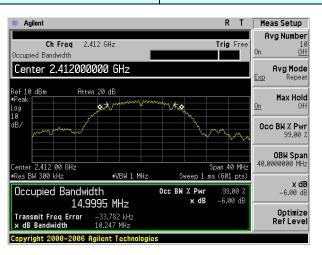
Test CH	Emission Ba	Limit(KMHz)	Result		
1631 011	802.11b	802.11g	Liiiit(Kivii iZ)	Nesuit	
Lowest	10.247	16.390		Pass	
Middle	10.250	16.423	>500		
Highest	10.245	16.337			

Test plot as follows:

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960 Page 16 of 40



802.11b Test mode:



# Lowest channel



#### Middle channel

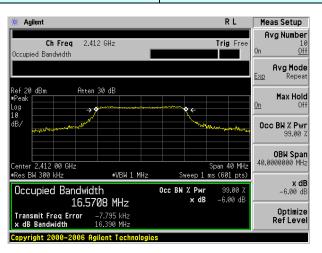


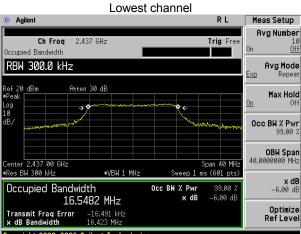
Highest channel

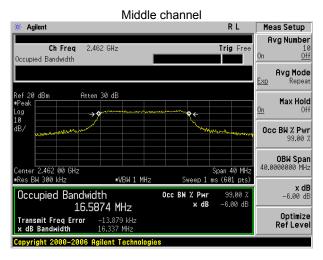
Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



Test mode: 802.11g







Highest channel

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



# 6.5 Power Spectral Density

Test Requirement:	FCC Part15 C Section 15.247 (e)			
Test Method:	ANSI C63.4:2003 and KDB558074 D01 Meas Guidance			
Limit:	8dBm			
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane			
Test Instruments:	Refer to section 5.7 for details			
Test mode:	Refer to section 5.3 for details			
Test results:	Pass			

#### **Measurement Data**

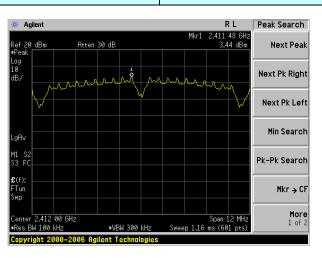
Test CH	Power Spectral Density (dBm/100KHz)		BWCF	•	ctral Density 3KHz)	Limit	Result	
	802.11b	802.11g		802.11b	802.11g	(dBm/3KHz)		
Lowest	3.44	-0.87	-15.20	-11.76	-16.07			
Middle	3.68	-0.71	-15.20	-11.52	-15.91	8.00	Pass	
Highest	4.11	-0.06	-15.20	-11.09	-15.26			
Remark: BWCF = 10log(3 kHz/100 kHz)= -15.20dB								

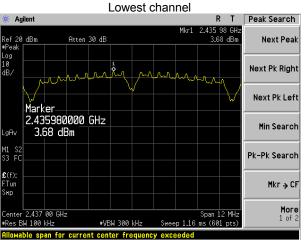
# Test plot as follows:

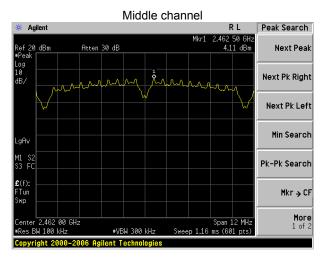
Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960 Page 19 of 40



Test mode: 802.11b



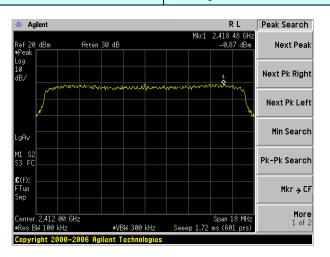


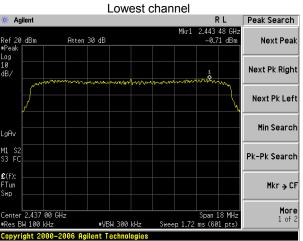


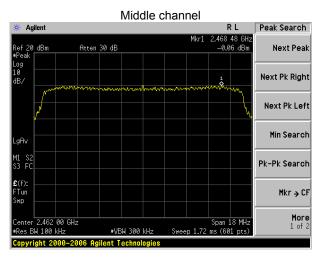
Highest channel



Test mode: 802.11g







Highest channel



# 6.6 Band edges

# **6.6.1 Conducted Emission Method**

Test Requirement:	FCC Part15 C Section 15.247 (d)				
Test Method:	ANSI C63.4:2003 and KDB558074 D01 Meas Guidance				
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.				
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane				
Test Instruments:	Refer to section 5.7 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Pass				

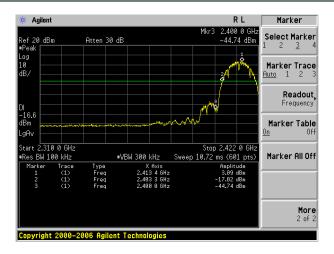
# Test plot as follows:

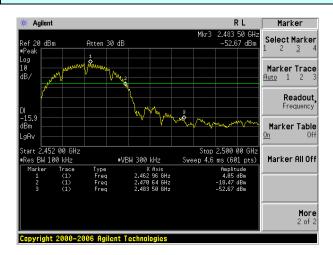
Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960 Page 22 of 40



#### Test mode:

# 802.11b



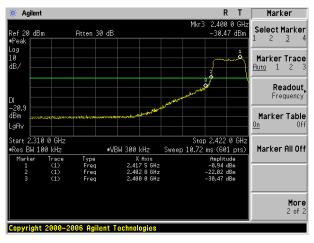


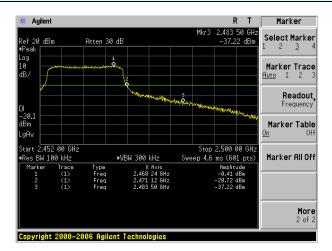
Lowest channel

Highest channel

#### Test mode:

#### 802.11g





Lowest channel

Highest channel

Global United Technology Services Co., Ltd. 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China 518102

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



# 6.6.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209 and 15.205					
Test Method:	ANSI C63.4: 2003					
Test Frequency Range:	30MHz to 25GHz	, only worse cas	e is reported			
Test site:	Measurement Dis	-	•			
Receiver setup:	Frequency	Detector	RBW	VBW	Remark	
		Peak	1MHz	3MHz	Peak Value	
	Above 1GHz	Peak	1MHz	10Hz	Average Value	
Limit:	Freque	ency	Limit (dBuV/	/m @3m)	Remark	
	Above 1	IGHz	54.0	0	Average Value	
	Above	GHZ	74.0	0	Peak Value	
Test setup:	Antenna Tower  Horn Antenna  Spectrum Analyzer  Turn Table  Amplifier					
Test Procedure:	<ol> <li>The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified</li> </ol>					
Test Instruments:	Refer to section 5.7 for details					
Test mode:	Refer to section 5.3 for details					
Test results:	Pass					

Remark:

Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960 Page 24 of 40



N	دما	CII	ron	nor	٦ŧ	ds	ıta:
I۷	IIEa	่อน	ıeı	nei	ш	uc	ILA.

Test mode:	802.11b	Test channel:	Lowest
------------	---------	---------------	--------

#### Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	49.68	27.58	3.81	34.83	46.24	74.00	-27.76	Horizontal
2400.00	56.28	27.58	3.83	34.83	52.86	74.00	-21.14	Horizontal
2390.00	62.44	27.58	3.81	34.83	59.00	74.00	-15.00	Vertical
2400.00	64.91	27.58	3.83	34.83	61.49	74.00	-12.51	Vertical

#### Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	37.26	27.58	3.81	34.83	33.82	54.00	-20.18	Horizontal
2400.00	37.28	27.58	3.83	34.83	33.86	54.00	-20.14	Horizontal
2390.00	41.35	27.58	3.81	34.83	37.91	54.00	-16.09	Vertical
2400.00	40.34	27.58	3.83	34.83	36.92	54.00	-17.08	Vertical

802.11b Test channel: Highest
-------------------------------

#### Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	51.38	27.52	3.89	34.86	47.93	74.00	-26.07	Horizontal
2500.00	56.32	27.55	3.90	34.87	52.90	74.00	-21.10	Horizontal
2483.50	51.10	27.52	3.89	34.86	47.65	74.00	-26.35	Vertical
2500.00	53.26	27.55	3.90	34.87	49.84	74.00	-24.16	Vertical

#### Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	42.31	27.52	3.89	34.86	38.86	54.00	-15.14	Horizontal
2500.00	38.36	27.55	3.90	34.87	34.94	54.00	-19.06	Horizontal
2483.50	42.35	27.52	3.89	34.86	38.90	54.00	-15.10	Vertical
2500.00	38.36	27.55	3.90	34.87	34.94	54.00	-19.06	Vertical

#### Remark:

- 1. Final Level =Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Global United Technology Services Co., Ltd. 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China 518102

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960

Page 25 of 40



Test mode:		802.1	1g	-	Test channel	:	Lowest	
Peak value:								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	i Leve			Polarization
2390.00	48.17	27.58	3.81	34.83	44.73	74.00	-29.27	Horizontal
2400.00	55.85	27.58	3.83	34.83	52.43	74.00	-21.57	Horizontal
2390.00	63.35	27.58	3.81	34.83	59.9	74.00	-14.09	Vertical
2400.00	62.38	27.58	3.83	34.83	58.96	74.00	-15.04	Vertical
Average valu	ie:							
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	l Leve		0.0	Polarization
2390.00	36.16	27.58	3.81	34.83	32.72	54.00	-21.28	Horizontal
2400.00	37.33	27.58	3.83	34.83	33.91	54.00	-20.09	Horizontal
2390.00	40.35	27.58	3.81	34.83	36.91	54.00	-17.09	Vertical
2400.00	40.34	27.58	3.83	34.83	36.92	54.00	-17.08	Vertical
Test mode:		802.1	1g	-	Test channel		Highest	

#### Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	59.32	27.52	3.89	34.86	55.87	74.00	-18.13	Horizontal
2500.00	53.32	27.55	3.90	34.87	49.90	74.00	-24.10	Horizontal
2483.50	61.09	27.52	3.89	34.86	57.64	74.00	-16.36	Vertical
2500.00	47.65	27.55	3.90	34.87	44.23	74.00	-29.77	Vertical

#### Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	43.26	27.52	3.89	34.86	39.81	54.00	-14.19	Horizontal
2500.00	35.63	27.55	3.90	34.87	32.21	54.00	-21.79	Horizontal
2483.50	42.77	27.52	3.89	34.86	39.32	54.00	-14.68	Vertical
2500.00	36.26	27.55	3.90	34.87	32.84	54.00	-21.16	Vertical

#### Remark:

- 1. Final Level =Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Global United Technology Services Co., Ltd. 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China 518102

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



# 6.7 Spurious Emission

# 6.7.1 Conducted Emission Method

Test Requirement:	FCC Part15 C Section 15.247 (d)			
Test Method:	ANSI C63.4:2003 and KDB558074 D01 Meas Guidance			
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.			
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane			
Test Instruments:	Refer to section 5.7 for details			
Test mode:	Refer to section 5.3 for details			
Test results:	Pass			

Test plot as follows:

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960

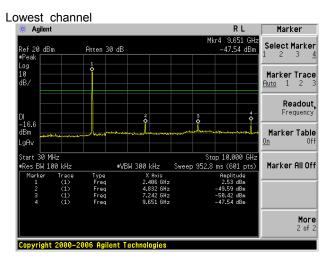
Page 27 of 40



Peak Search

Next Peak

# Test mode: 802.11b



10 dB/
dB/
DI
-16.6 dBm
LgAv

Start 10.00 GHz
+Res BH 100 HHz

Min Search

Pk-Pk Search

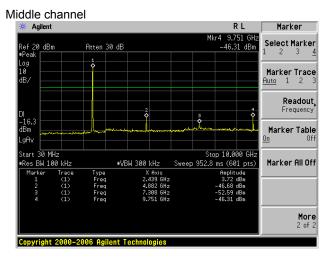
Marker Trace
1 (1) Freq 23.72 GHz

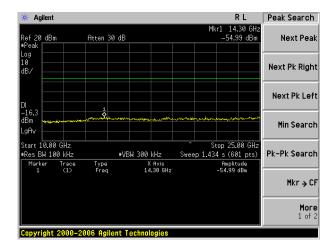
Freq 23.72 GHz

Caparight 2009-2006 Grillost Technologies

30MHz~10GHz

10GHz~25GHz





30MHz~10GHz 10GHz~25GHz

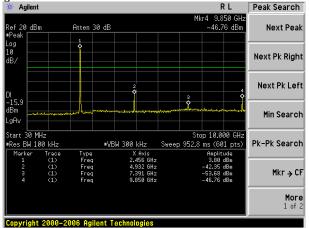
Ref 20 dBm

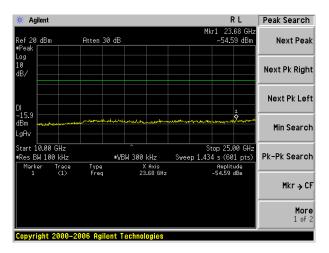
Atten 30 dB

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960 Page 28 of 40









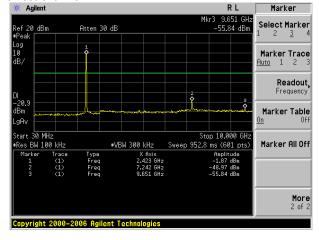
30MHz~10GHz

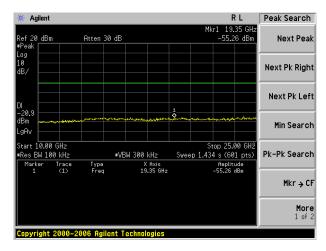
10GHz~25GHz

#### Test mode:

802.11g

#### Lowest channel





30MHz~10GHz

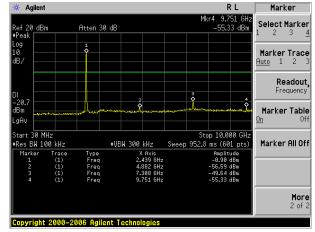
10GHz~25GHz

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



Peak Search

#### Middle channel



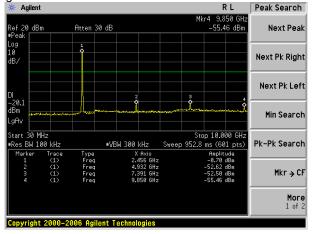
30MHz~10GHz

# 

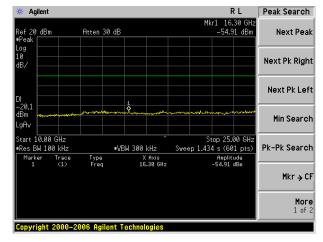
# Agilent

10GHz~25GHz

#### Highest channel



30MHz~10GHz



10GHz~25GHz

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



# 6.7.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Se	FCC Part15 C Section 15.209					
Test Method:	ANSI C63.4: 200	ANSI C63.4: 2003					
Test Frequency Range:	30MHz to 25GHz	30MHz to 25GHz					
Test site:	Measurement Dis	stance: 3m					
Receiver setup:	Frequency	Detector	RBW	VBW	Remark		
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value		
	Above 1GHz	Peak	1MHz	3MHz	Peak Value		
	Above Toriz	Peak	1MHz	10Hz	Average Value		
Limit:	Freque	ency	Limit (dBuV	/m @3m)	Remark		
	30MHz-8	88MHz	40.0	)	Quasi-peak Value		
	88MHz-2	16MHz	43.5	5	Quasi-peak Value		
	216MHz-9	60MHz	46.0	)	Quasi-peak Value		
	960MHz-	-1GHz	54.0	)	Quasi-peak Value		
	Above <sup>2</sup>	IGHz	54.0	)	Average Value		
	710000	10112	74.0	)	Peak Value		
	Turn Table Ground Plane Above 1GHz	4m		RF Test Receiver			
	EUT	3m 4m		Antenna Towe Horn Antenna Spectrum Analyzer	r		



Test Procedure:	1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
	2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
	3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
	4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
	<ol><li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li></ol>
	6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test Instruments:	Refer to section 5.7 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Remark:

Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.

#### ■ Below 1GHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
77.87	55.68	11.26	0.42	31.83	35.53	40.00	-4.47	Vertical
129.92	45.61	9.03	0.56	31.86	23.34	43.50	-20.16	Vertical
181.92	53.41	9.84	0.67	32.17	31.75	43.50	-11.75	Vertical
207.85	53.89	10.81	0.74	32.27	33.17	43.50	-10.33	Vertical
234.17	52.72	11.83	0.85	32.28	33.12	46.00	-12.88	Vertical
260.14	44.00	12.16	0.95	32.29	24.82	46.00	-21.18	Vertical
77.87	56.80	11.26	0.42	31.83	36.65	40.00	-3.35	Horizontal
129.92	53.77	9.03	0.56	31.86	31.50	43.50	-12.00	Horizontal
181.92	56.50	9.84	0.67	32.17	34.84	43.50	-8.66	Horizontal
207.85	58.31	10.81	0.74	32.27	37.59	43.50	-5.91	Horizontal
234.17	60.65	11.83	0.85	32.28	41.05	46.00	-4.95	Horizontal
260.14	49.58	12.16	0.95	32.29	30.40	46.00	-15.60	Horizontal

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960 Page 32 of 40



Lowest

#### ■ Above 1GHz

802.11b

Test mode:

Peak value:								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4824.00	41.23	31.79	5.34	24.07	54.29	74.00	-19.71	Vertical
7236.00	39.26	36.19	6.88	26.44	55.89	74.00	-18.11	Vertical
9648.00	32.46	38.07	8.96	25.36	54.13	74.00	-19.87	Vertical
12060.00	26.34	39.05	10.35	25.15	50.59	74.00	-23.41	Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4824.00	42.16	31.79	5.34	24.07	55.22	74.00	-18.78	Horizontal
7236.00	39.35	36.19	6.88	26.44	55.98	74.00	-18.02	Horizontal
9648.00	29.65	38.07	8.96	25.36	51.32	74.00	-22.68	Horizontal
12060.00	25.35	39.05	10.35	25.15	49.60	74.00	-24.40	Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		Horizontal

Test channel:

#### Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4824.00	21.26	31.79	5.34	24.07	34.32	54.00	-19.68	Vertical
7236.00	14.26	36.19	6.88	26.44	30.89	54.00	-23.11	Vertical
9648.00	13.21	38.07	8.96	25.36	34.88	54.00	-19.12	Vertical
12060.00	10.26	39.05	10.35	25.15	34.51	54.00	-19.49	Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4824.00	21.32	31.79	5.34	24.07	34.38	54.00	-19.62	Horizontal
7236.00	26.59	36.19	6.88	26.44	43.22	54.00	-10.78	Horizontal
9648.00	20.16	38.07	8.96	25.36	41.83	54.00	-12.17	Horizontal
12060.00	10.35	39.05	10.35	25.15	34.60	54.00	-19.40	Horizontal
14472.00	*					54.00		Horizontal
16884.00	*					54.00		Horizontal

#### Remark:

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960 Page 33 of 40

<sup>1.</sup> Final Level =Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor

<sup>2. &</sup>quot;\*", means this data is the too weak instrument of signal is unable to test.



Test mode:		802.11b		Test channel:				Middle	Э	
Peak value:										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)		eamp Level or (dB) (dBuV/m)		Limit (dBu'	_	Over Limit (dB)	polarization
4874.00	38.56	31.85	5.40	24	1.01	51.80	74.	00	-22.20	Vertical
7311.00	32.26	36.37	6.90	26	6.58	48.95	74.	00	-25.05	Vertical
9688.00	24.26	38.13	8.98	25	5.34	46.03	74.	00	-27.97	Vertical
12185.00	20.16	38.92	10.38	25	5.04	44.42	74.	00	-29.58	Vertical
14682.00	*						74.	00		Vertical
17179.00	*						74.	00		Vertical
4874.00	38.26	31.85	5.40	24	1.01	51.50	74.	00	-22.50	Horizontal
7311.00	28.35	36.37	6.90	26	6.58	45.04	74.	00	-28.96	Horizontal
9688.00	29.09	38.13	8.98	25	5.34	50.86	74.	00	-23.14	Horizontal
12185.00	25.79	38.92	10.38	25	5.04	50.05	74.	00	-23.95	Horizontal
14682.00	*				·		74.	00		Horizontal
17179.00	*				_		74.	00		Horizontal

#### Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874.00	21.02	31.85	5.40	24.01	34.26	54.00	-19.74	Vertical
7311.00	16.32	36.37	6.90	26.58	33.01	54.00	-20.99	Vertical
9688.00	11.14	38.13	8.98	25.34	32.91	54.00	-21.09	Vertical
12185.00	10.68	38.92	10.38	25.04	34.94	54.00	-19.06	Vertical
14682.00	*					54.00		Vertical
17179.00	*					54.00		Vertical
4874.00	22.35	31.85	5.40	24.01	35.59	54.00	-18.41	Horizontal
7311.00	17.26	36.37	6.90	26.58	33.95	54.00	-20.05	Horizontal
9688.00	12.30	38.13	8.98	25.34	34.07	54.00	-19.93	Horizontal
12185.00	10.23	38.92	10.38	25.04	34.49	54.00	-19.51	Horizontal
14682.00	*					54.00		Horizontal
17179.00	*					54.00		Horizontal

#### Remark:

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960

Page 34 of 40

<sup>1.</sup> Final Level =Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor

<sup>2. &</sup>quot;\*", means this data is the too weak instrument of signal is unable to test.



Test mode:		802.11b	802.11b			Test channel: High			st	
Peak value:		•								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)		amp or (dB)	Level (dBuV/m)	Limit (dBu'	_	Over Limit (dB)	polarization
4924.00	38.26	31.89	5.46	23	3.96	51.65	74.	00	-22.35	Vertical
7386.00	31.81	36.49	6.93	26	6.79	48.44	74.	00	-25.56	Vertical
9848.00	26.35	38.24	9.05	25	5.30	48.34	74.	00	-25.66	Vertical
12310.00	28.34	38.83	10.41	24	1.90	52.68	74.	00	-21.32	Vertical
14772.00	*						74.	00		Vertical
17234.00	*						74.	00		Vertical
4924.00	38.26	31.89	5.46	23	3.96	51.65	74.	00	-22.35	Horizontal
7386.00	33.76	36.49	6.93	26	6.79	50.39	74.	00	-23.61	Horizontal
9848.00	25.26	38.24	9.05	25	5.30	47.25	74.	00	-26.75	Horizontal
12310.00	24.35	38.83	10.41	24	.90	48.69	74.	00	-25.31	Horizontal
14772.00	*						74.	00		Horizontal
17234.00	*						74.	00		Horizontal

#### Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4924.00	25.26	31.89	5.46	23.96	38.65	54.00	-15.35	Vertical
7386.00	17.35	36.49	6.93	26.79	33.98	54.00	-20.02	Vertical
9848.00	10.26	38.24	9.05	25.30	32.25	54.00	-21.75	Vertical
12310.00	10.32	38.83	10.41	24.90	34.66	54.00	-19.34	Vertical
14772.00	*					54.00		Vertical
17234.00	*					54.00		Vertical
4924.00	24.97	31.89	5.46	23.96	38.36	54.00	-15.64	Horizontal
7386.00	19.35	36.49	6.93	26.79	35.98	54.00	-18.02	Horizontal
9848.00	12.35	38.24	9.05	25.30	34.34	54.00	-19.66	Horizontal
12310.00	11.39	38.83	10.41	24.90	35.73	54.00	-18.27	Horizontal
14772.00	*					54.00		Horizontal
17234.00	*					54.00		Horizontal

# Remark:

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960 Page 35 of 40

<sup>1.</sup> Final Level =Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor

<sup>2. &</sup>quot;\*", means this data is the too weak instrument of signal is unable to test.



Test mode:

802.11a

Report No: GTSE12070084602

lowest

rest mode.		602.11g		rest c	nannei.	iowest		
Peak value:								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4824.00	36.59	31.79	5.34	24.07	49.65	74.00	-24.35	Vertical
7236.00	32.16	36.19	6.88	26.44	48.79	74.00	-25.21	Vertical
9648.00	29.35	38.07	8.96	25.36	51.02	74.00	-22.98	Vertical
12060.00	27.26	39.05	10.35	25.15	51.51	74.00	-22.49	Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4824.00	39.26	31.79	5.34	24.07	52.32	74.00	-21.68	Horizontal
7236.00	31.26	36.19	6.88	26.44	47.89	74.00	-26.11	Horizontal
9648.00	28.50	38.07	8.96	25.36	50.17	74.00	-23.83	Horizontal
12060.00	22.36	39.05	10.35	25.15	46.61	74.00	-27.39	Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		Horizontal
Average value	e:	•	•					•
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4824.00	21.35	31.79	5.34	24.07	34.41	54.00	-19.59	Vertical
7236.00	15.38	36.19	6.88	26.44	32.01	54.00	-21.99	Vertical
9648.00	12.34	38.07	8.96	25.36	34.01	54.00	-19.99	Vertical

25.15

24.07

26.44

25.36

25.15

34.53

35.41

37.92

34.02

34.57

Test channel:

# Remark:

12060.00

14472.00

16884.00

4824.00

7236.00

9648.00

12060.00

14472.00

16884.00

10.28

\*

22.35

21.29

12.35

10.32

10.35

5.34

6.88

8.96

10.35

39.05

31.79

36.19

38.07

39.05

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960 Page 36 of 40

-19.47

-18.59

-16.08

-19.98

-19.43

Vertical

Vertical

Vertica

Horizontal Horizontal

Horizontal

Horizontal

Horizontal

Horizontal

54.00

54.00

54.00

54.00

54.00

54.00

54.00

54.00

54.00

<sup>1.</sup> Final Level =Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor

<sup>2. &</sup>quot;\*", means this data is the too weak instrument of signal is unable to test.



Test mode:		802.11g Test channel:					Middle	е		
Peak value:										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (d		Level (dBuV/m)	Limit (dBu'	_	Over Limit (dB)	polarization
4874.00	42.35	31.85	5.40	24.01		55.59	74.	00	-18.41	Vertical
7311.00	40.26	36.37	6.90	26.58		56.95	74.	00	-17.05	Vertical
9688.00	32.12	38.13	8.98	25.34		53.89	74.	00	-20.11	Vertical
12185.00	22.39	38.92	10.38	25.04		46.65	74.	00	-27.35	Vertical
14472.00	*						74.	00		Vertical
16884.00	*						74.	00		Vertical
4874.00	42.16	31.85	5.40	24.01		55.40	74.	00	-18.60	Horizontal
7311.00	39.35	36.37	6.90	26.58		56.04	74.	00	-17.96	Horizontal
9688.00	30.16	38.13	8.98	25.34		51.93	74.	00	-22.07	Horizontal
12185.00	28.26	38.92	10.38	25.04		52.52	74.	00	-21.48	Horizontal
14472.00	*						74.	00		Horizontal
16884.00	*						74.	00		Horizontal

#### Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874.00	20.35	31.85	5.40	24.01	33.59	54.00	-20.41	Vertical
7311.00	17.06	36.37	6.90	26.58	33.75	54.00	-20.25	Vertical
9688.00	13.11	38.13	8.98	25.34	34.88	54.00	-19.12	Vertical
12185.00	10.88	38.92	10.38	25.04	35.14	54.00	-18.86	Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4874.00	22.36	31.85	5.40	24.01	35.60	54.00	-18.40	Horizontal
7311.00	18.94	36.37	6.90	26.58	35.63	54.00	-18.37	Horizontal
9688.00	14.83	38.13	8.98	25.34	36.60	54.00	-17.40	Horizontal
12185.00	12.44	38.92	10.38	25.04	36.70	54.00	-17.30	Horizontal
14472.00	*					54.00		Horizontal
16884.00	*					54.00		Horizontal

#### Remark:

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960 Page 37 of 40

<sup>1.</sup> Final Level =Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor

<sup>2. &</sup>quot;\*", means this data is the too weak instrument of signal is unable to test.



Test mode:		802.11g	802.11g			hannel:		Highe	st	
Peak value:		•								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Prea Facto	•	Level (dBuV/m)	Limit Line (dBuV/m)		Over Limit (dB)	polarization
4924.00	37.12	31.89	5.46	23.	.96	50.51	74.	00	-23.49	Vertical
7386.00	32.67	36.49	6.93	26.	.79	49.30	74.	00	-24.70	Vertical
9848.00	30.84	38.24	9.05	25.	.30	52.83	74.	00	-21.17	Vertical
12310.00	28.17	38.83	10.41	24.	.90	52.51	74.	00	-21.49	Vertical
14772.00	*						74.	00		Vertical
17234.00	*						74.	00		Vertical
4924.00	39.84	31.89	5.46	23.	.96	53.23	74.	00	-20.77	Horizontal
7386.00	32.85	36.49	6.93	26.	.79	49.48	74.	00	-24.52	Horizontal
9848.00	30.74	38.24	9.05	25.	.30	52.73	74.	00	-21.27	Horizontal
12310.00	29.35	38.83	10.41	24.	.90	53.69	74.	00	-20.31	Horizontal
14772.00	*						74.	00		Horizontal
17234.00	*						74.	00		Horizontal

#### Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4924.00	20.35	31.89	5.46	23.96	33.74	54.00	-20.26	Vertical
7386.00	15.36	36.49	6.93	26.79	31.99	54.00	-22.01	Vertical
9848.00	12.32	38.24	9.05	25.30	34.31	54.00	-19.69	Vertical
12310.00	12.00	38.83	10.41	24.90	36.34	54.00	-17.66	Vertical
14772.00	*					54.00		Vertical
17234.00	*					54.00		Vertical
4924.00	20.35	31.89	5.46	23.96	33.74	54.00	-20.26	Horizontal
7386.00	18.35	36.49	6.93	26.79	34.98	54.00	-19.02	Horizontal
9848.00	12.35	38.24	9.05	25.30	34.34	54.00	-19.66	Horizontal
12310.00	10.35	38.83	10.41	24.90	34.69	54.00	-19.31	Horizontal
14772.00	*					54.00		Horizontal
17234.00	*					54.00		Horizontal

# Remark:

Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960 Page 38 of 40

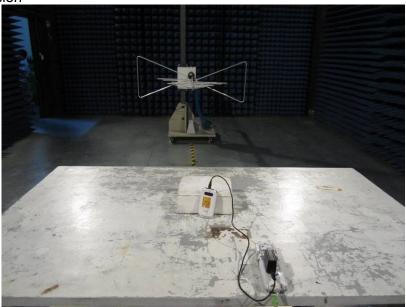
<sup>1.</sup> Final Level =Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor

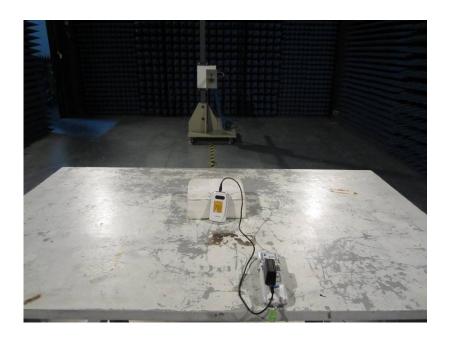
<sup>2. &</sup>quot;\*", means this data is the too weak instrument of signal is unable to test.



# 7 Test Setup Photo

Radiated Emission





Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



**Conducted Emission** 



# 8 EUT Constructional Details

Reference to the test report No. GTSE12070084601

----end-----