

TEST REPORT

Applicant: SHENZHEN KENXINDA TECHNOLOGY CO.,LTD

Address of Applicant: 18TH FLOOR,FUCHUN ORIENT BUILDING,SHENNAN AV 7006, SHENZHEN, CHINA

Equipment Under Test (EUT)

Product Name: GSM MOBILE PHONE

Model No.: S-250

Trade mark: SEFTON

FCC ID: ZSHS-250

Applicable standards: FCC CFR Title 47 Part 15 Subpart B:2010

Date of sample receipt: Nov. 1, 2011

Date of Test: Nov. 1-14, 2011

Date of report issued: Nov. 16, 2011

Test Result : PASS *

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

Authorized Signature:



Stephen Guo
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.

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2 Version

Version No.	Date	Description
00	Nov. 16, 2011	<i>Original</i>

Prepared By:

Collin. He

Date:

Nov. 16, 2011

Project Engineer

Check By:

Hans. Hu

Date:

Nov. 16, 2011

Reviewer

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4 Test Summary

Test Item	Section in CFR 47	Result
Conducted Emission	Part15.107	PASS
Readiated Emissions	Part15.109	PASS

PASS: *The EUT complies with the essential requirements in the standard.*

5 General Information

5.1 Client Information

Applicant:	SHENZHEN KENXINDA TECHNOLOGY CO.,LTD
Address of Applicant:	18TH FLOOR,FUCHUN ORIENT BUILDING,SHENNAN AV 7006 ,SHENZHEN, CHINA
Manufacturer	SHENZHEN KENXINDA TECHNOLOGY CO.,LTD BAO'AN BRANCH
Address of Manufacturer	1-6 FLOOR,NO.105 WORK SHOP&1-5 FLOOR,NO.104 WORKSHOP,XINWEIHUANING ROAD,DALANG COMMUNITY, DALANGSTREET,BAO'AN DISTRICT,SHENZHEN, P.R.CHINA

5.2 General Description of E.U.T.

Product Name:	GSM MOBILE PHONE
Model No.:	S-250
Trade mark:	SEFTON
AC adapter:	Model No:HWT-2.5W-5050G Input: AC 100-240V 50/60Hz Output: DC 5V 500mA
Power supply:	Type: Li-ion Battery 3.7V 900mAh Voltage:DC 3.7V

5.3 Test mode and voltage

Test mode:	
PC mode	Keep the EUT in exchange data with PC.

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 fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in 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 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
HP	Printer	CB495A	05257893	DoC
DELL	PC	OPTIPLEX745	GTS312	DoC
DELL	MONITOR	E178FPC	N/A	DoC
DELL	KEYBOARD	SK-8115	N/A	DoC
DELL	MOUSE	MOC5UO	N/A	DoC

5.7 Deviation from Standards

Biconical, log.per. antenna and horn antenna were used instead of dipole antenna. Semi-anechoic Chamber was used as alternation of open air test sites, and all test suites were performed with radiated method in it.

5.8 Abnormalities from Standard Conditions

None.

5.9 Other Information Requested by the Customer

None.

6 Test Instruments list

Conducted Emission						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.0(L)x3.0(W)x3.0(H)	GTS252	Jul. 04 2011	Jul. 03 2012
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS223	Jul. 04 2011	Jul. 03 2012
3	10dB Pulse Limita	Rohde & Schwarz	N/A	GTS224	Jul. 04 2011	Jul. 03 2012
4	LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	GTS226	Jul. 04 2011	Jul. 03 2012
5	Coaxial Cable	GTS	N/A	GTS227	Apr. 01 2011	Mar. 31 2012
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A

Radiated Emission						
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 2012
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. 04 2011	Jul. 03 2012
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	Feb. 26 2011	Feb. 25 2012
5	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
6	Coaxial Cable	GTS	N/A	GTS213	Apr. 01 2011	Mar. 31 2012
7	Coaxial Cable	GTS	N/A	GTS211	Apr. 01 2011	Mar. 31 2012
8	Coaxial cable	GTS	N/A	GTS210	Apr. 01 2011	Mar. 31 2012
9	Coaxial Cable	GTS	N/A	GTS212	Apr. 01 2011	Mar. 31 2012
10	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	Jul. 04 2011	Jul. 03 2012

7 Test results and Measurement Data

7.1 Conducted Emissions

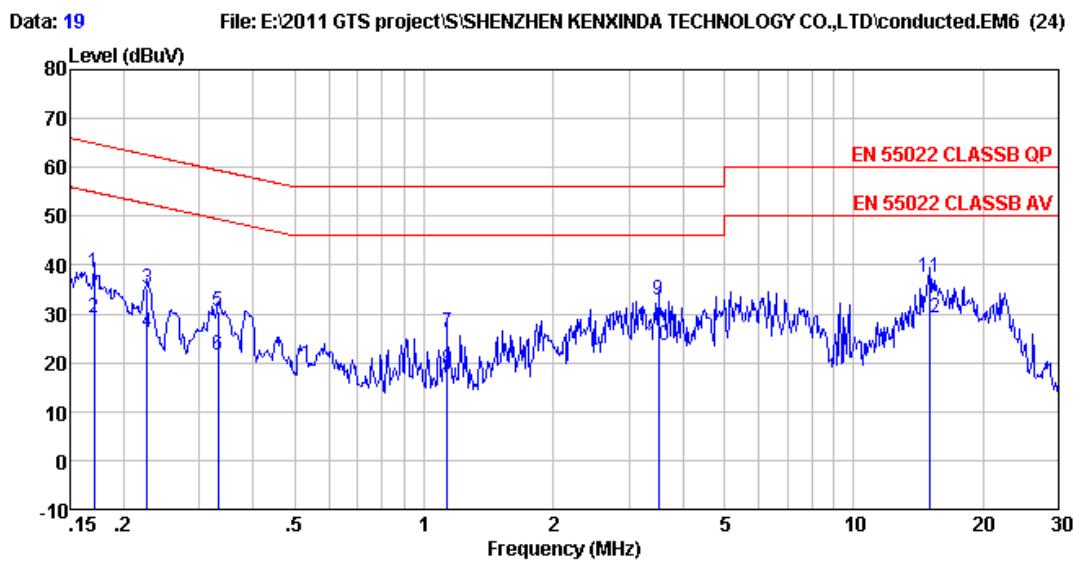
Test Requirement:	FCC Part15 B Section 15.107																
Test Method:	ANSI C63.4:2003																
Test Frequency Range:	150kHz to 30MHz																
Class / Severity:	Class B																
Receiver setup:	RBW=9kHz, VBW=30kHz																
Limit:	<table border="1"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th> <th colspan="2">Limit (dBμV)</th> </tr> <tr> <th>Quasi-peak</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>0.15-0.5</td> <td>66 to 56*</td> <td>56 to 46*</td> </tr> <tr> <td>0.5-5</td> <td>56</td> <td>46</td> </tr> <tr> <td>5-30</td> <td>60</td> <td>50</td> </tr> </tbody> </table> <p>Decreases with the logarithm of the frequency.</p>			Frequency range (MHz)	Limit (dB μ V)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dB μ V)																
	Quasi-peak	Average															
0.15-0.5	66 to 56*	56 to 46*															
0.5-5	56	46															
5-30	60	50															
Test procedure	<p>The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). 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.</p>																
Test setup:	<p>Reference Plane</p> <p><i>Remark:</i> <i>E.U.T: Equipment Under Test</i> <i>LISN: Line Impedance Stabilization Network</i> <i>Test table height=0.8m</i></p>																
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1 012mbar											
Measurement Record:						Uncertainty: ± 3.45 dB											
Test Instruments:	Refer to section 6 for details																
Test mode:	Refer to section 5.3 for details																
Test results:	Passed																

Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Line:



Condition : EN 55022 CLASSB QP LISN(2011) LINE

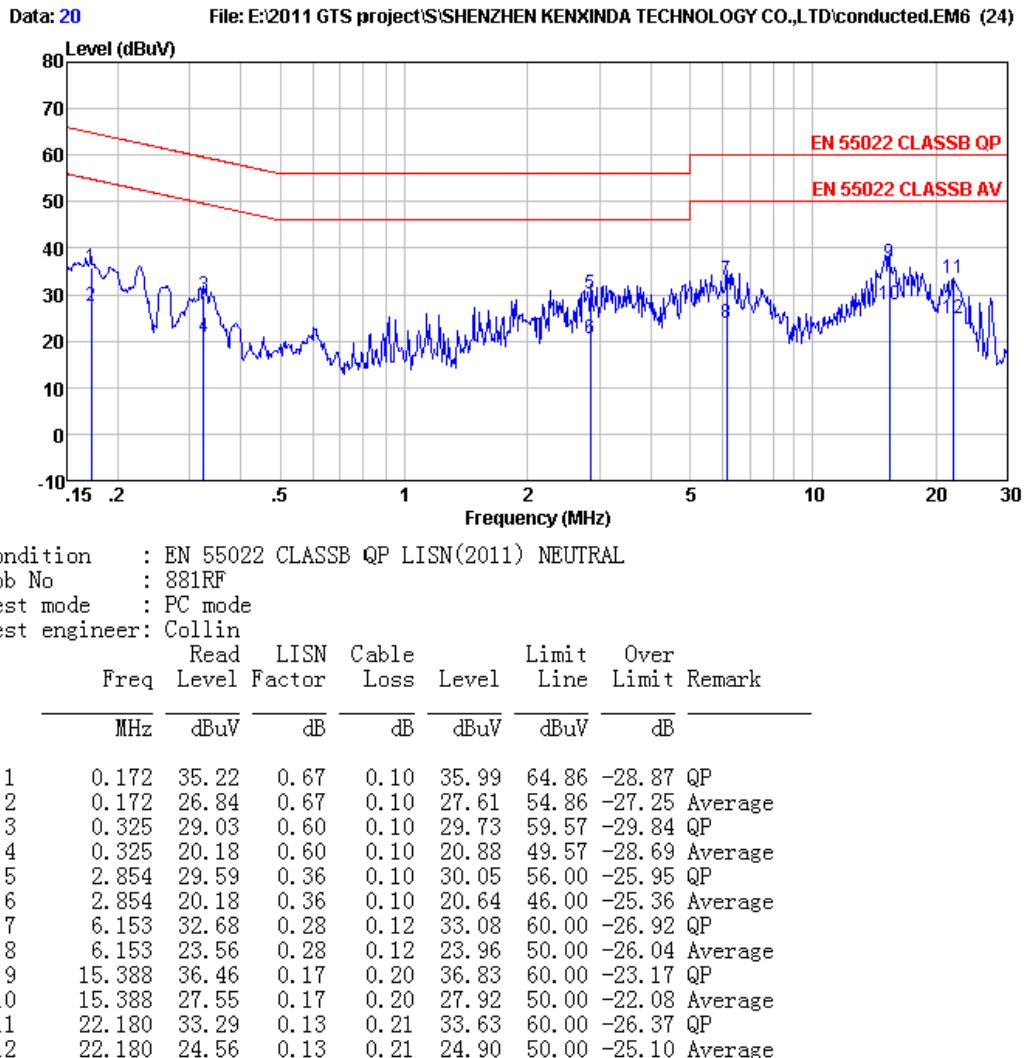
Job No : 881RF

Test mode : PC mode

Test engineer: Collin

Freq	Read	LISN	Cable	Limit	Over	Remark
	Level	Factor	Loss			
MHz	dBuV	dB	dB	dBuV	dBuV	dB
1	0.170	37.56	0.67	0.10	38.33	64.94 -26.61 QP
2	0.170	28.44	0.67	0.10	29.21	54.94 -25.73 Average
3	0.227	34.51	0.64	0.10	35.25	62.57 -27.32 QP
4	0.227	25.47	0.64	0.10	26.21	52.57 -26.36 Average
5	0.332	29.85	0.60	0.10	30.55	59.40 -28.85 QP
6	0.332	20.98	0.60	0.10	21.68	49.40 -27.72 Average
7	1.135	25.73	0.46	0.10	26.29	56.00 -29.71 QP
8	1.135	18.13	0.46	0.10	18.69	46.00 -27.31 Average
9	3.509	32.48	0.34	0.10	32.92	56.00 -23.08 QP
10	3.509	23.15	0.34	0.10	23.59	46.00 -22.41 Average
11	14.986	37.07	0.18	0.20	37.45	60.00 -22.55 QP
12	14.986	28.81	0.18	0.20	29.19	50.00 -20.81 Average

Neutral:

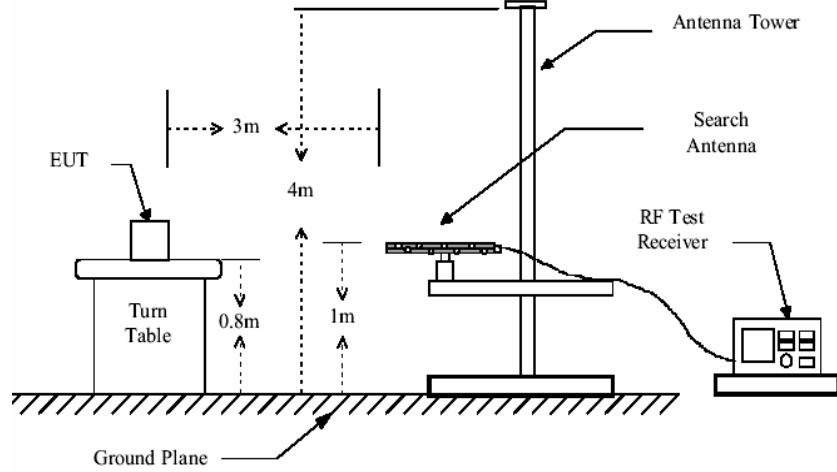
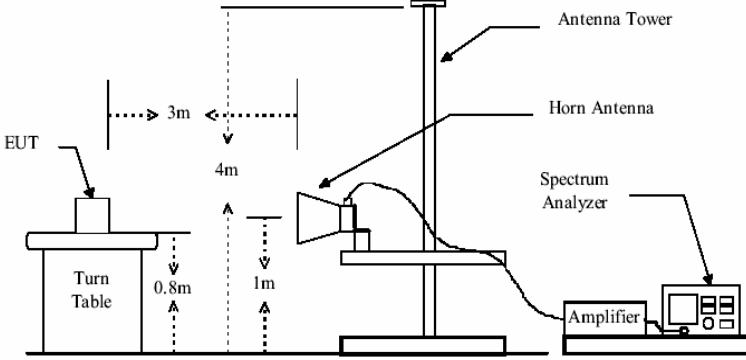


Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.

7.2 Radiated Emission

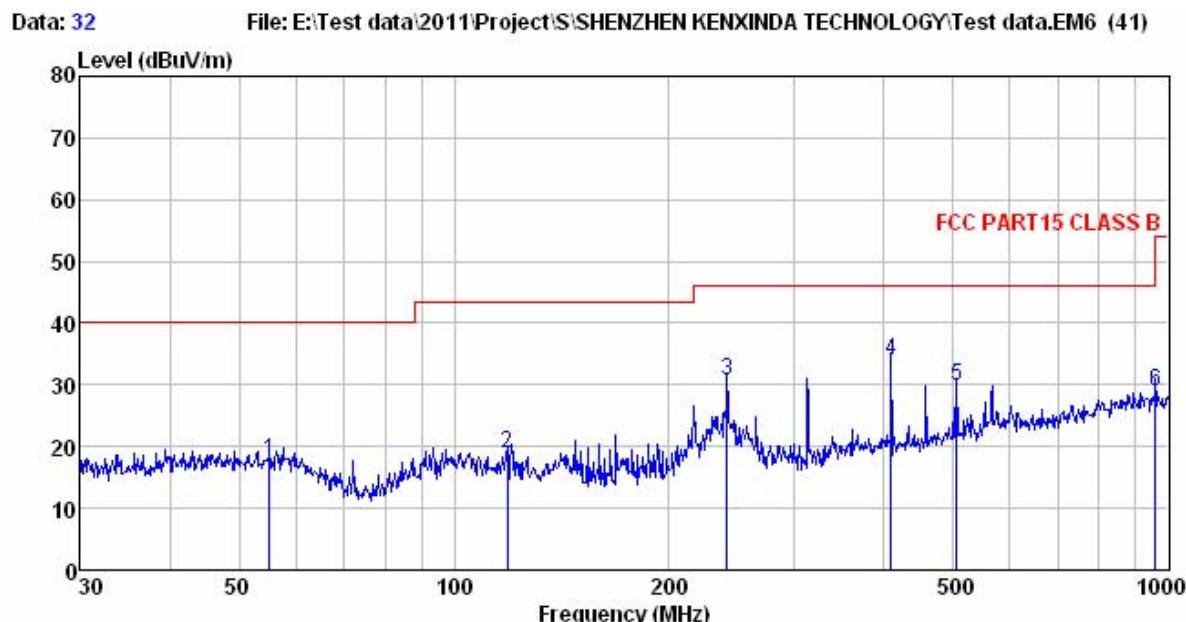
Test Requirement:	FCC Part15 B Section 15.109				
Test Method:	ANSI C63.4:2009				
Test Frequency Range:	30MHz to 6000MHz				
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
	Average	1MHz	10Hz		Average Value
Limit:	Frequency	Limit (dBuV/m @3m)		Remark	
	30MHz-88MHz	40.0		Quasi-peak Value	
	88MHz-216MHz	43.5		Quasi-peak Value	
	216MHz-960MHz	46.0		Quasi-peak Value	
	960MHz-1GHz	54.0		Quasi-peak Value	
	Above 1GHz	54.0		Average Value	Peak Value
74.0					
Test Procedure:	<ol style="list-style-type: none"> The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 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. 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 rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 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 setup:	<p>Below 1GHz</p>  <p>Above 1GHz</p> 
Test environment:	Temp.: 25 °C Humid.: 52% Press.: 1 012mbar
Measurement Record:	Uncertainty: $\pm 4.5\text{dB}$
Test Instruments:	Refer to section 6 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data

Below 1 G

Horizontal:



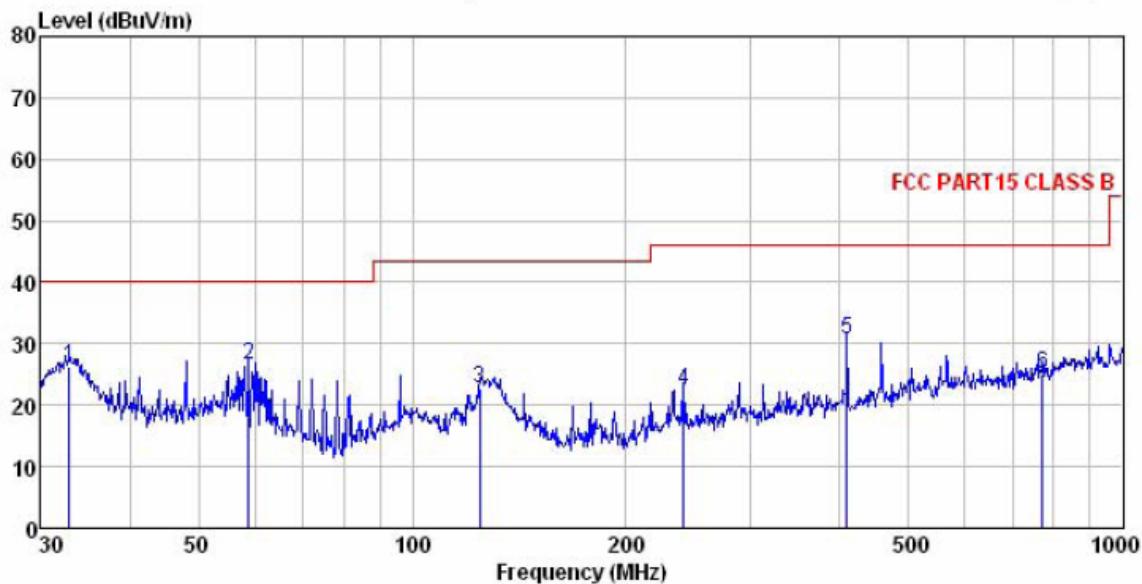
Site : 3m chamber
 Condition : FCC PART15 CLASS B 3m VULB9163 HORIZONTAL
 Job No. : 885RF
 Test mode : PC mode
 Test Engineer: Collin

Freq	Read	Antenna	Cable	Preamp	Limit	Over	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	
1	55.22	36.34	13.03	0.34	31.99	17.72	40.00 -22.28 QP
2	118.60	39.59	10.69	0.53	31.81	19.00	43.50 -24.50 QP
3	240.83	50.13	12.09	0.88	32.28	30.82	46.00 -15.18 QP
4	408.95	49.77	15.27	1.27	32.26	34.05	46.00 -11.95 QP
5	504.71	43.36	16.68	1.48	31.59	29.93	46.00 -16.07 QP
6	958.79	36.66	21.49	2.23	31.50	28.88	46.00 -17.12 QP

Vertical:

Data: 30

File: E:\Test data\2011\Project\S\SHENZHEN KENXINDA TECHNOLOGY\Test data.EM6 (41)

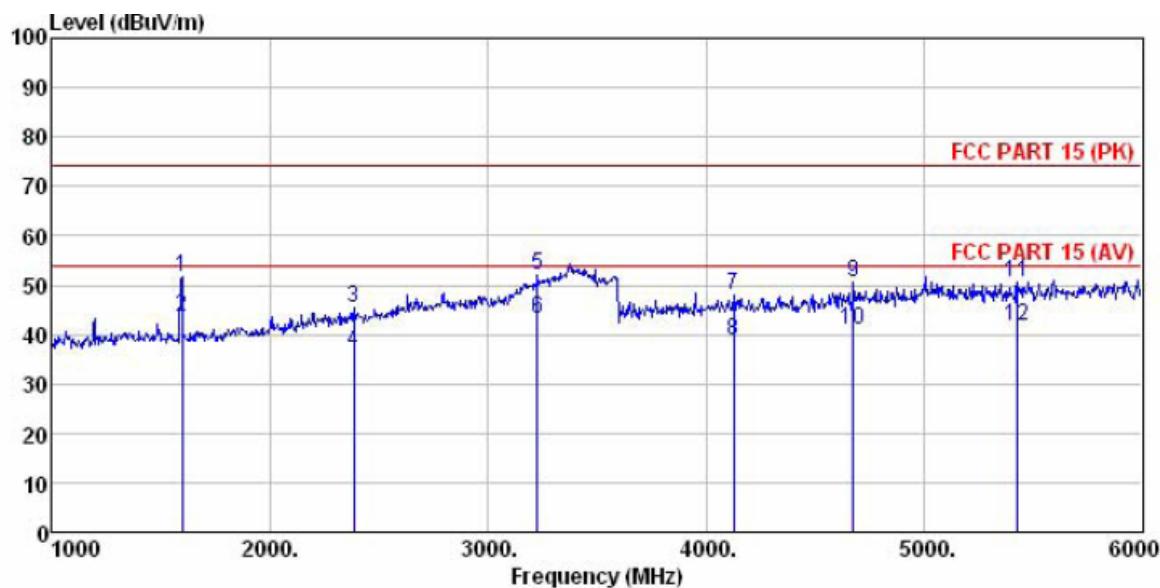


Site : 3m chamber
 Condition : FCC PART15 CLASS B 3m VULB9163 VERTICAL
 Job No. : 881RF
 Test mode : PC mode
 Test Engineer: Collin

Freq	Read	Antenna	Cable	Preamp	Limit	Over	Remark
	MHz	dBuV	dB/m	dB	dB	Line	
1	32.86	45.96	12.31	0.22	32.23	26.26	40.00 -13.74 QP
2	58.82	45.45	12.77	0.35	31.95	26.62	40.00 -13.38 QP
3	124.57	44.10	9.80	0.55	31.83	22.62	43.50 -20.88 QP
4	240.83	41.89	12.09	0.88	32.28	22.58	46.00 -23.42 QP
5	408.95	46.38	15.27	1.27	32.26	30.66	46.00 -15.34 QP
6	771.45	34.83	19.72	2.01	31.55	25.01	46.00 -20.99 QP

Above 1 G

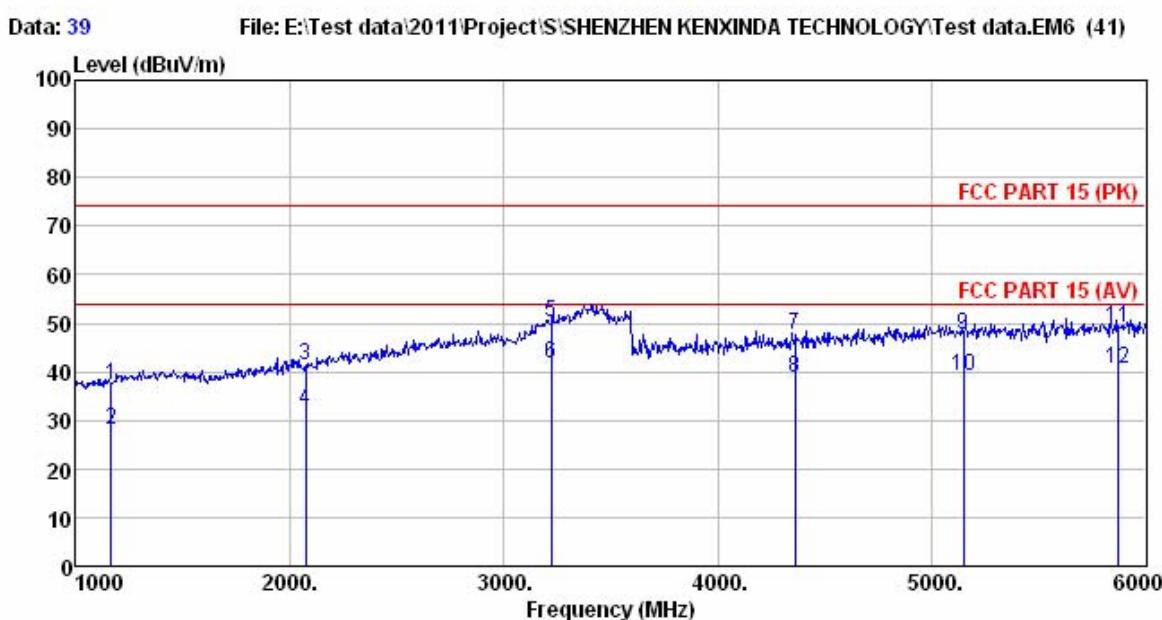
Horizontal:



Site : 3m chamber
 Condition : FCC PART 15 (PK) 3m BBHA9120 (>1GHZ) HORIZONTAL
 Job No. : 881RF
 Test mode : PC mode
 Test Engineer: Collin

Freq	Read	Antenna	Cable	Preamp	Limit	Over	Remark	
	Freq	Level	Factor	Loss				
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	-----
1	1595.00	58.16	24.98	3.11	34.64	51.61	74.00	-22.39 Peak
2	1595.00	50.27	24.98	3.11	34.64	43.72	54.00	-10.28 Average
3	2385.00	48.70	27.58	3.81	34.83	45.26	74.00	-28.74 Peak
4	2385.00	39.97	27.58	3.81	34.83	36.53	54.00	-17.47 Average
5	3225.00	53.72	28.62	4.60	35.08	51.86	74.00	-22.14 Peak
6	3225.00	44.88	28.62	4.60	35.08	43.02	54.00	-10.98 Average
7	4125.00	47.74	30.09	5.38	35.33	47.88	74.00	-26.12 Peak
8	4125.00	38.73	30.09	5.38	35.33	38.87	54.00	-15.13 Average
9	4675.00	48.80	31.24	5.79	35.44	50.39	74.00	-23.61 Peak
10	4675.00	39.27	31.24	5.79	35.44	40.86	54.00	-13.14 Average
11	5425.00	48.00	31.91	6.25	35.42	50.74	74.00	-23.26 Peak
12	5425.00	38.97	31.91	6.25	35.42	41.71	54.00	-12.29 Average

Vertical:



Site : 3m chamber
 Condition : FCC PART 15 (PK) 3m BBHA9120 (>1GHZ) VERTICAL
 Job No. : 885RF
 Test mode : PC mode
 Test Engineer: Collin

Freq	Read	Antenna	Cable	Preamp	Limit	Over	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	
1	1165.00	44.49	24.75	2.56	34.54	37.26	74.00 -36.74 Peak
2	1165.00	35.18	24.75	2.56	34.54	27.95	54.00 -26.05 Average
3	2075.00	45.64	26.71	3.56	34.73	41.18	74.00 -32.82 Peak
4	2075.00	36.59	26.71	3.56	34.73	32.13	54.00 -21.87 Average
5	3220.00	52.02	28.62	4.60	35.08	50.16	74.00 -23.84 Peak
6	3220.00	43.67	28.62	4.60	35.08	41.81	54.00 -12.19 Average
7	4360.00	46.99	30.50	5.58	35.38	47.69	74.00 -26.31 Peak
8	4360.00	37.89	30.50	5.58	35.38	38.59	54.00 -15.41 Average
9	5150.00	45.01	32.07	6.08	35.47	47.69	74.00 -26.31 Peak
10	5150.00	36.49	32.07	6.08	35.47	39.17	54.00 -14.83 Average
11	5870.00	45.43	32.73	6.47	35.62	49.01	74.00 -24.99 Peak
12	5870.00	36.94	32.73	6.47	35.62	40.52	54.00 -13.48 Average

Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor