FCC CERTIFICATION On Behalf of Li Xiang Model Factory

Transmitter Model No.: 8801

FCC ID: UO9880127M

Prepared for : Li Xiang Model Factory

Address : 2nd Floor No.7 Mansion, East No.1 Lane, Heping Tongyi

Xin Village, Fuyong Town, Baoan District, Shenzhen,

China

Prepared by : ACCURATE TECHNOLOGY CO. LTD

Address : F1, Bldg. A, Changyuan New Material Port, Keyuan Rd.

Science & Industry Park, Nanshan, Shenzhen, Guangdong

P.R. China

Tel: (0755) 26503290 Fax: (0755) 26503396

Report Number : ATE20062098
Date of Test : October 18, 2006
Date of Report : October 24, 2006

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Test Report Certification

Applicant : Li Xiang Model Factory

Manufacturer : Li Xiang Model Factory

EUT Description : Transmitter

(A) MODEL NO.: 8801(B) SERIAL NO.: N/A

(C) POWER SUPPLY: 12V DC ("AA" batteries 8×)

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.227: 2006 & ANSI C63.4: 2003

The device described above is tested by ACCURATE TECHNOLOGY CO. LTD to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.227 limits. The measurement results are contained in this test report and ACCURATE TECHNOLOGY CO. LTD is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of ACCURATE TECHNOLOGY CO. LTD.

Date of Test:	October 18, 2006	
Prepared by : Reviewer :	sky Long	
	(Engineer)	
Prepared by : Reviewer : Approved & Authorized Signer :	5emle	
	(Quality Manager)	
Approved & Authorized Signer:	Martinh	
	(Manager)	

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT : Transmitter

Model Number : 8801

Power Supply : $12V DC ("AA" batteries 8 \times)$

Applicant : Li Xiang Model Factory

Address : 2nd Floor No.7 Mansion, East No.1 Lane, Heping Tongyi

Xin Village, Fuyong Town, Baoan District, Shenzhen,

China

Manufacturer : Li Xiang Model Factory

Address : 2nd Floor No.7 Mansion, East No.1 Lane, Heping Tongyi

Xin Village, Fuyong Town, Baoan District, Shenzhen,

China

Date of sample received: October 16, 2006

Date of Test : October 18, 2006

1.2.Description of Test Facility

EMC Lab : Accredited by TUV Rheinland Shenzhen, May 10, 2004

Accredited by FCC, May 10, 2004

The Certificate Registration Number is 253065

Accredited by Industry Canada, May 18, 2004 The Certificate Registration Number is IC 5077

Name of Firm : ACCURATE TECHNOLOGY CO. LTD

Site Location : F1, Bldg. A, Changyuan New Material Port, Keyuan Rd.

Science & Industry Park, Nanshan, Shenzhen, Guangdong

P.R. China

1.3. Measurement Uncertainty

Conducted emission expanded uncertainty = 2.23dB, k=2

Radiated emission expanded uncertainty = 4.12dB, k=2

2. MEASURING DEVICE AND TEST EQUIPMENT

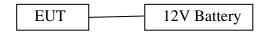
Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Туре	S/N	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	03.31.2007
EMI Test Receiver	Rohde&Schwarz	ESI26	838786/013	01.02.2007
Loop Antenna	Schwarzbeck	FMZB1516	113	01.02.2007
Bilog Antenna	Schwarzbeck	VULB9163	9163-194	03.31.2007
Bilog Antenna	Chase	CBL6112B	2591	03.31.2007
Horn Antenna	Rohde&Schwarz	HF906	100013	01.02.2007
Spectrum Analyzer	Anritsu	MS2651B	6200238856	03.31.2007
Pre-Amplifier	Agilent	8447D	2944A10619	03.31.2007
L.I.S.N.	Rohde&Schwarz	ESH3-Z5	100305	03.31.2007
L.I.S.N.	Rohde&Schwarz	ESH3-Z5	100310	03.31.2007

3. RADIATED EMISSION FOR FCC PART 15 SECTION 15.109(A)

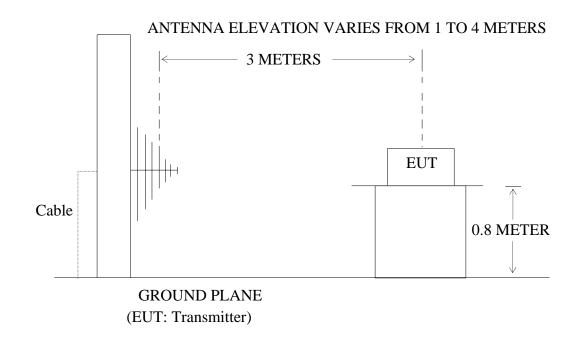
3.1.Block Diagram of Test Setup

3.1.1.Block diagram of connection between the EUT and simulators



(EUT: Transmitter)

3.1.2. Anechoic Chamber Test Setup Diagram



3.2. The Field Strength of Radiation Emission Measurement Limits

3.2.1. Radiation Emission Measurement Limits According to Section 15.109(a)

		Limit,	
Frequency (MHz)	Field Strength of Quasi-peak Value (microvolts/m)	Field Strength of Quasi-peak Value (dBµV/m)	The final measurement in band 9-90kHz, 110-490kHz and
30 - 88	100	40	above 1000MHz is performed with
88 - 216	150	43.5	Average detector. Except those frequency bands
216 - 960	200	46	mention above, the

3.3. Configuration of EUT on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

3.3.1. Transmitter (EUT)

Model Number : 8801 Serial Number : N/A

Manufacturer : Li Xiang Model Factory

3.4. Operating Condition of EUT

- 3.4.1. Setup the EUT and simulator as shown as Section 3.1.
- 3.4.2. Turn on the power of all equipment.
- 3.4.3. Let the EUT work in Charging modes (use 12V cigarette-lighter adapter connect to Battery) measure it.

3.5. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to FCC Part 15 Subpart C on radiated emission measurement.

The bandwidth of test receiver (R&S ESCS30) is set at 120KHz in 30-1000MHz. The frequency range from 30MHz to 1000MHz is checked.

3.6. The Field Strength of Radiation Emission Measurement Results **PASS.**

The frequency range 30MHz to 1000MHz is investigated.

Date of Test:	October 18, 2006	Temperature:	23°C
EUT:	Transmitter	Humidity:	52%
Model No.:	8801	Power Supply:	12V DC ("AAA" battery 8×)
Test Mode:	Charging	Test Engineer:	Andy

Polarization	Frequency (MHz)	Reading(dBµV/m) QP	Factor Corr.(dB)	Result(dBμV/m) QP	Limits(dBµV/m) QP	Margin(dBμV/m) QP
Horizontal	-	-	-	-	-	-
Vertical	-	-	-	-	-	-

[&]quot;-" means Disturbances are small or not detectable.

The spectral diagrams in appendix 1 display the measurement of un-weighted peak values.

The field is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Reviewer:	Sand -)	
Keviewei.	- Ban	

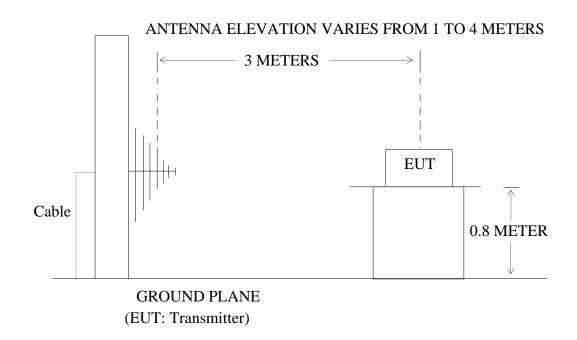
4. RADIATED EMISSION FOR FCC PART 15 SECTION 15.227(B)

- 4.1.Block Diagram of Test Setup
 - 4.1.1.Block diagram of connection between the EUT and simulators

EUT

(EUT: Transmitter)

4.1.2. Anechoic Chamber Test Setup Diagram



4.2. The Field Strength of Radiation Emission Measurement Limits

4.2.1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in section 15.209

Radiation Emission Measurement Limits According to Section 15.209(a)

		Limit,	
Frequency (MHz)	Field Strength of Quasi-peak Value (microvolts/m)	Field Strength of Quasi-peak Value (dBµV/m)	The final measurement in band 9-90kHz, 110-490kHz and
30 - 88	100	40	above 1000MHz is performed with
88 - 216	150	43.5	Average detector. Except those

216 - 960	200	46	frequency bands mention above, the
Above 960	500	54	final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

4.3. Configuration of EUT on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.3.1. Transmitter (EUT)

Model Number : 8801 Serial Number : N/A

Manufacturer : Li Xiang Model Factory

4.4. Operating Condition of EUT

4.4.1. Setup the EUT and simulator as shown as Section 3.1.

4.4.2. Turn on the power of all equipment.

4.4.3. Let the EUT work in TX modes(on) measure it. The transmit frequency are 27.045M, 27.095M, 27.145MHz. We are select 27.045M, 27.095M, 27.145MHz TX frequency to transmitted.

4.5.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to FCC Part 15 Subpart C on radiated emission measurement.

The bandwidth of test receiver (R&S ESCS30) is set at 120KHz in 30-1000MHz. The frequency range from 30MHz to 1000MHz is checked.

The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

4.6. The Field Strength of Radiation Emission Measurement Results **PASS.**

The frequency range 30MHz to 1000MHz is investigated.

Date of Test:October 18, 2006Temperature:23°CEUT:TransmitterHumidity:52%Model No.:8801Power Supply:12V DC ("AA" battery 8×)Test Mode:TX 27.045MHzTest Engineer:Andy

Polarization	Frequency (MHz)	Reading(dBμV/m) QP	Factor Corr.(dB)	Result(dBµV/m) QP	Limits(dBµV/m) QP	Margin(dBμV/m) QP
Horizontal	54.092	19.5	11.7	31.2	40.0	8.8
Horizontal	81.140	20.4	8.9	29.3	40.0	10.7
Horizontal	108.188	26.1	7.0	33.1	43.5	10.4
Horizontal	135.244	30.1	5.5	35.6	43.5	7.9
Horizontal	162.296	24.3	6.6	30.9	43.5	12.6
Horizontal	216.364	26.9	9.7	36.6	46.0	9.4
Horizontal	243.400	24.8	9.8	34.6	46.0	11.4
Vertical	54.096	25.2	7.3	32.5	40.0	7.5
Vertical	81.154	25.1	5.3	30.4	40.0	9.6
Vertical	108.196	25.2	7.0	32.2	43.5	11.3
Vertical	135.250	24.2	7.3	31.5	43.5	12.0
Vertical	162.284	15.6	8.0	23.6	43.5	19.9
Vertical	216.344	15.0	8.8	23.8	46.0	22.2
Vertical	243.404	14.7	8.6	23.3	46.0	22.7

The spectral diagrams in appendix 1 display the measurement of un-weighted peak values.

The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Date of Test:October 18, 2006Temperature:23°CEUT:TransmitterHumidity:52%Model No.:8801Power Supply:12V DC ("AA" battery 8×)Test Mode:TX 27.095MHzTest Engineer:Andy

	Frequency	Reading(dBµV/m)	Factor	Result(dBuV/m)	Limita(dDuV/m)	Margin(dBμV/m)
Polarization	(MHz)	QP	Corr.(dB)	QP	QP	QP
Horizontal	54.196	20.6	11.7	32.3	40.0	7.7
Horizontal	81.288	21.4	8.9	30.3	40.0	9.7
Horizontal	108.406	22.7	7.0	29.7	43.5	13.8
Horizontal	135.488	28.5	5.6	34.1	43.5	9.4
Horizontal	162.590	28.8	6.8	35.6	43.5	7.9
Horizontal	189.660	25.5	9.0	34.5	43.5	9.0
Horizontal	216.775	21.2	9.7	30.9	46.0	15.1
Horizontal	243.856	22.3	9.8	32.1	46.0	13.9
Horizontal	270.965	18.0	11.3	29.3	46.0	16.7
Vertical	54.200	25.6	7.1	32.7	40.0	7.3
Vertical	81.296	25.7	5.6	31.3	40.0	8.7
Vertical	108.396	22.6	7.0	29.6	43.5	13.9
Vertical	135.488	26.6	7.3	33.9	43.5	9.6
Vertical	162.580	27.3	8.0	35.3	43.5	8.2
Vertical	189.674	25.3	8.8	34.1	43.5	9.4
Vertical	243.870	19.5	8.6	28.1	46.0	17.9
Vertical	270.962	14.6	10.4	25.0	46.0	21.0

The spectral diagrams in appendix 1 display the measurement of un-weighted peak values.

The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Date of Test:October 18, 2006Temperature:23°CEUT:TransmitterHumidity:52%Model No.:8801Power Supply:12V DC ("AA" battery 8×)Test Mode:TX 27.145MHzTest Engineer:Andy

Polarization	Frequency (MHz)	Reading(dBμV/m) QP	Factor Corr.(dB)	Result(dBµV/m) QP	Limits(dBµV/m) QP	Margin(dBμV/m) QP
Horizontal	54.300	20.5	11.7	32.2	40.0	7.8
Horizontal	81.444	19.6	8.9	28.5	40.0	11.5
Horizontal	108.584	24.0	7.0	31.0	43.5	12.5
Horizontal	135.740	29.8	5.6	35.4	43.5	8.1
Horizontal	162.884	27.1	6.9	34.0	43.5	9.5
Horizontal	190.020	18.6	9.2	27.8	43.5	15.7
Vertical	54.310	25.2	7.3	32.5	40.0	7.5
Vertical	81.452	26.1	5.3	31.4	40.0	8.6
Vertical	108.596	23.6	7.0	30.6	43.5	12.9
Vertical	135.732	28.7	7.3	36.0	43.5	7.5
Vertical	162.892	22.2	8.0	30.2	43.5	13.3
Vertical	190.028	14.1	8.8	22.9	43.5	20.6

The spectral diagrams in appendix 1 display the measurement of un-weighted peak values.

The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Reviewer:	Searle)	

5. FUNDAMENTAL RADIATED EMISSION FOR FCC PART 15 SECTION 15.227(A)

5.1.Block Diagram of Test Setup

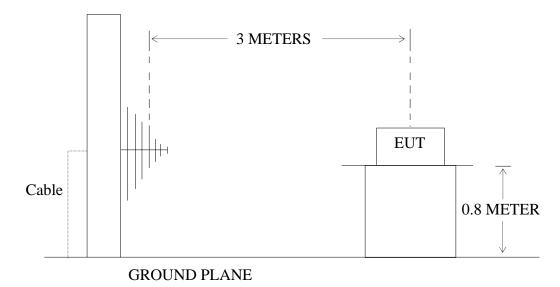
5.1.1.Block diagram of connection between the EUT and simulators

EUT

(EUT: Transmitter)

5.1.2. Anechoic Chamber Test Setup Diagram

ANTENNA ELEVATION VARIES FROM 1 TO 4 METERS



(EUT: Transmitter)

5.2. The Emission Limit For Section 15.227(a)

4.2.1 The field strength of any emission within this band shall not exceed 10,000microvolts/meter at 3 meters. The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in Section 15.35 for limiting peak emission apply.

5.3.EUT Configuration on Measurement

The following equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

5.3.1. Transmitter (EUT)

Model Number : 8801 Serial Number : N/A

Manufacturer : Li Xiang Model Factory

5.4. Operating Condition of EUT

- 5.4.1. Setup the EUT and simulator as shown as Section 4.1.
- 5.4.2. Turn on the power of all equipment.
- 5.4.3.Let the EUT work in TX mode (On) measure it. The transmit frequency are 27.045M, 27.095M, 27.145MHz. We are select 27.045M, 27.095M, 27.145MHz TX frequency to transmitted.

5.5.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. calibrated Loop antenna is used as receiving antenna. In order to find the maximum emission levels, all of the interface cables must be manipulated according to FCC Part 15 on radiated emission measurement.

The bandwidth of test receiver (R&S ESCS30) is set at 9KHz in 9kHz-30MHz

5.6. The Emission Measurement Result

PASS.

Date of Test:	October 18, 2006	Temperature:	23°C
EUT:	Transmitter	Humidity:	52%
Model No.:	8801	Power Supply:	12V DC ("AA" battery 8×)
Test Mode:	TX	Test Engineer:	Andy

Fundamental Radiated Emissions

Test conditions		Fundamental	Fundamental Frequency		
		27.0451	27.045MHz		
	Unit	$(dB\mu V/m)/(\mu V/m)$	$(dB\mu V/m)/(\mu V/m)$		
$T_{nom}(23^{\circ}C)$		AV	PEAK		
		72.5/4217	73.9/4955		
lir	mit	80/10,000	100/100,000		
NT / N.		. 1 . 1 1 1	. 1 1		

Note: Measurement was performed with modulated signal with average detector and peak detector.

Test conditions		Fundamental	Fundamental Frequency	
		27.0951	27.095MHz	
	Unit	$(dB\mu V/m)/(\mu V/m)$	$(dB\mu V/m)/(\mu V/m)$	
$T_{nom}(23^{\circ}C)$		AV	PEAK	
		74.1/5070	75.4/5888	
limit		80/10,000	100/100,000	
Note: Massymment was nonformed with modulated signal with average detector and neal				

Note: Measurement was performed with modulated signal with average detector and peak detector.

Test conditions		Fundamental Frequency	
		27.145MHz	
	Unit	$(dB\mu V/m)/(\mu V/m)$	$(dB\mu V/m)/(\mu V/m)$
$T_{nom}(23^{\circ}C)$		AV	PEAK
		76.0/6310	77.3/7328
limit		80/10,000	100/100,000

Note: Measurement was performed with modulated signal with average detector and peak detector.

The spectral diagrams in appendix 1.

Reviewer:	Searl)	
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6. BAND EDGES

6.1. The Requirement

5.1.1. The wanted emission within the band 26.96-27.28MHz.

6.2.EUT Configuration on Measurement

The following equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

6.2.1.Transmitter (EUT)

Model Number : 8801 Serial Number : N/A

Manufacturer : Li Xiang Model Factory

6.3. Operating Condition of EUT

- 6.3.1. Setup the EUT and simulator as shown as Section 4.1.
- 6.3.2. Turn on the power of all equipment.
- 6.3.3.Let the EUT work in TX mode (On) measure it. The transmit frequency are 27.045M, 27.095M, 27.145MHz.We are select 27.045M, 27.095M, 27.145MHz TX frequency to transmitted.

6.4. Test Procedure

The transmitter output was fed into the spectrum analyzer and photo was taken. The vertical scale is set to 10dB per division; the horizontal scale is set to 32kHz per division. Star frequency are 26.96MHz, stop frequency are 27.28MHz.

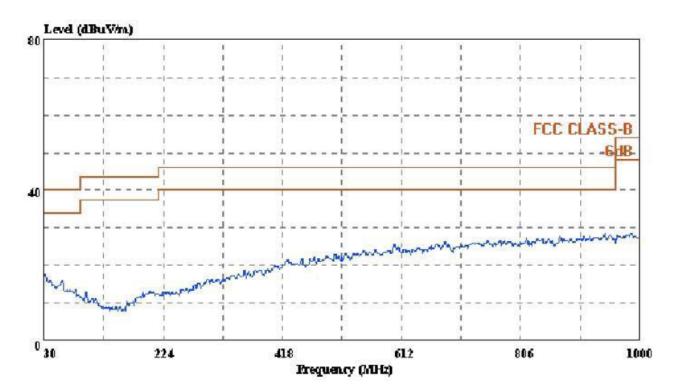
RBW are 3kHz, VBW are 3kHz, Sweep time are 50ms.

6.5. The Measurement Result

The EUT does meet the FCC requirement.

The spectral diagrams in appendix 1.

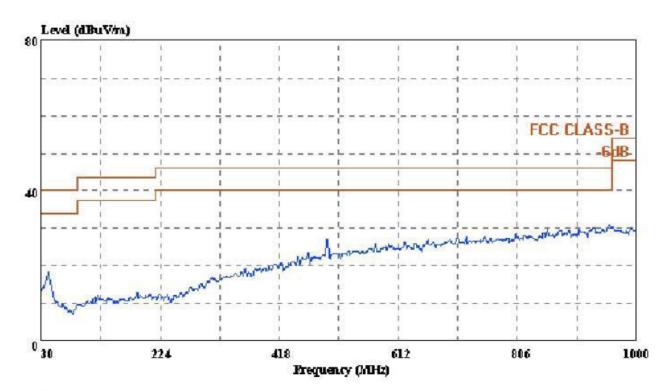
APPENDIX I (Test Curves)



Condition: FCC CLASS-B 3m ATC VULB9163(NEW) HORIZONTAL

eut : Transmitter m/n:8801

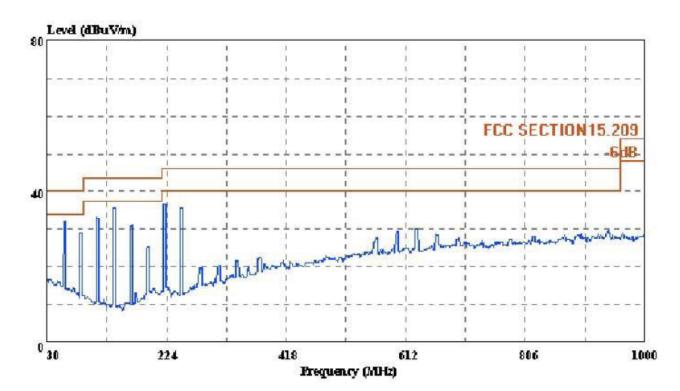
power : DC 12.0V memo : CHARGING manuf : LI XIANG sample no.: 063370



Condition: FCC CLASS-B 3m ATC VULB9163 (NEW) VERTICAL

eut : Transmitter m/n:8801

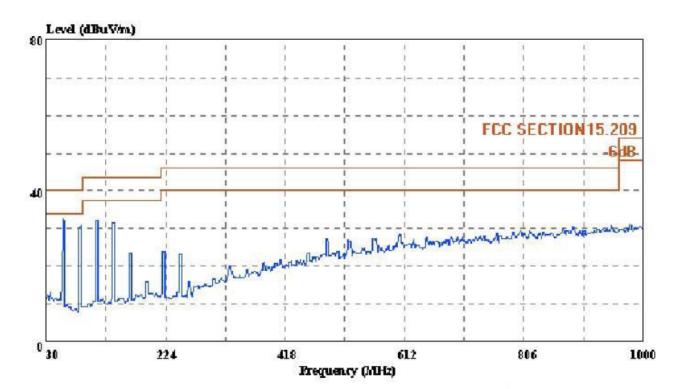
power : DC 12.0V memo : CHARGING manuf : LI XIANG sample no.: 063370



Condition: FCC SECTION15.209 3m ATC FCC15C ANTENNA HORIZONTAL

eut : Transmitter m/n:8801

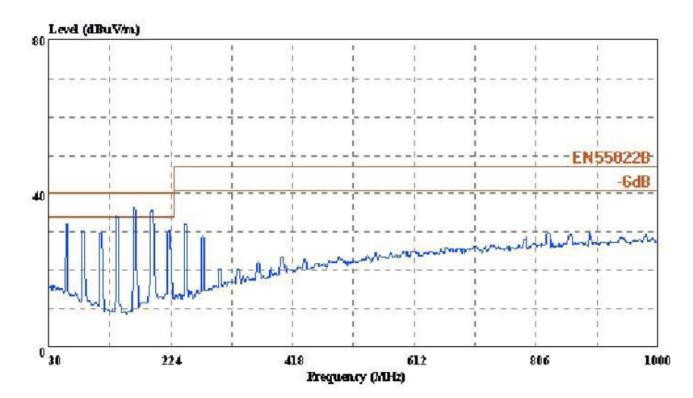
power : DC 12.0V
memo : TX 27.045MHz
manuf : LI XIANG
sample no.: 063370



Condition: FCC SECTION15.209 3m ATC FCC15C ANTENNA VERTICAL

eut : Transmitter m/n:8801

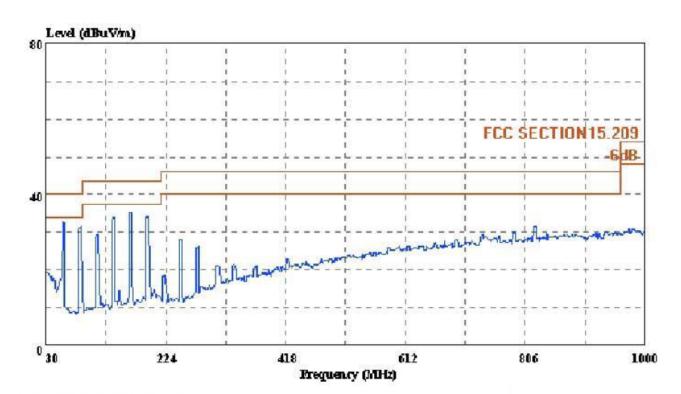
power : DC 12.0V memo : TX 27.045MHz manuf : LI XIANG sample no.: 063370



Condition: FCC SECTION15.209 3m ATC FCC15C ANTENNA HORIZONTAL

eut : Transmitter m/n:8801

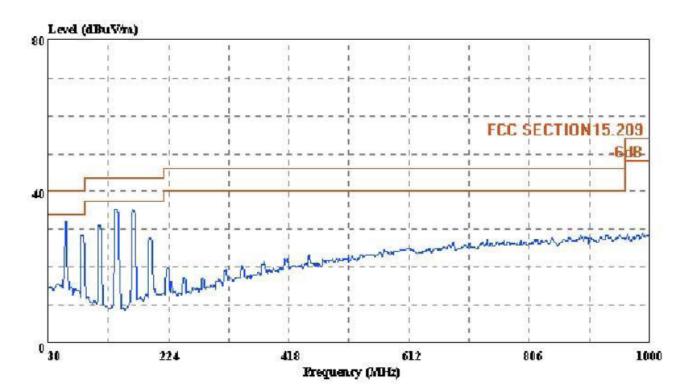
power : DC 12.0V memo : TX 27.095MHz manuf : LI XIANG sample no.: 063369



Condition: FCC SECTION15.209 3m ATC FCC15C ANTENNA VERTICAL

eut : Transmitter m/n:8801

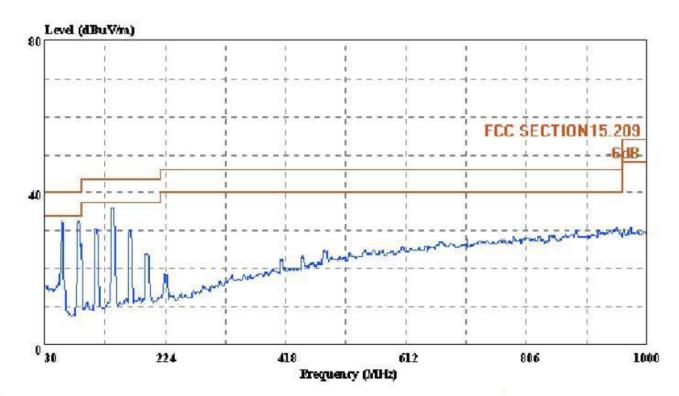
power : DC 12.0V memo : TX 27.095MHz manuf : LI XIANG sample no.: 063369



Condition: FCC SECTION15.209 3m ATC FCC15C ANTENNA HORIZONTAL

eut : Transmitter m/n:8801

power : DC 12.0V memo : TX 27.145MHz manuf : LI XIANG sample no.: 063371



Condition: FCC SECTION15.209 3m ATC FCC15C ANTENNA VERTICAL

eut : Transmitter m/n:8801

power : DC 12.0V memo : TX 27.145MHz manuf : LI XIANG sample no.: 063371

