

FCC TEST REPORT  
For  
SHENZHEN JAME TECHNOLOGY CORP., LTD.  
car mount wireless charger  
Test Model: CZZJ-2630  
Serial model No.: Please Refer to Page 7

Prepared for : SHENZHEN JAME TECHNOLOGY CORP., LTD.  
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Date of receipt of test sample : January 09, 2018  
Number of tested samples : 1  
Serial number : Prototype  
Date of Test : January 09, 2018~ January 22, 2018  
Date of Report : January 22, 2018

FCC TEST REPORT
FCC CFR 47 PART 18

Report Reference No. .... : LCS180102042AEA

Date Of Issue..... : January 22, 2018

Testing Laboratory Name ..... : Shenzhen LCS Compliance Testing Laboratory Ltd.

Address..... : 1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China

Testing Location/ Procedure ..... : Full application of Harmonised standards [checked]
Partial application of Harmonised standards [ ]
Other standard testing method [ ]

Applicant's Name..... : SHENZHEN JAME TECHNOLOGY CORP., LTD.

Address..... : Jame High-Tech Industrial Park, Xiaobu Rd No.2, Guanjingtou, Fenggang Town, Dongguan, China

Test Specification

Standard ..... : FCC CFR 47 PART 18

Test Report Form No. .... : LCSEMC-1.0

TRF Originator..... : Shenzhen LCS Compliance Testing Laboratory Ltd.

Master TRF ..... : Dated 2011-03

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Test Item Description..... : car mount wireless charger

Trade Mark..... : N/A

Test Model ..... : CZZJ-2630

Power Supply : Input:DC5/9V

Result ..... : Positive

Compiled by:

[Signature: Ace Chai]

Ace Chai/ File administrators

Supervised by:

[Signature: Dick Su]

Dick Su/ Technique principal

Approved by:

[Signature: Gavin Liang]

Gavin Liang/ Manager



### Revision History

Revision	Issue Date	Revisions	Revised By
000	January 22, 2018	Initial Issue	Gavin Liang

## TABLE OF CONTENTS

<b>1. SUMMARY OF STANDARDS AND RESULTS.....</b>	<b>6</b>
1.1. Description of Standards and Results .....	6
1.2. Description of Test Modes.....	6
<b>2. GENERAL INFORMATION .....</b>	<b>7</b>
2.1. Description of Device (EUT).....	7
2.2. Support Equipment List .....	7
2.3. External I/O Port .....	7
2.4. Description of Test Facility .....	7
2.5. Summary of Test Equipment .....	8
2.6. Statement of the measurement uncertainty .....	8
2.7. Measurement Uncertainty .....	9
<b>3. POWER LINE CONDUCTED MEASUREMENT .....</b>	<b>10</b>
3.1. Block Diagram of Test Setup.....	10
3.2. Power Line Conducted Emission Measurement Limits.....	10
3.3. Configuration of EUT on Measurement .....	10
3.4. Operating Condition of EUT.....	11
3.5. Test Procedure .....	11
3.6. Test Results .....	11
<b>4. RADIATED EMISSION MEASUREMENT.....</b>	<b>13</b>
4.1. Block Diagram of Test Setup.....	13
4.2. Radiated Emission Limit.....	14
4.3. EUT Configuration on Measurement.....	14
4.4. Operating Condition of EUT.....	14
4.5. Measuring Setting .....	14
4.6. Test Procedure .....	14
4.7. Test Results .....	16
<b>5. PHOTOGRAPHS OF TEST SETUP .....</b>	<b>18</b>
<b>6. EXTERNAL PHOTOGRAPHS OF THE EUT .....</b>	<b>18</b>
<b>7. INTERNAL PHOTOGRAPHS OF THE EUT .....</b>	<b>18</b>

# 1. SUMMARY OF STANDARDS AND RESULTS

## 1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	Standard	Results
Conducted disturbance at mains terminals	FCC CFR 47 PART 18.307(a) / MP-5: 1986	PASS
Radiated disturbance	FCC CFR 47 PART 18.305(b) / MP-5: 1986	PASS
N/A is an abbreviation for Not Applicable.		

## 1.2. Description of Test Modes

Test Modes:		
Mode 1	AC/DC Adapter + EUT + Mobile Phone(Battery Status: <1%)	Record
Mode 2	AC/DC Adapter + EUT + Mobile Phone(Battery Status: <50%)	Pre-tested
Mode 3	AC/DC Adapter + EUT + Mobile Phone(Battery Status: 100%)	Pre-tested
<i>Note: All test modes were pre-tested, but we only recorded the worst case in this report.</i>		

## 2. GENERAL INFORMATION

### 2.1. Description of Device (EUT)

EUT : car mount wireless charger  
 Test Model : CZZJ-2630  
 Serial model No. : CZZJ-2630B, CZZJ-263C  
 Operating Frequency : 110-205KHz  
 Modulation Type : CW (Continuous Wave)  
 Antenna Type : Inductive Loop Coil Antenna  
 Power Supply : Input: DC5/9V

### 2.2. Support Equipment List

Manufacturer	Description	Model	Serial Number	Certificate
JIANGSU CHENYANG ELECTRON CO., LTD	Adapter	CYSK10-050 200-E	--	VOC
SAMSUNG	Mobile Phone	S4	--	FCC ID

### 2.3. External I/O Port

I/O Port Description	Quantity	Cable
USB Port	1	N/A

### 2.4. Description of Test Facility

FCC Registration Number. is 254912.

Industry Canada Registration Number. is 9642A-1.

ESMD Registration Number. is ARCB0108.

UL Registration Number. is 100571-492.

TUV SUD Registration Number. is SCN1081.

TUV RH Registration Number. is UA 50296516-001

NVLAP Registration Code is 600167-0

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.4:2014 and CISPR 16-1-4:2010 SVSWR requirement for radiated emission above 1GHz.

## 2.5.Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the LCS quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.



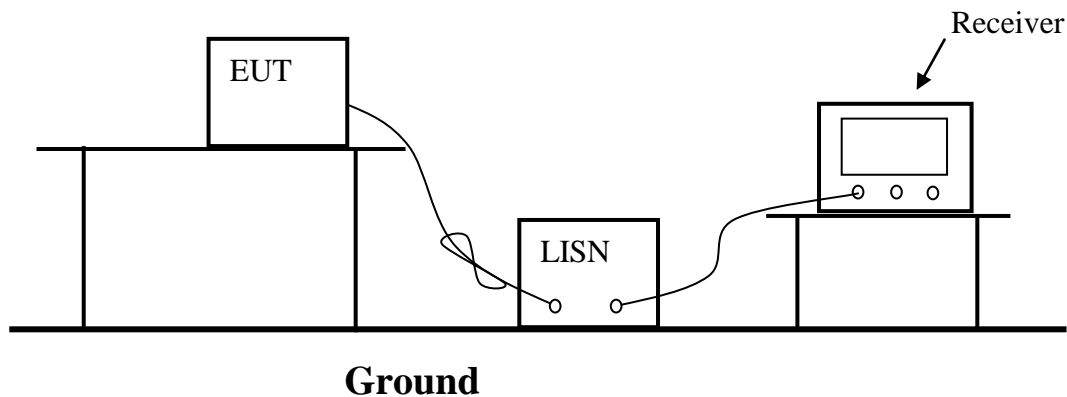
## 2.6.Measurement Uncertainty

Test Item	Frequency Range	Uncertainty	Note
Radiation Uncertainty :	9KHz~30MHz	3.10dB	(1)
	30MHz~200MHz	2.96dB	(1)
	200MHz~1000MHz	3.10dB	(1)
	1GHz~26.5GHz	3.80dB	(1)
	26.5GHz~40GHz	3.90dB	(1)
Conduction Uncertainty :	150kHz~30MHz	1.63dB	(1)
Power disturbance :	30MHz~300MHz	1.60dB	(1)

(1). This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

### 3. POWER LINE CONDUCTED MEASUREMENT

#### 3.1. Block Diagram of Test Setup



#### 3.2. Power Line Conducted Emission Measurement Limits

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 ~ 0.50	66 to 56*	56 to 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

- Notes: 1. \*Decreasing linearly with logarithm of frequency.  
 2. The lower limit shall apply at the transition frequencies.

#### 3.3. Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

### 3.4. Operating Condition of EUT

- (1) Setup the EUT and simulator as shown as Section 3.1.
- (2) Turn on the power of all equipment.
- (3) Let the EUT work in worst test mode (Mode 1) and measure it.

### 3.5. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC/ANSI C63.4-2014 on Conducted Emission Measurement.

The bandwidth of test receiver is set at 9kHz.

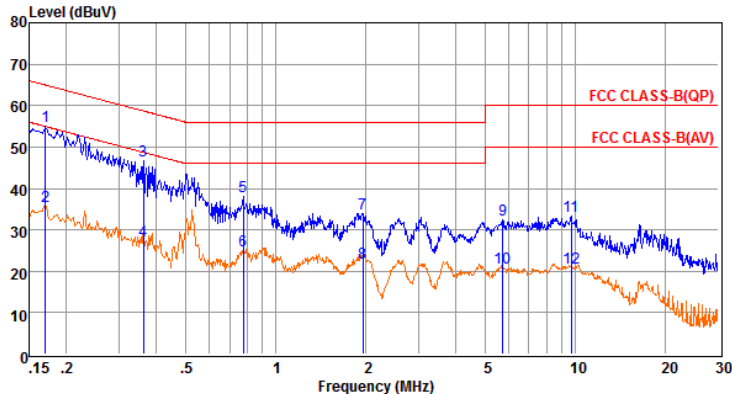
The frequency range from 150kHz to 30MHz is checked.

### 3.6. Test Results

**PASS.**

The test data please refer to following page.

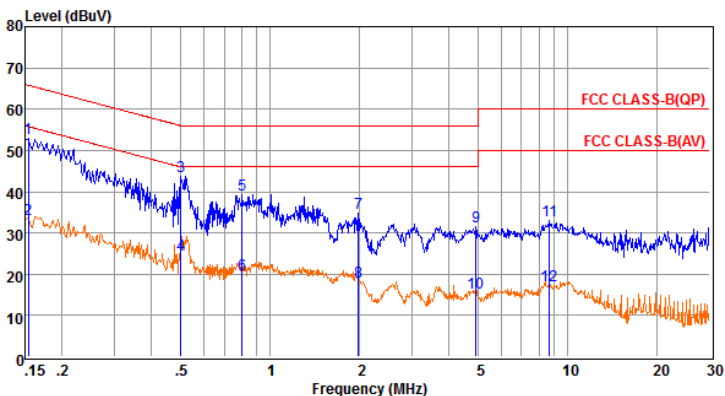
**AC Power Line Conducted Emission (Power input to adapter @ AC 120V/60Hz(Worst Case))**



Pol: LINE

	Freq	Reading	LISNFac	CabLos	Aux2Fac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.17	35.26	9.60	0.02	10.00	54.88	64.94	-10.06	QP
2	0.17	16.17	9.60	0.02	10.00	35.79	54.94	-19.15	Average
3	0.36	26.95	9.62	0.03	10.00	46.60	58.69	-12.09	QP
4	0.36	7.74	9.62	0.03	10.00	27.39	48.69	-21.30	Average
5	0.78	18.30	9.64	0.04	10.00	37.98	56.00	-18.02	QP
6	0.78	5.37	9.64	0.04	10.00	25.05	46.00	-20.95	Average
7	1.95	14.24	9.64	0.05	10.00	33.93	56.00	-22.07	QP
8	1.95	2.42	9.64	0.05	10.00	22.11	46.00	-23.89	Average
9	5.71	12.67	9.66	0.06	10.00	32.39	60.00	-27.61	QP
10	5.71	1.01	9.66	0.06	10.00	20.73	50.00	-29.27	Average
11	9.71	13.51	9.69	0.08	10.00	33.28	60.00	-26.72	QP
12	9.71	0.96	9.69	0.08	10.00	20.73	50.00	-29.27	Average

Remarks: 1. Measured = Reading + LISNFac + Cable Loss + Aux2 Fac.  
 2. The emission levels that are 20dB below the official limit are not reported.



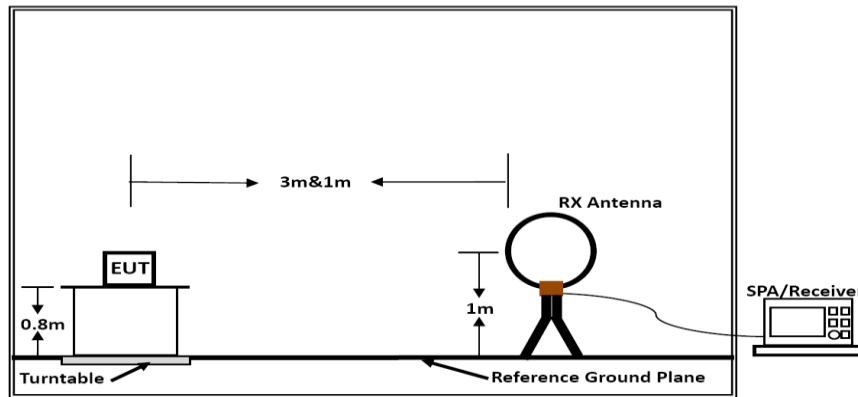
Pol: NEUTRAL

	Freq	Reading	LISNFac	CabLos	Aux2Fac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.15	33.15	9.69	0.02	10.00	52.86	65.78	-12.92	QP
2	0.15	13.56	9.69	0.02	10.00	33.27	55.77	-22.50	Average
3	0.50	24.16	9.62	0.04	10.00	43.82	56.00	-12.18	QP
4	0.50	5.04	9.62	0.04	10.00	24.70	46.00	-21.30	Average
5	0.80	19.73	9.63	0.04	10.00	39.40	56.00	-16.60	QP
6	0.80	0.19	9.63	0.04	10.00	19.86	46.00	-26.14	Average
7	1.98	15.17	9.63	0.05	10.00	34.85	56.00	-21.15	QP
8	1.98	-1.52	9.63	0.05	10.00	18.16	46.00	-27.84	Average
9	4.93	11.85	9.66	0.06	10.00	31.57	56.00	-24.43	QP
10	4.93	-4.11	9.66	0.06	10.00	15.61	46.00	-30.39	Average
11	8.68	13.32	9.71	0.08	10.00	33.11	60.00	-26.89	QP
12	8.68	-2.45	9.71	0.08	10.00	17.34	50.00	-32.66	Average

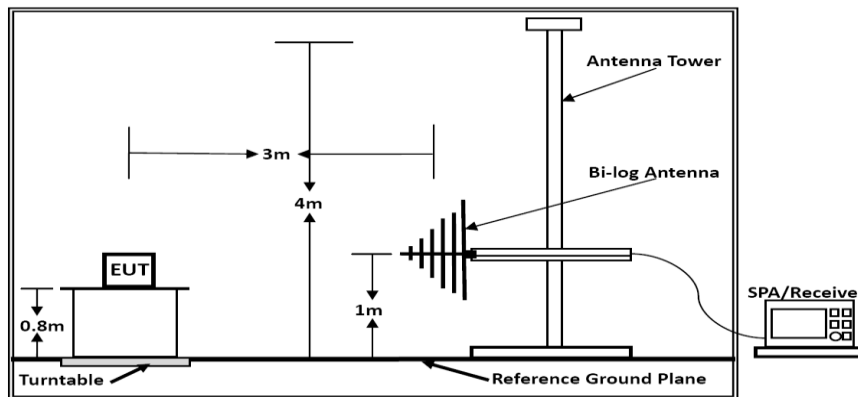
Remarks: 1. Measured = Reading + LISNFac + Cable Loss + Aux2 Fac.  
 2. The emission levels that are 20dB below the official limit are not reported.

## 4. RADIATED EMISSION MEASUREMENT

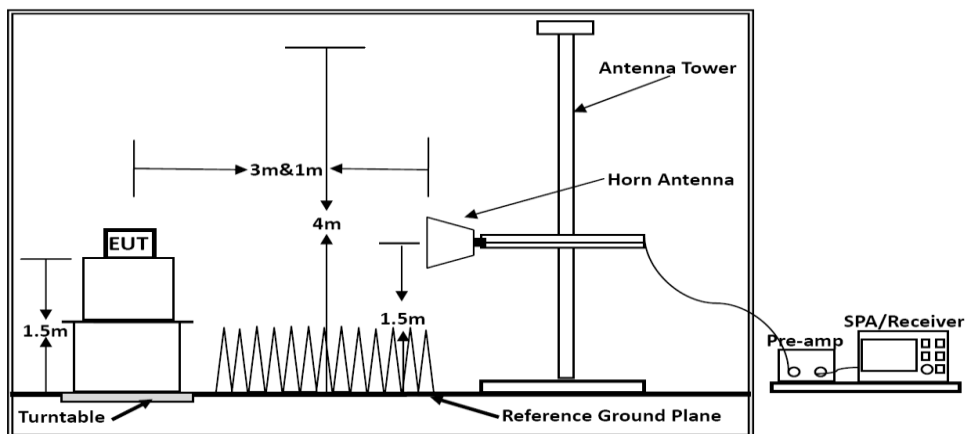
### 4.1. Block Diagram of Test Setup



Below 30MHz



Below 1GHz



Above 1GHz

### 4.2.Radiated Emission Limit

Frequency MHz	Distance Meters	Field Strengths Limit	
		dBμV/m	Remark
0.009~30MHz	3	103.5	Quasi-peak

Remark : (1) Emission level dBμV/m for 0.009~30MHz = 20log(15) + 40log(300/3)dBμV/m;  
 Calculated according FCC 18.305&ANSI C63.10.  
 (2) The smaller limit shall apply at the cross point between two frequency bands.  
 (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

### 4.3.EUT Configuration 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.

### 4.4.Operating Condition of EUT

- (1) Setup the EUT as shown in Section 4.1.
- (2) Let the EUT work in worst test mode (Mode 1) and measure it.

### 4.5.Measuring Setting

Receiver Parameter	Setting
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 100kHz for QP

### 4.6.Test Procedure

#### 1) Sequence of testing 9 kHz to 30 MHz

##### Setup:

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.
- If the EUT is a floor standing device, it is placed on the ground.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 3 meter.
- The EUT was set into operation.

**Premeasurement:**

- The turntable rotates from 0 ° to 315 ° using 45 ° steps.
- The antenna height is 0.8 meter.
- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

**Final measurement:**

- Identified emissions during the premeasurement the software maximizes by rotating the turntable position (0 ° to 360 °) and by rotating the elevation axes (0 ° to 360 °).
- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QPK detector.
- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

**2) Sequence of testing 30 MHz to 1 GHz**

**Setup:**

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.
- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 3 meter.
- The EUT was set into operation.

**Premeasurement:**

- The turntable rotates from 0 ° to 315 ° using 45 ° steps.
- The antenna is polarized vertical and horizontal.
- The antenna height changes from 1 to 3 meter.
- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

**Final measurement:**

- The final measurement will be performed with minimum the six highest peaks.
- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position ( $\pm 45^\circ$ ) and antenna movement between 1 and 4 meter.

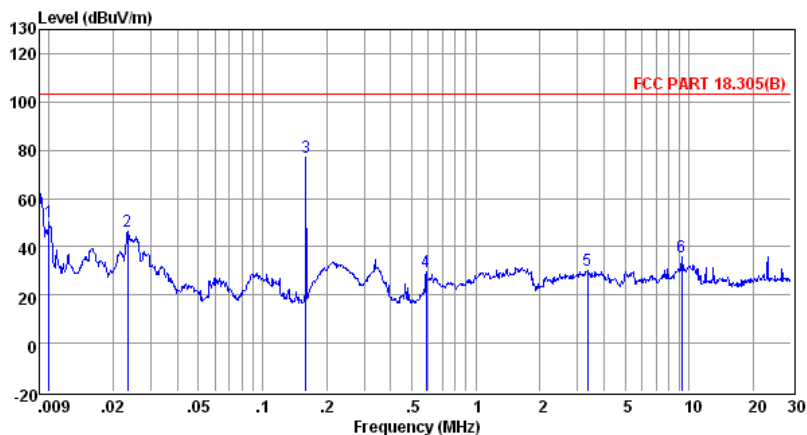
- The final measurement will be done with QP detector with an EMI receiver.
- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

### 4.7. Test Results

**PASS.**

Only report the worst test data (Mode 1) as following page.

0.009~30MHz:



pol:

	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	0.01	29.46	0.30	20.64	50.40	103.50	-53.10	QP
2	0.02	25.13	0.30	20.66	46.09	103.50	-57.41	QP
3	0.16	56.11	0.30	20.44	76.85	103.50	-26.65	QP
4	0.59	8.95	0.30	20.46	29.71	103.50	-73.79	QP
5	3.33	9.67	0.30	20.30	30.27	103.50	-73.23	QP
6	9.25	15.01	0.30	20.26	35.57	103.50	-67.93	QP

- Note: 1. All readings are Quasi-peak values.  
 2. Measured= Reading + Antenna Factor + Cable Loss  
 3. The emission that ate 20db blow the official limit are not reported



## 5.SUMMARY OF TEST EQUIPMENT

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1	Power Meter	R&S	NRVS	100444	2017-06-17	2018-06-16
2	Power Sensor	R&S	NRV-Z81	100458	2017-06-17	2018-06-16
3	Power Sensor	R&S	NRV-Z32	10057	2017-06-17	2018-06-16
4	ESA-E SERIES SPECTRUM ANALYZER	Agilent	E4407B	MY41440754	2017-11-18	2018-11-17
5	MXA Signal Analyzer	Agilent	N9020A	MY49100040	2017-06-17	2018-06-16
6	SPECTRUM ANALYZER	R&S	FSP	100503	2017-06-17	2018-06-16
7	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	2017-06-17	2018-06-16
8	Positioning Controller	MF	MF-7082	/	2017-06-17	2018-06-16
9	EMI Test Software	AUDIX	E3	N/A	2017-06-17	2018-06-16
10	EMI Test Receiver	R&S	ESR 7	101181	2017-06-17	2018-06-16
11	AMPLIFIER	QuieTek	QTK-A2525G	CHM10809065	2017-11-18	2018-11-17
12	Active Loop Antenna	SCHWARZBECK	FMZB 1519B	00005	2017-06-23	2018-06-22
13	By-log Antenna	SCHWARZBECK	VULB9163	9163-470	2017-05-02	2018-05-01
14	Horn Antenna	EMCO	3115	6741	2017-06-23	2018-06-22
15	Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	791	2017-09-22	2018-09-21
16	Broadband Preamplifier	SCHWARZBECK	BBV 9719	9719-025	2017-09-22	2018-09-21
17	RF Cable-R03m	Jye Bao	RG142	CB021	2017-06-17	2018-06-16
18	RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	2017-06-17	2018-06-16
19	TEST RECEIVER	R&S	ESCI	101142	2017-06-17	2018-06-16
20	RF Cable-CON	UTIFLEX	3102-26886-4	CB049	2017-06-17	2018-06-16
21	10dB Attenuator	SCHWARZBECK	MTS-IMP136	261115-001-0032	2017-06-17	2018-06-16
22	Artificial Mains	R&S	ENV216	101288	2017-06-17	2018-06-16

Note: All equipment is calibrated through GUANGZHOU LISAI CALIBRATION AND TEST CO.,LTD.

## **6. PHOTOGRAPHS OF TEST SETUP**

Please refer to separated files **Appendix A** for Photographs of Test Setup.

## **7. EXTERNAL PHOTOGRAPHS OF THE EUT**

Please refer to separated files **Appendix B** for External Photographs of the EUT.

## **8. INTERNAL PHOTOGRAPHS OF THE EUT**

Please refer to separated files **Appendix C** for Internal Photographs of the EUT.

-----THE END OF REPORT-----