



REPORT No. : SZ17120109W01

TEST REPORT

APPLICANT : JACS Solutions, LLC

PRODUCT NAME : Tablets

MODEL NAME : TT800V

BRAND NAME : JACS SOLUTION

FCC ID : 2AGCD-JACS800V

STANDARD(S) : 47 CFR Part 27

TEST DATE : 2018-01-05 to 2018-01-06

ISSUE DATE : 2018-01-24

Tested by: Mo Yugai
Mo Yugai (Test Engineer)

Approved by: Andy Yeh
Andy Yeh (Technical Director)

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MORLAB

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Change History		
Issue	Date	Reason for change
1.0	2018-01-24	First edition



1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	JACS Solutions, LLC
Applicant Address:	8808 Centre Park Drive, Suite 305, Columbia, MD 21045, USA
Manufacturer:	Xiamen Candour Co., Ltd
Manufacturer Address:	19F C&D International Building 1669 Huandao East Road, Xiamen, Fujian, CN

1.2. Equipment Under Test (EUT) Description

Product Name:	Tablets
Serial No:	(N/A, marked #1 by test site)
Hardware Version:	N/A
Software Version:	N/A
Modulation Type:	QPSK, 16QAM
Operating Frequency Range:	LTE Band 4: Tx: 1710MHz ~1755MHz; Rx: 2110MHz ~ 2155MHz LTE Band 13: Tx: 777MHz ~787MHz; Rx: 746MHz ~ 756MHz
Antenna Type:	Integral Antenna
Antenna Gain:	LTE Band4: 1.34dBi LTE Band13: 1.12dBi

Note 1: This test report is updated from report (Report No.: STR17068003I-1), which issued on Jul.29, 2017 by Shenzhen SEM. Test Technology Co., Ltd. Compare with original product, the new product is adding a plastic cover on the battery. The purpose is tightening the battery's position. To fix the plastic cover, 3 screws was used, one of them are around LTE antenna. But there is no change on LTE antenna. The appearance color is changed. The changes only affect the test results of Radiated Spurious Emissions. Only the test results of Radiated Spurious Emissions were recorded in this report.

Note 2: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.



1.3. Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 2, Part 27 for the EUT FCC ID Certification:

No	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 27	Miscellaneous Wireless Communications Services

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Test Date	Test Engineer	Result
1	2.1053, 2.1057, 27.53(g)	Radiated Spurious Emissions	Jan 05&06, 2018	Mo Yugai	PASS

Note1: The other test items please refer to report (Report No.: STR17068003I-1), which issued on Jul.29, 2017 by Shenzhen SEM. Test Technology Co., Ltd.

Note: Measurement method according to TIA/EIA 603.D-2010.

1.4. Environmental Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15 - 35
Relative Humidity (%):	30 -60
Atmospheric Pressure (kPa):	86-106

2. 47 CFR Part 2, Part 27 Requirements

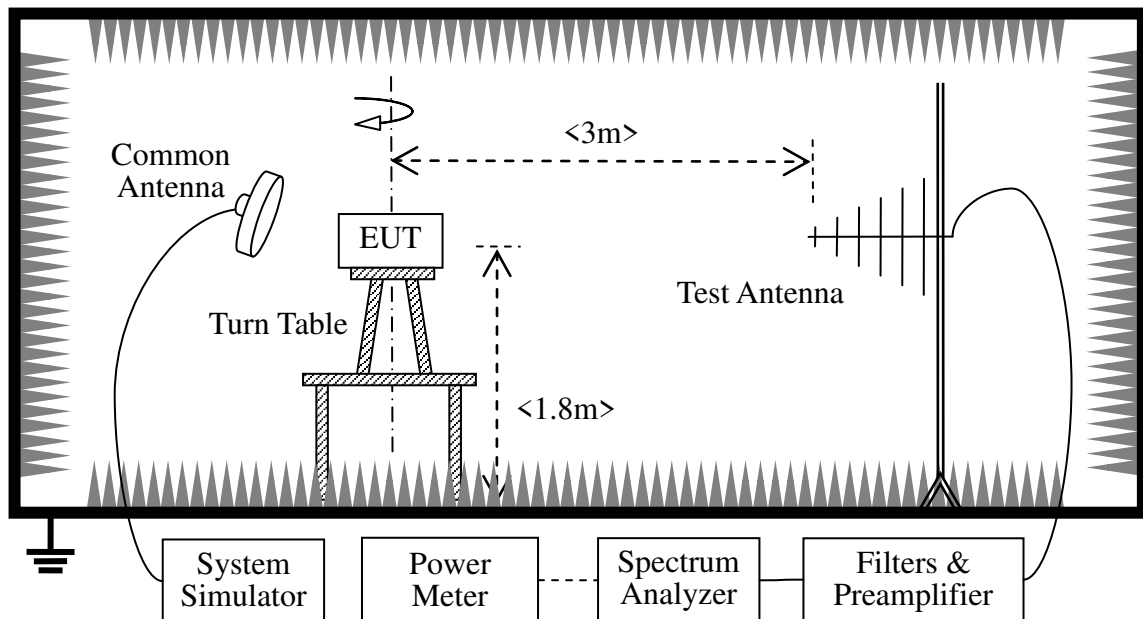
2.1. Radiated Out of Band Emissions

2.1.1. Requirement

According to FCC section 2.1053 and section 27.53(g), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43+10*\log(P)$ dB. This calculated to be -13dBm.

2.1.2. Test Description

Test Setup:



The EUT, which is powered by the PC, is located in a 3m Full-Anechoic Chamber; the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading.

A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power, and only the test result of the maximum output power was recorded.

The Test Antenna is a Bi-Log one (used for 30MHz to 1GHz) or a Horn one (used for above 3GHz), and it's located at the same height as the EUT. The Filters consists of Notch Filters and High Pass Filter.

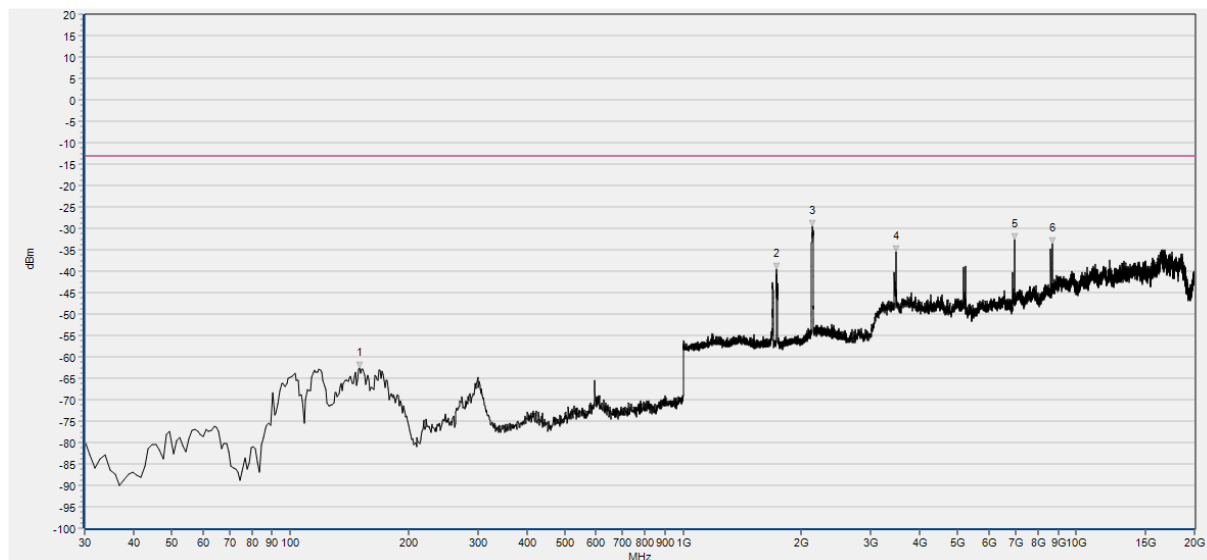
2.1.3. Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested to verify the out of band emissions.

Note1: The power of the EUT transmitting frequency should be ignored.

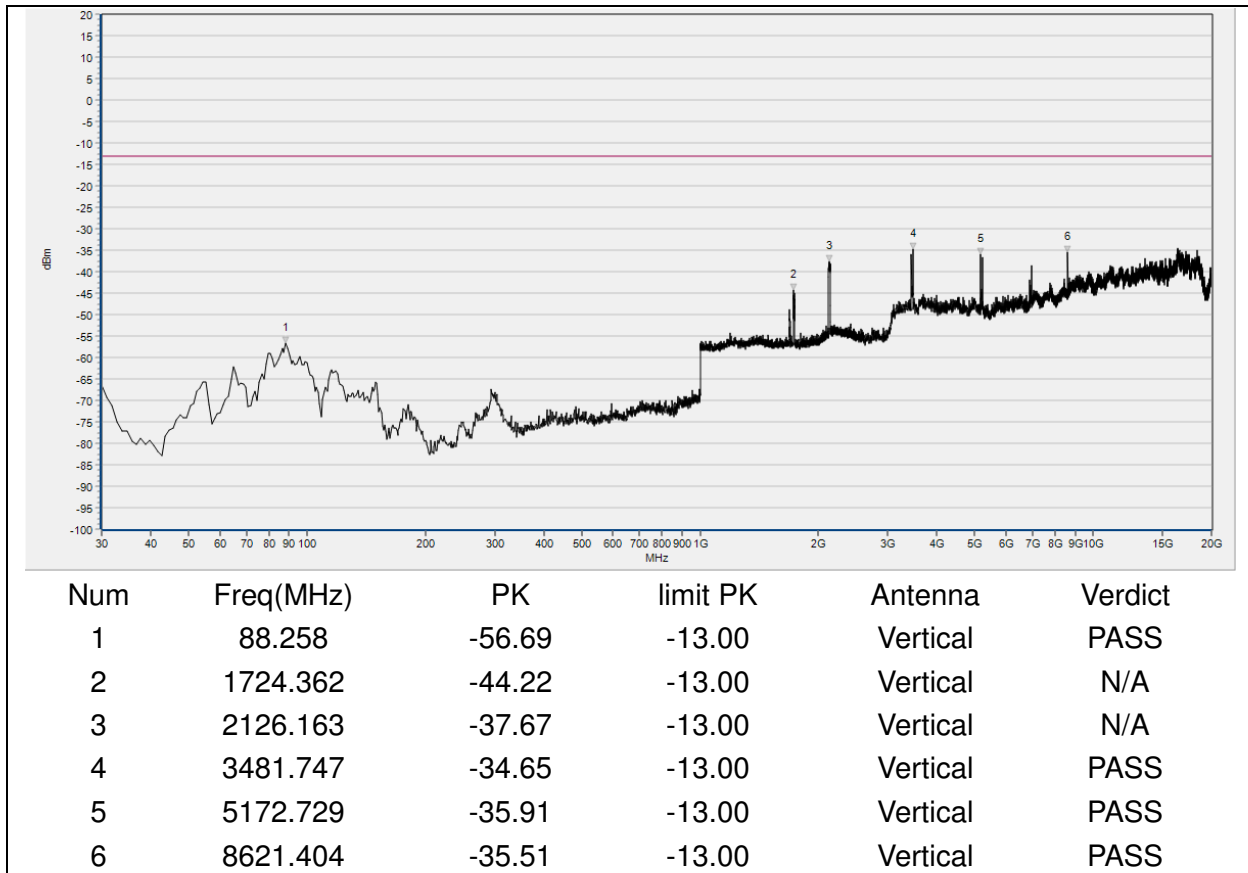
Note2: All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Note3: All test modes (different bandwidth and different modulation) are performed, but only the worst case is recorded in this report.

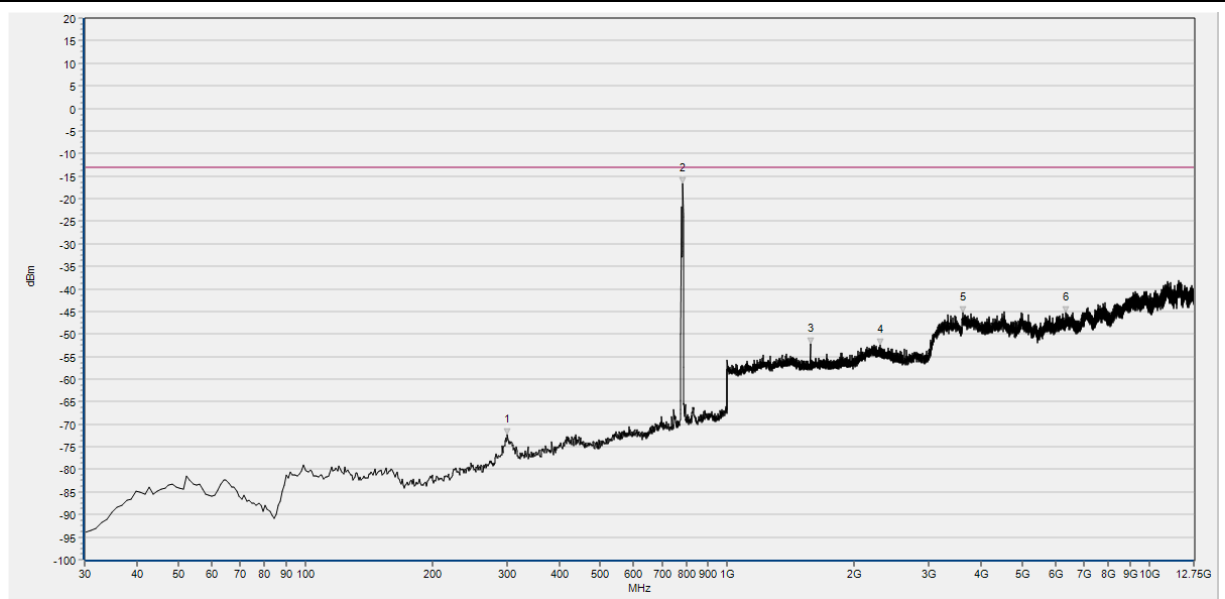


Num	Freq(MHz)	PK	limit PK	Antenna	Verdict
1	150.400	-62.73	-13.00	Horizontal	PASS
2	1724.362	-39.42	-13.00	Horizontal	N/A
3	2136.568	-29.62	-13.00	Horizontal	N/A
4	3481.747	-35.45	-13.00	Horizontal	PASS
5	6962.327	-32.73	-13.00	Horizontal	PASS
6	8702.617	-33.49	-13.00	Horizontal	PASS

(LTE Band4, 20MHz BW, QPSK, Mid Channel, Horizontal)

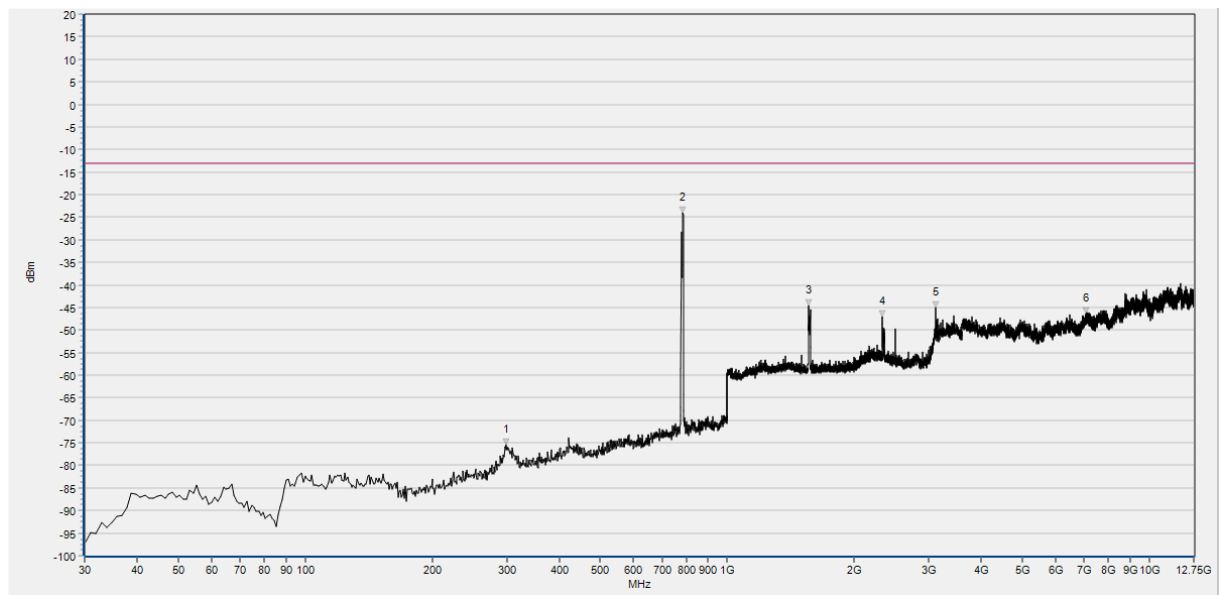


(LTE Band4, 20MHz BW, QPSK, Mid Channel, Vertical)



Num	Freq(MHz)	PK	limit PK	Antenna	Verdict
1	301.600	-72.22	-13.00	Horizontal	PASS
2	785.630	-16.72	-13.00	Horizontal	N/A
3	1572.389	-52.14	-13.00	Horizontal	PASS
4	2305.482	-52.40	-13.00	Horizontal	PASS
5	3615.185	-45.36	-13.00	Horizontal	PASS
6	6352.491	-45.36	-13.00	Horizontal	PASS

(LTE Band13, 10MHz BW, QPSK, Mid Channel, Horizontal)



Num	Freq(MHz)	PK	limit PK	Antenna	Verdict
1	298.690	-75.53	-13.00	Vertical	PASS
2	785.630	-23.92	-13.00	Vertical	N/A
3	1555.742	-44.49	-13.00	Vertical	PASS
4	2333.653	-47.08	-13.00	Vertical	PASS
5	3111.284	-45.02	-13.00	Vertical	PASS
6	7092.653	-46.42	-13.00	Vertical	PASS

(LTE Band13, 10MHz BW, QPSK, Mid Channel, Vertical)



Annex A Test Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

Test items	Uncertainty
Radiated Emission	$\pm 2.95\text{dB}$

This uncertainty represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$



Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

Company Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Department:	Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, Guangdong Province, P. R. China
Responsible Test Lab Manager:	Mr. Su Feng
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, Guangdong Province, P. R. China

3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at FL.3, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10-2013 and CISPR Publication 22; the FCC designation number is CN1192.



4. Test Equipments Utilized

4.1 Radiated Test Equipments

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Cal. Due
Receiver	MY54130016	N9038A	Agilent	2017.05.17	2018.05.16
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2017.05.14	2018.05.13
Test Antenna - Horn	9170C-531	BBHA9170	Schwarzbeck	2017.09.13	2018.09.12
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2017.03.07	2018.03.06
Test Antenna - Horn	01774	BBHA 9120D	Schwarzbeck	2017.09.13	2018.09.12
Coaxial cable (N male) (9KHz-30MHz)	CB04	EMC04	Morlab	N/A	N/A
Coaxial cable (N male) (30MHz-26GHz)	CB02	EMC02	Morlab	N/A	N/A
Coaxial cable (N male) (30MHz-26GHz)	CB03	EMC03	Morlab	N/A	N/A
1-18GHz pre-Amplifier	MA02	TS-PR18	Rohde& Schwarz	2017.05.17	2018.05.16
18-26.5GHz pre-Amplifier	MA03	TS-PR18	Rohde& Schwarz	2017.05.17	2018.05.16
Anechoic Chamber	N/A	9m*6m*6m	CRT	2017.11.19	2020.11.18

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