TEST REPORT

No. I18D00147-SAR01

For

Client : Shanghai Sunmi Technology Co.,Ltd.

Production : POS System

Model Name : “T3521” “T3522” “T3523”

FCC ID: 2AH25T2LITE

Hardware Version: V1.02

Software Version: 1.1.16/1.1.17

Issued date: 2018-09-08

Test Laboratory:

ECIT Shanghai, East China Institute of Telecommunications

Add: 7F, G Area, No.668, Beijing East Road, Huangpu District, Shanghai, P. R. China

Tel: (+86)-021-63843300, E-Mail: welcome@ecit.org.cn

Revision Version

Report Number	Revision	Date	Memo
I18D00147-SAR01	00	2018-09-08	Initial creation of test report

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1. Test Laboratory

1.1. Testing Location

Company Name:	ECIT Shanghai, East China Institute of Telecommunications
Address:	7-8F, G Area,No. 668, Beijing East Road, Huangpu District, Shanghai, P. R. China
Postal Code:	200001
Telephone:	(+86)-021-63843300
Fax:	(+86)-021-63843301
FCC Registration NO.:	489729

1.2. Project Data

Project Leader:	Zhou Yan

1.3. Signature

Yan Hang
(Prepared this test report)

Fu Erliang
(Reviewed this test report)

Zheng Zhongbin
(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name: Shanghai Sunmi Technology Co.,Ltd.
Address /Post: Room 505, KIC Plaza, No.388 Song Hu Road, Yang Pu District,
Telephone: 18721763396

2.2. Manufacturer Information

Company Name: Shanghai Sunmi Technology Co.,Ltd.
Address /Post: Room 505, KIC Plaza, No.388 Song Hu Road, Yang Pu District,
Telephone: 18721763396

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

EUT Description	POS System
Model name	“T3521” “T3522” “T3523”
WCDMA Frequency Band	N/A
LTE Frequency Band	N/A
Wifi Frequency Band	N/A
BT Frequency Band	b/g/n
Antenna Type	External Antenna
FCC ID:	2AH25T2LITE

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version:	Date of receipt
N01	N/A	V1.02	1.1.16/1.1.17	2018.07.31

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
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*AE ID: is used to identify the test sample in the lab internally.

4. Reference Documents For FCC

4.1. Applicable Standards

The MPE report was carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47 Part 2.1091.
FCC CFR 47, Part 2, FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS
Section 1.1310 Radiofrequency radiation exposure limits

4.2. Test Limits

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

Limits for Occupational / Controlled Exposure

Frequency Range [MHz]	Electric Field Strength (E) [V/m]	Magnetic Field Strength (H) [A/m]	Power Density (S) [mW/cm2]	Averaging Times |E|2, |H|2 or S [miniutes]
0.3 – 3.0	614	1.63	(100)*	6
3.0 – 30	1824/f	4.89/f	(900/f)*	6
30 – 300	61.4	0.163	1.0	6
300 – 1500	--	--	F/300	6
1500 - 100000	--	--	5	6

Limits for General Population / Uncontrolled Exposure

Frequency Range [MHz]	Electric Field Strength (E) [V/m]	Magnetic Field Strength (H) [A/m]	Power Density (S) [mW/cm2]	Averaging Times |E|2, |H|2 or S [miniutes]
0.3 – 1.34	614	1.63	(100)*	30
1.34 – 30	824/f	2.19/f	(180/f)*	30
30 – 300	27.5	0.073	0.2	30
300 – 1500	--	--	F/1500	30
1500 - 100000	--	--	1.0	30

Note: f=frequency in MHz; *Plane-wave equivalent power density
For the DUT, the limits for General Population / Uncontrolled Exposure are applicable.

5. Test Results

5.1. RF Power Output

Frequency range	Max power(dBm)	Highest Frame-Averaged Output Power (dBm)	Antenna Gain（dBi）
Wifi 802.11b	18	18	-2.1
Wifi 802.11g	14	14	-2.1
Wifi 802.11 n20	12	12	-2.1
Wifi 802.11 n40	11	11	-2.1
BT	2	2	-2.1
BLE	2	2	-2.1

5.2. Calculation Information

For conservative evaluation consideration, only maximum power of each frequency band based on the tighter limits respectively are used to calculate the boundary power density.

Based on the FCC KDB 447498 D01 and 47 CFR §2.1091, the DUT is evaluated as a mobile device.

Given $S = \frac{P \times G}{4\Pi d^2}$ ***Equation 1***

Where
P = Power in Watts
G = Numeric antenna gain
d = Distance in meters
S = Power density in milliwatts / square centimeter

5.3. Power density calculations

Band	Frequency (MHz)	Highest Output Power (dBm)	Antenna Gain（dBi）	Numeric antenna gain	Power density at 20cm	Limit mW/cm²
WLAN 802.11b	2412	18	-2.1	0.617	0.022	1.0
WLAN 802.11g	2412	14	-2.1	0.617	0.009	1.0
WLAN 802.11 n20	2412	12	-2.1	0.617	0.005	1.0
WLAN 802.11 n40	2422	11	-2.1	0.617	0.004	1.0
BT	2402	2	-2.1	0.617	0.001	1.0
BLE	2402	2	-2.1	0.617	0.001	1.0

Note: For conservativeness, the lowest uplink frequency of each band is used to determine the MPE limit of that band

5.4. Calculations

The product is under the MPE limits. All is pass.

************END OF REPORT************