FCC RF Test Report

(GSM)

Report No.:	JYTSZ-R12-2500093
Applicant:	Sun Cupid Technology (HK) Ltd.
Address of Applicant:	16/F, CEO Tower, 77 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong.
Equipment Under Test (EUT)	
Product Name:	LTE Smart phone
Model No.:	S6003L, X6 Plus
Trade Mark:	NUU
FCC ID:	2ADINS6003L
Applicable Standards:	FCC CFR Title 47 Part 2, 22H, 24E
Date of Sample Receipt:	23 Dec., 2024
Date of Test:	24 Dec., 2024 to 10 Jan., 2025
Date of Report Issued:	13 Jan., 2025
Test Result:	PASS

Tested by:	Project Engineer	***Date:***	*13 Jan., 2025*
Reviewed by:	Senior Engineer	***Date:***	*13 Jan., 2025*
Approved by:	Manager	***Date:***	*13 Jan., 2025*

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

1 Version

Version No.	Date	Description
00	*13 Jan., 2025*	*Original*

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3 General Information

3.1 Client Information

Applicant:	Sun Cupid Technology (HK) Ltd.
Address:	16/F, CEO Tower, 77 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong.
Manufacturer:	Sun Cupid Technology (HK) Ltd.
Address:	16/F, CEO Tower, 77 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong.
Factory:	SUNCUPID (ShenZhen) Electronic Ltd
Address:	Room 502, Block B, Fuan Science & Technology Building, Gaoxin South 1 st Road, Nanshan District, Shenzhen, 518063 China.

3.2 General Description of E.U.T.

Product Name:	LTE Smart phone	
Model No.:	S6003L, X6 Plus	
Operation Frequency Range:	GSM850:	824.2 MHz - 848.8 MHz
	PCS1900:	1850.2 MHz - 1909.8 MHz
Modulation Type:	☒Voice(GMSK) ☒GPRS(GMSK) ☒EGPRS(GMSK, 8PSK)	
Antenna Type:	Internal Antenna	
Antenna Gain:	GSM 850:	0 dBi (declare by Applicant)
	PCS1900:	-1 dBi (declare by Applicant)
Power Supply:	Rechargeable Li-ion Polymer Battery DC3.8V, 3120mAh	
AC Adapter:	Model: A8A-050200U-US1 Input: AC100-240V, 50/60Hz, 0.35A Output: DC 5.0V, 2A	
Remark:	Model No.: S6003L, X6 Plus, were identical inside, the electrical circuit design, layout, components used and internal wiring, with only difference being model name.	
Test Sample Condition:	The test samples were provided in good working order with no visible defects.	

3.3 Test Mode and Environment

Test Mode:	
GSM mode:	Keep the EUT communication with simulated station in GSM mode
GPRS mode:	Keep the EUT communication with simulated station in GPRS mode
EGPRS mode:	Keep the EUT communication with simulated station in EGPRS mode
Remark: *The EUT has been tested under continuous transmitting mode. Channel Low, Mid and High for each type band with rated data rate were chosen for full testing. The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for these modes. Just the worst case position (H mode) shown in report.*	
Operating Environment:	
Temperature:	Normal: 15℃ ~ 35℃, Extreme: -30℃ ~ +50℃
Humidity:	20 % ~ 75 % RH
Atmospheric Pressure:	1008 mbar
Voltage:	Nominal: 3.80Vdc, Extreme: Low 3.50Vdc, High 4.35Vdc
Test Engineer:	Real Chen(Radiated measurement)

3.4 Description of Test Auxiliary Equipment

Test Equipment	Manufacturer	Model No.	Serial No.
Simulated Station	Anritsu	MT8820C	6201026545

3.5 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))
Radiated Emission (30MHz ~ 200MHz) (3m SAC)	±4.6 dB
Radiated Emission (200MHz ~ 1000MHz) (3m SAC)	±5.8 dB
Radiated Emission (1GHz ~ 18GHz) (3m FAR)	5.15 dB
Radiated Emission (18GHz ~ 40GHz) (3m FAR)	5.30 dB
Note: *All the measurement uncertainty value were shown with a coverage k=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.*	

3.6 Additions to, Deviations, or Exclusions from the Method

No

3.7 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

- **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **CNAS - Registration No.: CNAS L15527**

JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf

3.8 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.
Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.
Tel: +86-755-23118282, Fax: +86-755-23116366
Email: info-JYTee@lets.com, Website: http://jyt.lets.com

3.9 Test Instruments List

Radiated Emission(3m SAC):					
Test Equipment	**Manufacturer**	**Model No.**	**Manage No.**	**Cal. Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
3m SAC	ETS	9m*6m*6m	WXJ001-1	04-14-2021	04-13-2026
Loop Antenna	Schwarzbeck	FMZB 1519 B	WXJ002-4	01-05-2024	01-04-2025
				12-25-2024	12-24-2024
BiConiLog Antenna	Schwarzbeck	VULB9163	WXJ002	01-09-2024	01-08-2025
				12-25-2024	12-24-2024
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-2	01-05-2024	01-04-2025
				12-25-2024	12-24-2024
Horn Antenna	Schwarzbeck	BBHA9170	WXJ002-5	12-28-2023	12-27-2024
				12-25-2024	12-24-2024
Pre-amplifier (30MHz ~ 1GHz)	Schwarzbeck	BBV9743B	WXJ001-2	12-27-2023	12-26-2024
				12-16-2024	12-15-2025
EMI Test Receiver	Rohde & Schwarz	ESRP7	WXJ003-1	12-27-2023	12-26-2024
				12-16-2024	12-15-2025
Coaxial Cable (30MHz ~ 1GHz)	JYTSZ	JYT3M-1G-NN-8M	WXG001-4	01-17-2024	01-16-2025
Test Software	Tonscend	TS+	Version: 3.0.0.1		

Radiated Emission(3m FAR):					
Test Equipment	**Manufacturer**	**Model No.**	**Manage No.**	**Cal. Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
3m FAR	YUNYI	9m*6m*6m	WXJ097	06-15-2023	06-14-2028
BiConiLog Antenna	Schwarzbeck	VULB9163	WXJ097-2	07-01-2024	06-30-2025
Biconical Antenna	Schwarzbeck	VUBA9117	WXJ002-1	07-01-2024	06-30-2027
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ097-3	06-16-2024	06-15-2025
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-3	12-28-2023	12-27-2024
				12-25-2024	12-24-2025
Horn Antenna	Schwarzbeck	BBHA9170	WXJ002-5	12-28-2023	12-27-2024
				12-25-2024	12-24-2025
Horn Antenna	Schwarzbeck	BBHA9170	WXJ002-6	12-28-2023	12-27-2024
				12-25-2024	12-24-2025
Pre-amplifier (30MHz ~ 1GHz)	YUNYI	PAM-310N	WXJ097-5	04-24-2024	04-23-2025
Pre-amplifier (1GHz ~ 18GHz)	YUNYI	PAM-118N	WXJ097-6	04-24-2024	04-23-2025
Pre-amplifier (18GHz ~ 40GHz)	RF System	TRLA-180400G45B	WXJ002-7	12-28-2023	12-27-2024
				12-25-2024	12-24-2025
EMI Test Receiver	Rohde & Schwarz	ESCI3	WXJ003	12-27-2023	12-26-2024
				12-16-2024	12-15-2025
Spectrum Analyzer	Rohde & Schwarz	FSP 30	WXJ004	12-27-2023	12-26-2024
				12-16-2024	12-15-2025
Spectrum Analyzer	KEYSIGHT	N9020B	WXJ081-1	06-11-2024	06-10-2025
Coaxial Cable (30MHz ~ 1GHz)	JYTSZ	JYT3M-1G-NN-13M	WXG097-1	07-30-2024	07-29-2025
Coaxial Cable (1GHz ~ 18GHz)	JYTSZ	JYT3M-18G-NN-8M	WXG097-2	07-30-2024	07-29-2025
Coaxial Cable (18GHz ~ 40GHz)	JYTSZ	JYT3M-40G-SS-8M	WXG097-3	07-30-2024	07-29-2025
High Band Reject Filter Group	Tonscend	JS0806-F	WXJ089	N/A	
Low Band Reject Filter Group	Tonscend	JS0806-F	WXJ097-4	N/A	
Test Software	Tonscend	TS+	Version: 5.0.0		

4 Measurement Setup and Procedure

4.1 Test Channel

According to ANSI C63.26-2015 chapter 5.1.2.1 Table 2 requirement, select lowest channel, middle channel, and highest channel in the frequency range in which device operates for testing. The detailed frequency points are as follows:

GSM850

Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
128	824.2	190	836.6	251	848.8

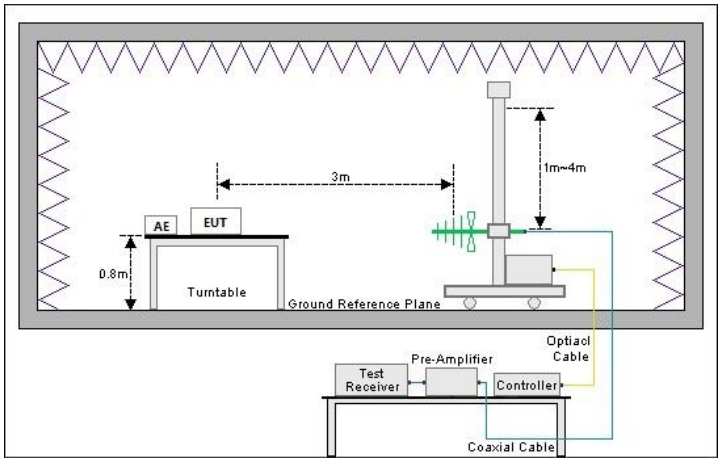
PCS1900

Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
512	1850.2	661	1880.0	810	1909.8

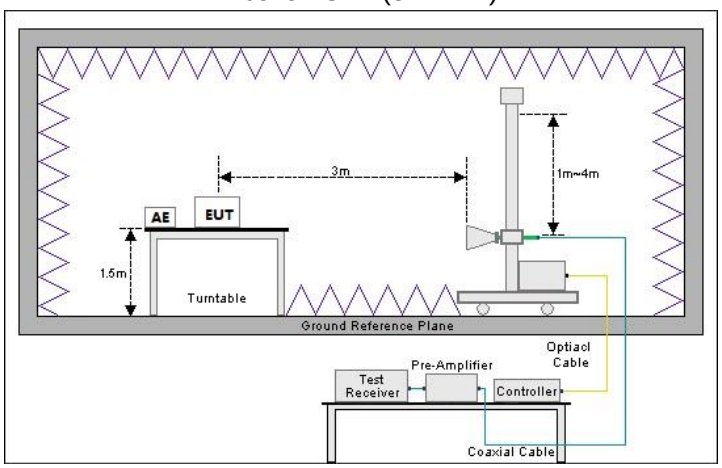
4.2 Test Setup

1) Radiated emission measurement:

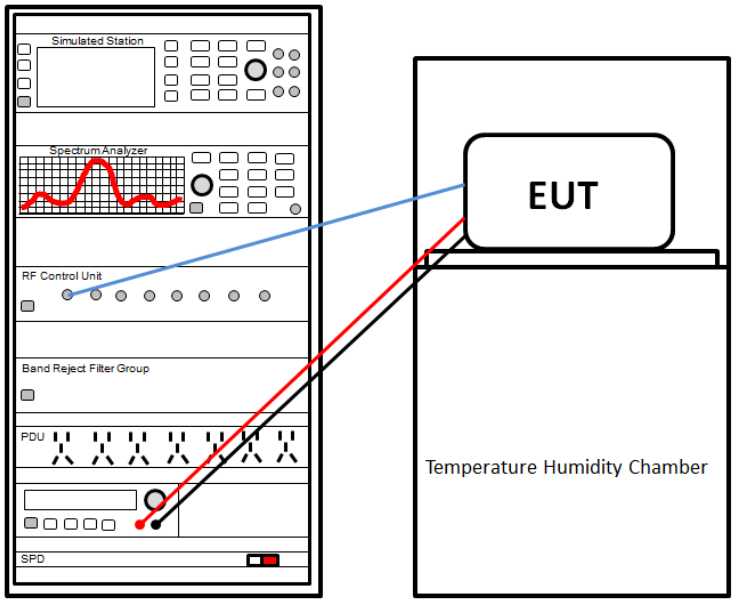
Below 1GHz (3m SAC)



Above 1GHz (3m FAR)



2) Conducted test method



4.3 Test Procedure

Test method	Test step
Radiated emission	**For below 1GHz:** 1. The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m. 2. EUT works in each mode of operation that needs to be tested，and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. 3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data. **For above 1GHz:** 1. The EUT was placed on the tabletop of a rotating table 1.5 m the ground at a 3 m fully anechoic room. The measurement distance from the EUT to the receiving antenna is 3 m. 2. EUT works in each mode of operation that needs to be tested，and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. 3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.
Conducted test method	1. The GSM antenna port of EUT was connected to the test port of the test system through an RF cable. 2. The EUT is keeping in continuous transmission mode and tested in all modulation modes. 3. Open the test software, prepare a test plan, and control the system through the software. After the test is completed, the test report is exported through the test software.

5 Test Results

5.1 Summary

5.1.1 Clause and Data Summary

This report was amended on FCC ID: 2ADINS6003L follow FCC Class II Permissive Change. The original report: CCISE200503501, issued by Shenzhen Zhongjian Nanfang Testing Co., Ltd. The differences between them as below: Change the Chipset from MT6761V to MT8766V(Pin to Pin replacement CPU). Update factory address. So need to spot test Field Strength of Spurious Radiation.

Test items	Standard clause	Test data	Result
RF Exposure (SAR)	Part 1.1307 Part 2.1093	Please refer to FCC ID: 2ADINS6003L, report No.: CCISE200503501.	Please refer to FCC ID: 2ADINS6003L, report No.: CCISE200503501.
RF Output Power	Part 2.1046 Part 22.913 (a)(5) Part 24.232 (c)	Please refer to FCC ID: 2ADINS6003L, report No.: CCISE200503501.	Please refer to FCC ID: 2ADINS6003L, report No.: CCISE200503501.
Peak-to-Average Power Ratio	Part 24.232 (d)	Please refer to FCC ID: 2ADINS6003L, report No.: CCISE200503501.	Please refer to FCC ID: 2ADINS6003L, report No.: CCISE200503501.
Modulation Characteristics	Part 2.1047	Please refer to FCC ID: 2ADINS6003L, report No.: CCISE200503501.	Please refer to FCC ID: 2ADINS6003L, report No.: CCISE200503501.
26dB Emission Bandwidth 99% Occupied Bandwidth	Part 2.1049	Please refer to FCC ID: 2ADINS6003L, report No.: CCISE200503501.	Please refer to FCC ID: 2ADINS6003L, report No.: CCISE200503501.
Out of Band Emission at Antenna Terminals	Part 2.1051 Part 22.917 (a) Part 24.238 (a)	Please refer to FCC ID: 2ADINS6003L, report No.: CCISE200503501.	Please refer to FCC ID: 2ADINS6003L, report No.: CCISE200503501.
Field Strength of Spurious Radiation	Part 2.1053 Part 22.917 (a) Part 24.238 (a)	See Section 5.2	Pass
Frequency Stability vs. Temperature	Part 22.355 Part 24.235 Part 2.1055(a)(1)(b)	Please refer to FCC ID: 2ADINS6003L, report No.: CCISE200503501.	Please refer to FCC ID: 2ADINS6003L, report No.: CCISE200503501.
Frequency Stability vs. Voltage	Part 22.355 Part 24.235 Part 2.1055(d)(2)	Please refer to FCC ID: 2ADINS6003L, report No.: CCISE200503501.	Please refer to FCC ID: 2ADINS6003L, report No.: CCISE200503501.

Remark:

1. *Pass: The EUT complies with the essential requirements in the standard.*
2. *Please refer to report FCC ID: 2ADINS6003L, report No.: CCISE200503501 issue by Shenzhen Zhongjian Nanfang Testing Co., Ltd.*
3. *The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (Fundamental Frequency below 1GHz)/1.0dB (Fundamental Frequency above 1GHz) (provided by the customer).*

Test Method:	*ANSI/TIA-603-E-2016* *ANSI C63.26-2015*

5.1.2 Test Limit

<table>
<tr><th>Items</th><th>Limit</th></tr>
<tr><td>RF Output Power</td><td>GSM850: 7W ERP
PCS1900: 2W EIRP</td></tr>
<tr><td>Peak-to-Average Power Ratio</td><td>The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB</td></tr>
<tr><td>Modulation Characteristics</td><td>N/A</td></tr>
<tr><td>26dB Emission Bandwidth
99% Occupied Bandwidth</td><td>N/A</td></tr>
<tr><td>Out of Band Emission at Antenna Terminals

Field Strength of Spurious Radiation</td><td>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.</td></tr>
<tr><td>Frequency Stability vs. Temperature

Frequency Stability vs. Voltage</td><td>GSM850:
Except as otherwise provided in this part, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table C-1 of this section.
TABLE C-1—FREQUENCY TOLERANCE FOR TRANSMITTERS IN THE PUBLIC MOBILE SERVICES
<table>
<tr><th>Frequency range (MHz)</th><th>Base, fixed (ppm)</th><th>Mobile >3 watts (ppm)</th><th>Mobile ≤3 watts (ppm)</th></tr>
<tr><td>25 to 50</td><td>20.0</td><td>20.0</td><td>50.0</td></tr>
<tr><td>50 to 450</td><td>5.0</td><td>5.0</td><td>50.0</td></tr>
<tr><td>450 to 512</td><td>2.5</td><td>5.0</td><td>5.0</td></tr>
<tr><td>821 to 896</td><td>1.5</td><td>2.5</td><td>2.5</td></tr>
<tr><td>928 to 929</td><td>5.0</td><td>n/a</td><td>n/a</td></tr>
<tr><td>929 to 960</td><td>1.5</td><td>n/a</td><td>n/a</td></tr>
<tr><td>2110 to 2220</td><td>10.0</td><td>n/a</td><td>n/a</td></tr>
</table>
PCS1900:
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.</td></tr>
</table>

5.2 Field Strength of Spurious Radiation Measurement

GSM850

Lowest channel

Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1648.40	-46.97	-11.55	-58.52	-13.00	45.52	Vertical
2472.60	-60.03	-8.68	-68.71	-13.00	55.71	Vertical
3296.80	-57.08	-3.87	-60.95	-13.00	47.95	Vertical
1648.40	-55.32	-10.88	-66.20	-13.00	53.20	Horizontal
2472.60	-59.97	-9.15	-69.12	-13.00	56.12	Horizontal
3296.80	-59.36	-3.93	-63.29	-13.00	50.29	Horizontal

Middle channel

Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.20	-47.20	-10.70	-57.90	-13.00	44.90	Vertical
2509.80	-60.09	-8.66	-68.75	-13.00	55.75	Vertical
3346.40	-57.04	-3.33	-60.37	-13.00	47.37	Vertical
1673.20	-55.38	-10.28	-65.66	-13.00	52.66	Horizontal
2509.80	-59.70	-8.73	-68.43	-13.00	55.43	Horizontal
3346.40	-59.53	-3.42	-62.95	-13.00	49.95	Horizontal

Highest channel

Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1697.60	-46.74	-9.90	-56.64	-13.00	43.64	Vertical
2546.40	-59.91	-8.40	-68.31	-13.00	55.31	Vertical
3395.20	-56.62	-2.55	-59.17	-13.00	46.17	Vertical
1697.60	-55.21	-9.70	-64.91	-13.00	51.91	Horizontal
2546.40	-59.51	-8.17	-67.68	-13.00	54.68	Horizontal
3395.20	-59.14	-2.62	-61.76	-13.00	48.76	Horizontal

Remark:

1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.

------End of report------