

Report No: CCISE180513005

FCC REPORT

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 mobile phone			
Model No.:	N5702L, G2, G3, G3+			
Trade mark:	NUU			
FCC ID:	2ADINN5702L			
Applicable standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.225			
Date of sample receipt:	25 May, 2018			
Date of Test:	25 May, to 08 Jun., 2018			
Date of report issue:	11 Jun., 2018			
Test Result:	PASS*			

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Bruce Zhang Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCISproduct certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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2 Version

Version No.	Date	Description
		This report was amended on FCC ID:
		2ADINN5702L follow FCC Class II
		Permissive Change.
		The differences between them as below:
00	11 Jun., 2018	Added a model number, Changed the
		battery and adapter. Base on the
		differences description, the Conducted
		Emission and Radiated Emission below
		1GHz were re-tested.

Tested by:

lang Test Engineer

Date:

11 Jun., 2018

Reviewed by:

man Date:

11 Jun., 2018

Project Engineer



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4 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203	Pass
Field strength of the fundamental signal	15.225 (a)	Pass*
Spurious emissions	15.225(d)& 15.209	Pass
20dB Bandwidth	15.215(c)	Pass*
Frequency tolerance	15.225 (e)	Pass*
Conducted Emission	15.207	Pass

Remarks:

Pass: The EUT complies with the essential requirements in the standard. Pass*: Please refer to the FCC ID: 2ADINN5702L



5 General Information

5.1 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:	Baolong Industrial City, Longgang District, Shenzhen Hi-Tech Road, Building 1, A 7, China.	

5.2 General Description of E.U.T.

Product Name:	LTE mobile phone
Model No.:	N5702L, G2, G3, G3+
Operation Frequency:	13.56MHz
Channel numbers:	1
Modulation type:	ASK
Antenna Type:	Internal Antenna
Antenna gain:	1dBi
Power supply:	Rechargeable Li-ion Battery DC3.8V-4000mAh
AC adapter:	Model: HJ-0502000N2-US Input: AC100-240V, 50/60Hz, 0.3A Output: DC 5.0V, 2000mA
Remark:	Model No.: N5702L, G2, G3, G3+ were identical inside, the electrical circuit design, layout, components used and internal wiring, with only difference being model name.



5.3 Test mode

Transmitting mode:	Keep the EUT in trar	Keep the EUT in transmitting mode with modulation				
Pre-Test Mode:						
CCIS has verified the construction and function in typical operation, The EUT was placed on three different polar directions; i.e. X axis, Y axis, Z axis. which was shown in this test report and defined as follows:						
Axis	X Y Z					
Field Strength(dBuV/m)	49.33 49.42 49.21					
Final Test Mode:						
According to ANSI C63.4 standards, the test results are both the "worst case" and "worst setup": Y axis (see the test setup photo).						

5.4 Description of Support Units

N/A

5.5 Laboratory Facility

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

• FCC - Registration No.: 727551

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

IC - Registration No.: 10106A-1

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing 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 L6048

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

• A2LA - Registration No.: 4346.01

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <u>https://portal.a2la.org/scopepdf/4346-01.pdf</u>

5.6 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd. Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road, Bao'an District, Shenzhen, Guangdong, China Tel: +86-755-23118282, Fax: +86-755-23116366 Email: info@ccis-cb.com, Website: http://www.ccis-cb.com



5.7 Test Instrumentslist

Radia	Radiated Emission:					
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
1	EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	03-07-2018	03-06-2019
2	Loop Antenna	SCHWARZBECK	FMZB 1519 B	CCIS0188	03-16-2018	03-15-2019
2	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	CCIS0005	03-16-2018	03-15-2019
3	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	CCIS0006	03-16-2018	03-15-2019
4	Amplifier (10kHz-1.3GHz)	HP	8447D	CCIS0003	03-07-2018	03-06-2019
5	Amplifier (1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	03-07-2018	03-06-2019
6	Spectrum analyzer	Rohde & Schwarz	FSP30	CCIS0023	03-07-2018	03-06-2019

Cond	Conducted Emission:					
Item	Test Equipment Manufacturer Model No. Inventory No.		Cal.Date	Cal.Date		
nom	rest Equipment	Manufacturer	woder No.	inventory No.	(mm-dd-yy)	(mm-dd-yy)
1	Shielding Room	ZhongShuo Electron	11.0(L)x4.0(W)x3.0(H)	CCIS0061	07-22-2017	07-21-2020
2	EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	03-07-2018	03-06-2019
3	LISN	CHASE	MN2050D	CCIS0074	03-19-2018	03-18-2019
4	EMI Test Software	AUDIX	E3	N/A	N/A	N/A



6 Test results and Measurement Data

6.1 Antenna requirement

Standard requirement:	FCC Part15 C Section 15.203
responsible party shall be u antenna that uses a unique	I be designed to ensure that no antenna other than that furnished by the used with the device. The use of a permanently attached antenna or of an a coupling to the intentional radiator, the manufacturer may design the unit an be replaced by the user, but the use of a standard antenna jack or ibited.
E.U.T Antenna:	
The EUT make use of an interview of the EUT make use o	regrated antenna, The typical gain of the antenna is 1dBi.

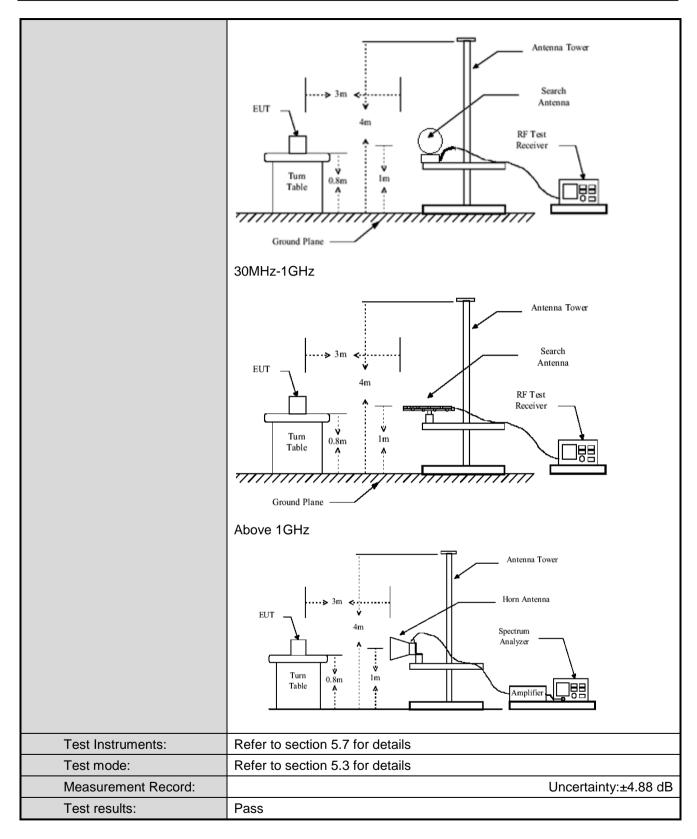




6.2 Radiated Emission

Test Deguirement		ation 15 005/	(a) and 15 00	0		
Test Requirement:	FCC Part15 C Section 15.225(a) and 15.209					
Test Method:	ANSI C63.10: 2013					
TestFrequencyRange:	9 kHz to 1000MHz					
Test site:	Measurement Distance: 3m(Semi-Anechoic Chamber)					
Receiver setup:	Frequency	Detector	RBW VBW			Remark
	9kHz-150kHz	Quasi-peak	200Hz 600Hz			Quasi-peak Value
	150kHz-30MHz	Quasi-peak			z Quasi-peak Value	
	30MHz-1GHz	Quasi-peak	120kHz 300KH		KHz Quasi-peak Value	
	Above 1GHz	Peak	1MHz	3MHz		
Limit:	Frequen	cy l	Limit (uV/m 🤇	@30m)	Lim	it (dBuV/m @3m)
(Field strength of the	13.553MHz-13	.567MHz	15848			124.0
fundamental signal)	13.410MHz-13.5 13.567MHz-13		334			90.5
	13.110MHz-13.4 13.710MHz-14	.010MHz	106			80.5
		ified, the results making measure mine the prope	s shallbe extra ementsat a mi rextrapolation	apolated to inimum of factor or	o the s ^t two c by usi	at a closer specified distances on atleast ing thesquare of an
Limit:	Frequency (MHz)	Limit (uV/n	n @3m)		Distance (m)
(Spurious Emissions)	0.009-0.4		2400/F(kHz)			300
(0)0000	0.490-1.705		24000/F(kHz)			30
	1.705-30		30			30
	30-88		100			3
	88-216		150)		3
	216-96	216-960 200)		3
	Above 1G		500			3
Test Procedure:	 Above 1GHz 500 3 a. The EUT was placed on the top of a rotating table 0.8 meters above the groundat a 3 meter semi-anechoic camber. The table was rotated 360 degrees todetermine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, whichwas mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and thenthe antenna was tuned to heights from 1 meter to 4 meters and the rotatabletable was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and SpecifiedBandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limitspecified, then testing could be stopped and the peak values of the EUT wouldbe reported. Otherwise the emissions that did not have 10dB margin would bere-tested one by one using peak, quasipeak or average method as specified andthen reported in a data 					
Test setup:	sheet. 9kHz-30MHz					

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CCIS



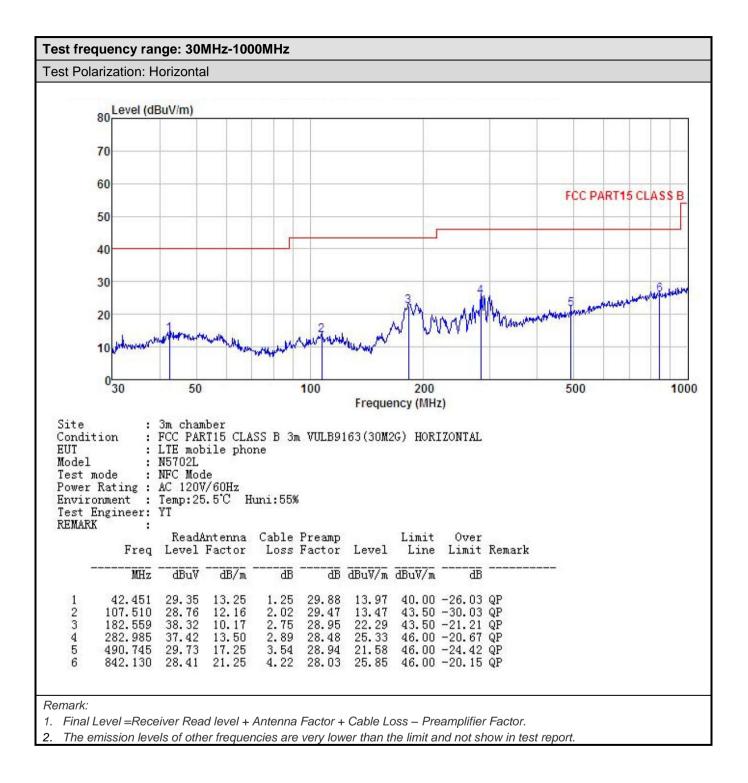
Measurement Data:

Spurious Emissions

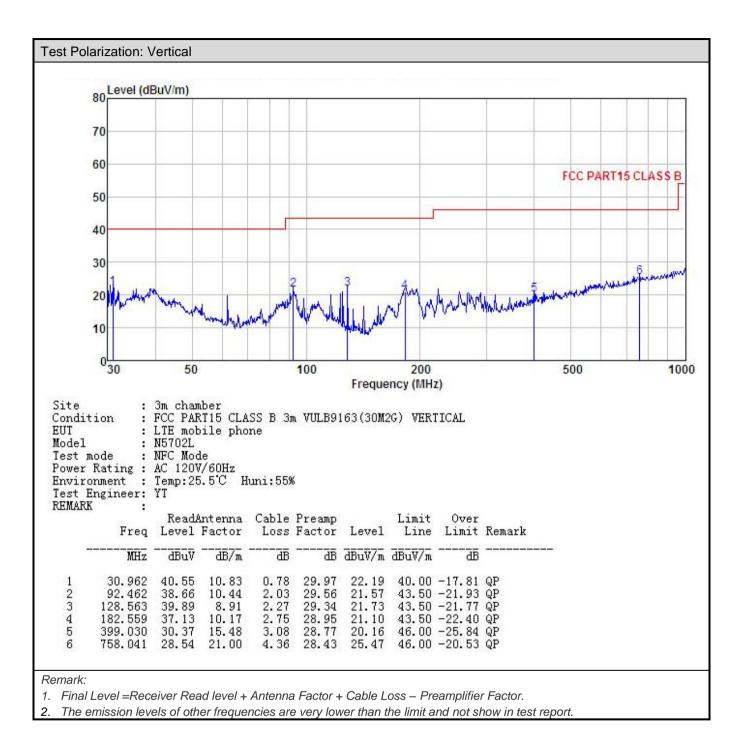
Test frequency range: 150kHz-30MHz

Refer to the FCC ID: 2ADINN5702L











6.3 20dB Bandwidth

Test Requirement:	FCC Part15 C Section 15.215 (c)		
Test Method:	ANSI C63.4:2014		
Receiver setup:	RBW=200Hz, VBW=300Hz, detector: Peak		
Limit:	he fundamental emission be kept within atleast the central 80% of the ermitted band		
Test Procedure:	 According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. Set the EUT to proper test channel. Max hold the radiated emissions, mark the peak power frequency point and the -20dB upper and lower frequency points. Read 20dB bandwidth. 		
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane		
Test Instruments:	Refer to section 5.7 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Refer to the FCC ID: 2ADINN5702L		



6.4 Frequency Tolerance

Test Requirement:	FCC Part15 C Section 15.225 (e)				
Test Method:					
	ANSI C63.10: 2013				
Receiver setup:	RBW=200Hz, VBW=300Hz, span=14kHz, detector: Peak				
Limit:	±0.01% of the operating frequency				
Test mode:	Transmitting mode				
Test Procedure:	Frequency stability V.S. Temperature measurement				
	 The equipment under test was powered by a fresh battery. RF output was connected to spectrum analyzer via feed through attenuators. 				
	3. The EUT was placed inside the temperature chamber.				
	4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency.				
	5. Turn EUT off and set the chamber temperature to −20°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.				
	 Repeat step measure with 10[°]C increased per stage until the highest temperature of +50[°]C reached 				
	Frequency stability V.S. Voltage measurement				
	 Set chamber temperature to 20°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage. 				
	2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.				
	Reduce the input voltage to specify extreme voltage variation (+/-15%) and endpoint, record the maximum frequency change.				
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table				
	Ground Reference Plane				
Test Instruments:	Refer to section 5.7 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Refer to the FCC ID: 2ADINN5702L				

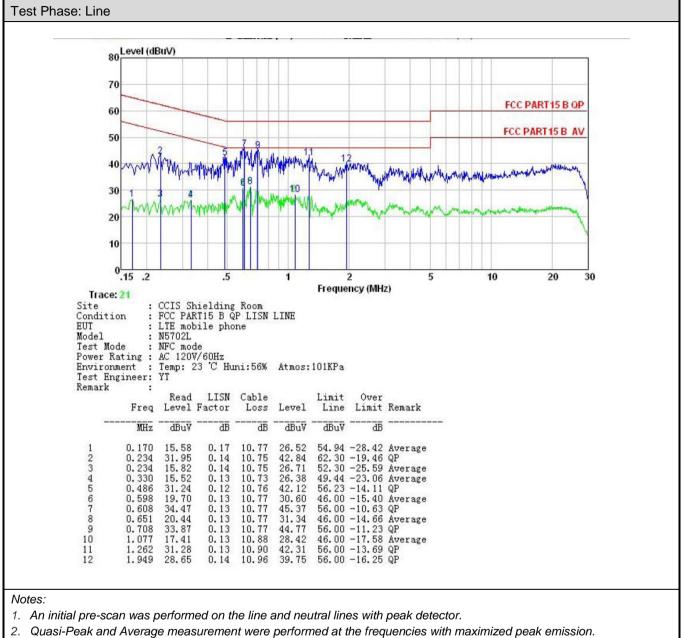


6.5 Conducted Emission

Test Requirement:	FCC Part15 B Section 15.207							
Test Method:	ANSI C63.4:2014							
TestFrequencyRange:	150kHz to 30MHz							
Class / Severity:	Class B							
Receiver setup:	RBW=9kHz, VBW=30kHz							
Limit:	Limit (dBµV)							
	Frequency range (MHz)		Qu	asi-peak		Average		
	0.1	15-0.5	66	6 to 56*	5	56 to 46*		
).5-5		56		46		
		.5-30		60		50		
Test setup:	* Decreases with the logarithm of the frequency. Reference Plane							
Test procedure	LISN 40cm 80cm LISN AUX Filter AC power Equipment E.U.T Filter AC power Test table/Insulation plane EMI Receiver Remark E.U.T: Equipment Under Test LISN: Line Impedence Stabilization Network Test table height=0.8m 1. The E.U.T and simulators are connected to the main power through a line							
	 impedance stabilization network (L.I.S.N.).It provide a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement. 							
Test environment:	Temp.:	23°C	Humid.:	56%	Press.:	101kPa		
Measurement Record:	Uncertainty: 3.28dB							
	Refer to section 5.7 for details							
Test Instruments:	Refer to sec	ction 5.7 for de	tails					
Test Instruments: Test mode:		ction 5.7 for de						



Measurement Data:



3. Final Level =Receiver Read level + LISN Factor + Cable Loss.



Test Phase: Neutral 80 Level (dBuV) 70 FCC PART 15 B OP 60 FCC PART 15 B AV 50 When the more more more thank and the second of the second VUN 40 30 20 10 0.15 5 .2 .5 1 2 10 20 30 Frequency (MHz) Trace: 23 CCIS Shielding Room FCC PART15 B QP LISN NEUTRAL LIE mobile phone Site : Condition EUT : Model N5702L Fest Mode : NFC mode Power Rating : AC 120V/60Hz Environment : Temp: 23 °C Huni:56% Atmos:101KPa Test Engineer: YT Remark : LISN Cable Limit Over Cactor Loss Level Line Limit Remark Read Freq Level Factor dBuV dBuV dBuV dB MHz dB dB 0.174 17.80 0.95 10.77 29.52 54.77 -25.25 Average 54.77 -25.25 Average 63.18 -18.07 QP 49.88 -18.35 Average 59.53 -13.51 QP 56.71 -11.37 QP 56.00 -9.99 QP 46.00 -13.80 Average 46.00 -10.98 Average 123 0.211 33.42 0.93 10.76 45.11 19.82 0.313 0.327 10.74 10.73 31.53 0.97 45678 0.97 46.02 0.459 33.63 0.97 10.74 45.34 0.538 34.28 20.47 23.28 0.97 10.76 46.01 10.76 32.20 35.02 0.651 0.97 g 0.654 36.83 0.97 10.77 48.57 56.00 -7.43 QP 56.00 -11.32 QP 46.00 -16.11 Average 0.755 32.92 0.97 10.79 44.68 29.89 10 11 12 17.21 0.97 10.83 29.01 46.00 -16.99 Average 0.871

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.

2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.

3. Final Level =Receiver Read level + LISN Factor + Cable Loss.