

FCC REPORT

Applicant: SWAGTEK

Address of Applicant: 10205 NW 19th St. Suite 101, Miami, FL, 33172

Equipment Under Test (EUT)

Product Name: 6.517 inch 4G Smart Phone

Model No.: L65 LITE, ULTRAx, N65 Lite

Trade mark: LOGIC, iSWAG, UNONU

FCC ID: O55653921

Applicable standards: FCC CFR Title 47 Part 15 Subpart B

Date of sample receipt: 24 Nov., 2021

Date of Test: 25 Nov., to 31 Dec., 2021

Date of report issued: 05 Jan., 2022

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 JYT product 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.

This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

2 Version

Version No.	Date	Description
00	05 Jan., 2022	Original

Tested by:

Mike.ou
Test Engineer

Date:

05 Jan., 2022

Reviewed by:

Winner Zhang
Project Engineer

Date:

05 Jan., 2022

3 Contents

	Page
1 COVER PAGE.....	1
2 VERSION	2
3 CONTENTS	3
4 TEST SUMMARY	4
5 GENERAL INFORMATION.....	5
5.1 CLIENT INFORMATION	5
5.2 GENERAL DESCRIPTION OF E.U.T.	5
5.3 TEST MODE.....	5
5.4 MEASUREMENT UNCERTAINTY	5
5.5 DESCRIPTION OF SUPPORT UNITS	6
5.6 RELATED SUBMITTAL(S) / GRANT (S).....	6
5.7 DESCRIPTION OF CABLE USED	6
5.8 ADDITIONS TO, DEVIATIONS, OR EXCLUSIONS FROM THE METHOD	6
5.9 LABORATORY FACILITY	6
5.10 LABORATORY LOCATION.....	6
5.11 TEST INSTRUMENTS LIST	7
6 TEST RESULTS AND MEASUREMENT DATA	8
6.1 CONDUCTED EMISSION.....	8
6.2 RADIATED EMISSION	11
7 TEST SETUP PHOTO	16
8 EUT CONSTRUCTIONAL DETAILS	17

4 Test Summary

Test Item	Section in CFR 47	Result
Conducted Emission	Part 15.107	Pass
Radiated Emission	Part 15.109	Pass
Remark: 1. Pass: The EUT complies with the essential requirements in the standard.		
Test Method:	ANSI C63.4:2014	

5 General Information

5.1 Client Information

Applicant:	SWAGTEK
Address:	10205 NW 19th St. Suite 101, Miami, FL, 33172
Manufacturer/ Factory:	SWAGTEK
Address:	10205 NW 19th St. Suite 101, Miami, FL, 33172

5.2 General Description of E.U.T.

Product Name:	6.517 inch 4G Smart Phone
Model No.:	L65 LITE, ULTRAx, N65 Lite
Power supply:	Rechargeable Li-ion Polymer Battery DC3.85V, 4000mAh
AC adapter:	Model: MST-0502000-FCC Input: AC100-240V, 50/60Hz, 0.3A Output: DC 5.0V, 2000mA
Test Sample Condition:	The test samples were provided in good working order with no visible defects.
Remark:	Model No.: L65 LITE, ULTRAx, N65 Lite were identical inside, the electrical circuit design, layout, components used and internal wiring, with only difference being trademark. LOGIC is for L65 LITE. iSWAG is for ULTRAx. UNONU is for N65 Lite. There are two kinds of EUT, single SIM card slot and dual SIM card slot, EUT is the same except for the difference of the card slot. Select Test Dual Card Slots EUT.

5.3 Test Mode

Operating mode	Detail description
PC mode	Keep the EUT in Downloading mode(Worst case)
Charging+Recording mode	Keep the EUT in Charging+Recording mode
Charging+Playing mode	Keep the EUT in Charging+Playing mode
FM mode	Keep the EUT in FM receiver mode
GPS mode	Keep the EUT in GPS receiver mode

The sample was placed 0.8m above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

5.4 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%)
Conducted Emission (9kHz ~ 150KHz) for V-AMN	3.11 dB
Conducted Emission (150kHz ~ 30MHz) for V-AMN	2.62 dB
Radiated Emission (9kHz ~ 30MHz electric field) for 3m SAC	3.13 dB
Radiated Emission (9kHz ~ 30MHz magnetic field) for 3m SAC	3.13 dB
Radiated Emission (30MHz ~ 1GHz) for 3m SAC	4.45 dB
Radiated Emission (1GHz ~ 18GHz) for 3m SAC	5.34 dB
Radiated Emission (18GHz ~ 40GHz) for 3m SAC	5.34 dB
Radiated Emission (30MHz ~ 1GHz) for 10m SAC	4.32 dB

5.5 Description of Support Units

Manufacturer	Description	Model	S/N	FCC ID/DoC
Lenovo	Laptop	ThinkPad T14 Gen 1	SL10Z47277	DoC
HP	Printer	HP LaserJet P1007	VNFP409729	DoC

5.6 Related Submittal(s) / Grant (s)

This is an original grant, no related submittals and grants.

5.7 Description of Cable Used

Cable Type	Description	Length	From	To
Detached USB Cable	Shielding	1.0m	EUT	PC/Adapter

5.8 Additions to, deviations, or exclusions from the method

No

5.9 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>

5.10 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://www.ccis-cb.com>

5.11 Test Instruments list

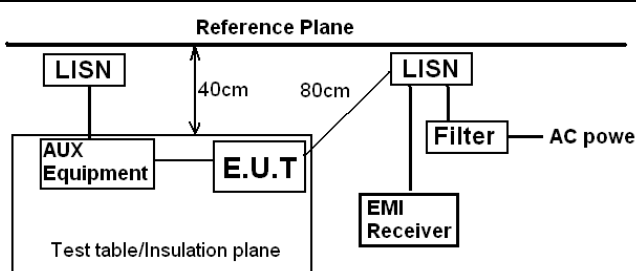
Radiated Emission(3m SAC):					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal.Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	ETS	9m*6m*6m	WXJ001-1	01-19-2021	01-18-2024
BiConiLog Antenna	Schwarzbeck	VULB9163	WXJ002	03-03-2021	03-02-2022
Biconical Antenna	Schwarzbeck	VUBA9117	WXJ002-1	06-20-2021	06-19-2022
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-2	03-03-2021	03-02-2022
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-3	06-18-2021	06-17-2022
Loop Antenna	Schwarzbeck	FMZB 1519 B	WXJ002-4	03-07-2021	03-06-2022
Pre-amplifier (30MHz ~ 1GHz)	Schwarzbeck	BBV9743B	WXG001-7	03-07-2021	03-06-2022
Pre-amplifier (1GHz ~ 18GHz)	SKET	LNPA_0118G-50	WXG001-3	03-07-2021	03-06-2022
Pre-amplifier (18GHz ~ 40GHz)	RF System	TRLA-180400G45B	WXG001-9	03-07-2021	03-06-2022
EMI Test Receiver	Rohde & Schwarz	ESRP7	WXJ003-1	03-03-2021	03-02-2022
Coaxial Cable (30MHz ~ 1GHz)	JYTSZ	JYT3M-1G-NN-8M	WXG001-4	03-07-2021	03-06-2022
Coaxial Cable (1GHz ~ 18GHz)	JYTSZ	JYT3M-18G-NN-8M	WXG001-5	03-07-2021	03-06-2022
Coaxial Cable (9kHz ~ 30MHz)	JYTSZ	JYT3M-1G-BB-5M	WXG001-6	03-07-2021	03-06-2022
Coaxial Cable (18GHz ~ 40GHz)	JYTSZ	JYT3M-40G-SS-8M	WXG001-7	03-07-2021	03-06-2022
Band Reject Filter Group	Tonscend	JS0806-F	WXJ089	N/A	
Test Software	Tonscend	TS+	Version: 3.0.0.1		

Radiated Emission(10m SAC):					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
10m SAC	ETS	RFSD-100-F/A	WXJ090	04-28-2021	04-27-2024
BiConiLog Antenna	SCHWARZBECK	VULB 9168	WXJ090-1	04-02-2021	04-01-2022
BiConiLog Antenna	SCHWARZBECK	VULB 9168	WXJ090-2	04-02-2021	04-01-2022
EMI Test Receiver	R&S	ESR 3	WXJ090-3	04-08-2021	04-07-2022
EMI Test Receiver	R&S	ESR 3	WXJ090-4	04-08-2021	04-07-2022
Low Pre-amplifier	Bost	LNA 0920N	WXG002-3	04-06-2021	04-05-2022
Low Pre-amplifier	Bost	LNA 0920N	WXG002-4	04-06-2021	04-05-2022
Cable	Bost	JYT10M-1G-NN-10M	XG002-7	04-02-2021	04-01-2022
Cable	Bost	JYT10M-1G-NN-10M	XG002-8	04-02-2021	04-01-2022
Test Software	R&S	EMC32	Version: 10.50.40		

Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal.Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
EMI Test Receiver	Rohde & Schwarz	ESCI 3	WXJ003	03-03-2021	03-02-2022
RF Switch	TOP PRECISION	RSU0301	WXG003	03-03-2021	03-02-2022
LISN	Schwarzbeck	NSLK 8127	QCJ001-13	03-18-2021	03-17-2022
LISN	Rohde & Schwarz	ESH3-Z5	WXJ005-1	06-18-2021	06-17-2022
LISN Coaxial Cable (9kHz ~ 30MHz)	JYTSZ	JYTCE-1G-NN-2M	WXG003-1	03-03-2021	03-02-2022
Test Software	AUDIX	E3	Version: 6.110919b		

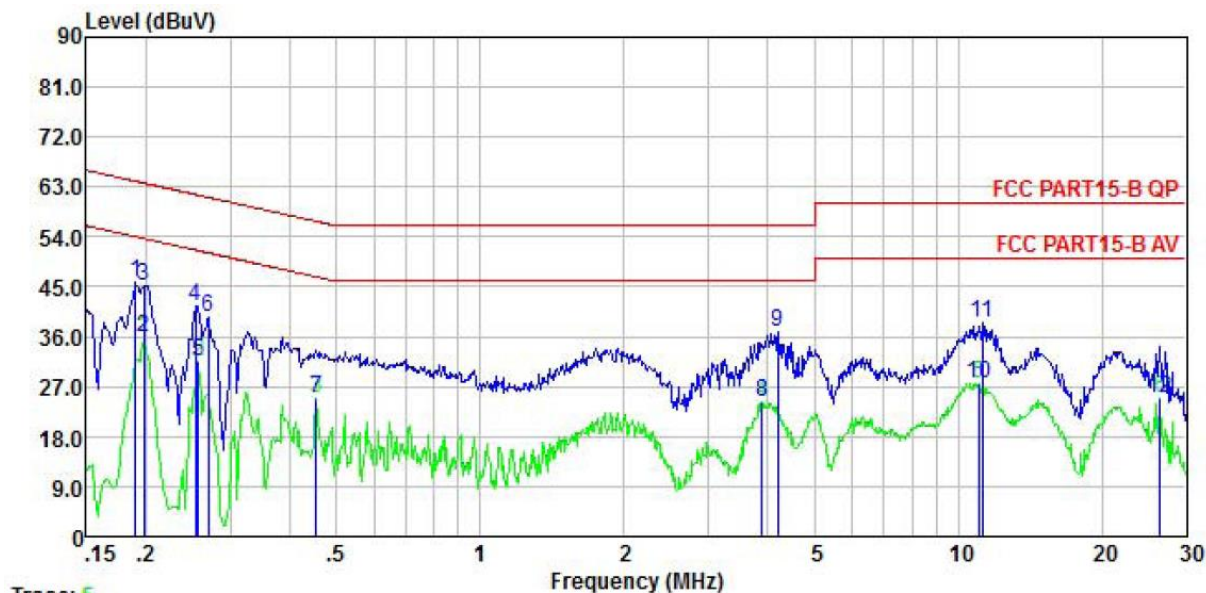
6 Test results and Measurement Data

6.1 Conducted Emission

Test Requirement:	FCC Part 15 B Section 15.107		
Test Frequency Range:	150kHz to 30MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9kHz, VBW=30kHz		
Limit:	Frequency range (MHz)	Limit (dBμV)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	0.5-30	60	50
* Decreases with the logarithm of the frequency.			
Test setup:	 <p>Remark: E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p>		
Test procedure	<ol style="list-style-type: none"> 1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The 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 refers 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(latest version) on conducted measurement. 		
Test Instruments:	Refer to section 5.11 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Pass		

Measurement data:

Product name:	6.517 inch 4G Smart Phone	Product model:	L65 LITE
Test by:	Mike	Test mode:	PC mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Humi: 55%



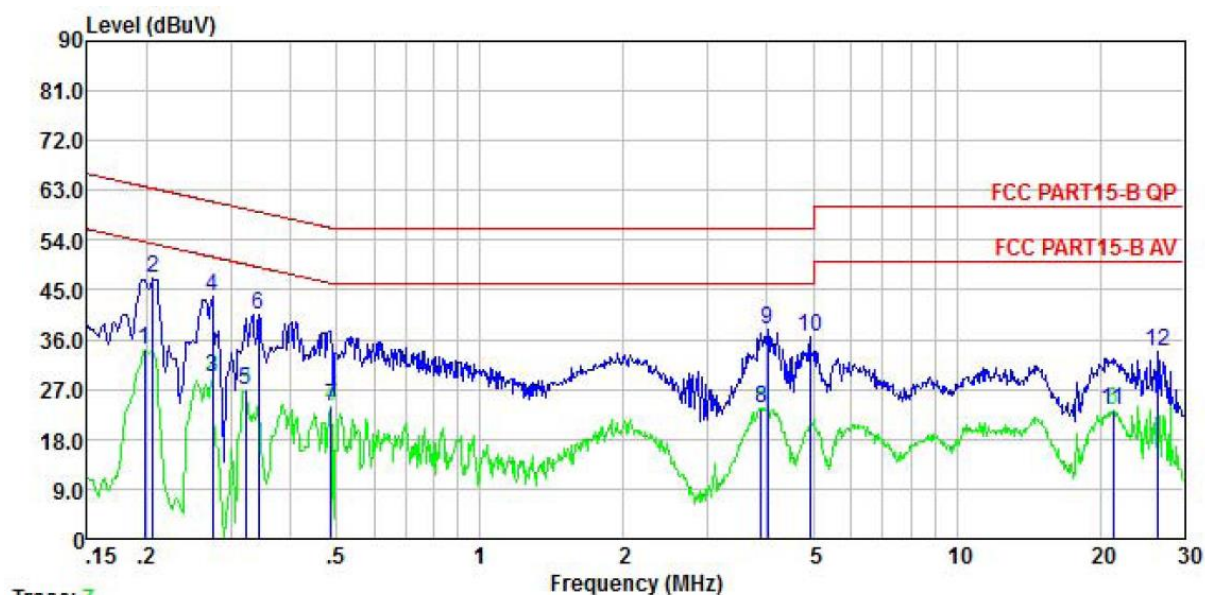
Trace: 5

	Freq	Read	LISN	Cable	Level	Limit	Over	
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	Remark
1	0.190	35.43	10.23	0.03	45.69	64.02	-18.33	QP
2	0.198	25.47	10.23	0.04	35.74	53.71	-17.97	Average
3	0.198	35.05	10.23	0.04	45.32	63.71	-18.39	QP
4	0.253	31.19	10.25	0.01	41.45	61.64	-20.19	QP
5	0.258	21.32	10.25	0.01	31.58	51.51	-19.93	Average
6	0.270	29.28	10.25	0.02	39.55	61.12	-21.57	QP
7	0.454	14.46	10.28	0.03	24.77	46.80	-22.03	Average
8	3.881	13.64	10.39	0.08	24.11	46.00	-21.89	Average
9	4.202	26.29	10.40	0.08	36.77	56.00	-19.23	QP
10	11.021	16.97	10.64	0.11	27.72	50.00	-22.28	Average
11	11.257	27.86	10.65	0.11	38.62	60.00	-21.38	QP
12	26.418	13.85	10.98	0.21	25.04	50.00	-24.96	Average

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.

Product name:	6.517 inch 4G Smart Phone	Product model:	L65 LITE
Test by:	Mike	Test mode:	PC mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5°C Humi: 55%



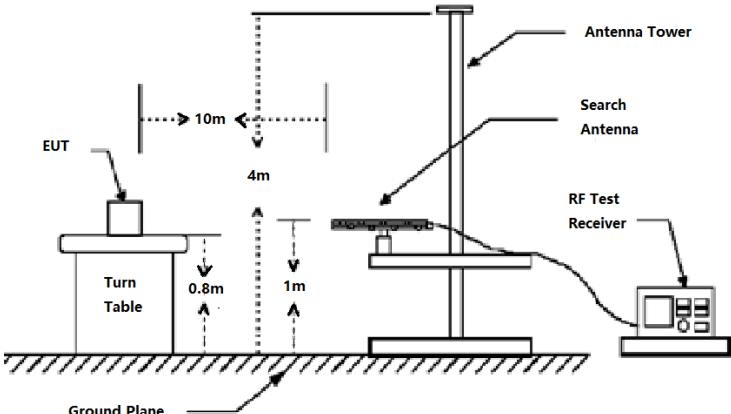
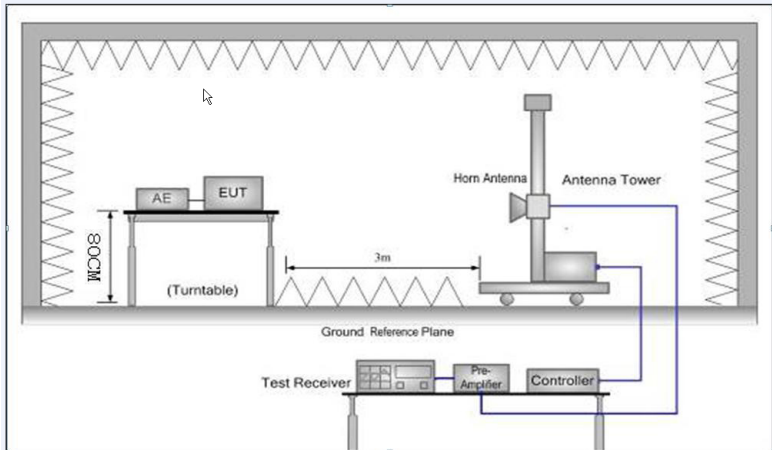
Trace: 7

	Freq	Read	LISN	Cable	Level	Limit	Over	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.198	24.10	10.22	0.04	34.36	53.71	-19.35	Average
2	0.206	36.82	10.22	0.04	47.08	63.36	-16.28	QP
3	0.274	18.98	10.24	0.02	29.24	50.98	-21.74	Average
4	0.274	33.50	10.24	0.02	43.76	60.98	-17.22	QP
5	0.322	16.64	10.25	0.03	26.92	49.66	-22.74	Average
6	0.343	30.28	10.26	0.02	40.56	59.13	-18.57	QP
7	0.486	13.53	10.28	0.03	23.84	46.23	-22.39	Average
8	3.881	13.19	10.38	0.08	23.65	46.00	-22.35	Average
9	4.006	27.47	10.38	0.08	37.93	56.00	-18.07	QP
10	4.926	26.11	10.41	0.09	36.61	56.00	-19.39	QP
11	21.260	12.28	10.88	0.17	23.33	50.00	-26.67	Average
12	26.418	22.70	10.90	0.21	33.81	60.00	-26.19	QP

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.

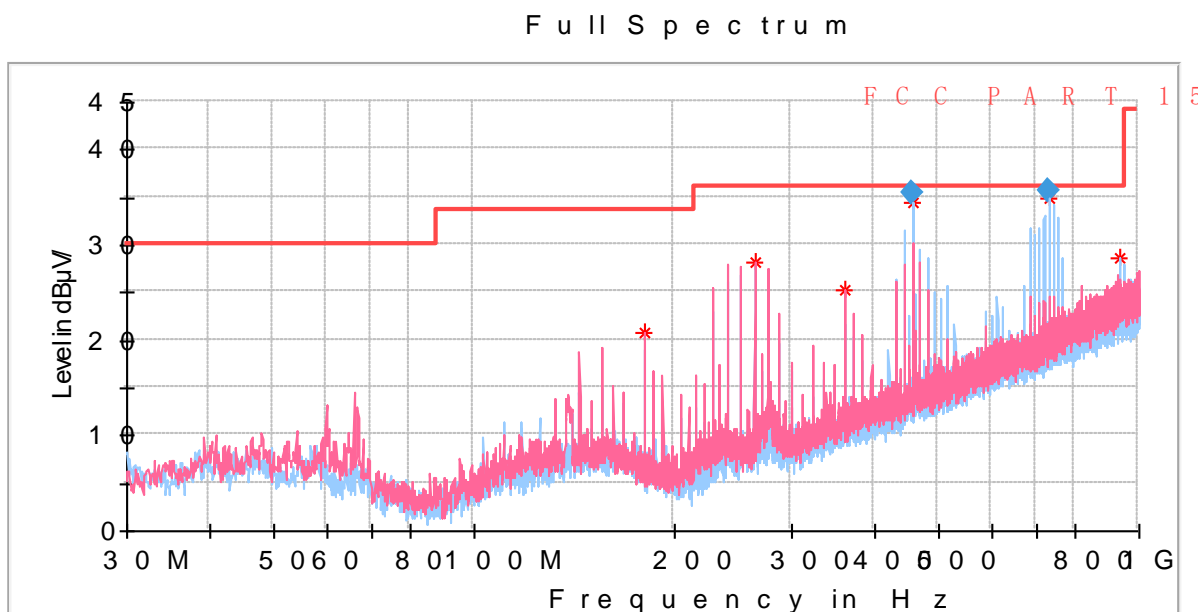
6.2 Radiated Emission

Test Requirement:	FCC Part 15 B Section 15.109				
Test Frequency Range:	30MHz to 6000MHz				
Test site:	3m(for above 1GHz), 10m(for below 1GHz) (Semi-Anechoic Chamber)				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak Value
	Above 1GHz	Peak RMS	1MHz 1MHz	3MHz 3MHz	Peak Value Average Value
Limit:	Frequency		Limit (dBuV/m @10m)		Remark
	30MHz-88MHz		30.0		Quasi-peak Value
	88MHz-216MHz		33.5		Quasi-peak Value
	216MHz-960MHz		36.0		Quasi-peak Value
	960MHz-1GHz		44.0		Quasi-peak Value
	Frequency		Limit (dBuV/m @3m)		Remark
	Above 1GHz		54.0 74.0		Average Value Peak Value
Test setup:	Below 1GHz				
					
	Above 1GHz				
					
Test Procedure:	<div>1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter chamber (below 1GHz) or 3 meter chamber(above 1GHz). The table was rotated 360 degrees to determine the position of the highest radiation.</div> <div>2. The EUT was set 10 meters(below 1GHz) or 3 meters(above 1GHz) away from the interference-receiving antenna, which was mounted on</div>				

	<p>the top of a variable-height antenna tower.</p> <p>3. 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.</p> <p>4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.</p> <p>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</p> <p>6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</p>
Test Instruments:	Refer to section 5.11 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	All of the observed value above 6GHz were the noise floor , which were no recorded

Measurement Data:
Below 1GHz:

Product Name:	6.517 inch 4G Smart Phone	Product Model:	L65 LITE
Test By:	Mike	Test mode:	PC mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical & Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%


Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
179.962000	20.78	33.50	12.72	100.0	V	72.0	-17.4
263.964000	28.16	36.00	7.84	100.0	V	95.0	-15.6
359.994000	25.21	36.00	10.79	100.0	V	170.0	-12.5
456.024000	34.45	36.00	1.55	100.0	H	99.0	-10.2
731.989000	34.84	36.00	1.16	100.0	H	328.0	-4.5
936.077000	28.71	36.00	7.29	100.0	H	122.0	-0.8

Final_Result

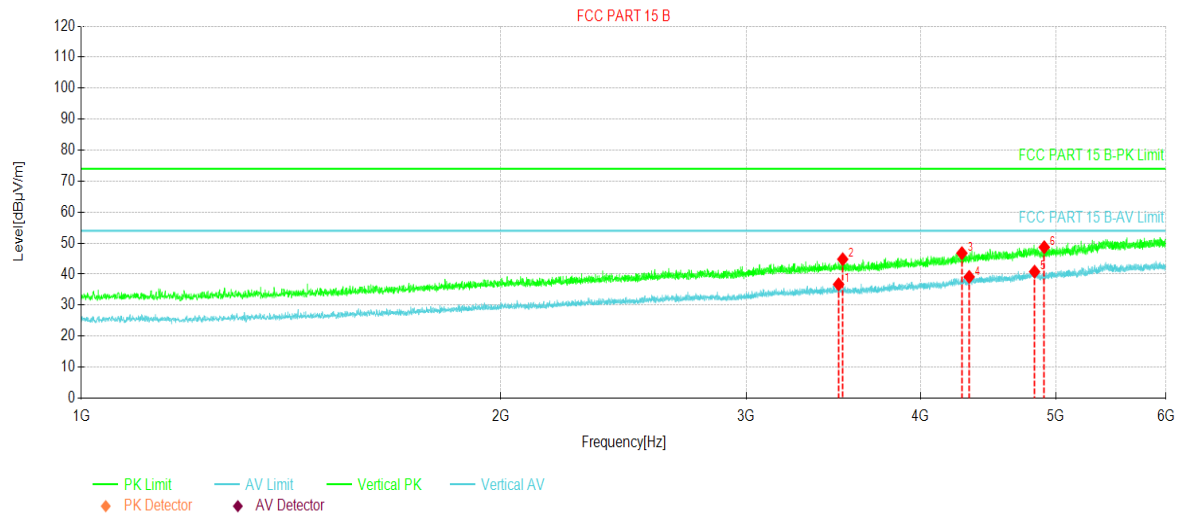
Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
456.984000	35.29	36.00	0.71	1000.0	125.0	H	95.0	-10.2
731.989000	35.50	36.00	0.50	1000.0	125.0	H	325.0	-4.5

Remark:

1. Final Level = Receiver Read level + Factor.(Antenna Factor + Cable Loss – Preamplifier Factor).
2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

Above 1GHz:

Product Name:	6.517 inch 4G Smart Phone	Product Model:	L65 LITE
Test By:	Mike	Test mode:	PC mode
Test Frequency:	1 GHz ~ 6 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%



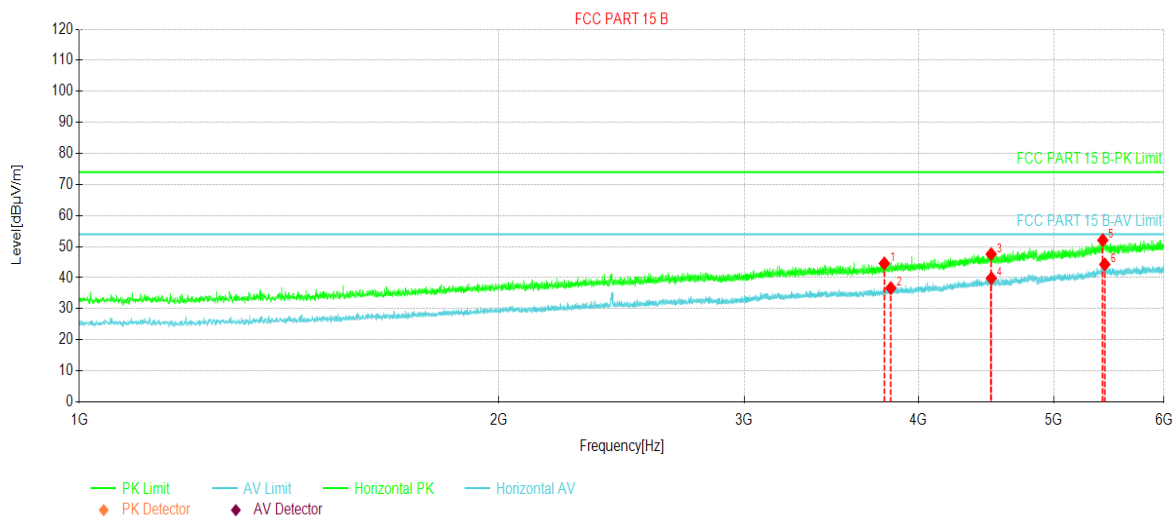
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	3493.74	52.10	36.69	-15.41	54.00	17.31	AV	Vertical
2	3517.75	60.20	44.81	-15.39	74.00	29.19	PK	Vertical
3	4282.82	59.15	46.76	-12.39	74.00	27.24	PK	Vertical
4	4334.83	51.18	39.10	-12.08	54.00	14.90	AV	Vertical
5	4829.38	50.70	40.78	-9.92	54.00	13.22	AV	Vertical
6	4907.39	58.08	48.68	-9.40	74.00	25.32	PK	Vertical

Remark:

- Final Level = Receiver Read level + Factor. (Antenna Factor + Cable Loss – Preamplifier Factor).
- The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

Product Name:	6.517 inch 4G Smart Phone	Product Model:	L65 LITE
Test By:	Mike	Test mode:	PC mode
Test Frequency:	1 GHz ~ 6 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Humi: 57%



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	3780.27	59.20	44.59	-14.61	74.00	29.41	PK	Horizontal
2	3821.28	51.06	36.65	-14.41	54.00	17.35	AV	Horizontal
3	4509.85	58.76	47.57	-11.19	74.00	26.43	PK	Horizontal
4	4511.35	51.00	39.81	-11.19	54.00	14.19	AV	Horizontal
5	5423.44	58.67	52.07	-6.60	74.00	21.93	PK	Horizontal
6	5440.94	50.86	44.26	-6.60	54.00	9.74	AV	Horizontal

Remark:

1. Final Level = Receiver Read level + Factor.(Antenna Factor + Cable Loss – Preamplifier Factor).
2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

Note: Pre-Scan yellow and red USB cables and found that the red USB cable is the worst case, and the report only reflects the worst mode.