FCC REPORT

Applicant:	Azumi S.A
Address of Applicant:	Avenida Aquilino de la Guardia con Calle 47, PH Ocean Plaza, Piso 16 of. 16-01, Marbella, Ciudad de Panama, Panama

Equipment Under Test (EUT)

Product Name:	Mobile Phone
Model No.:	L5Z, L4Z
Trade mark:	AZUMI
FCC ID:	QRP-FP-010
Applicable standards:	FCC CFR Title 47 Part 15 Subpart B
Date of sample receipt:	14 Dec., 2020
Date of Test:	15 Dec., to 24 Dec., 2020
Date of report issued:	06 Jan., 2020
Test Result:	PASS *

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

Authorized Signature:

Bruce Zhang
Laboratory Manager

2 Version

Version No.	Date	Description
00	*25 Dec., 2020*	*Original*
01	*06 Jan., 2020*	*Updated remark on page 2.*

Remark:

This report was amended on FCC ID: QRP-FP-010 follow FCC Class II Permissive Change. The differences between them as below: Screen cable circuit, USB port cable circuit and Power chip. So, the EMC needs to retest.

Tested by:	Janet Wei	***Date:***	*06 Jan., 2020*
	Test Engineer		
Reviewed by:	Winner Zhang	***Date:***	*06 Jan., 2020*
	Project Engineer		

3 Contents

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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.* *2. N/A: The EUT not applicable of the test item.*		
Test Method:	*ANSI C63.4:2014*	

5 General Information

5.1 Client Information

Applicant:	Azumi S.A
Address:	Avenida Aquilino de la Guardia con Calle 47, PH Ocean Plaza, Piso 16 of. 16-01, Marbella, Ciudad de Panama, Panama
Manufacturer:	AZUMI HK LTD
Address:	FLAT/RM 18 BLK 1 14/F GOLDEN INDUSTRIAL BUILDING 16-26 KWAI TAK STREET KWAI CHUNG, HK

5.2 General Description of E.U.T.

Product Name:	Mobile Phone
Model No.:	L5Z, L4Z
Hardware Version:	AZUMI_L5Z_HW_V1.0
Software Version:	AZUMI_L5Z_SW_V01
Power supply:	Rechargeable Li-ion Battery DC3.7V, 600mAh
AC adapter :	Input: AC100-240V, 50/60Hz, 0.15A Output: DC 5.0V, 500mA
Remark:	L5Z, L4Z 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.

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

Parameters	Expanded Uncertainty
Conducted Emission (9kHz ~ 30MHz)	±1.60 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	±3.12 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.32 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.38 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±3.36 dB (k=2)

5.5 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
DELL	PC	OPTIPLEX745	N/A	DoC
DELL	MONITOR	E178FPC	N/A	DoC
DELL	KEYBOARD	SK-8115	N/A	DoC
DELL	MOUSE	MOC5UO	N/A	DoC
LENOVO	Laptop	SL510	2847A65	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
Power line	Unshielded	1.0m	EUT	Adapter
Detached headset cable	Unshielded	1.2m	EUT	Headset

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 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.

- **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: https://portal.a2la.org/scopepdf/4346-01.pdf

5.10 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.
Address: No.110~116, Building B, Jinyuan Business Building, 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

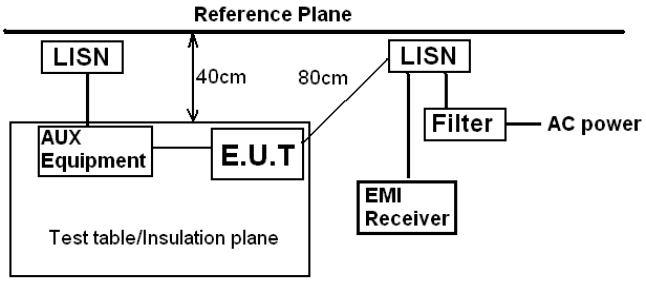
5.11 Test Instruments list

Radiated Emission:					
Test Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
3m SAC	SAEMC	9m*6m*6m	966	07-22-2020	07-21-2021
Loop Antenna	SCHWARZBECK	FMZB1519B	00044	03-07-2020	03-06-2021
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-07-2020	03-06-2021
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-07-2020	03-06-2021
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-22-2020	06-21-2021
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-18-2019	11-17-2020
EMI Test Software	AUDIX	E3	Version: 6.110919b		
Pre-amplifier	HP	8447D	2944A09358	03-07-2020	03-06-2021
Pre-amplifier	CD	PAP-1G18	11804	03-07-2020	03-06-2021
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-05-2020	03-04-2021
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-18-2019	11-17-2020
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-05-2020	03-04-2021
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-07-2020	03-06-2021
Cable	MICRO-COAX	MFR64639	K10742-5	03-07-2020	03-06-2021
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-07-2020	03-06-2021

Conducted Emission:					
Test Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
EMI Test Receiver	Rohde & Schwarz	ESCI	101189	03-05-2020	03-04-2021
Pulse Limiter	SCHWARZBECK	OSRAM 2306	9731	03-05-2020	03-04-2021
LISN	CHASE	MN2050D	1447	03-05-2020	03-04-2021
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2020	07-20-2021
Cable	HP	10503A	N/A	03-05-2020	03-04-2021
EMI Test Software	AUDIX	E3	Version: 6.110919b		

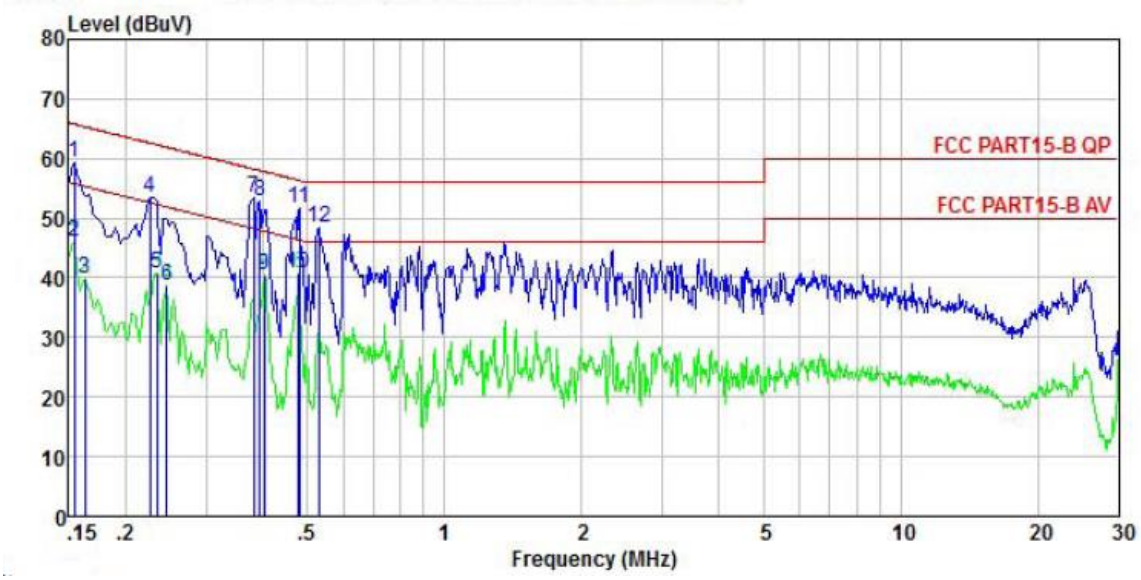
6 Test results and Measurement Data

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:	 *Remark:* *E.U.T: Equipment Under Test* *LISN: Line Impedence Stabilization Network* *Test table height=0.8m*		
Test procedure	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: 2014 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:	Mobile Phone	Product model:	L5Z
Test by:	Janet	Test mode:	PC mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%

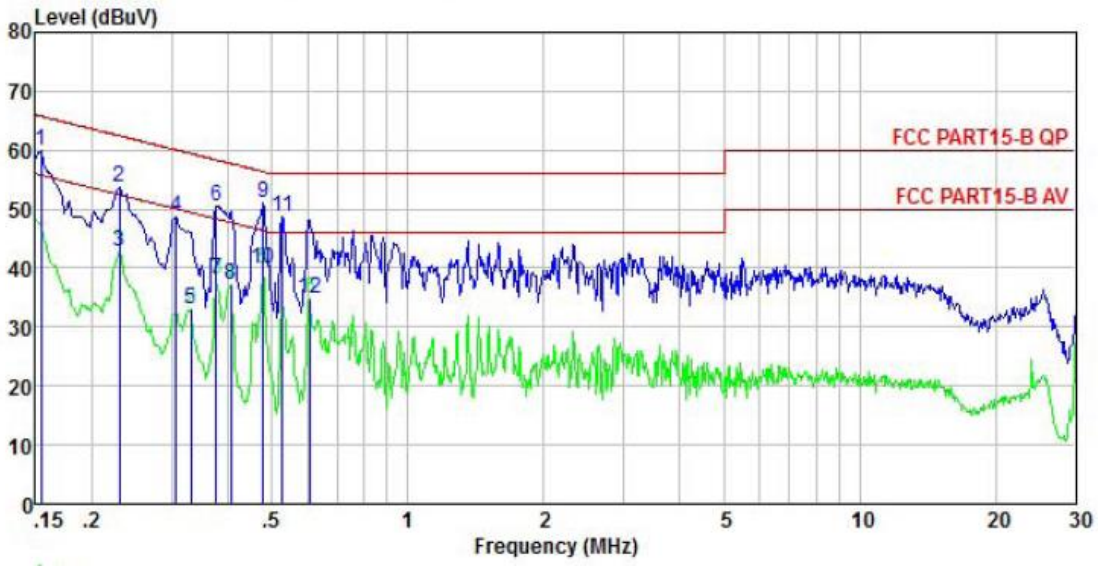


	Freq	Read Level	LISN Factor	Aux Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.154	49.10	-0.57	-0.06	10.78	59.25	65.78	-6.53	QP
2	0.154	35.99	-0.57	-0.06	10.78	46.14	55.78	-9.64	Average
3	0.162	29.61	-0.58	-0.08	10.77	39.72	55.34	-15.62	Average
4	0.226	43.51	-0.58	-0.19	10.75	53.49	62.61	-9.12	QP
5	0.234	30.66	-0.57	-0.20	10.75	40.64	52.30	-11.66	Average
6	0.246	28.59	-0.57	-0.21	10.75	38.56	51.91	-13.35	Average
7	0.381	43.01	-0.49	0.31	10.72	53.55	58.25	-4.70	QP
8	0.393	42.09	-0.48	0.38	10.72	52.71	57.99	-5.28	QP
9	0.402	29.79	-0.48	0.42	10.72	40.45	47.81	-7.36	Average
10	0.479	30.60	-0.44	-0.21	10.75	40.70	46.36	-5.66	Average
11	0.481	41.61	-0.44	-0.24	10.75	51.68	56.32	-4.64	QP
12	0.529	38.33	-0.45	-0.36	10.76	48.28	56.00	-7.72	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.*

Product name:	Mobile Phone	Product model:	L5Z
Test by:	Janet	Test mode:	PC mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%

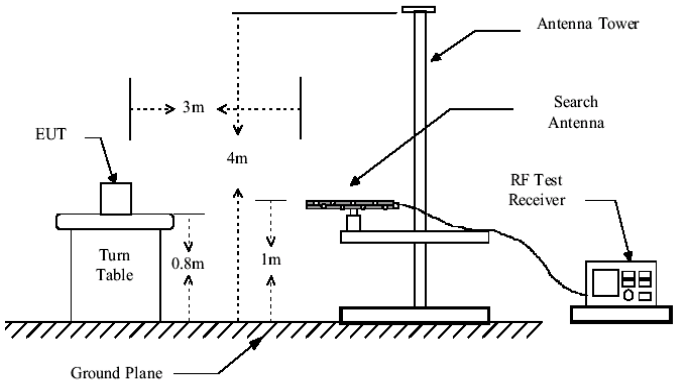


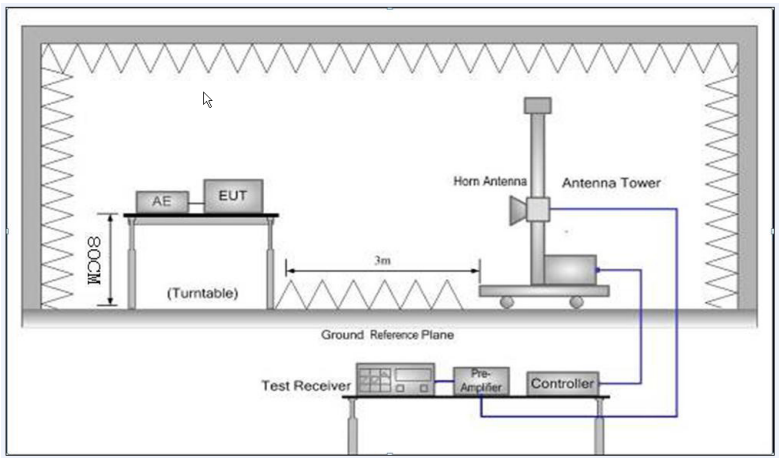
	Freq	Read Level	LISN Factor	Aux Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.154	49.84	-0.69	0.01	10.78	59.94	65.78	-5.84	QP
2	0.230	43.72	-0.67	0.00	10.75	53.80	62.44	-8.64	QP
3	0.230	32.59	-0.67	0.00	10.75	42.67	52.44	-9.77	Average
4	0.307	38.76	-0.67	0.00	10.74	48.83	60.06	-11.23	QP
5	0.330	22.90	-0.66	-0.01	10.73	32.96	49.44	-16.48	Average
6	0.377	40.57	-0.64	-0.04	10.72	50.61	58.34	-7.73	QP
7	0.377	27.95	-0.64	-0.04	10.72	37.99	48.34	-10.35	Average
8	0.406	27.05	-0.63	-0.05	10.72	37.09	47.73	-10.64	Average
9	0.479	40.85	-0.65	0.01	10.75	50.96	56.36	-5.40	QP
10	0.479	29.72	-0.65	0.01	10.75	39.83	46.36	-6.53	Average
11	0.527	38.49	-0.65	0.03	10.76	48.63	56.00	-7.37	QP
12	0.608	24.53	-0.64	0.04	10.77	34.70	46.00	-11.30	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.*

6.2 Radiated Emission

<table>
<tr><td>Test Requirement:</td><td colspan="5">FCC Part 15 B Section 15.109</td></tr>
<tr><td>Test Frequency Range:</td><td colspan="5">30MHz to 6000MHz</td></tr>
<tr><td>Test site:</td><td colspan="5">Measurement Distance: 3m (Semi-Anechoic Chamber)</td></tr>
<tr><td>Receiver setup:</td><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td></td><td>30MHz-1GHz</td><td>Quasi-peak</td><td>120kHz</td><td>300kHz</td><td>Quasi-peak Value</td></tr>
<tr><td></td><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td></td><td>RMS</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr>
<tr><td>Limit:</td><td colspan="2">Frequency</td><td colspan="2">Limit (dBuV/m @3m)</td><td>Remark</td></tr>
<tr><td></td><td colspan="2">30MHz-88MHz</td><td colspan="2">40.0</td><td>Quasi-peak Value</td></tr>
<tr><td></td><td colspan="2">88MHz-216MHz</td><td colspan="2">43.5</td><td>Quasi-peak Value</td></tr>
<tr><td></td><td colspan="2">216MHz-960MHz</td><td colspan="2">46.0</td><td>Quasi-peak Value</td></tr>
<tr><td></td><td colspan="2">960MHz-1GHz</td><td colspan="2">54.0</td><td>Quasi-peak Value</td></tr>
<tr><td></td><td colspan="2" rowspan="2">Above 1GHz</td><td colspan="2">54.0</td><td>Average Value</td></tr>
<tr><td></td><td colspan="2">74.0</td><td>Peak Value</td></tr>
<tr><td>Test setup:</td><td colspan="5">Below 1GHz
 

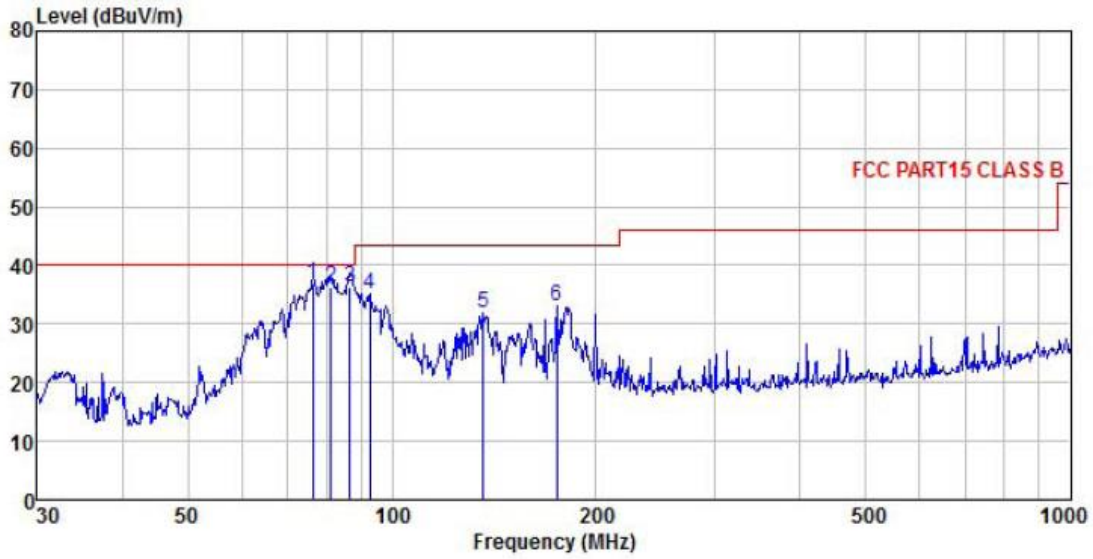
Above 1GHz
 
</td></tr>
<tr><td>Test Procedure:</td><td colspan="5">1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
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.</td></tr>
</table>

	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. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 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.
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 ware the niose floor , which were no recorded

Measurement Data:

Below 1GHz:

Product Name:	Mobile Phone	**Product model:**	L5Z
Test By:	Janet	**Test mode:**	PC mode
Test Frequency:	30 MHz ~ 1 GHz	**Polarization:**	Vertical
Test Voltage:	AC 120/60Hz	**Environment:**	Temp: 24℃ Huni: 57%

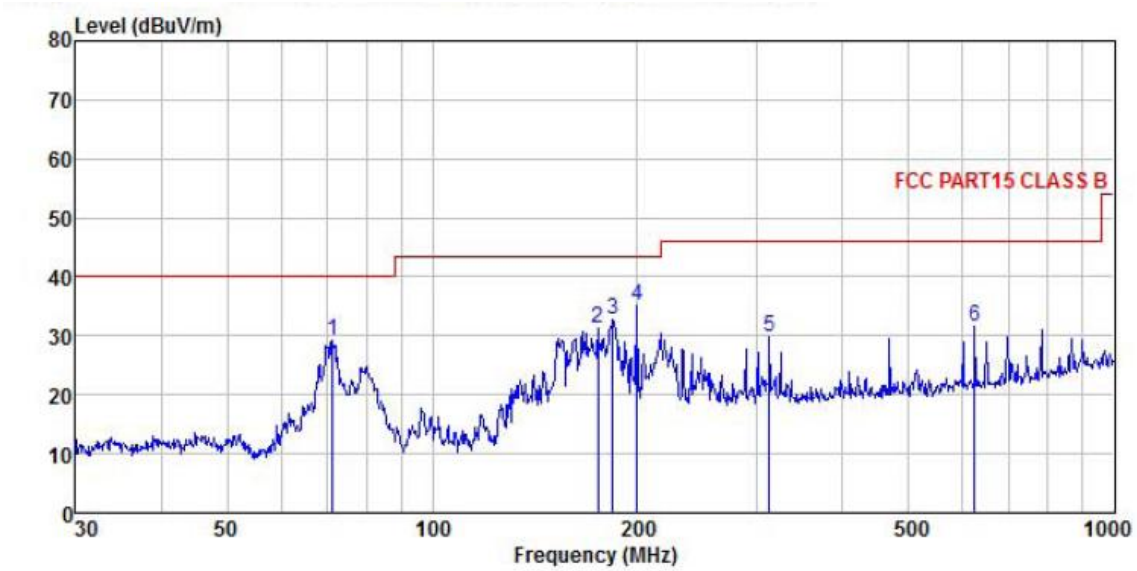


	Freq	Read Level	Antenna Factor	Cable Loss	Aux Factor	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	76.512	54.06	11.91	0.46	0.00	29.67	36.76	40.00	-3.24	QP
2	81.212	52.83	12.52	0.47	0.00	29.63	36.19	40.00	-3.81	QP
3	86.807	54.75	10.81	0.48	0.00	29.59	36.45	40.00	-3.55	QP
4	92.787	54.76	9.44	0.50	0.00	29.56	35.14	43.50	-8.36	QP
5	136.460	46.94	13.59	0.60	0.00	29.29	31.84	43.50	-11.66	QP
6	175.037	44.46	16.80	0.67	0.00	29.01	32.92	43.50	-10.58	QP

Remark:

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

Product Name:	Mobile Phone	Product model:	L5Z
Test By:	Janet	Test mode:	PC mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



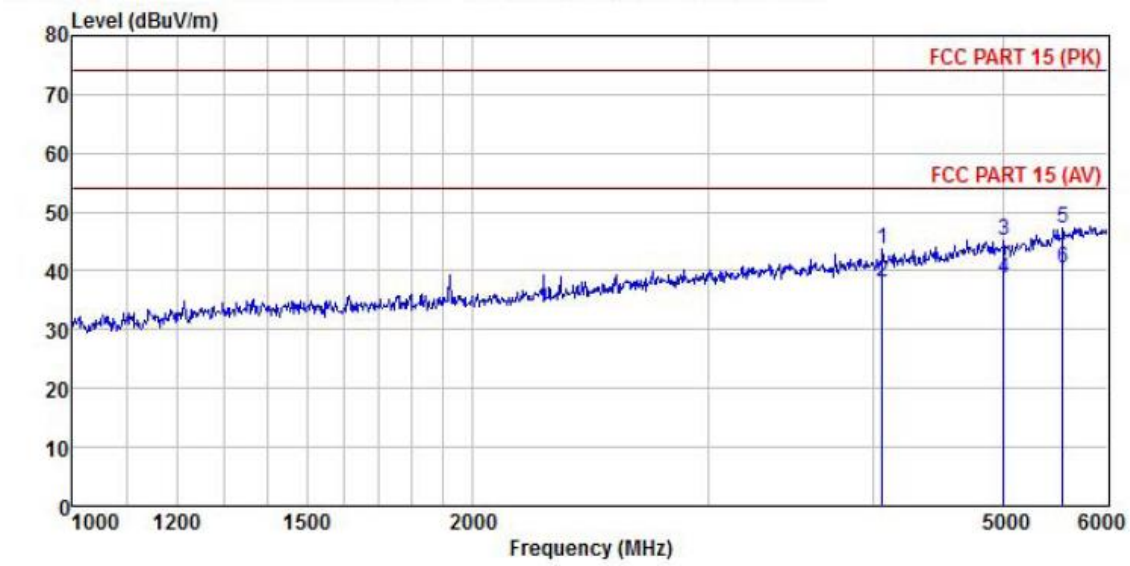
	Freq	Read Level	Antenna Factor	Cable Loss	Aux Factor	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	71.330	47.99	10.47	0.45	0.00	29.71	29.20	40.00	-10.80	QP
2	175.037	42.83	16.80	0.67	0.00	29.01	31.29	43.50	-12.21	QP
3	183.844	43.93	17.12	0.69	0.00	28.94	32.80	43.50	-10.70	QP
4	199.986	44.90	18.30	0.72	0.00	28.83	35.09	43.50	-8.41	QP
5	312.179	38.70	18.73	0.88	0.00	28.48	29.83	46.00	-16.17	QP
6	625.078	39.27	20.00	1.24	0.00	28.86	31.65	46.00	-14.35	QP

Remark:

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

Above 1GHz:

Product Name:	Mobile Phone	**Product model:**	L5Z
Test By:	Janet	**Test mode:**	PC mode
Test Frequency:	1 GHz ~ 6 GHz	**Polarization:**	Vertical
Test Voltage:	AC 120/60Hz	**Environment:**	Temp: 24℃ Huni: 57%

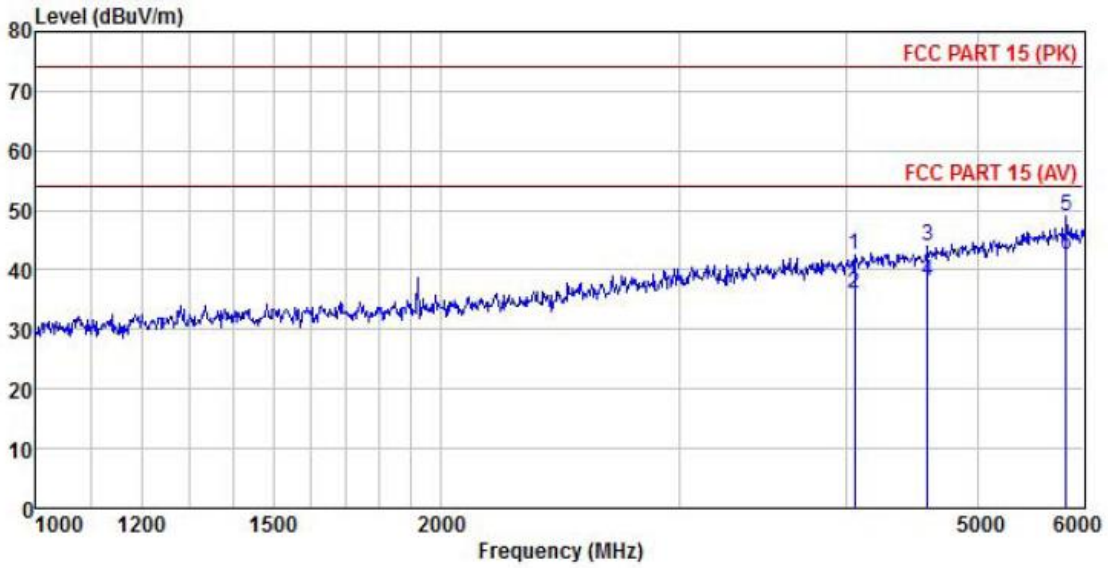


	Freq	Read Level	Antenna Factor	Cable Loss	Aux Factor	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	4059.890	48.16	29.40	5.82	2.22	41.81	43.79	74.00	-30.21	Peak
2	4059.890	42.32	29.40	5.82	2.22	41.81	37.95	54.00	-16.05	Average
3	5006.774	46.69	31.20	6.56	2.50	41.88	45.07	74.00	-28.93	Peak
4	5006.774	40.31	31.20	6.56	2.50	41.88	38.69	54.00	-15.31	Average
5	5545.141	46.94	32.32	7.02	2.66	41.81	47.13	74.00	-26.87	Peak
6	5545.141	40.28	32.32	7.02	2.66	41.81	40.47	54.00	-13.53	Average

Remark:

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

Product Name:	Mobile Phone	Product model:	L5Z
Test By:	Janet	Test mode:	PC mode
Test Frequency:	1 GHz ~ 6 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



	Freq	Read Level	Antenna Factor	Cable Loss	Aux Factor	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	4052.622	46.88	29.38	5.81	2.22	41.81	42.48	74.00	-31.52	Peak
2	4052.622	40.44	29.38	5.81	2.22	41.81	36.04	54.00	-17.96	Average
3	4594.167	47.14	30.34	6.22	2.39	42.14	43.95	74.00	-30.05	Peak
4	4594.167	41.37	30.34	6.22	2.39	42.14	38.18	54.00	-15.82	Average
5	5819.996	48.62	32.43	7.14	2.75	42.02	48.92	74.00	-25.08	Peak
6	5819.996	42.21	32.43	7.14	2.75	42.02	42.51	54.00	-11.49	Average

Remark:

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