FCC REPORT

Applicant:	Antel Communications LLC
Address of Applicant:	21 Bennetts Road, Suite 201, Setauket, NY 11733, USA

Equipment Under Test (EUT)

Product Name:	smart phone
Model No.:	AL501
Trade mark:	Avantel
FCC ID:	2AE62AL501
Applicable standards:	FCC CFR Title 47 Part 15 Subpart B
Date of sample receipt:	23 Nov., 2015
Date of Test:	23 Nov., to 21 Dec., 2015
Date of report issued:	21 Dec., 2015
Test Result:	Pass *

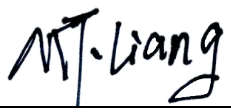
* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

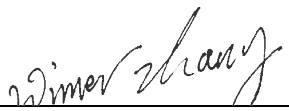
Bruce Zhang
Laboratory Manager

2 Version

Version No.	Date	Description
00	*21 Dec., 2015*	*Original*

Tested by:  ***Date:*** *21 Dec., 2015*

Test Engineer

Reviewed by:  ***Date:*** *21 Dec., 2015*

Project Engineer

3 Contents

Page

4 Test Summary

Test Item	Section in CFR 47	Result
Conducted Emission	Part 15.107	Pass
Radiated Emission	Part 15.109	Pass

Pass: The EUT complies with the essential requirements in the standard.

5 General Information

5.1 Client Information

Applicant:	Antel Communications LLC
Address of Applicant:	21 Bennetts Road, Suite 201, Setauket, NY 11733, USA
Manufacturer:	AMER Mobile Technology Co.,LTD
Address of Manufacturer:	17F, Tower B, HuiHai Center, Chuangye Road no.1,Longhua new district, Shenzhen. China.

5.2 General Description of E.U.T.

Product Name:	smart phone
Model No.:	AL501
Power supply:	Rechargeable Li-ion Battery DC3.7V-2150mAh
AC adapter :	Model: AL501 Input:100-240V AC, 50/60Hz 0.15A Output:5V DC MAX 1000mA

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 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
DELL	PC	OPTIPLEX745	1284354585	DoC
DELL	MONITOR	E178FPC	A4585654	DoC
DELL	KEYBOARD	SK-8115	B1584690	DoC
DELL	MOUSE	MOC5UO	C5288745	DoC
HP	Printer	CB495A	05257893	DoC
MERCURY	Wireless router	MW150R	12922104015	FCC ID
NAKAMICHI	Bluetooth earphone	T8	6154886147	FCC ID

Item	Shielded Type	Ferrite Core	Length	Note
C-1	unshielded	NO	100cm	N/A
C-2	unshielded	NO	120cm	N/A
C-3	unshielded	NO	110cm	N/A

5.5 Laboratory Facility

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

- **FCC - Registration No.: 817957**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in out files. Registration 817957, February 27, 2012.

- **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.

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

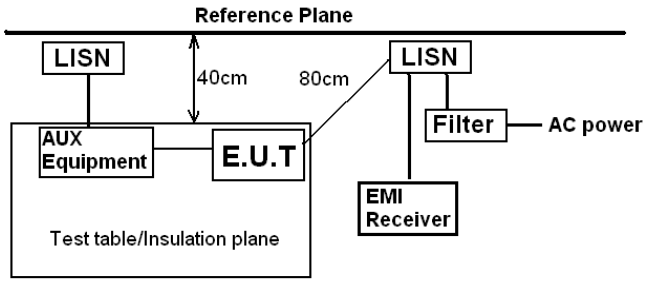
5.7 Test Instruments list

Radiated Emission:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal. Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
1	3m SAC	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	08-23-2014	08-22-2017
2	BiConiLog Antenna	SCHWARZBECK	VULB9163	CCIS0005	03-28-2015	03-28-2016
3	Horn Antenna	SCHWARZBECK	BBHA9120D	CCIS0006	03-28-2015	03-28-2016
4	Pre-amplifier (10kHz-1.3GHz)	HP	8447D	CCIS0003	04-01-2015	03-31-2016
5	Pre-amplifier (1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	04-01-2015	03-31-2016
6	Spectrum analyzer 9k-30GHz	Rohde & Schwarz	FSP30	CCIS0023	03-28-2015	03-28-2016
7	EMI Test Receiver	Rohde & Schwarz	ESRP7	CCIS0167	03-28-2015	03-28-2016

Conducted Emission:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
1	Shielding Room	ZhongShuo Electron	11.0(L)x4.0(W)x3.0(H)	CCIS0061	11-10-2013	11-09-2016
2	EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	03-28-2015	03-28-2016
3	LISN	CHASE	MN2050D	CCIS0074	03-28-2015	03-28-2016
4	Coaxial Cable	CCIS	N/A	CCIS0086	04-01-2015	03-31-2016

6 Test results and Measurement Data

6.1 Conducted Emission

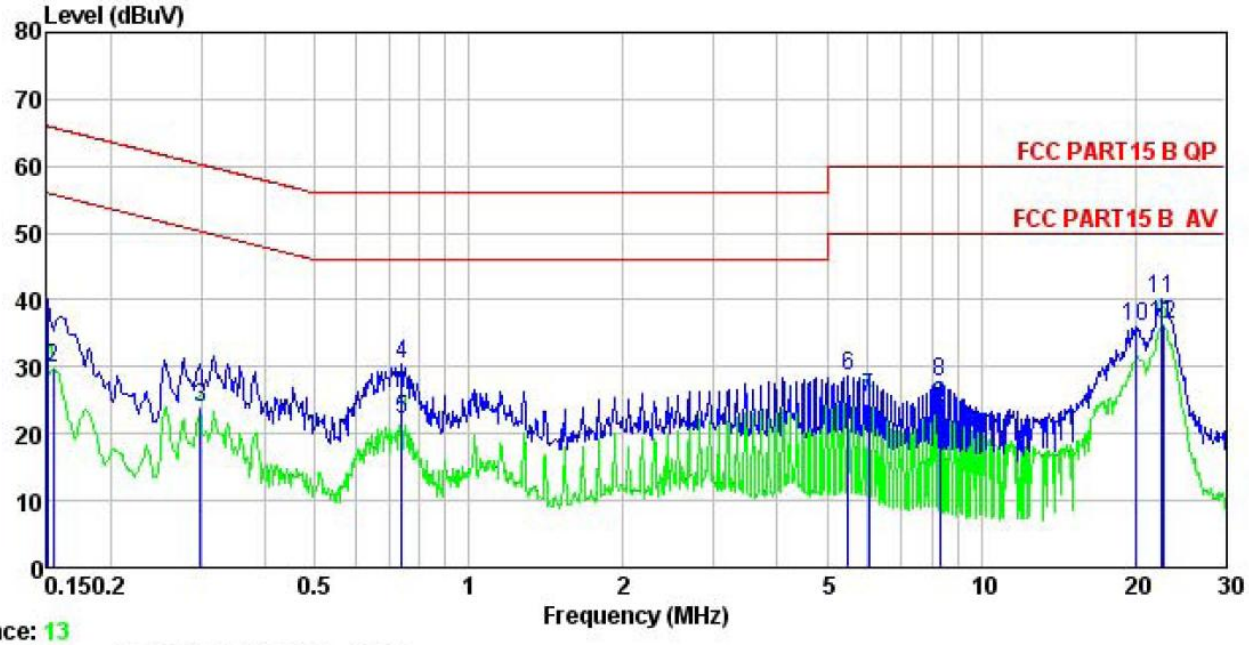
<table>
<tr><td>Test Requirement:</td><td colspan="3">FCC Part 15 B Section 15.107</td></tr>
<tr><td>Test Method:</td><td colspan="3">ANSI C63.4:2009</td></tr>
<tr><td>Test Frequency Range:</td><td colspan="3">150kHz to 30MHz</td></tr>
<tr><td>Class / Severity:</td><td colspan="3">Class B</td></tr>
<tr><td>Receiver setup:</td><td colspan="3">RBW=9kHz, VBW=30kHz</td></tr>
<tr><td>Limit:</td><td rowspan="2">Frequency range (MHz)</td><td colspan="2">Limit (dBµV)</td></tr>
<tr><td></td><td>Quasi-peak</td><td>Average</td></tr>
<tr><td></td><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr>
<tr><td></td><td>0.5-5</td><td>56</td><td>46</td></tr>
<tr><td></td><td>0.5-30</td><td>60</td><td>50</td></tr>
<tr><td></td><td colspan="3">* Decreases with the logarithm of the frequency.</td></tr>
<tr><td>Test setup:</td><td colspan="3"> 

Remark:
E.U.T: Equipment Under Test
LISN: Line Impedence Stabilization Network
Test table height=0.8m</td></tr>
<tr><td>Test procedure</td><td colspan="3">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: 2009 on conducted measurement.</td></tr>
<tr><td>Test environment:</td><td colspan="3">Temp.: 23 °C Humid.: 56% Press.: 101kPa</td></tr>
<tr><td>Measurement Record:</td><td colspan="3">Uncertainty: ±3.28dB</td></tr>
<tr><td>Test Instruments:</td><td colspan="3">Refer to section 5.7 for details</td></tr>
<tr><td>Test mode:</td><td colspan="3">Refer to section 5.3 for details</td></tr>
<tr><td>Test results:</td><td colspan="3">Pass</td></tr>
</table>

Measurement data:

Test Voltage: AC 120V/60Hz

Line:

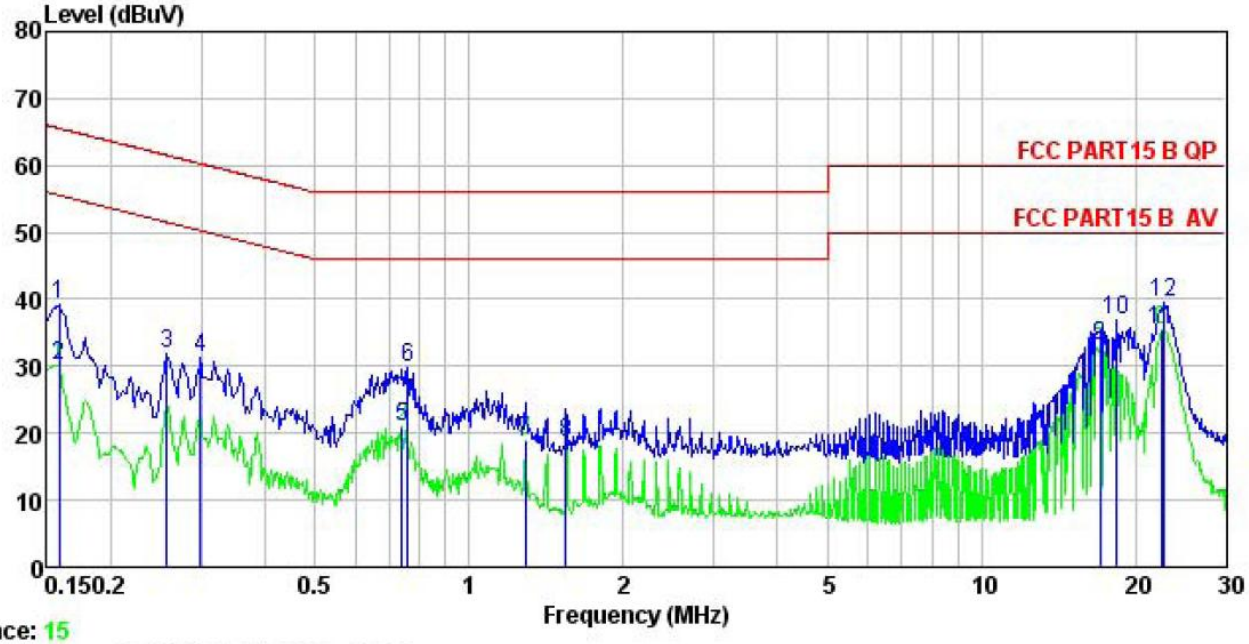


Trace: 13

Site : CCIS Shielding Room
Condition : FCC PART15 B QP LISN LINE
EUT : Smartphone
Model : AL501
Test Mode : PC mode
Power Rating : AC 120V/60Hz
Environment : Temp: 23 ℃ Huni:56% Atmos:101KPa
Test Engineer: MT.liang
Remark :

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.150	29.15	0.27	10.78	40.20	66.00	-25.80	QP
2	0.154	18.71	0.27	10.78	29.76	55.78	-26.02	Average
3	0.299	12.92	0.26	10.74	23.92	50.28	-26.36	Average
4	0.739	19.41	0.22	10.79	30.42	56.00	-25.58	QP
5	0.739	11.14	0.22	10.79	22.15	46.00	-23.85	Average
6	5.505	17.60	0.30	10.83	28.73	60.00	-31.27	QP
7	6.024	14.30	0.31	10.82	25.43	50.00	-24.57	Average
8	8.323	16.46	0.32	10.87	27.65	60.00	-32.35	QP
9	8.323	13.00	0.32	10.87	24.19	50.00	-25.81	Average
10	20.056	24.75	0.34	10.93	36.02	60.00	-23.98	QP
11	22.535	28.74	0.44	10.89	40.07	60.00	-19.93	QP
12	22.655	25.11	0.44	10.89	36.44	50.00	-13.56	Average

Neutral:



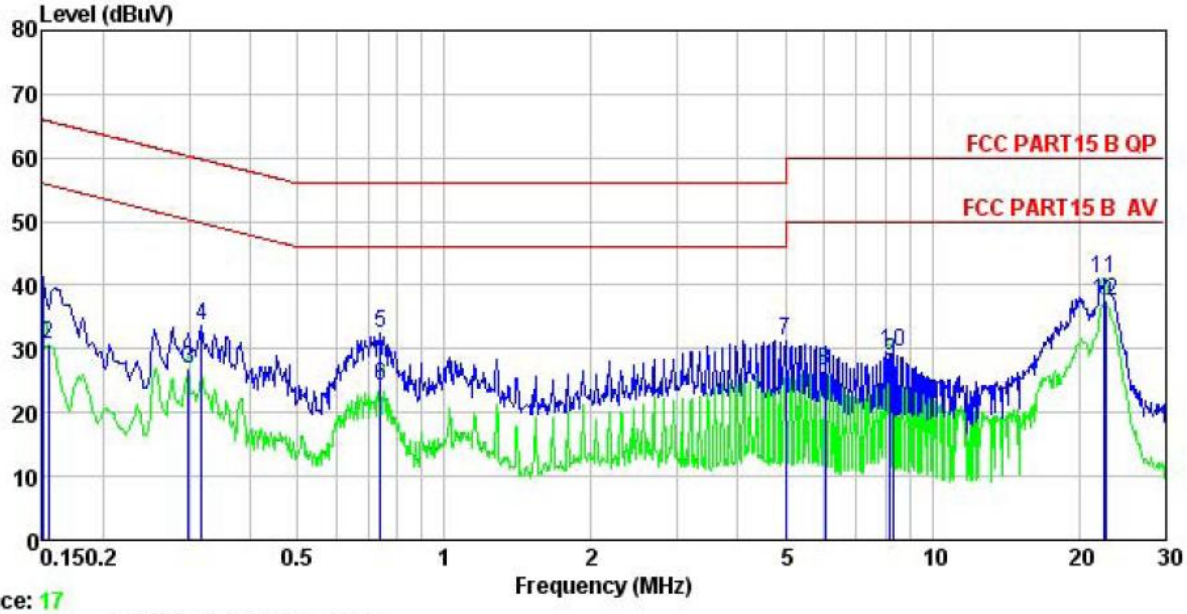
Trace: 15

Site : CCIS Shielding Room
Condition : FCC PART15 B QP LISN NEUTRAL
EUT : Smartphone
Model : AL501
Test Mode : PC mode
Power Rating : AC 120V/60Hz
Environment : Temp: 23 'C Huni:56% Atmos:101KPa
Test Engineer: MT.liang
Remark :

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.158	28.13	0.25	10.78	39.16	65.56	-26.40	QP
2	0.158	19.03	0.25	10.78	30.06	55.56	-25.50	Average
3	0.258	20.78	0.26	10.75	31.79	61.51	-29.72	QP
4	0.299	20.18	0.26	10.74	31.18	60.28	-29.10	QP
5	0.739	10.10	0.19	10.79	21.08	46.00	-24.92	Average
6	0.759	18.91	0.19	10.80	29.90	56.00	-26.10	QP
7	1.289	7.78	0.25	10.90	18.93	46.00	-27.07	Average
8	1.544	7.36	0.26	10.93	18.55	46.00	-27.45	Average
9	17.018	21.85	0.25	10.91	33.01	50.00	-16.99	Average
10	18.328	25.83	0.26	10.91	37.00	60.00	-23.00	QP
11	22.416	24.29	0.37	10.90	35.56	50.00	-14.44	Average
12	22.775	28.19	0.39	10.89	39.47	60.00	-20.53	QP

Test Voltage: AC 240V/60Hz

Line:

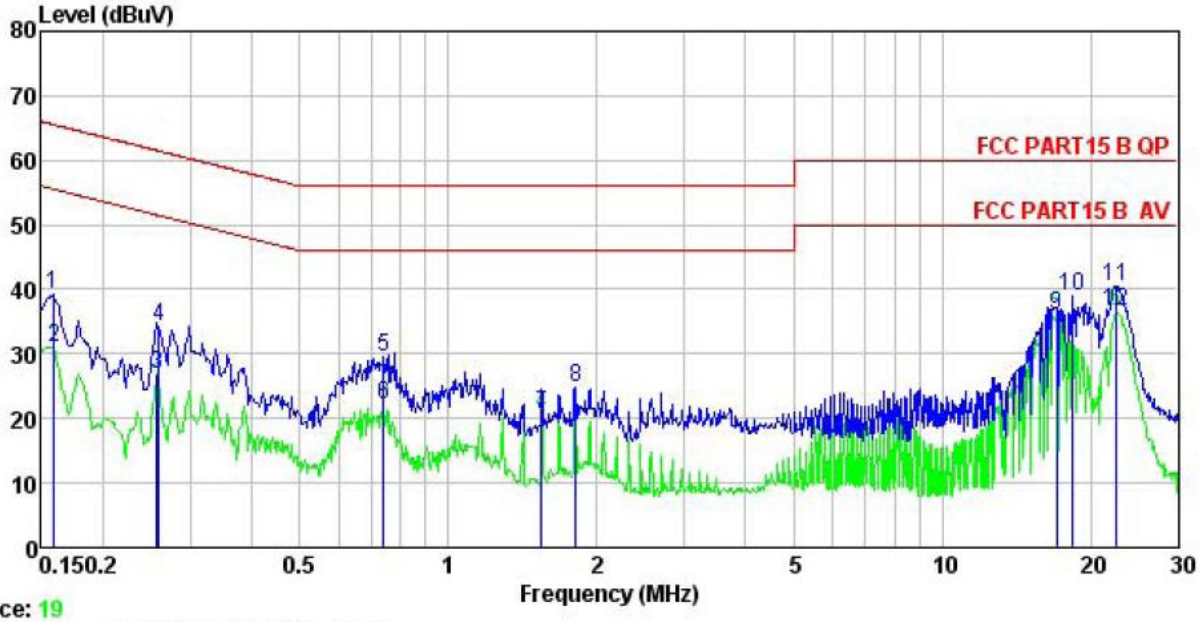


Trace: 17

Site : CCIS Shielding Room
Condition : FCC PART15 B QP LISN LINE
EUT : Smartphone
Model : AL501
Test Mode : PC mode
Power Rating : AC 240V/60Hz
Environment : Temp: 23 ℃ Huni:56% Atmos:101KPa
Test Engineer: MT.liang
Remark :

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.150	30.15	0.27	10.78	41.20	66.00	-24.80	QP
2	0.154	19.71	0.27	10.78	30.76	55.78	-25.02	Average
3	0.299	15.92	0.26	10.74	26.92	50.28	-23.36	Average
4	0.318	22.73	0.26	10.74	33.73	59.75	-26.02	QP
5	0.739	21.41	0.22	10.79	32.42	56.00	-23.58	QP
6	0.739	13.14	0.22	10.79	24.15	46.00	-21.85	Average
7	5.005	20.28	0.30	10.85	31.43	60.00	-28.57	QP
8	6.024	15.30	0.31	10.82	26.43	50.00	-23.57	Average
9	8.192	16.95	0.32	10.86	28.13	50.00	-21.87	Average
10	8.323	18.46	0.32	10.87	29.65	60.00	-30.35	QP
11	22.535	29.74	0.44	10.89	41.07	60.00	-18.93	QP
12	22.655	26.11	0.44	10.89	37.44	50.00	-12.56	Average

Neutral:



Trace: 19

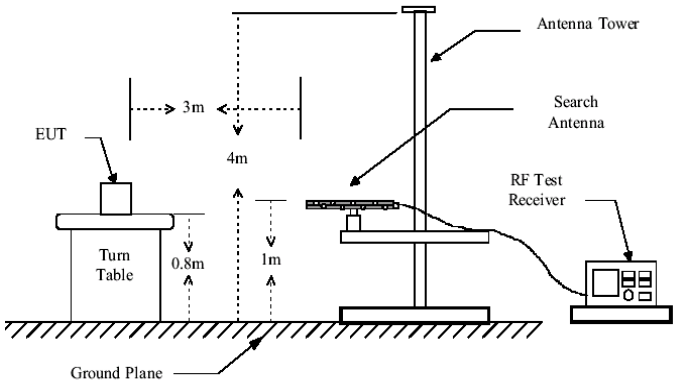
Site : CCIS Shielding Room
Condition : FCC PART15 B QP LISN NEUTRAL
EUT : Smartphone
Model : AL501
Test Mode : PC mode
Power Rating : AC 240V/60Hz
Environment : Temp: 23 'C Huni:56% Atmos:101KPa
Test Engineer: MT.liang
Remark :

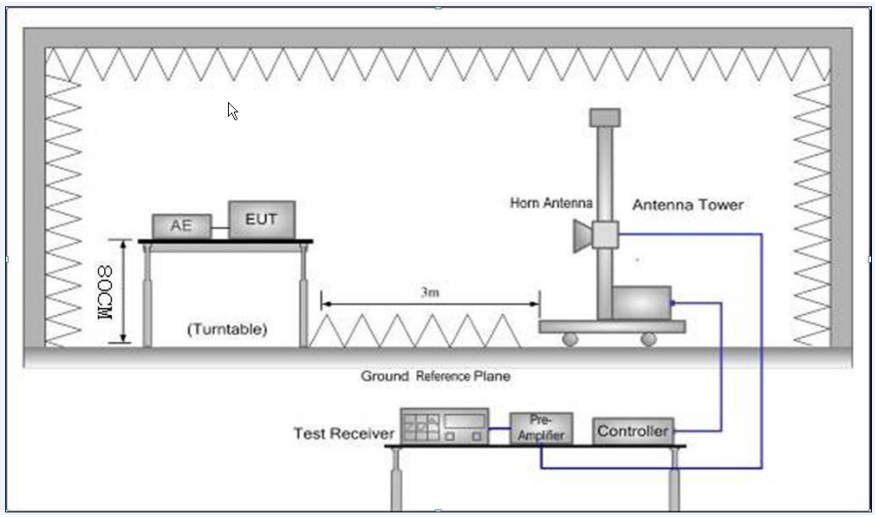
	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.158	28.13	0.25	10.78	39.16	65.56	-26.40	QP
2	0.159	20.11	0.25	10.78	31.14	55.52	-24.38	Average
3	0.258	15.83	0.26	10.75	26.84	51.51	-24.67	Average
4	0.259	23.24	0.26	10.75	34.25	61.47	-27.22	QP
5	0.739	18.50	0.19	10.79	29.48	56.00	-26.52	QP
6	0.739	11.10	0.19	10.79	22.08	46.00	-23.92	Average
7	1.544	9.36	0.26	10.93	20.55	46.00	-25.45	Average
8	1.810	13.45	0.28	10.95	24.68	56.00	-31.32	QP
9	17.018	24.85	0.25	10.91	36.01	50.00	-13.99	Average
10	18.328	27.83	0.26	10.91	39.00	60.00	-21.00	QP
11	22.416	29.30	0.37	10.90	40.57	60.00	-19.43	QP
12	22.416	25.29	0.37	10.90	36.56	50.00	-13.44	Average

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT
2. Final Test Level =Receiver Reading + 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 Method:</td><td colspan="5">ANSI C63.4:2009</td></tr>
<tr><td>Test Frequency Range:</td><td colspan="5">30MHz to 12000MHz</td></tr>
<tr><td>Test site:</td><td colspan="5">Measurement Distance: 3m (Semi-Anechoic Chamber)</td></tr>
<tr><td rowspan="4">Receiver setup:</td><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>120kHz</td><td>300kHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>RMS</td><td>1MHz</td><td>10Hz</td><td>Average Value</td></tr>
<tr><td rowspan="7">Limit:</td><td colspan="2">Frequency</td><td colspan="2">Limit (dBuV/m @3m)</td><td>Remark</td></tr>
<tr><td colspan="2">30MHz-88MHz</td><td colspan="2">40.0</td><td>Quasi-peak Value</td></tr>
<tr><td colspan="2">88MHz-216MHz</td><td colspan="2">43.5</td><td>Quasi-peak Value</td></tr>
<tr><td colspan="2">216MHz-960MHz</td><td colspan="2">46.0</td><td>Quasi-peak Value</td></tr>
<tr><td colspan="2">960MHz-1GHz</td><td colspan="2">54.0</td><td>Quasi-peak Value</td></tr>
<tr><td colspan="2" rowspan="2">Above 1GHz</td><td colspan="2">54.0</td><td>Average Value</td></tr>
<tr><td colspan="2">74.0</td><td>Peak Value</td></tr>
<tr><td>Test setup:</td><td colspan="5">Below 1GHz
 

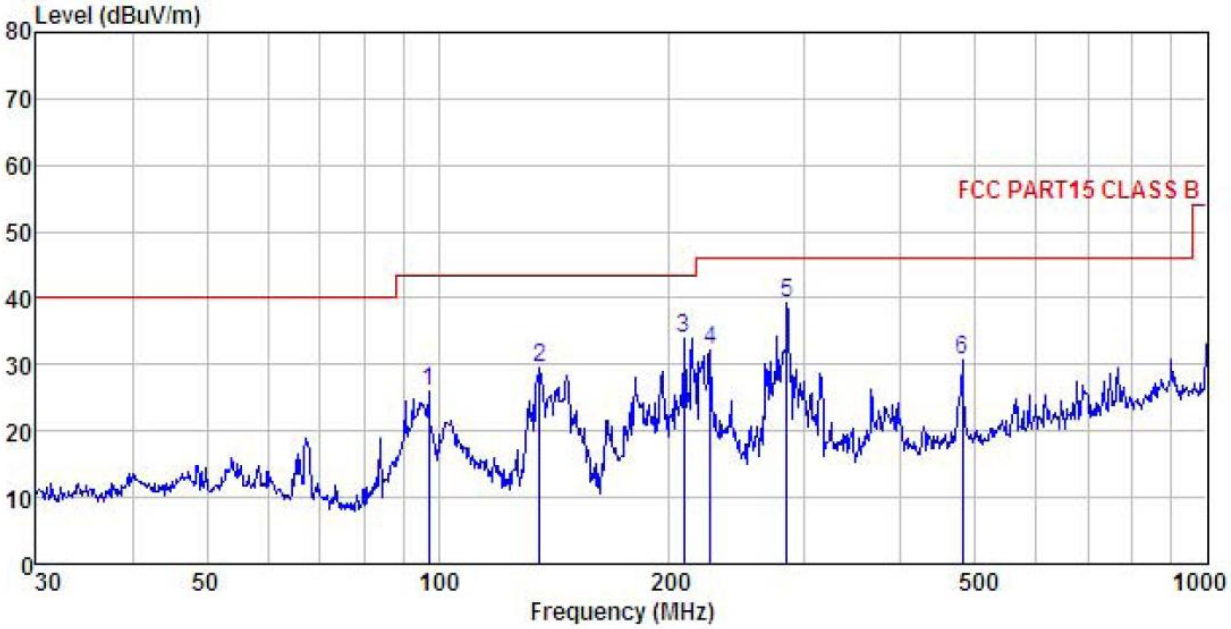
Above 1GHz
 
</td></tr>
</table>

Test Procedure:	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. 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 environment:	Temp.:	25 °C	Humid.:	55%	Press.:	1 01kPa
Measurement Record:	Uncertainty: ±4.88dB					
Test Instruments:	Refer to section 5.7 for details					
Test mode:	Refer to section 5.3 for details					
Test results:	Passed					

Measurement Data

Below 1GHz

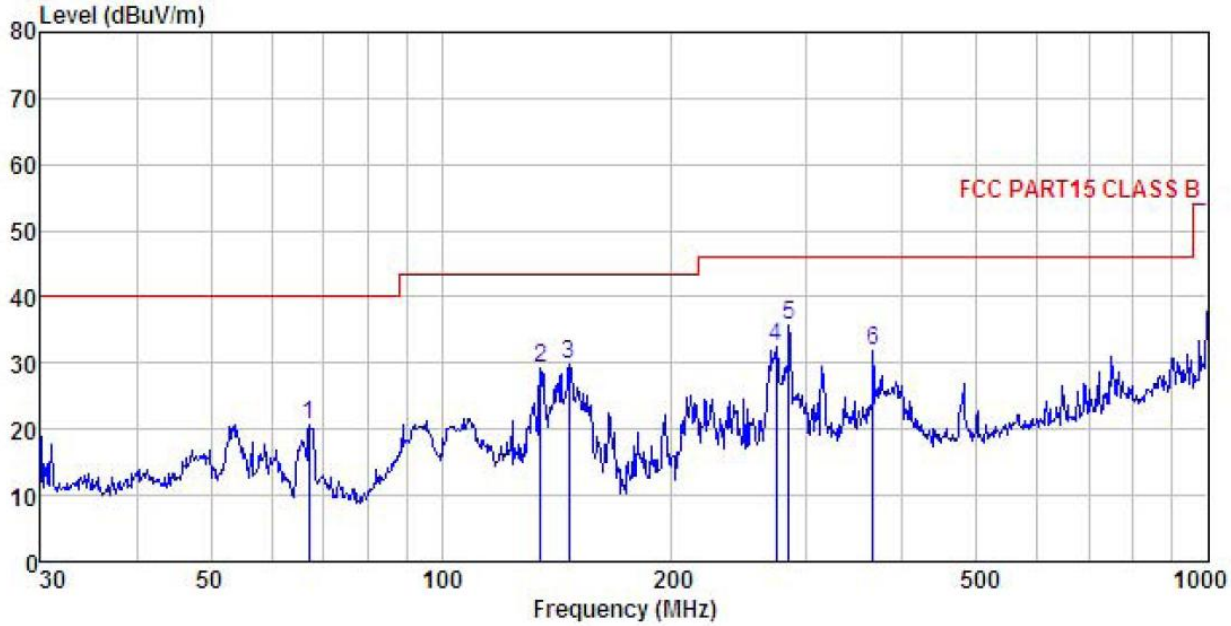
Horizontal:



Site : 3m chamber
Condition : FCC PART15 CLASS B 3m VULB9163(30M1G) HORIZONTAL
EUT : smart phone
Model : AL501
Test mode : PC Mode
Power Rating : AC120V/60Hz
Environment : Temp:25.5℃ Huni:55%
Test Engineer: MT
REMARK :

	Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	97.115	41.47	12.97	0.94	29.54	25.84	43.50	-17.66	QP
2	135.506	48.97	8.51	1.23	29.30	29.41	43.50	-14.09	QP
3	208.580	50.35	10.84	1.42	28.78	33.83	43.50	-9.67	QP
4	226.099	47.93	11.46	1.51	28.67	32.23	46.00	-13.77	QP
5	283.979	53.26	12.75	1.72	28.48	39.25	46.00	-6.75	QP
6	480.528	41.13	16.07	2.35	28.92	30.63	46.00	-15.37	QP

Vertical:

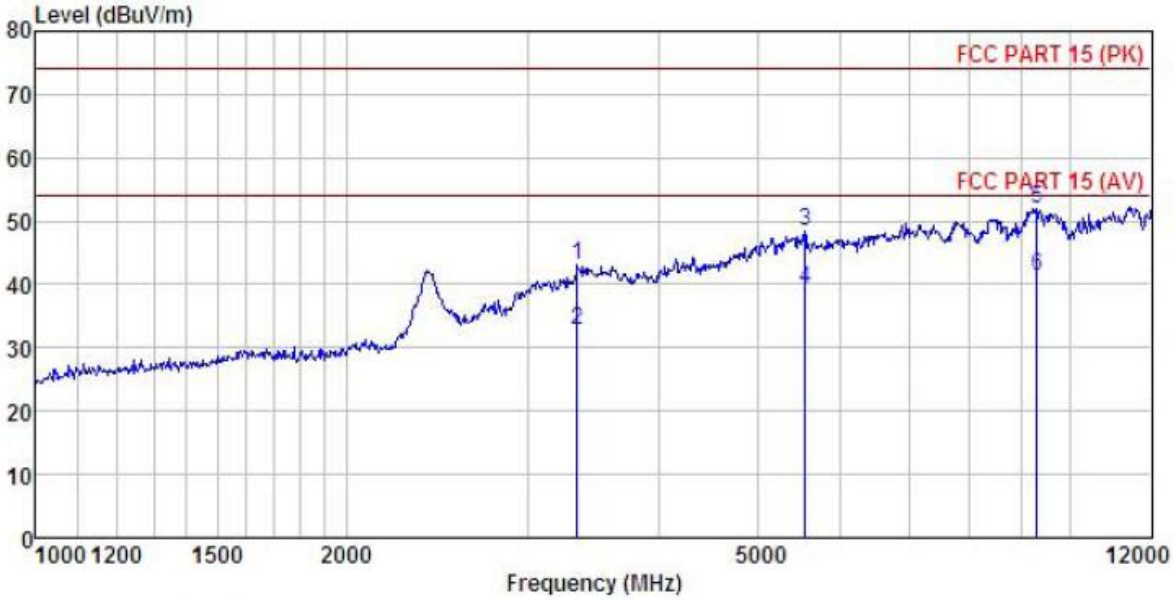


Site : 3m chamber
Condition : FCC PART15 CLASS B 3m VULB9163(30M1G) VERTICAL
EUT : smart phone
Model : AL501
Test mode : PC Mode
Power Rating : AC120V/60Hz
Environment : Temp:25.5℃ Huni:55%
Test Engineer: MT
REMARK :

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	67.202	39.87	9.75	0.77	29.74	20.65	40.00	-19.35	QP
2	134.559	48.80	8.56	1.22	29.30	29.28	43.50	-14.22	QP
3	146.888	49.48	8.24	1.30	29.24	29.78	43.50	-13.72	QP
4	273.234	46.87	12.46	1.69	28.50	32.52	46.00	-13.48	QP
5	283.979	49.60	12.75	1.72	28.48	35.59	46.00	-10.41	QP
6	365.539	43.96	14.48	2.00	28.63	31.81	46.00	-14.19	QP

Above 1GHz

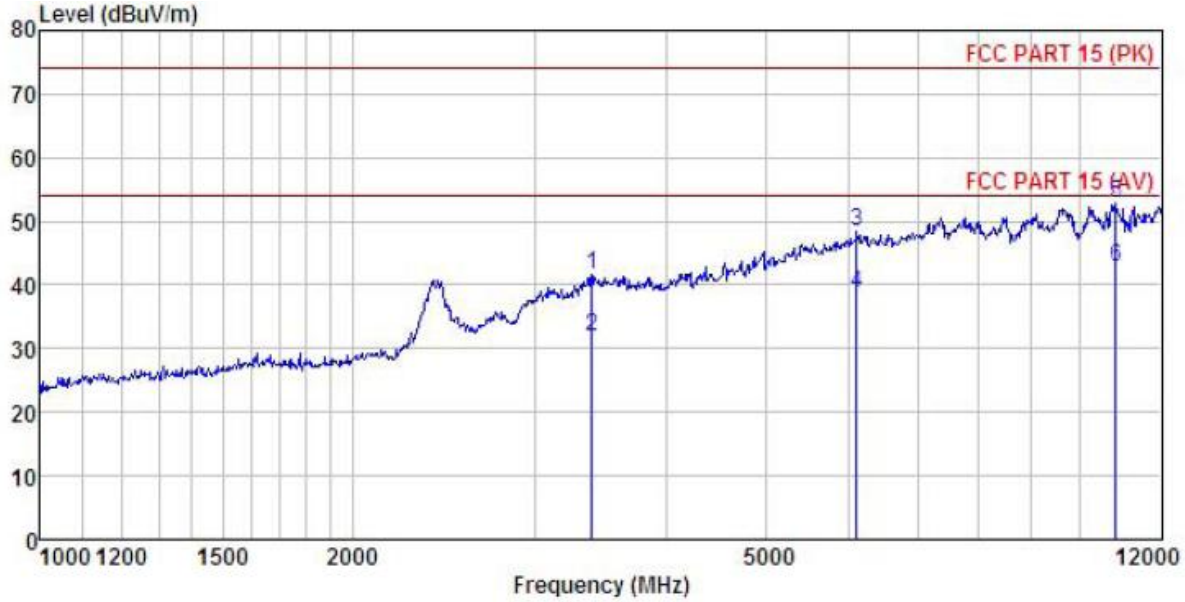
Horizontal:



Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL
EUT : smart phone
Model : AL501
Test mode : PC Mode
Power Rating : AC120V/60Hz
Environment : Temp:25.5℃ Huni:55%
Test Engineer: MT
REMARK :

	Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	3342.042	45.77	28.29	8.49	39.31	43.24	74.00	-30.76	Peak
2	3342.042	35.21	28.29	8.49	39.31	32.68	54.00	-21.32	Average
3	5546.364	45.05	32.09	11.43	40.30	48.27	74.00	-25.73	Peak
4	5546.364	35.97	32.09	11.43	40.30	39.19	54.00	-14.81	Average
5	9298.801	40.82	37.87	14.39	41.22	51.86	74.00	-22.14	Peak
6	9298.801	30.35	37.87	14.39	41.22	41.39	54.00	-12.61	Average

Vertical:



Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL
EUT : smart phone
Model : AL501
Test mode : PC Mode
Power Rating : AC120V/60Hz
Environment : Temp:25.5'C Huni:55%
Test Engineer: MT
REMARK :

	Freq	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	3393.477	43.36	28.46	8.59	38.84	41.57	74.00	-32.43	Peak
2	3393.477	33.58	28.46	8.59	38.84	31.79	54.00	-22.21	Average
3	6109.670	44.44	32.93	11.92	40.95	48.34	74.00	-25.66	Peak
4	6109.670	34.85	32.93	11.92	40.95	38.75	54.00	-15.25	Average
5	10860.830	36.90	40.14	16.09	40.38	52.75	74.00	-21.25	Peak
6	10860.830	26.84	40.14	16.09	40.38	42.69	54.00	-11.31	Average

7 Test Setup Photo

Radiated Emission

Conducted Emission

8 EUT Constructional Details

Reference to the test report No. CCIS15110090301

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