

# FCC REPORT (WIFI)

**Applicant:** BLU Products, Inc.

**Address of Applicant:** 10814 NW 33rd St # 100 Doral, FL 33172, USA

## Equipment Under Test (EUT)

**Product Name:** Smart Phone

**Model No.:** B110DL

**Trade mark:** BLU

**FCC ID:** YHLBLUB110DL

**Applicable standards:** FCC CFR Title 47 Part 15 Subpart C Section 15.247

**Date of sample receipt:** 09 Dec., 2021

**Date of Test:** 10 Dec., 2021 to 15 Jan., 2022

**Date of report issued:** 16 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.

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## 2 Version

Version No.	Date	Description
00	16 Jan., 2022	Original

**Tested by:**

Mike.ou  
**Test Engineer**

**Date:**

16 Jan., 2022

**Reviewed by:**

Winner Zhang  
**Project Engineer**

**Date:**

16 Jan., 2022

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## 4 Test Summary

Test Items	Section in CFR 47	Result
Antenna requirement	15.203 & 15.247 (b)	Pass
AC Power Line Conducted Emission	15.207	Pass <sup>1</sup>
Conducted Peak Output Power	15.247 (b)(3)	Pass <sup>2</sup>
6dB Emission Bandwidth 99% Occupied Bandwidth	15.247 (a)(2)	Pass <sup>1</sup>
Power Spectral Density	15.247 (e)	Pass <sup>1</sup>
Band Edge	15.247 (d)	Pass <sup>1</sup>
Emissions in Restricted Frequency Bands	15.205 & 15.209	Pass <sup>2</sup>
Conducted Spurious Emission	15.247 (d)	Pass <sup>1</sup>
Radiated Spurious Emission	15.205 & 15.209	Pass <sup>2</sup>
<p><b>Remark:</b></p> <ol style="list-style-type: none"> <li>Pass<sup>1</sup>: Items data are refer from the original report issued by SGS-CSTC Standards Technical Services, Co., Ltd. Shenzhen Branch. ( Date of Test: 2019/10/17-2019/10/31). The detailed data refer to Appendix - 2.4G WIFI.</li> <li>Pass<sup>2</sup>: These items are tested by JianYan Testing Group Shenzhen Co., Ltd.</li> <li>Re-test statement: The EUT is operating at the same power level with the original testing of SGS-CSTC Standards Technical Services, Co Ltd. Shenzhen Branch.</li> <li>The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by the customer).</li> </ol>		
<b>Test Method:</b>	ANSI C63.10-2013 KDB 558074 D01 15.247 Meas Guidance v05r02	

## 5 General Information

### 5.1 Client Information

Applicant:	BLU Products, Inc.
Address:	10814 NW 33rd St # 100 Doral, FL 33172, USA
Manufacturer:	BLU Products, Inc.
Address:	10814 NW 33rd St # 100 Doral, FL 33172, USA

### 5.2 General Description of E.U.T.

Product Name:	Smart Phone
Model No.:	B110DL
Hardware Version:	V0.23
Software Version:	PPR1.180610.011
Operation Frequency:	2412MHz~2462MHz: 802.11b/802.11g/802.11n(HT20)
Channel numbers:	11: 802.11b/802.11g/802.11(HT20)
Channel separation:	5MHz
Modulation technology: (IEEE 802.11b)	Direct Sequence Spread Spectrum (DSSS)
Modulation technology: (IEEE 802.11g/802.11n)	Orthogonal Frequency Division Multiplexing(OFDM)
Data speed (IEEE 802.11b):	1Mbps, 2Mbps, 5.5Mbps, 11Mbps
Data speed (IEEE 802.11g):	6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps
Data speed (IEEE 802.11n):	Up to 72.2Mbps
Antenna Type:	Integrated Antenna
Antenna gain:	0.18dBi
Power supply:	Rechargeable Li-ion Battery DC3.8V, 3000mAh
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

Operation Frequency each of channel for 802.11b/g/n(HT20)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

Note:  
1. Channel 1, 6 & 11 selected for 802.11b/g/n-HT20 as Lowest, Middle and Highest channel.

### 5.3 Test environment and mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010 mbar
Test mode:	
Transmitting mode	Keep the EUT in continuous transmitting with modulation
<p>Radiated Emission: The sample was placed 0.8m (below 1GHz)/1.5m (above 1GHz) 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 &amp; 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. We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:</p>	
Per-scan all kind of data rate, the follow list were the worst case.	
Mode	Data rate
802.11b	1Mbps
802.11g	6Mbps
802.11n(HT20)	6.5Mbps

### 5.4 Description of Support Units

The EUT has been tested as an independent unit.

### 5.5 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%)
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

### 5.6 Additions to, deviations, or exclusions from the method

No

### 5.7 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>

## 5.8 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://www.ccis-cb.com>

## 5.9 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	ETS	RFD-100	Q1984	04-14-2021	04-13-2024
BiConiLog Antenna	SCHWARZBECK	VULB9163	9163-1246	03-07-2021	03-06-2022
Biconical Antenna	SCHWARZBECK	VUBA 9117	9117#359	06-17-2021	06-17-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	912D-916	03-07-2021	03-06-2022
Broad-Band Horn Antenna	SCHWARZBECK	BBHA9170	1067	04-02-2021	04-01-2022
Broad-Band Horn Antenna	SCHWARZBECK	BBHA9170	1068	04-02-2021	04-01-2022
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-03-2021	03-02-2022
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-03-2021	03-02-2022
Spectrum analyzer	Keysight	N9010B	MY60240202	10-27-2021	10-26-2022
Low Pre-amplifier	SCHWARZBECK	BBV9743B	00305	03-07-2021	03-06-2022
High Pre-amplifier	SKET	LNPA_0118G-50	MF280208233	03-07-2021	03-06-2022
Band Reject Filter Group	Tonscend	JS0806	21B8060367	04-06-2021	04-05-2022
Cable	Qualwave	JYT3M-1G-NN-8M	JYT3M-1	03-07-2021	03-06-2022
Cable	Qualwave	JYT3M-18G-NN-8M	JYT3M-2	03-07-2021	03-06-2022
Cable	Qualwave	JYT3M-1G-BB-5M	JYT3M-3	03-07-2021	03-06-2022
Cable	Bost	JYT3M-40G-SS-8M	JYT3M-4	04-02-2021	04-01-2022
EMI Test Software	Tonscend	TS+	Version:3.0.0.1		

Conducted method:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
Spectrum Analyzer	Keysight	N9010B	MY60240202	10-27-2021	10-26-2022
Power Detector Box	MWRF-test	MW100-PSB	MW201020JYT	11-19-2021	11-18-2022
RF Control Box	MWRF-test	MW100-RFCB	MW200927JYT	N/A	N/A
DC Power Supply	Keysight	E3642A	MY60296194	11-27-2020	11-26-2023
Test Software	MWRF-tes	MTS 8310	Version: 2.0.0.0		

## 6 Test results and Measurement Data

### 6.1 Antenna requirement:

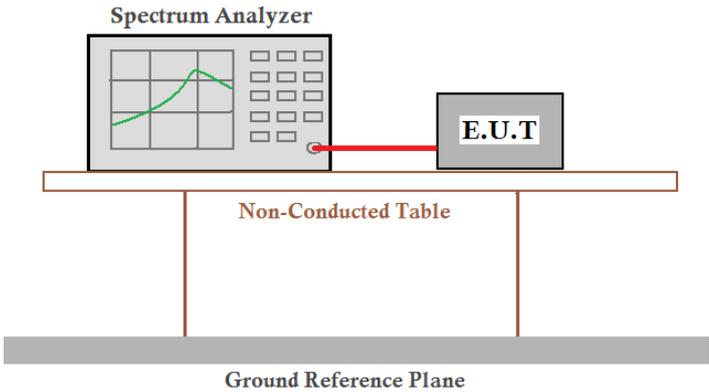
<b>Standard requirement:</b>	FCC Part 15 C Section 15.203 /247(b)
<p>15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.</p> <p>15.247(b) (4) requirement: (4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.</p>	
<b>E.U.T Antenna:</b>	
<p>The Wi-Fi antenna is an Integrated antenna which cannot replace by end-user, the best-case gain of the antenna is 0.18 dBi.</p>	

## 6.2 Conducted Output Power

### 6.2.1 Re-test statement

**Re-test statement:** The EUT is operating at the same power level with the original testing of SGS-CSTC Standards Technical Services, Co Ltd. Shenzhen Branch.

### 6.2.2 Test Results

Test Requirement:	FCC Part 15 C Section 15.247 (b)(3)
Limit:	30dBm
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by two legs. Below the table is a Ground Reference Plane.</p>
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

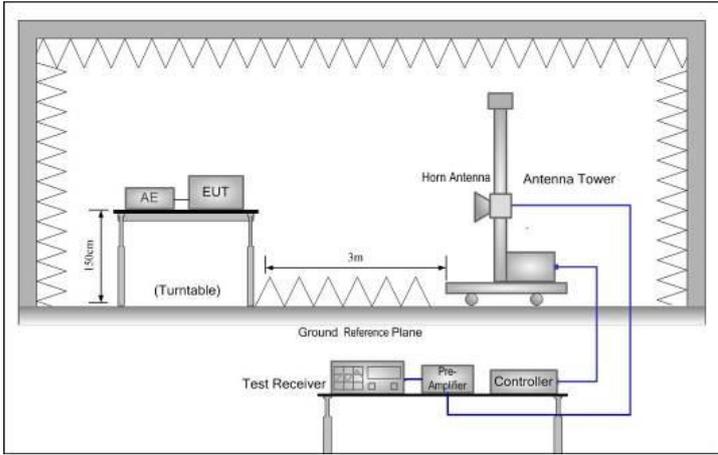
**Measurement Data:**

Mode	Test Channel	The Original Reports Level [dBm]	Re-Test Reports Level [dBm]	Power level
802.11b	Lowest	21.03	20.87	54
	Middle	21.59	21.40	54
	Highest	21.65	21.42	57
802.11g	Lowest	21.10	20.79	58
	Middle	21.77	21.39	58
	Highest	21.59	21.18	58
802.11n20	Lowest	19.21	19.09	55
	Middle	19.78	19.52	55
	Highest	19.62	19.36	55

**Remark:**

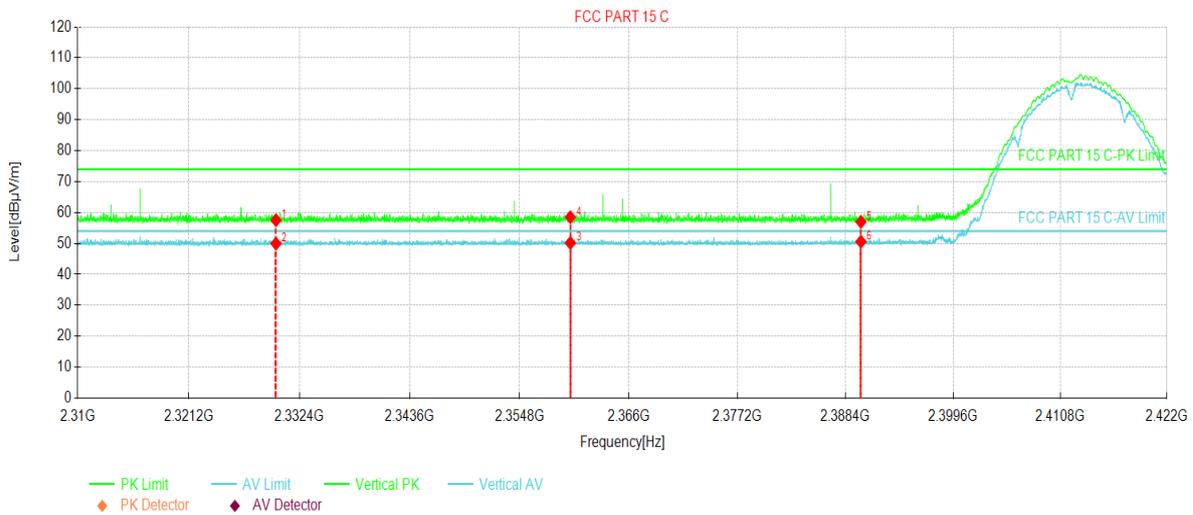
	The Original Reports	Re-Test Reports
File name:	test report 2.4G WLAN	Test Report 2.4G WIFI rev1
Test location:	SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch	JianYan Testing Group Shenzhen Co., Ltd.
The output power is re-test at JianYan Testing Group Shenzhen Co., Ltd.		

### 6.3 6.3 Emissions in Restricted Frequency Bands

Test Requirement:	FCC Part 15 C Section 15.209 and 15.205				
Test Frequency Range:	2310 MHz to 2390 MHz and 2483.5 MHz to 2500 MHz				
Test Distance:	3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
RMS		1MHz	3MHz	Average Value	
Limit:	Frequency	Limit (dBuV/m @3m)		Remark	
	Above 1GHz	54.00		Average Value	
		74.00		Peak Value	
Test Procedure:	<ol style="list-style-type: none"> <li>The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>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.</li> <li>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 rota table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>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.</li> </ol>				
Test setup:					
Test Instruments:	Refer to section 5.9 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Passed				

802.11b mode:

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 24°C Humi: 57%

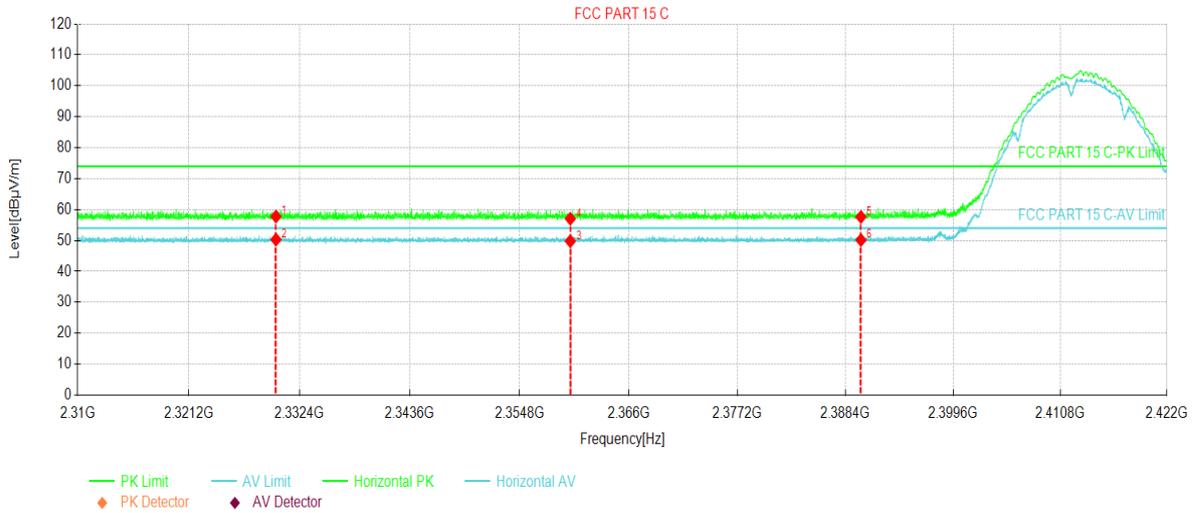


Suspected Data List										
NO	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2330.0	22.11	57.52	35.41	74.00	16.48	214	161	PK	Vertical
2	2330.0	14.55	49.96	35.41	54.00	4.04	149	131	AV	Vertical
3	2360.0	14.54	50.17	35.63	54.00	3.83	329	164	AV	Vertical
4	2360.0	22.87	58.50	35.63	74.00	15.50	31	159	PK	Vertical
5	2390.0	21.15	56.99	35.84	74.00	17.01	102	142	PK	Vertical
6	2390.0	14.75	50.59	35.84	54.00	3.41	264	168	AV	Vertical

Remark:

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

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 24°C Huni: 57%

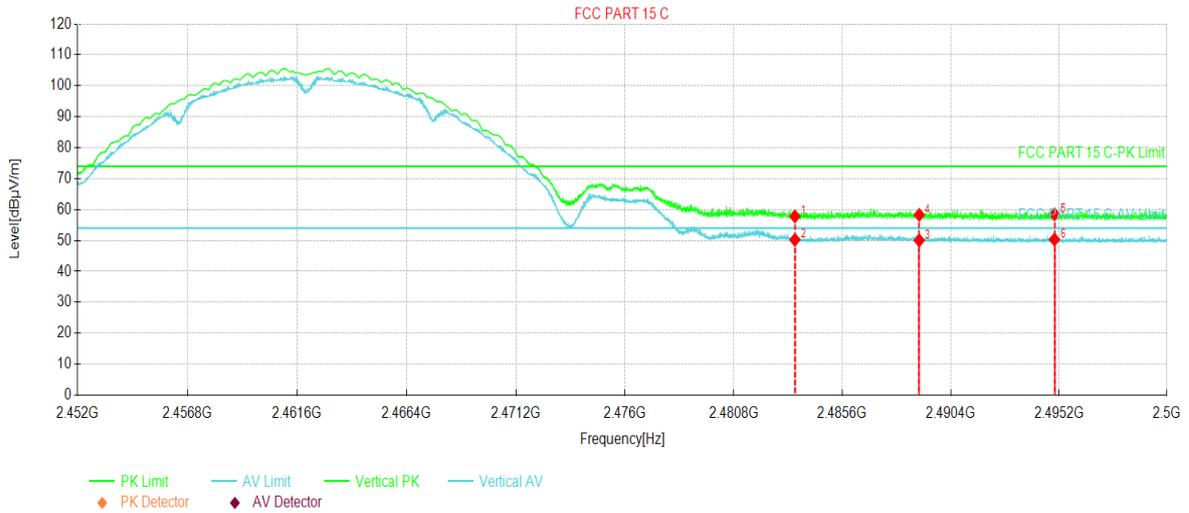


Suspected Data List										
NO	Freq [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2330.0	22.34	57.75	35.41	74.00	16.25	285	150	PK	Horizontal
2	2330.0	14.87	50.28	35.41	54.00	3.72	117	165	AV	Horizontal
3	2360.0	14.14	49.77	35.63	54.00	4.23	122	162	AV	Horizontal
4	2360.0	21.40	57.03	35.63	74.00	16.97	238	149	PK	Horizontal
5	2390.0	21.78	57.62	35.84	74.00	16.38	192	134	PK	Horizontal
6	2390.0	14.32	50.16	35.84	54.00	3.84	142	164	AV	Horizontal

**Remark:**

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

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 24°C Huni: 57%

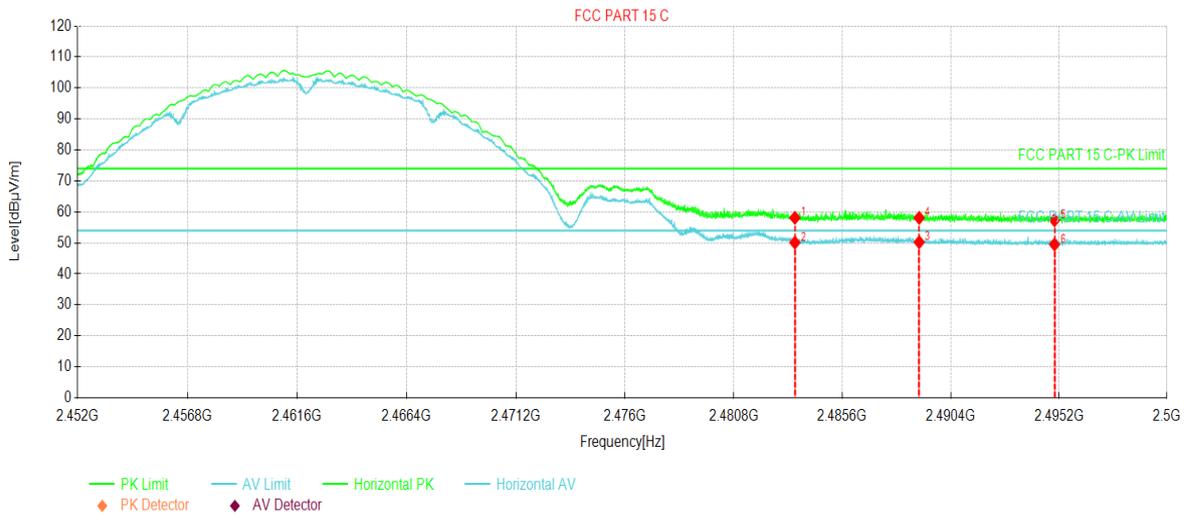


Suspected Data List										
NO	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2483.5	22.06	57.78	35.72	74.00	16.22	153	145	PK	Vertical
2	2483.5	14.50	50.22	35.72	54.00	3.78	217	160	AV	Vertical
3	2489.0	14.32	50.03	35.71	54.00	3.97	16	134	AV	Vertical
4	2489.0	22.57	58.28	35.71	74.00	15.72	337	164	PK	Vertical
5	2495.0	22.76	58.45	35.69	74.00	15.55	12	167	PK	Vertical
6	2495.0	14.62	50.31	35.69	54.00	3.69	351	131	AV	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.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 24°C Huni: 57%



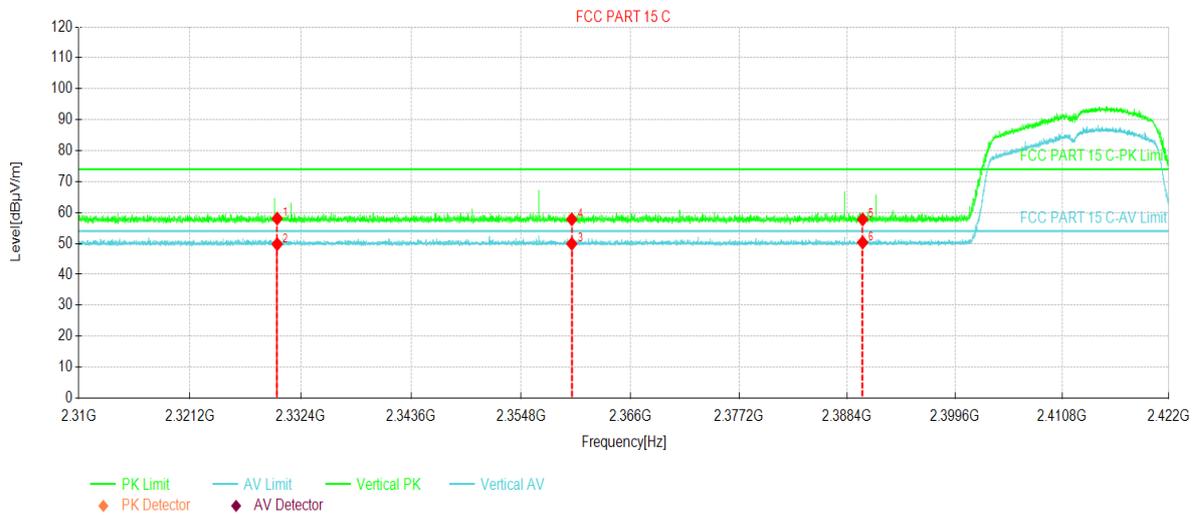
Suspected Data List										
NO	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2483.5	22.38	58.10	35.72	74.00	15.90	332	156	PK	Horizontal
2	2483.5	14.38	50.10	35.72	54.00	3.90	21	134	AV	Horizontal
3	2489.0	14.52	50.23	35.71	54.00	3.77	159	167	AV	Horizontal
4	2489.0	22.37	58.08	35.71	74.00	15.92	210	154	PK	Horizontal
5	2495.0	21.62	57.31	35.69	74.00	16.69	157	162	PK	Horizontal
6	2495.0	13.81	49.50	35.69	54.00	4.50	209	143	AV	Horizontal

**Remark:**

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

802.11g mode:

Product Name:	Smart Phone	Product Model:	B110DL
Test By:	Mike	Test mode:	802.11g Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	DC 3.8V	Environment:	Temp: 24°C Humi: 57%

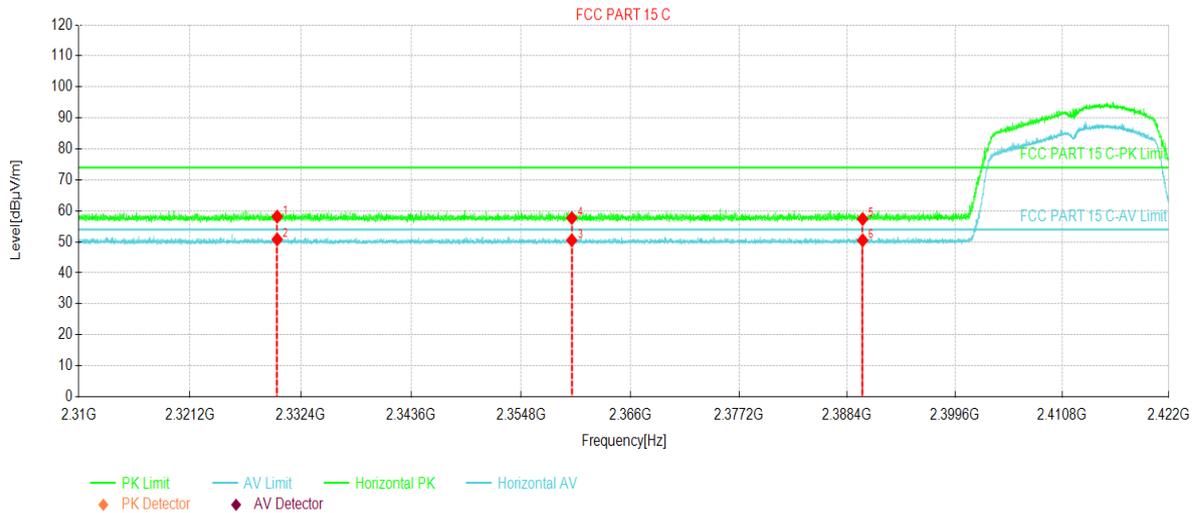


Suspected Data List										
NO	Freq [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2330.0	22.64	58.05	35.41	74.00	15.95	106	158	PK	Vertical
2	2330.0	14.34	49.75	35.41	54.00	4.25	253	157	AV	Vertical
3	2360.0	14.24	49.87	35.63	54.00	4.13	183	167	AV	Vertical
4	2360.0	22.17	57.80	35.63	74.00	16.20	191	168	PK	Vertical
5	2390.0	21.93	57.77	35.84	74.00	16.23	188	154	PK	Vertical
6	2390.0	14.46	50.30	35.84	54.00	3.70	183	149	AV	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.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 24°C Huni: 57%

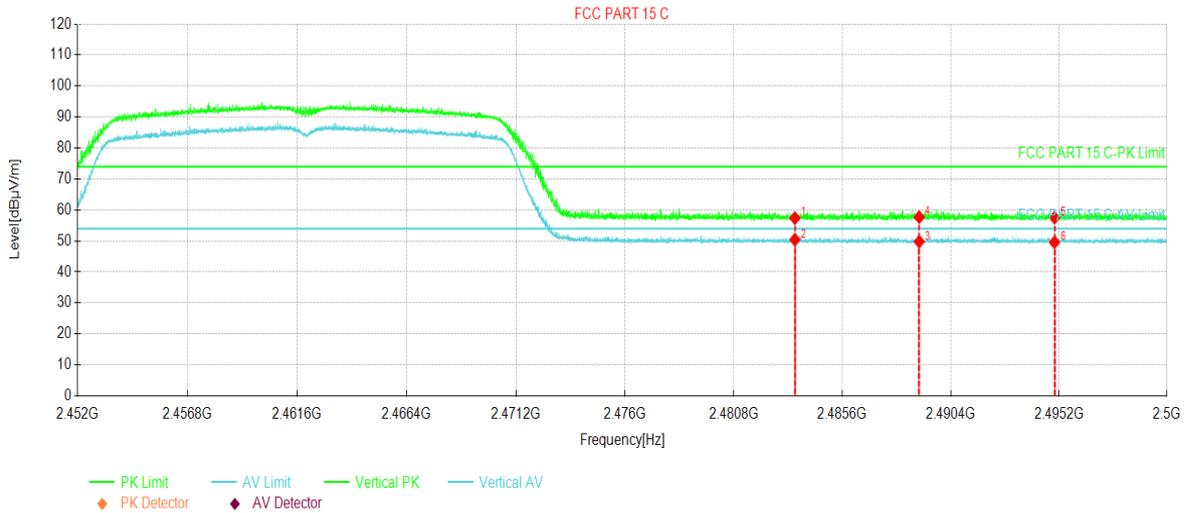


Suspected Data List										
NO	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2330.0	22.74	58.15	35.41	74.00	15.85	310	156	PK	Horizontal
2	2330.0	15.39	50.80	35.41	54.00	3.20	47	134	AV	Horizontal
3	2360.0	14.88	50.51	35.63	54.00	3.49	104	142	AV	Horizontal
4	2360.0	22.06	57.69	35.63	74.00	16.31	257	162	PK	Horizontal
5	2390.0	21.53	57.37	35.84	74.00	16.63	58	134	PK	Horizontal
6	2390.0	14.67	50.51	35.84	54.00	3.49	301	148	AV	Horizontal

**Remark:**

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

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 24°C Huni: 57%

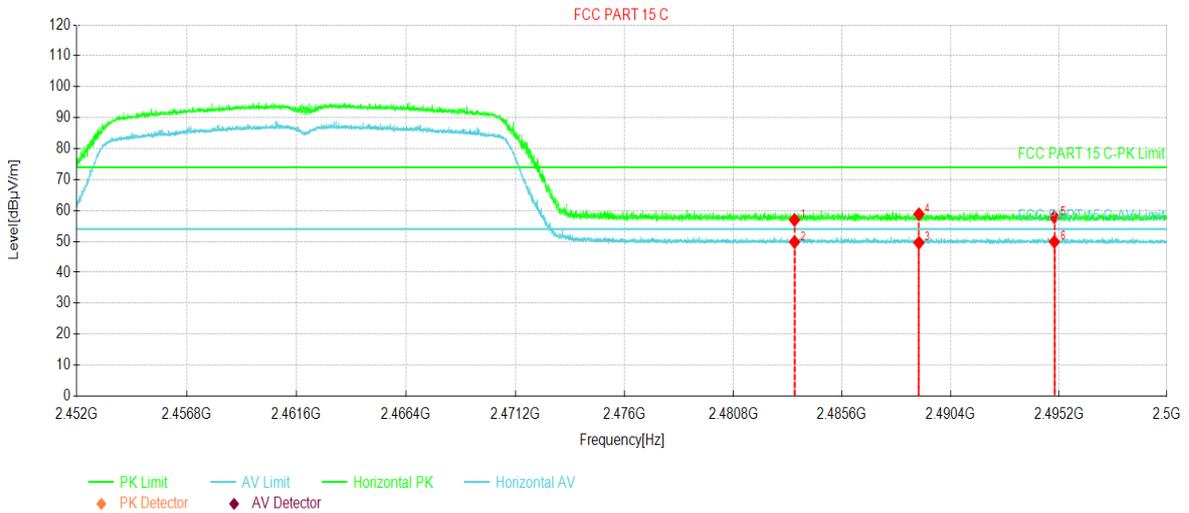


Suspected Data List										
NO	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2483.5	21.63	57.35	35.72	74.00	16.65	67	152	PK	Vertical
2	2483.5	14.71	50.43	35.72	54.00	3.57	292	134	AV	Vertical
3	2489.0	14.06	49.77	35.71	54.00	4.23	56	164	AV	Vertical
4	2489.0	21.99	57.70	35.71	74.00	16.30	302	147	PK	Vertical
5	2495.0	21.85	57.54	35.69	74.00	16.46	309	167	PK	Vertical
6	2495.0	13.87	49.56	35.69	54.00	4.44	54	153	AV	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.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 24°C Huni: 57%



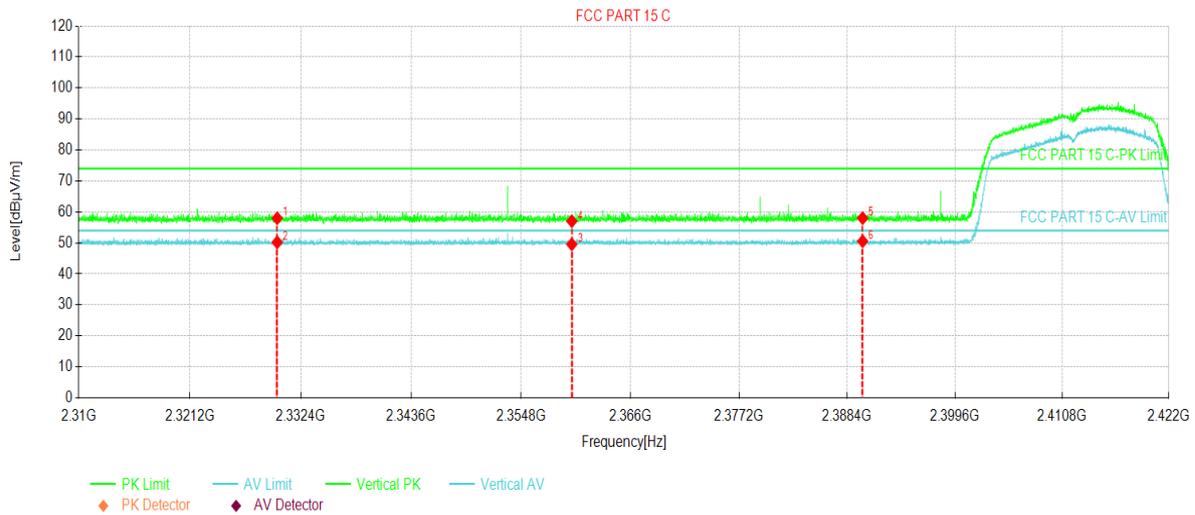
Suspected Data List											
NO	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity	
1	2483.5	21.23	56.95	35.72	74.00	17.05	219	151	PK	Horizontal	
2	2483.5	14.07	49.79	35.72	54.00	4.21	34	132	AV	Horizontal	
3	2489.0	13.87	49.58	35.71	54.00	4.42	279	164	AV	Horizontal	
4	2489.0	23.10	58.81	35.71	74.00	15.19	86	148	PK	Horizontal	
5	2495.0	22.19	57.88	35.69	74.00	16.12	78	146	PK	Horizontal	
6	2495.0	14.20	49.89	35.69	54.00	4.11	281	158	AV	Horizontal	

**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.

802.11n(HT20):

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11n(HT20) Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 24°C Huni: 57%

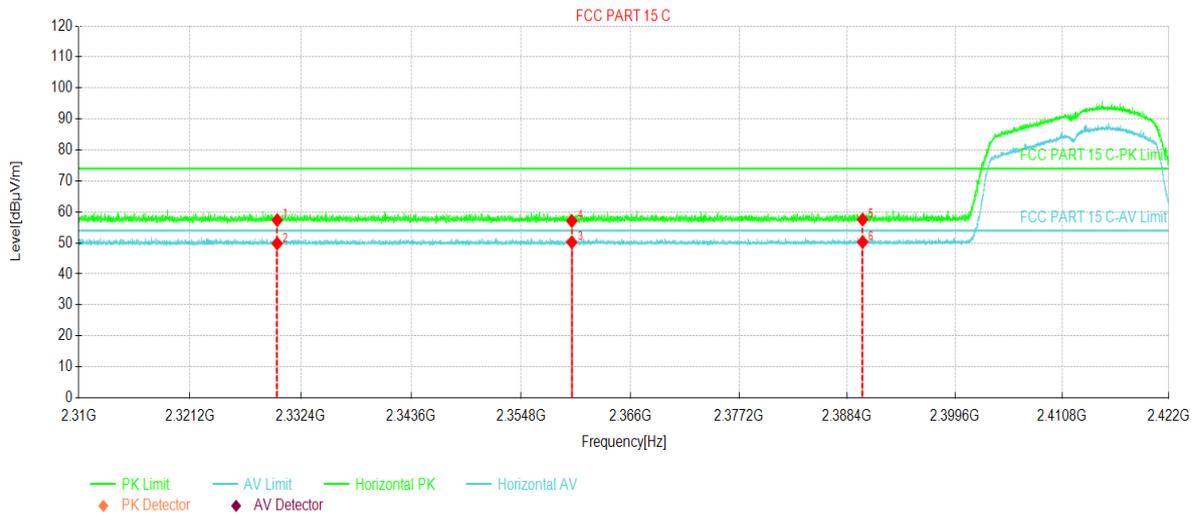


Suspected Data List											
NO	Freq [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity	
1	2330.0	22.57	57.98	35.41	74.00	16.02	178	159	PK	Vertical	
2	2330.0	14.79	50.20	35.41	54.00	3.80	195	147	AV	Vertical	
3	2360.0	13.91	49.54	35.63	54.00	4.46	138	134	AV	Vertical	
4	2360.0	21.38	57.01	35.63	74.00	16.99	234	157	PK	Vertical	
5	2390.0	22.15	57.99	35.84	74.00	16.01	179	160	PK	Vertical	
6	2390.0	14.69	50.53	35.84	54.00	3.47	187	138	AV	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.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11n(HT20) Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 24°C Huni: 57%

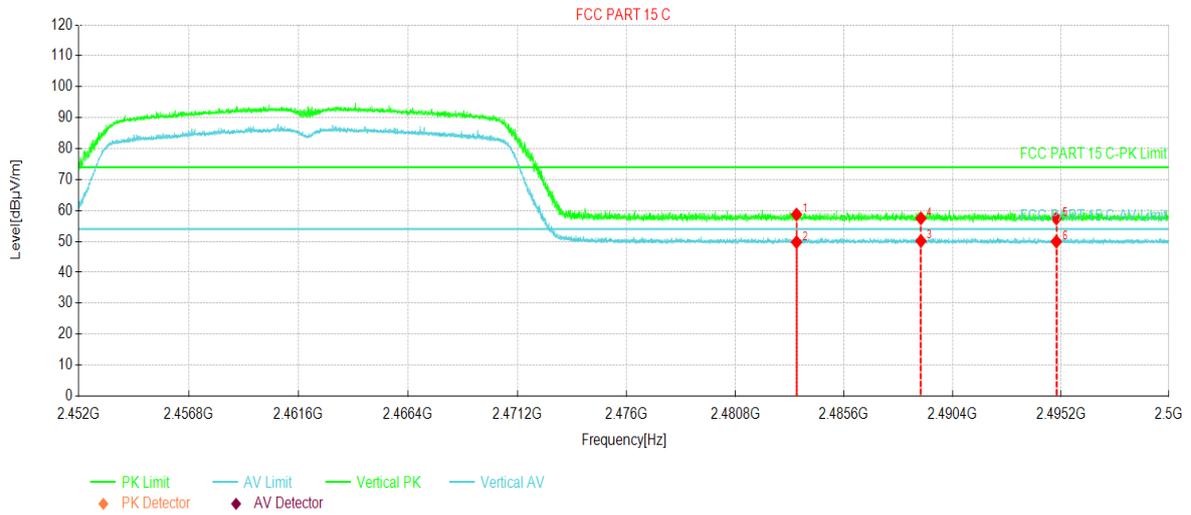


Suspected Data List											
NO	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity	
1	2330.0	21.94	57.35	35.41	74.00	16.65	16	131	PK	Horizontal	
2	2330.0	14.38	49.79	35.41	54.00	4.21	354	147	AV	Horizontal	
3	2360.0	14.60	50.23	35.63	54.00	3.77	20	164	AV	Horizontal	
4	2360.0	21.45	57.08	35.63	74.00	16.92	337	148	PK	Horizontal	
5	2390.0	21.70	57.54	35.84	74.00	16.46	170	146	PK	Horizontal	
6	2390.0	14.44	50.28	35.84	54.00	3.72	207	149	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.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11n(HT20) Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 24°C Huni: 57%

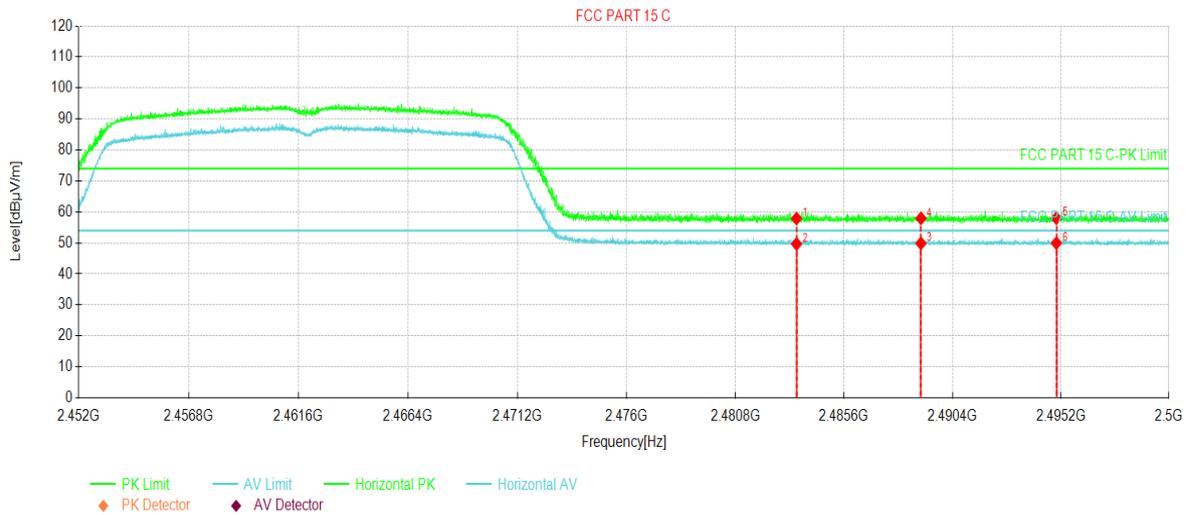


Suspected Data List											
NO	Freq [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity	
1	2483.5	22.99	58.71	35.72	74.00	15.29	348	156	PK	Vertical	
2	2483.5	14.03	49.75	35.72	54.00	4.25	19	134	AV	Vertical	
3	2489.0	14.43	50.14	35.71	54.00	3.86	26	146	AV	Vertical	
4	2489.0	21.75	57.46	35.71	74.00	16.54	337	167	PK	Vertical	
5	2495.0	21.72	57.41	35.69	74.00	16.59	343	162	PK	Vertical	
6	2495.0	14.24	49.93	35.69	54.00	4.07	25	149	AV	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.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11n(HT20) Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 24°C Huni: 57%



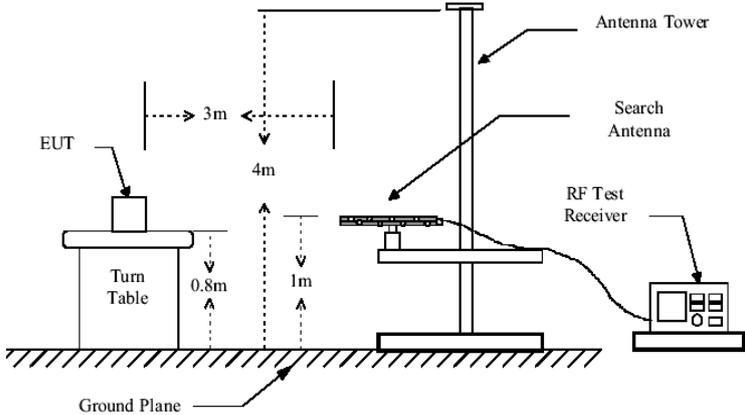
Suspected Data List										
NO	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2483.5	22.15	57.87	35.72	74.00	16.13	177	145	PK	Horizontal
2	2483.5	13.95	49.67	35.72	54.00	4.33	180	161	AV	Horizontal
3	2489.0	14.15	49.86	35.71	54.00	4.14	167	157	AV	Horizontal
4	2489.0	22.22	57.93	35.71	74.00	16.07	207	134	PK	Horizontal
5	2495.0	22.30	57.99	35.69	74.00	16.01	196	139	PK	Horizontal
6	2495.0	14.26	49.95	35.69	54.00	4.05	173	142	AV	Horizontal

**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.

## 6.4 Spurious Emission

### 6.4.1 Radiated Emission Method

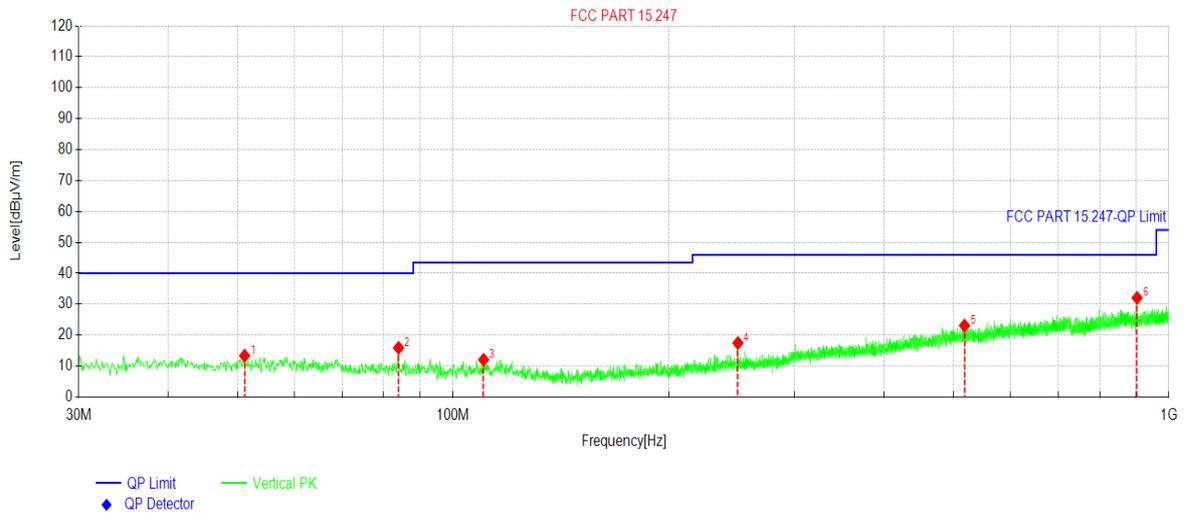
Test Requirement:	FCC Part 15 C Section 15.209 and 15.205				
Test Frequency Range:	9kHz to 25GHz				
Test Distance:	3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
RMS		1MHz	3MHz	Average Value	
Limit:	Frequency	Limit (dBuV/m @3m)		Remark	
	30MHz-88MHz	40.0		Quasi-peak Value	
	88MHz-216MHz	43.5		Quasi-peak Value	
	216MHz-960MHz	46.0		Quasi-peak Value	
	960MHz-1GHz	54.0		Quasi-peak Value	
	Above 1GHz	54.0		Average Value	
74.0		Peak Value			
Test Procedure:	<ol style="list-style-type: none"> <li>The EUT was placed on the top of a rotating table 0.8m(below 1GHz)/1.5m(above 1GHz) above the ground at a 3 meter chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>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.</li> <li>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 rota table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>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.</li> </ol>				
Test setup:	<p>Below 1GHz</p>  <p>Above 1GHz</p>				

Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	<ol style="list-style-type: none"> <li>1. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case.</li> <li>2. 9 kHz to 30MHz is lower than the limit 20dB, so only shows the data of above 30MHz in this report.</li> </ol>

**Measurement Data (worst case):**

**Below 1GHz:**

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	Wi-Fi Tx mode
<b>Test Frequency:</b>	30 MHz ~ 1 GHz	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 24°C      Humi: 57%

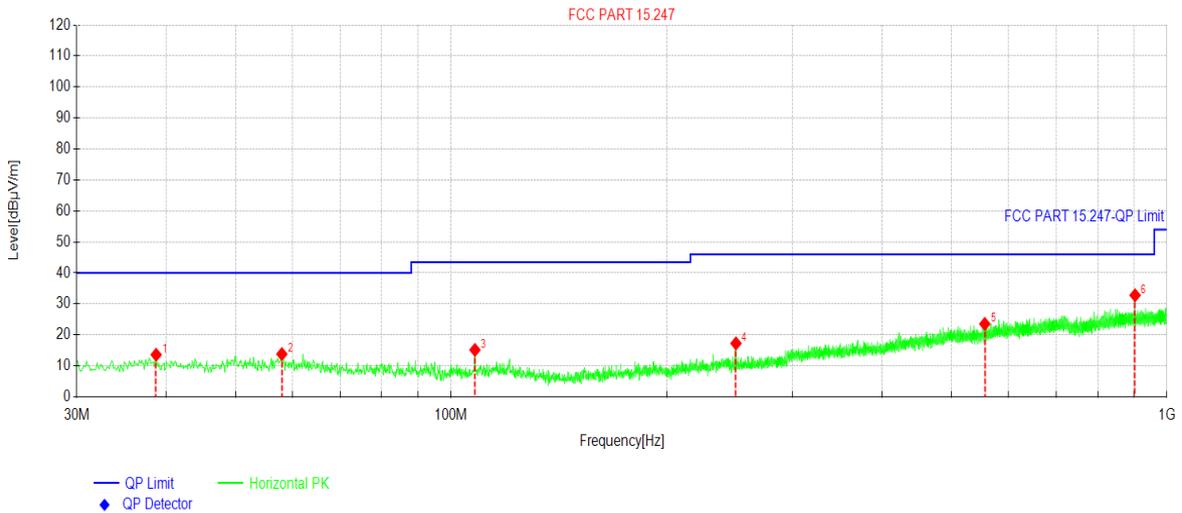


Suspected Data List											
NO	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity	
1	51.148	28.05	13.36	-14.69	40.00	26.64	54	100	PK	Vertical	
2	83.937	33.37	15.91	-17.46	40.00	24.09	147	129	PK	Vertical	
3	110.32	27.85	12.04	-15.81	43.50	31.46	264	107	PK	Vertical	
4	250.01	31.26	17.47	-13.79	46.00	28.53	354	116	PK	Vertical	
5	518.15	30.01	23.11	-6.90	46.00	22.89	157	111	PK	Vertical	
6	902.69	33.42	32.05	-1.37	46.00	13.95	105	123	PK	Vertical	

**Remark:**

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

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	Wi-Fi Tx mode
<b>Test Frequency:</b>	30 MHz ~ 1 GHz	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 24°C Huni: 57%



Suspected Data List										
NO	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	38.730	28.19	13.59	-14.60	40.00	26.41	78	102	PK	Horizontal
2	58.035	28.67	13.81	-14.86	40.00	26.19	103	123	PK	Horizontal
3	107.99	31.09	15.15	-15.94	43.50	28.35	354	115	PK	Horizontal
4	250.01	31.05	17.26	-13.79	46.00	28.74	243	130	PK	Horizontal
5	556.66	30.20	23.54	-6.66	46.00	22.46	159	110	PK	Horizontal
6	902.60	34.16	32.79	-1.37	46.00	13.21	305	126	PK	Horizontal

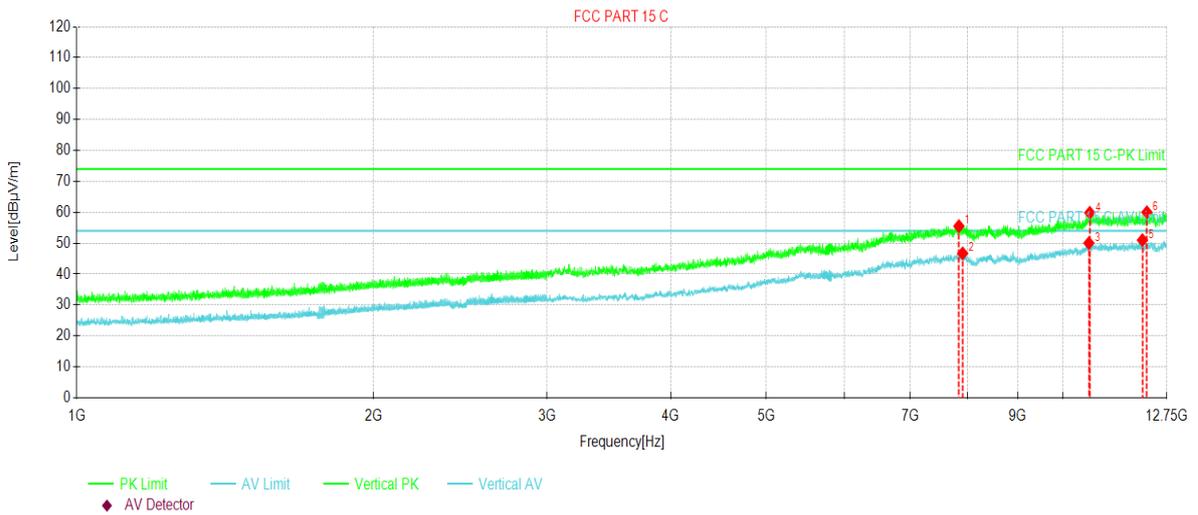
**Remark:**

- 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.

**Above 1GHz**

**Remark: When testing spurs above 1GHz, use Band Reject Filter Group to filter out fundamental signal**

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11b Low CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Huni: 52%

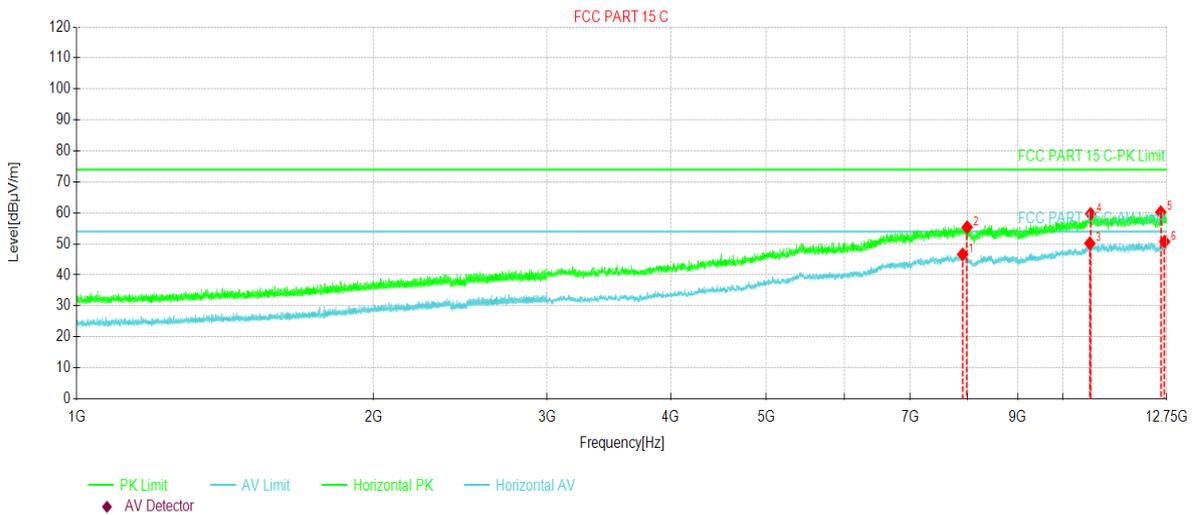


Suspected Data List										
NO	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7844.5	54.48	55.50	1.02	74.00	18.50	321	138	PK	Vertical
2	7914.0	45.71	46.70	0.99	54.00	7.30	308	144	AV	Vertical
3	10625.	43.01	50.03	7.02	54.00	3.97	246	130	AV	Vertical
4	10648.	52.73	59.83	7.10	74.00	14.17	210	134	PK	Vertical
5	12040.	43.46	50.99	7.53	54.00	3.01	113	153	AV	Vertical
6	12167.	52.33	59.99	7.66	74.00	14.01	90	159	PK	Vertical

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11b Low CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Huni: 52%

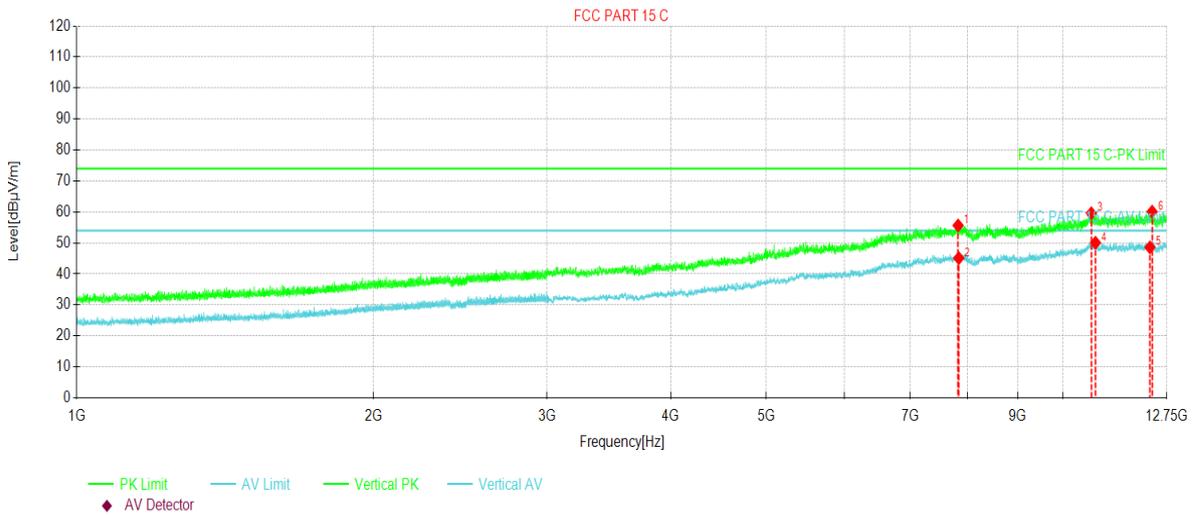


Suspected Data List											
NO	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity	
1	7914.0	45.63	46.62	0.99	54.00	7.38	158	132	AV	Horizontal	
2	7996.8	54.48	55.38	0.90	74.00	18.62	179	129	PK	Horizontal	
3	10650.	43.09	50.19	7.10	54.00	3.81	263	145	AV	Horizontal	
4	10668.	52.54	59.70	7.16	74.00	14.30	280	150	PK	Horizontal	
5	12569.	52.58	60.24	7.66	74.00	13.76	45	164	PK	Horizontal	
6	12684.	42.42	50.75	8.33	54.00	3.25	358	169	AV	Horizontal	

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11b Mid CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Humi: 52%

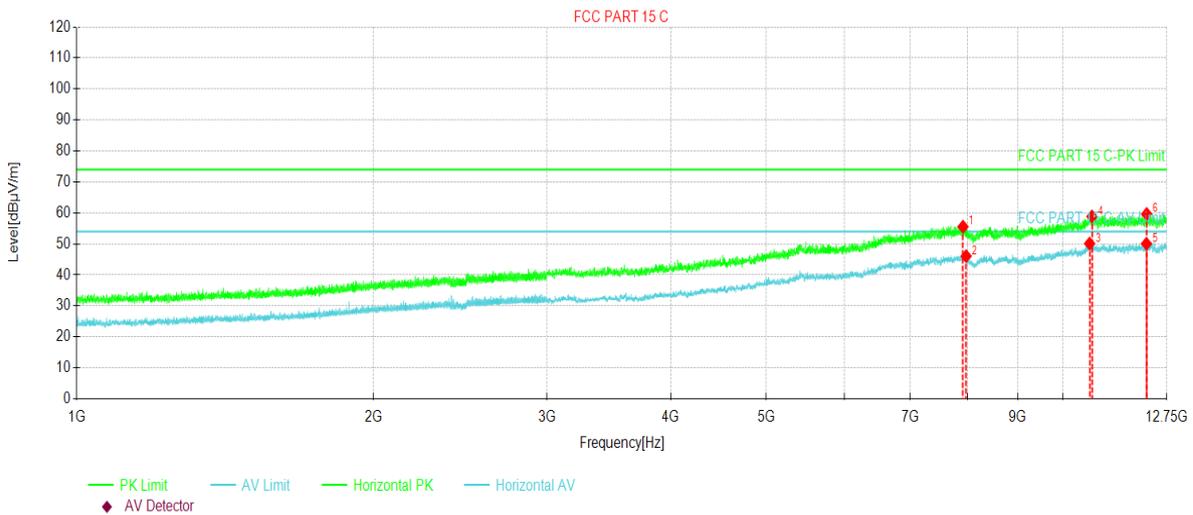


Suspected Data List											
NO	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity	
1	7829.9	54.63	55.65	1.02	74.00	18.35	355	145	PK	Vertical	
2	7842.0	44.07	45.09	1.02	54.00	8.91	23	152	AV	Vertical	
3	10686.	52.35	59.57	7.22	74.00	14.43	177	137	PK	Vertical	
4	10791.	42.91	50.06	7.15	54.00	3.94	183	143	AV	Vertical	
5	12253.	40.72	48.57	7.85	54.00	5.43	248	160	AV	Vertical	
6	12316.	52.26	60.09	7.83	74.00	13.91	231	154	PK	Vertical	

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11b Mid CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Huni: 52%

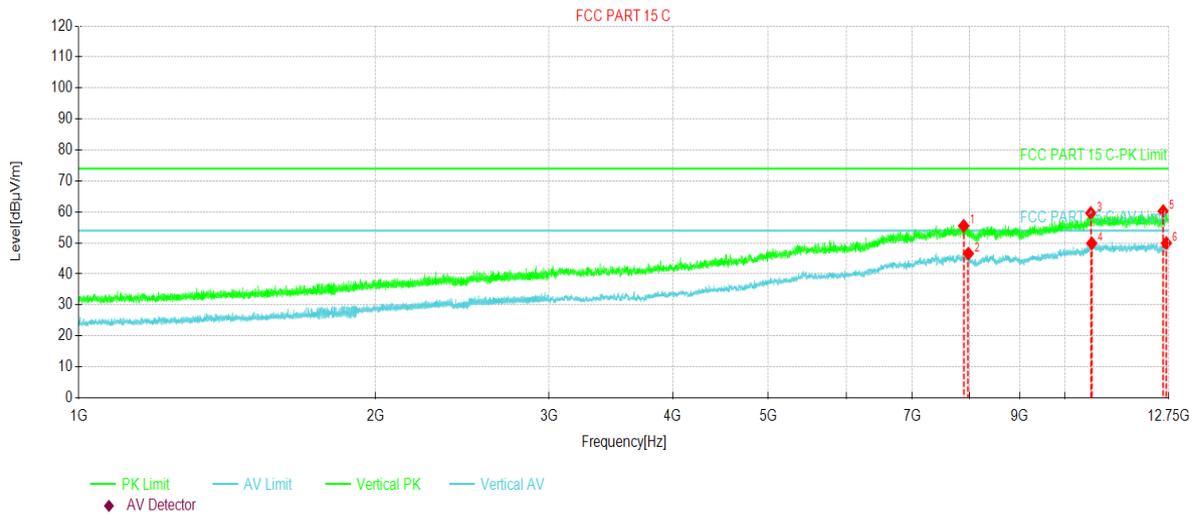


Suspected Data List											
NO	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity	
1	7920.0	54.55	55.54	0.99	74.00	18.46	15	138	PK	Horizontal	
2	7978.5	45.13	46.05	0.92	54.00	7.95	358	141	AV	Horizontal	
3	10642.	43.02	50.10	7.08	54.00	3.90	228	145	AV	Horizontal	
4	10703.	51.59	58.85	7.26	74.00	15.15	209	152	PK	Horizontal	
5	12154.	42.47	50.04	7.57	54.00	3.96	179	158	AV	Horizontal	
6	12161.	52.04	59.66	7.62	74.00	14.34	190	166	PK	Horizontal	

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11b High CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Huni: 52%

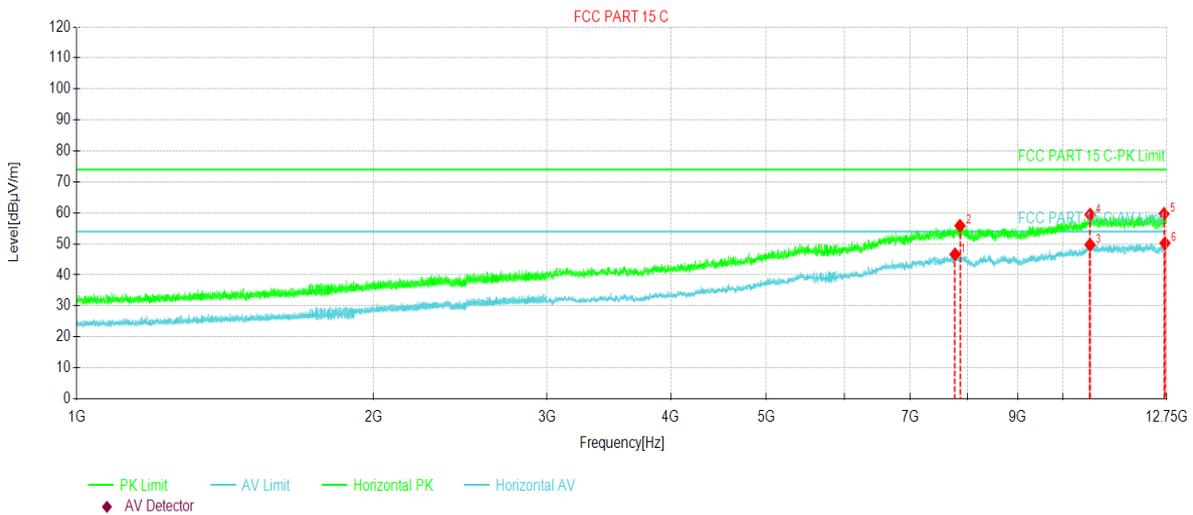


Suspected Data List										
NO	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7895.7	54.49	55.50	1.01	74.00	18.50	106	141	PK	Vertical
2	7982.2	45.64	46.56	0.92	54.00	7.44	127	135	AV	Vertical
3	10623.	52.64	59.65	7.01	74.00	14.35	80	152	PK	Vertical
4	10646.	42.79	49.88	7.09	54.00	4.12	61	159	AV	Vertical
5	12580.	52.46	60.26	7.80	74.00	13.74	237	161	PK	Vertical
6	12674.	41.64	49.94	8.30	54.00	4.06	250	164	AV	Vertical

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11b High CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Huni: 52%

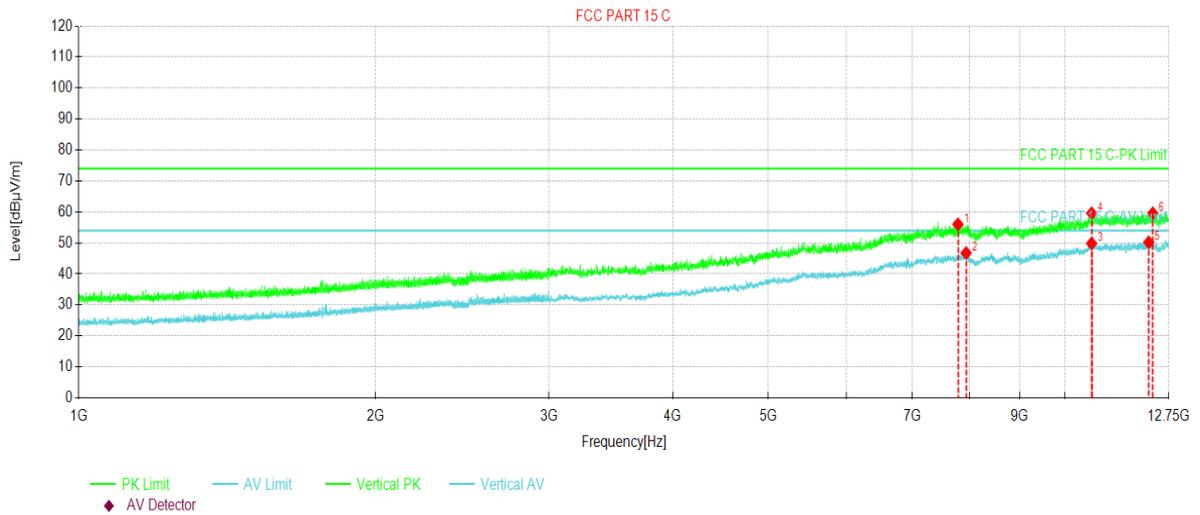


Suspected Data List											
NO	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity	
1	7773.8	45.72	46.62	0.90	54.00	7.38	38	134	AV	Horizontal	
2	7864.0	54.84	55.85	1.01	74.00	18.15	56	145	PK	Horizontal	
3	10653.	42.61	49.72	7.11	54.00	4.28	123	157	AV	Horizontal	
4	10657.	52.33	59.45	7.12	74.00	14.55	101	153	PK	Horizontal	
5	12665.	51.44	59.71	8.27	74.00	14.29	281	162	PK	Horizontal	
6	12693.	41.87	50.23	8.36	54.00	3.77	293	170	AV	Horizontal	

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11g Low CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Huni: 52%

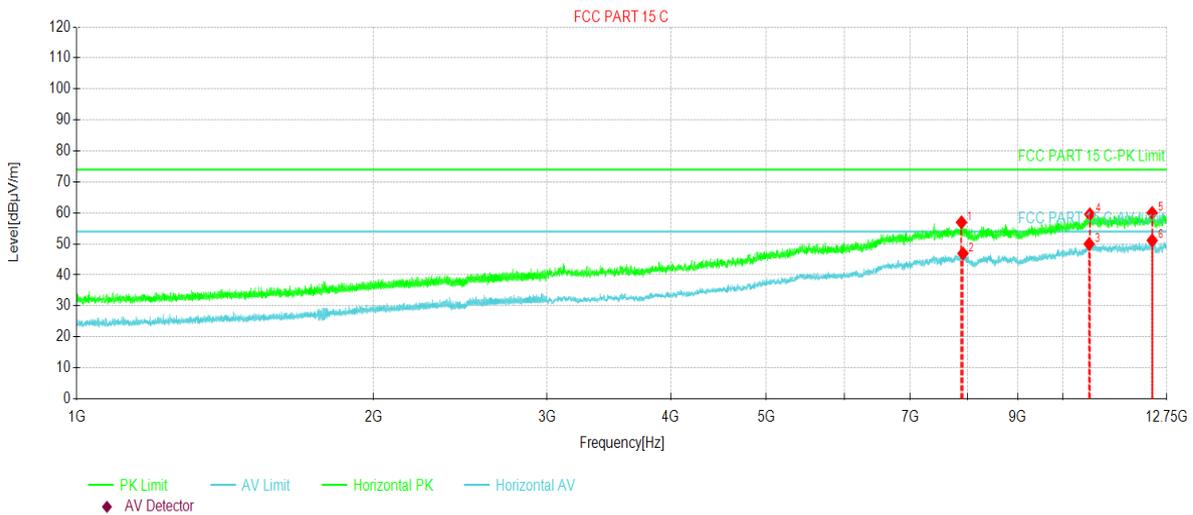


Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7790.9	55.01	55.99	0.98	74.00	18.01	330	131	PK	Vertical
2	7940.8	45.78	46.75	0.97	54.00	7.25	301	136	AV	Vertical
3	10644.	42.77	49.85	7.08	54.00	4.15	268	143	AV	Vertical
4	10645.	52.49	59.57	7.08	74.00	14.43	232	158	PK	Vertical
5	12161.	42.57	50.19	7.62	54.00	3.81	114	154	AV	Vertical
6	12277.	51.72	59.56	7.84	74.00	14.44	101	163	PK	Vertical

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11g Low CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Huni: 52%

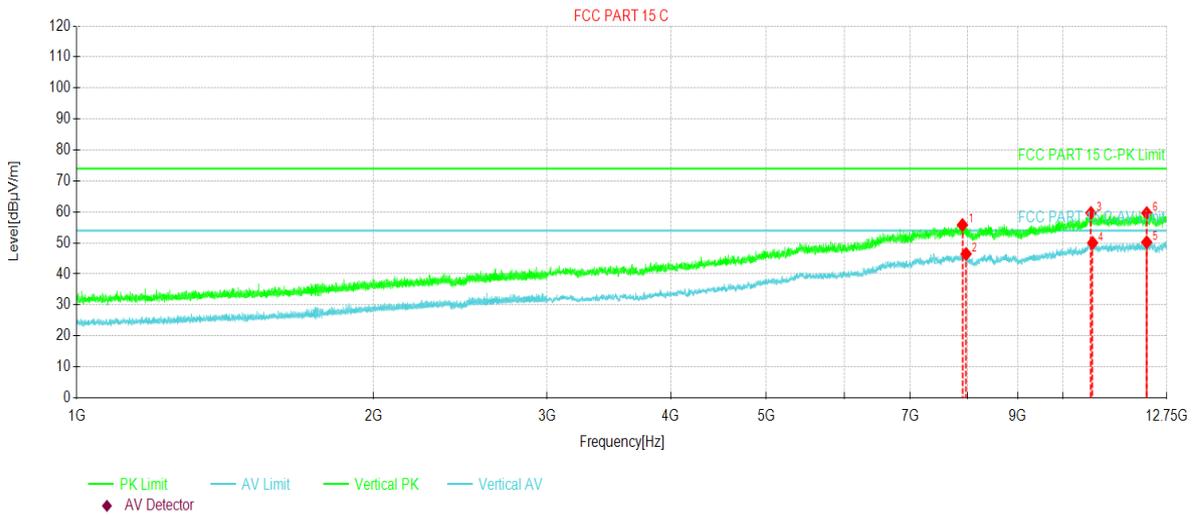


Suspected Data List											
NO	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity	
1	7892.0	55.94	56.95	1.01	74.00	17.05	187	134	PK	Horizontal	
2	7920.0	45.92	46.91	0.99	54.00	7.09	208	144	AV	Horizontal	
3	10631.	42.93	49.97	7.04	54.00	4.03	320	150	AV	Horizontal	
4	10650.	52.46	59.56	7.10	74.00	14.44	297	155	PK	Horizontal	
5	12317.	52.14	59.97	7.83	74.00	14.03	15	164	PK	Horizontal	
6	12318.	43.29	51.12	7.83	54.00	2.88	352	174	AV	Horizontal	

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11g Mid CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Humi: 52%

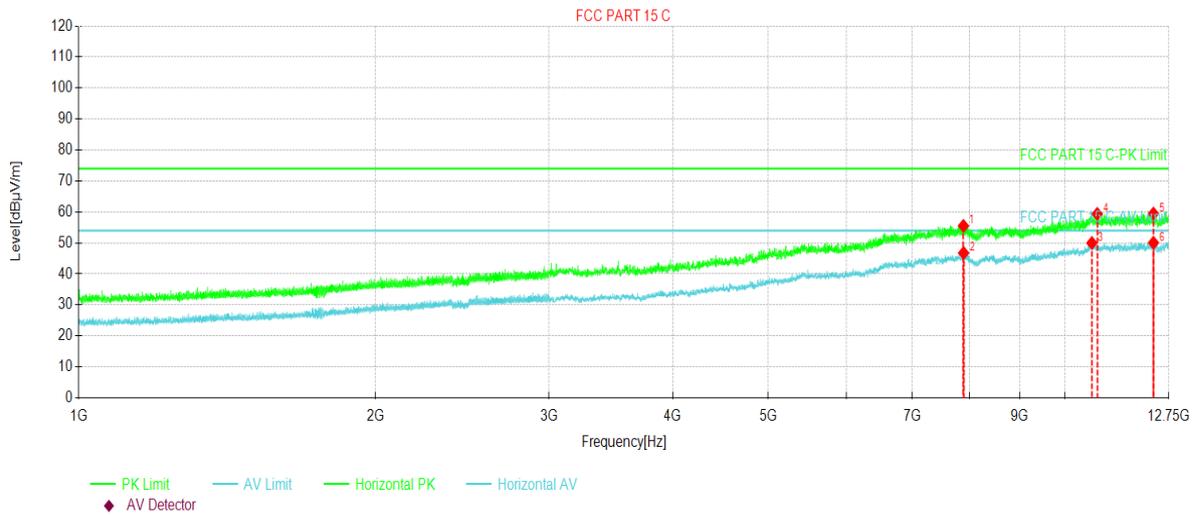


Suspected Data List											
NO	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity	
1	7909.1	54.81	55.81	1.00	74.00	18.19	102	133	PK	Vertical	
2	7977.3	45.53	46.45	0.92	54.00	7.55	127	151	AV	Vertical	
3	10678.	52.47	59.66	7.19	74.00	14.34	96	149	PK	Vertical	
4	10719.	42.79	50.03	7.24	54.00	3.97	75	158	AV	Vertical	
5	12161.	42.62	50.24	7.62	54.00	3.76	302	160	AV	Vertical	
6	12163.	52.01	59.64	7.63	74.00	14.36	334	168	PK	Vertical	

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11g Mid CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Huni: 52%

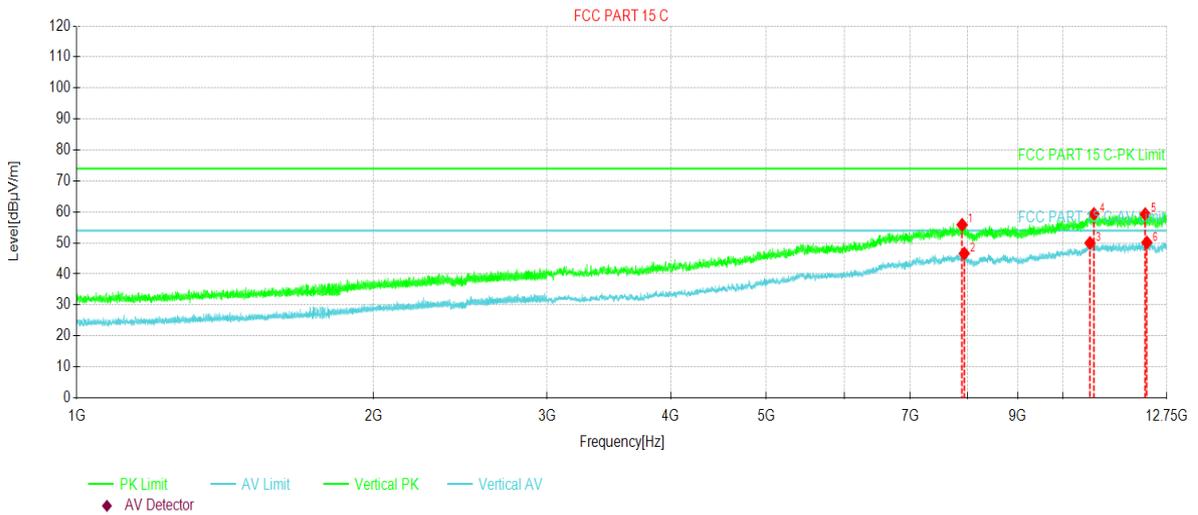


Suspected Data List											
NO	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity	
1	7890.8	54.51	55.52	1.01	74.00	18.48	67	134	PK	Horizontal	
2	7894.5	45.75	46.76	1.01	54.00	7.24	98	139	AV	Horizontal	
3	10650.	42.88	49.98	7.10	54.00	4.02	173	143	AV	Horizontal	
4	10784.	52.21	59.37	7.16	74.00	14.63	191	154	PK	Horizontal	
5	12296.	51.65	59.48	7.83	74.00	14.52	267	159	PK	Horizontal	
6	12297.	42.23	50.06	7.83	54.00	3.94	281	167	AV	Horizontal	

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11g High CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Huni: 52%

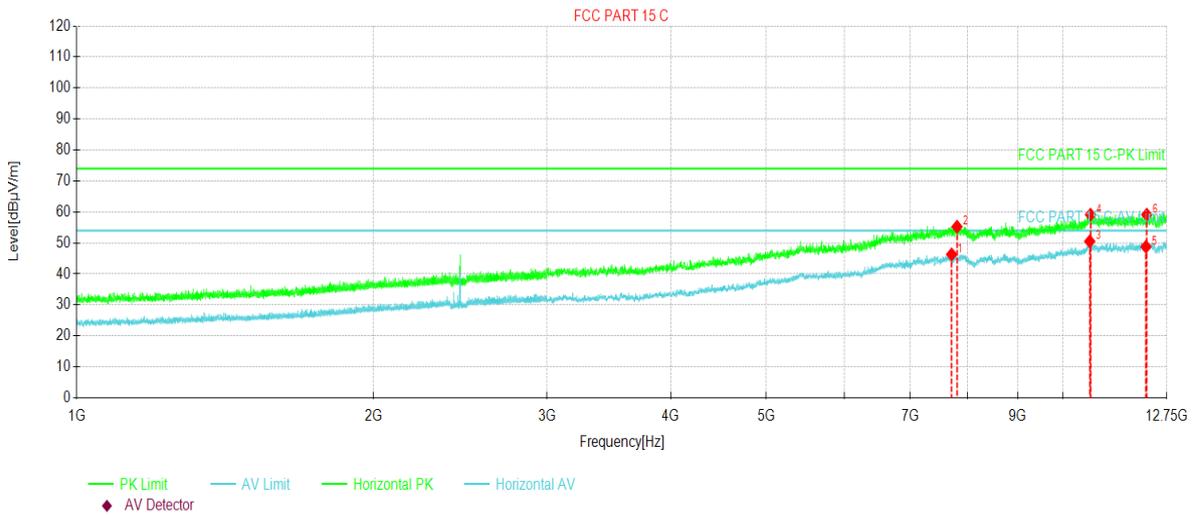


Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7903.0	54.84	55.85	1.01	74.00	18.15	349	162	PK	Vertical
2	7943.2	45.64	46.60	0.96	54.00	7.40	14	158	AV	Vertical
3	10652.	42.87	49.98	7.11	54.00	4.02	226	156	AV	Vertical
4	10751.	52.13	59.33	7.20	74.00	14.67	267	149	PK	Vertical
5	12119.	51.95	59.29	7.34	74.00	14.71	309	142	PK	Vertical
6	12166.	42.48	50.13	7.65	54.00	3.87	328	131	AV	Vertical

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11g High CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Huni: 52%

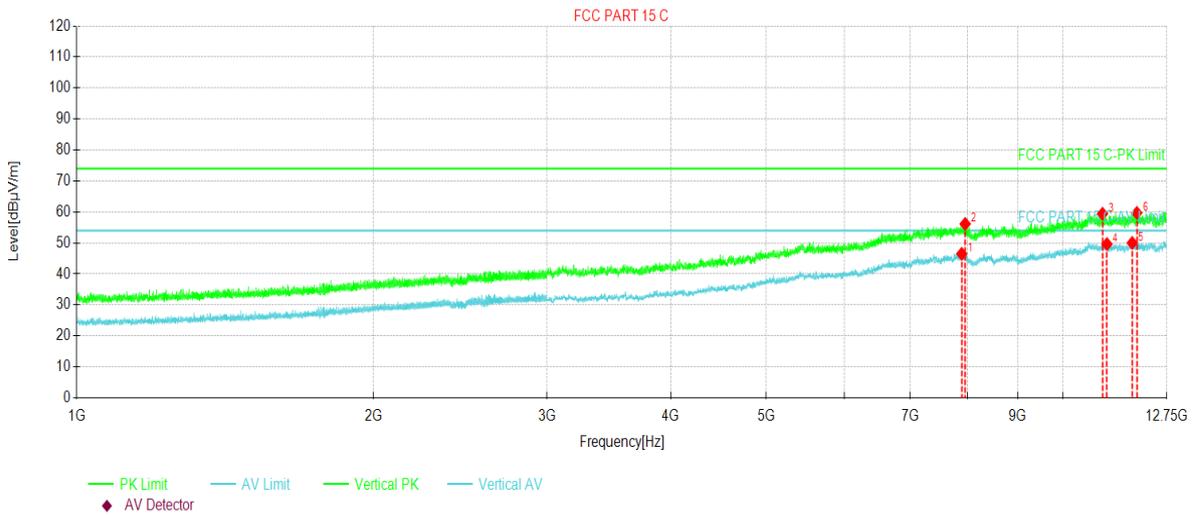


Suspected Data List										
NO	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7711.6	45.68	46.28	0.60	54.00	7.72	357	130	AV	Horizontal
2	7809.1	54.22	55.24	1.02	74.00	18.76	6	145	PK	Horizontal
3	10646.	43.42	50.51	7.09	54.00	3.49	99	136	AV	Horizontal
4	10665.	51.97	59.12	7.15	74.00	14.88	125	148	PK	Horizontal
5	12140.	41.29	48.77	7.48	54.00	5.23	266	156	AV	Horizontal
6	12163.	51.50	59.13	7.63	74.00	14.87	283	161	PK	Horizontal

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11n20 Low CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Huni: 52%

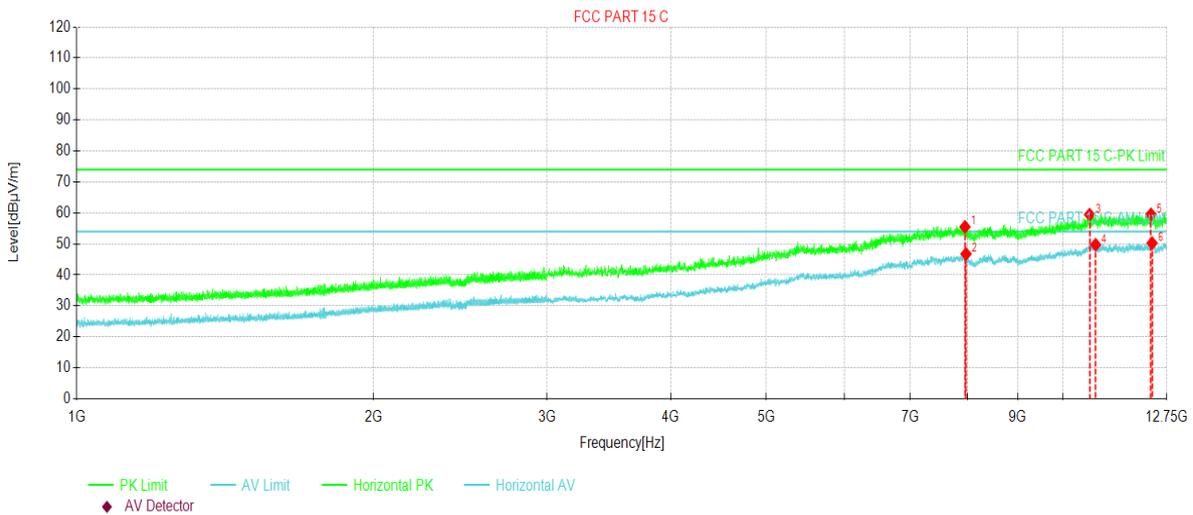


Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7895.7	45.47	46.48	1.01	54.00	7.52	294	132	AV	Vertical
2	7960.3	55.20	56.14	0.94	74.00	17.86	270	139	PK	Vertical
3	10969.	51.98	59.40	7.42	74.00	14.60	309	145	PK	Vertical
4	11083.	42.46	49.63	7.17	54.00	4.37	281	148	AV	Vertical
5	11756.	42.06	50.01	7.95	54.00	3.99	311	156	AV	Vertical
6	11883.	52.15	59.69	7.54	74.00	14.31	343	161	PK	Vertical

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11n20 Low CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Huni: 52%

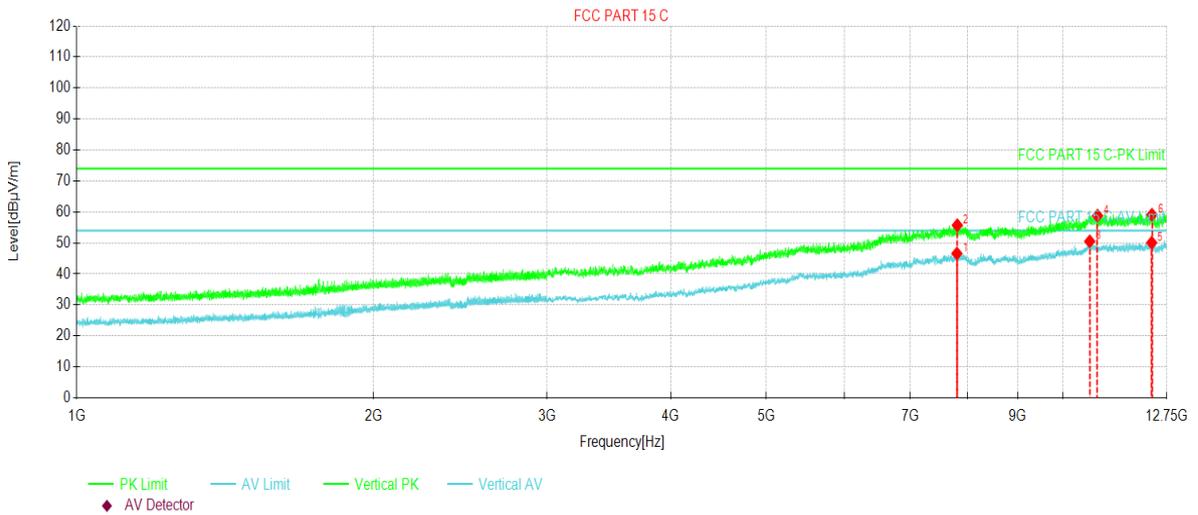


Suspected Data List											
NO	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity	
1	7956.6	54.54	55.49	0.95	74.00	18.51	348	143	PK	Horizontal	
2	7974.9	45.83	46.76	0.93	54.00	7.24	315	149	AV	Horizontal	
3	10644.	52.35	59.43	7.08	74.00	14.57	274	153	PK	Horizontal	
4	10795.	42.58	49.73	7.15	54.00	4.27	243	159	AV	Horizontal	
5	12283.	51.66	59.50	7.84	74.00	14.50	197	167	PK	Horizontal	
6	12314.	42.42	50.25	7.83	54.00	3.75	188	173	AV	Horizontal	

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11n20 Mid CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Huni: 52%

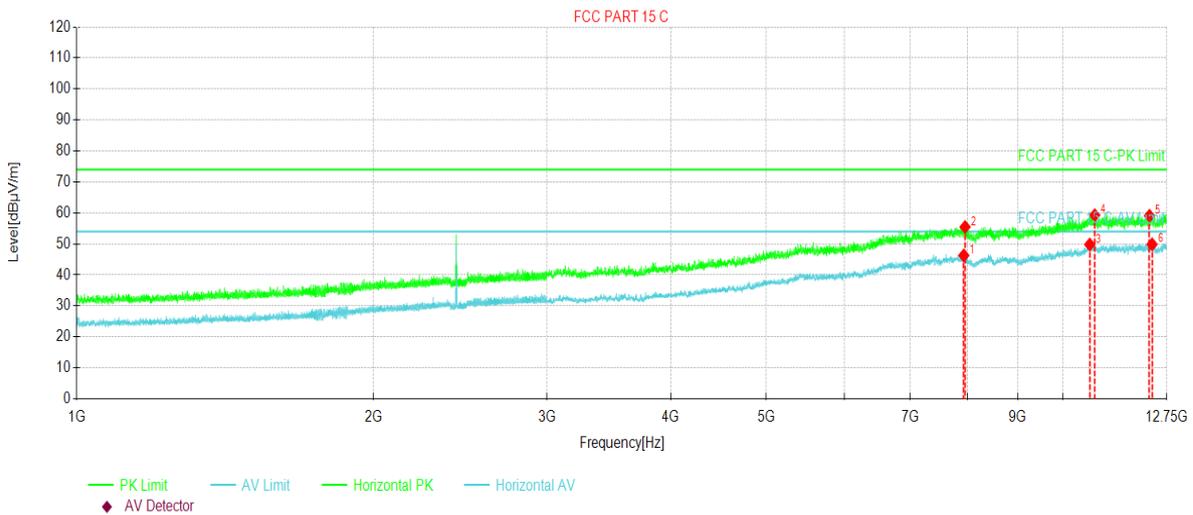


Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7807.9	45.57	46.59	1.02	54.00	7.41	64	155	AV	Vertical
2	7815.2	54.70	55.72	1.02	74.00	18.28	79	152	PK	Vertical
3	10646.	43.43	50.52	7.09	54.00	3.48	307	149	AV	Vertical
4	10842.	51.57	58.78	7.21	74.00	15.22	336	145	PK	Vertical
5	12305.	42.25	50.08	7.83	54.00	3.92	195	136	AV	Vertical
6	12311.	51.27	59.10	7.83	74.00	14.90	183	131	PK	Vertical

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11n20 Mid CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Huni: 52%

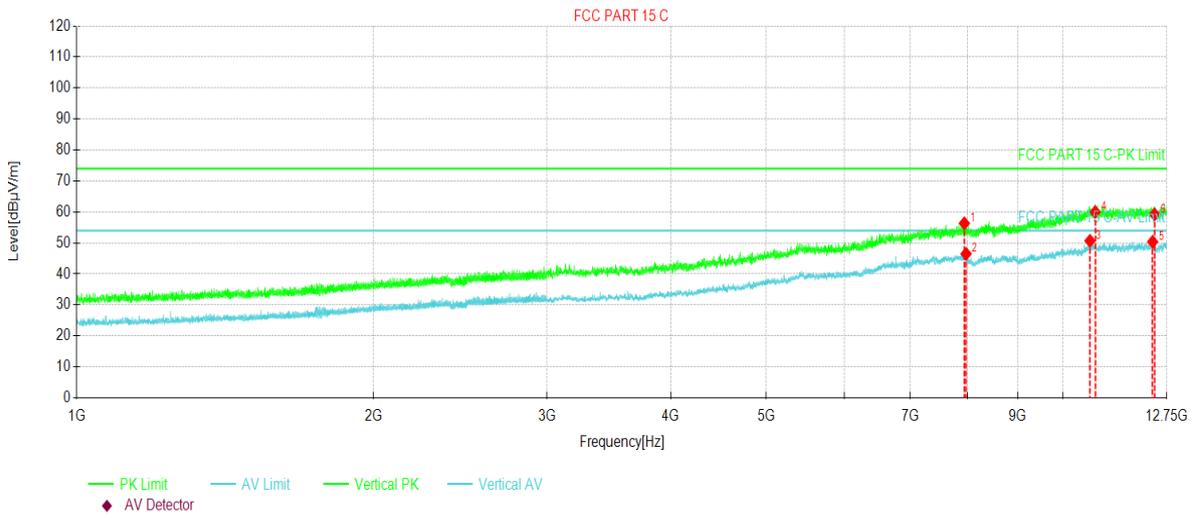


Suspected Data List											
NO	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity	
1	7933.5	45.30	46.27	0.97	54.00	7.73	67	137	AV	Horizontal	
2	7957.8	54.51	55.46	0.95	74.00	18.54	81	140	PK	Horizontal	
3	10647.	42.71	49.80	7.09	54.00	4.20	167	146	AV	Horizontal	
4	10771.	52.10	59.27	7.17	74.00	14.73	196	148	PK	Horizontal	
5	12240.	51.21	59.07	7.86	74.00	14.93	306	154	PK	Horizontal	
6	12314.	42.02	49.85	7.83	54.00	4.15	325	158	AV	Horizontal	

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11n20 High CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Humi: 52%

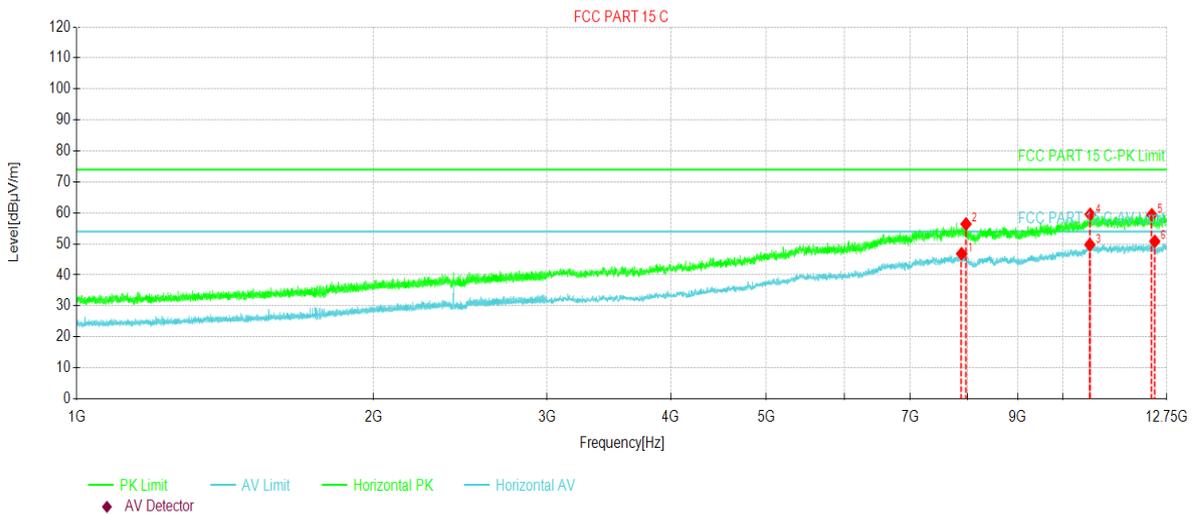


Suspected Data List										
NO	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7944.4	55.38	56.34	0.96	74.00	17.66	79	158	PK	Vertical
2	7977.3	45.57	46.49	0.92	54.00	7.51	92	150	AV	Vertical
3	10652.	43.57	50.68	7.11	54.00	3.32	215	143	AV	Vertical
4	10782.	52.83	59.99	7.16	74.00	14.01	239	136	PK	Vertical
5	12333.	42.54	50.37	7.83	54.00	3.63	305	159	AV	Vertical
6	12385.	51.38	59.22	7.84	74.00	14.78	314	165	PK	Vertical

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

<b>Product Name:</b>	Smart Phone	<b>Product Model:</b>	B110DL
<b>Test By:</b>	Mike	<b>Test mode:</b>	802.11n20 High CH
<b>Test Frequency:</b>	1 GHz ~ 25 GHz	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	DC 3.8V	<b>Environment:</b>	Temp: 21.2°C Huni: 52%



Suspected Data List											
NO	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity	
1	7893.2	45.83	46.84	1.01	54.00	7.16	59	132	AV	Horizontal	
2	7976.1	55.48	56.41	0.93	74.00	17.59	83	129	PK	Horizontal	
3	10650.	42.66	49.76	7.10	54.00	4.24	194	144	AV	Horizontal	
4	10658.	52.41	59.54	7.13	74.00	14.46	208	140	PK	Horizontal	
5	12307.	51.54	59.37	7.83	74.00	14.63	324	156	PK	Horizontal	
6	12394.	42.95	50.79	7.84	54.00	3.21	308	151	AV	Horizontal	

**Remark:**

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Pre-amplifier Factor).
- The emission levels of above 12.75GHz are lower than the limit 20dB and not show in test report.

## 7 Appendix

The below Appendix was detail result tested by SGS-CSTC Standards Technical Services, Co., Ltd.Shenzhen Branch.

( Date of Test: 2019/10/17-2019/10/31).

Appendix	Item
Appendix - 2.4G WIFI	2.4G WIFI