

FCC REPORT

(WIFI)

Applicant: Unimax communications

Address of Applicant: 18201 McDurmott St. West Suite E, Irvine, CA 92614.

Equipment Under Test (EUT)

Product Name: Smartphone

Model No.: U683CL

Trade mark: UMX

FCC ID: P46-U683CL

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 ¹
Conducted Peak Output Power	15.247 (b)(3)	Pass ²
6dB Emission Bandwidth 99% Occupied Bandwidth	15.247 (a)(2)	Pass ¹
Power Spectral Density	15.247 (e)	Pass ¹
Band Edge	15.247 (d)	Pass ¹
Emissions in Restricted Frequency Bands	15.205 & 15.209	Pass ²
Conducted Spurious Emission	15.247 (d)	Pass ¹
Radiated Spurious Emission	15.205 & 15.209	Pass ²
Remark:		
1. Pass ¹ : Items data are refer from the original report issued by SGS-CSTC Standards Technical Services, Co., Ltd.Shenzhen Branch.(Date of Test: 2019/1/10-2019/1/24).The detailed data refer to Appendix - 2.4GWIFI.		
2. Pass ² : These items are tested by JianYan Testing Group Shenzhen Co., Ltd.		
3. 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.		
4. The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by the customer).		
Test Method:	ANSI C63.10-2013 KDB 558074 D01 15.247 Meas Guidance v05r02	

5 General Information

5.1 Client Information

Applicant:	Unimax communications
Address:	18201 McDurmott St. West Suite E, Irvine, CA 92614.
Manufacturer/ Factory:	Unimax communications
Address:	18201 McDurmott St. West Suite E, Irvine, CA 92614.

5.2 General Description of E.U.T.

Product Name:	Smartphone
Model No.:	U683CL
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:	1.2 dBi
Power supply:	Rechargeable Li-ion Battery DC3.85V, 2000mAh
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:	21.1 °C
Humidity:	45 % RH
Atmospheric Pressure:	1010 mbar
Test mode:	
Transmitting mode	Keep the EUT in continuous transmitting with modulation
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 & 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:	
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
Band Reject Filter Group	Tonscend	JS0806	21B8060367	04-06-2021	04-05-2022
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
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:

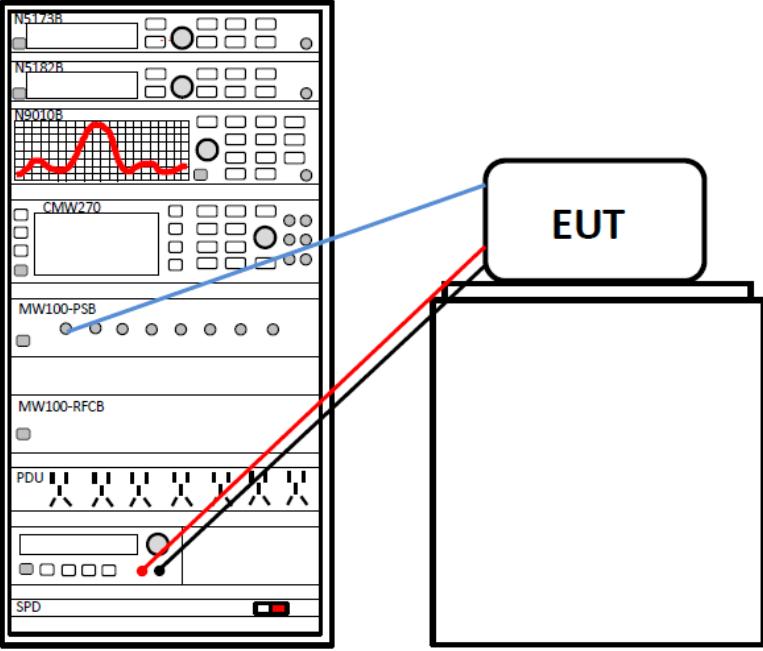
Standard requirement:	FCC Part 15 C Section 15.203 /247(b)
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique 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.	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.
E.U.T Antenna:	The Wi-Fi antenna is an Integrated antenna which cannot replace by end-user, the best-case gain of the antenna is 1.2 dBi.

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:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

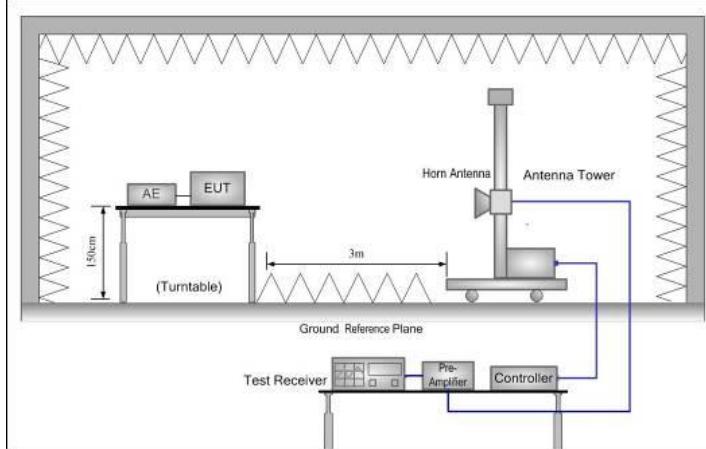
Measurement Data:

Mode	Test Channel	The Original Reports Level [dBm]	Re-Test Reports Level [dBm]	Power level
802.11B	Lowest	19.80	19.341	18
	Middle	19.94	19.395	17
	Highest	20.27	20.186	18
802.11G	Lowest	21.46	21.516	17
	Middle	21.43	21.765	17
	Highest	21.74	21.696	17
802.11N20	Lowest	20.53	20.531	17
	Middle	20.66	20.767	17
	Highest	20.83	20.613	17

Remark:

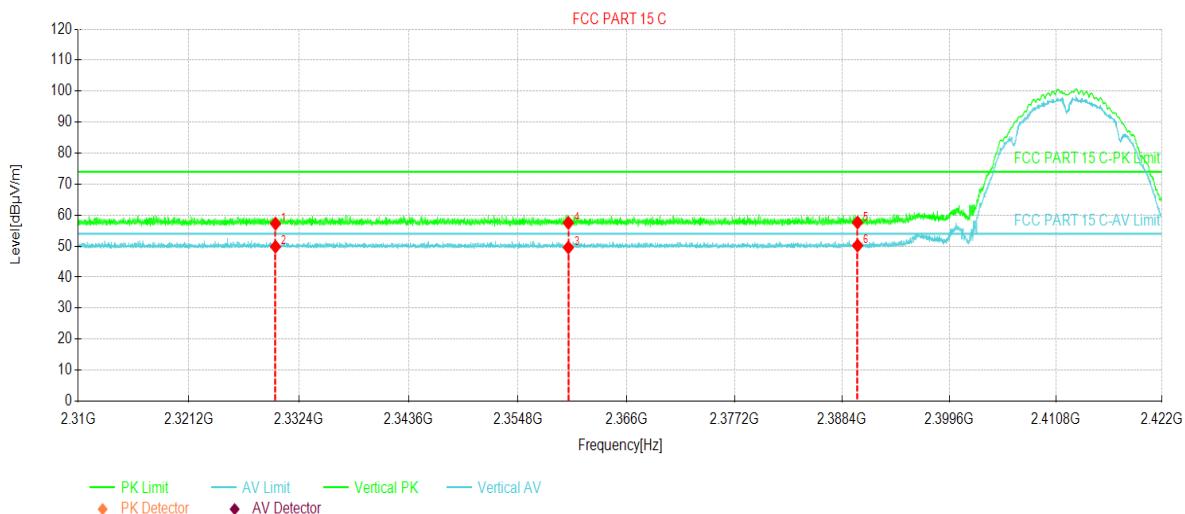
	The Original Reports	Re-Test Reports
File name:	test report 2.4G WLAN	Test Report 2.4G WIFI rev1
Test location:	SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch	JianYan Testing Group Shenzhen Co., Ltd.
The output power is re-test at JianYan Testing Group Shenzhen Co., Ltd.		

6.3 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"> 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. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 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. 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. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 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 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:

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11b Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 °C Huni: 45%

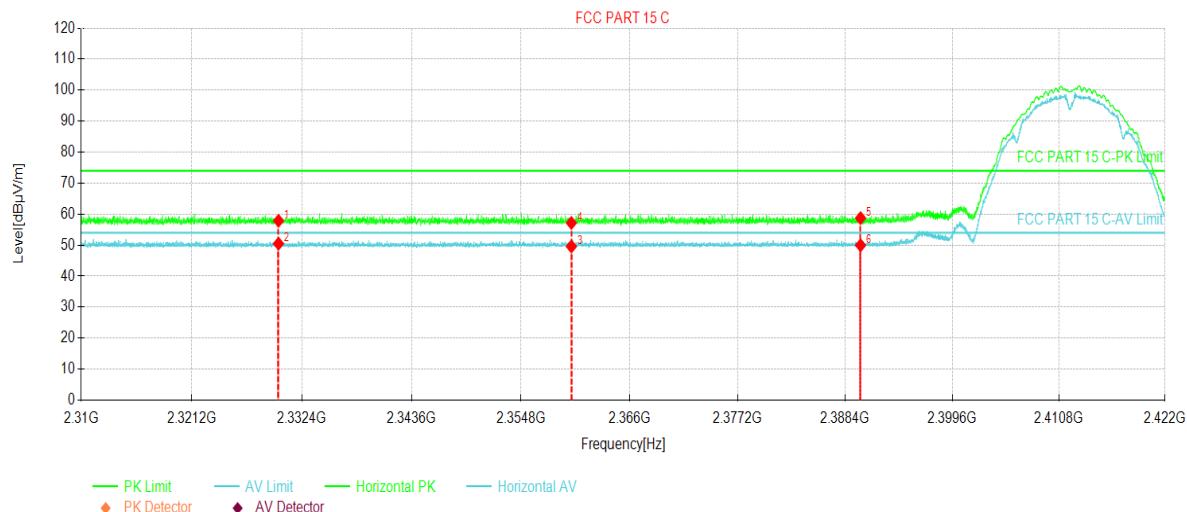


NO	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2330.0	21.86	57.27	35.41	74.00	16.73	251	154	PK	Vertical
2	2330.0	14.41	49.82	35.41	54.00	4.18	107	134	AV	Vertical
3	2360.0	13.93	49.56	35.63	54.00	4.44	341	130	AV	Vertical
4	2360.0	21.88	57.51	35.63	74.00	16.49	28	150	PK	Vertical
5	2390.0	21.78	57.62	35.84	74.00	16.38	94	166	PK	Vertical
6	2390.0	14.35	50.19	35.84	54.00	3.81	264	157	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.

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11b Tx mode
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1°C Huni: 45%

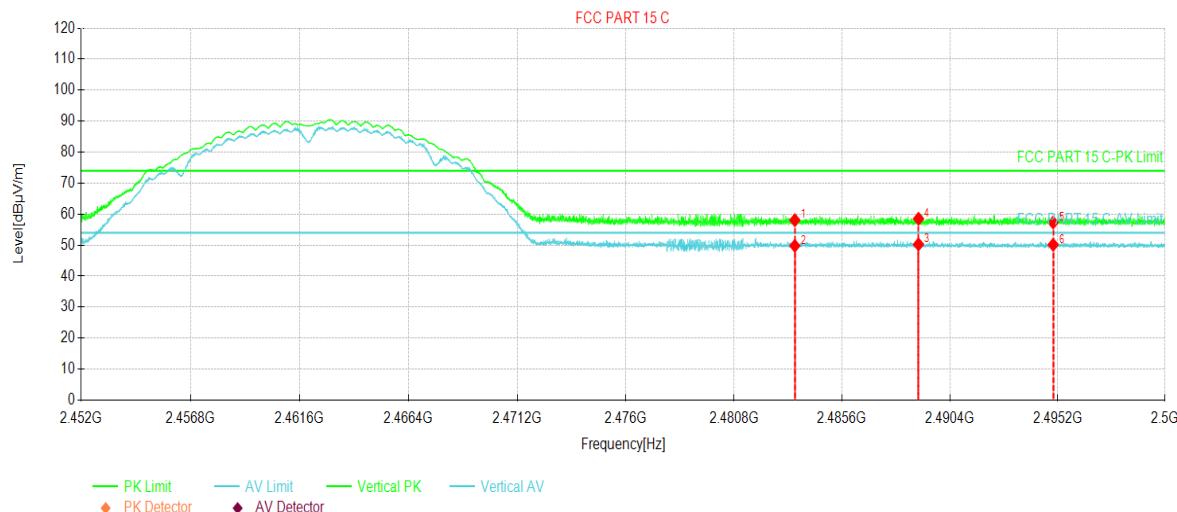


NO	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2330.0	22.45	57.86	35.41	74.00	16.14	236	166	PK	Horizontal
2	2330.0	15.07	50.48	35.41	54.00	3.52	127	154	AV	Horizontal
3	2360.0	13.95	49.58	35.63	54.00	4.42	301	130	AV	Horizontal
4	2360.0	21.54	57.17	35.63	74.00	16.83	57	150	PK	Horizontal
5	2390.0	22.88	58.72	35.84	74.00	15.28	259	144	PK	Horizontal
6	2390.0	14.10	49.94	35.84	54.00	4.06	110	159	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.

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11b Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1°C Huni: 45%

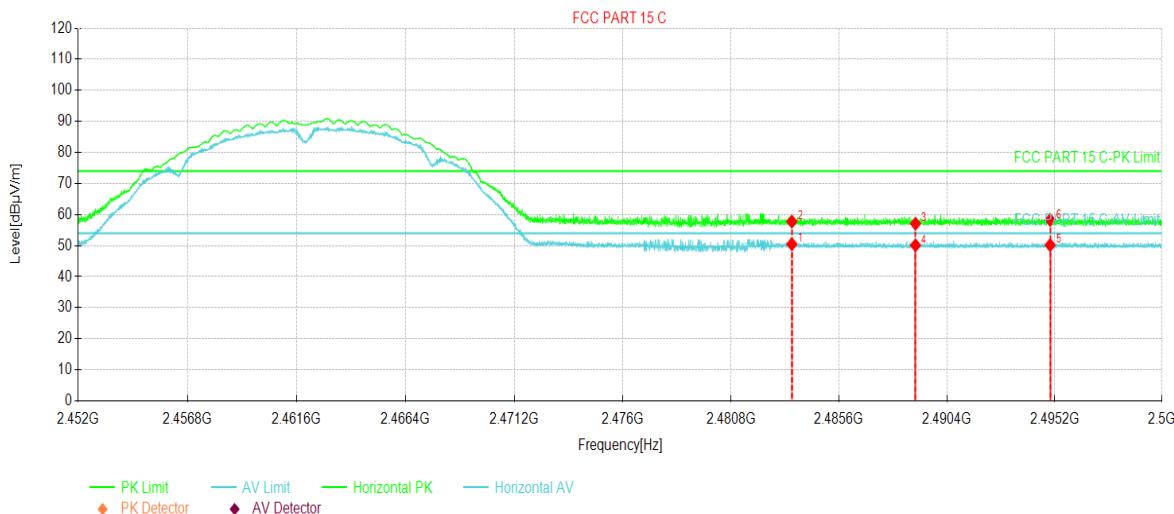


NO	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2483.5	22.34	58.06	35.72	74.00	15.94	154	156	PK	Vertical
2	2483.5	14.07	49.79	35.72	54.00	4.21	207	154	AV	Vertical
3	2489.0	14.54	50.25	35.71	54.00	3.75	167	149	AV	Vertical
4	2489.0	22.79	58.50	35.71	74.00	15.50	187	134	PK	Vertical
5	2495.0	21.62	57.31	35.69	74.00	16.69	317	151	PK	Vertical
6	2495.0	14.44	50.13	35.69	54.00	3.87	49	168	AV	Vertical

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.

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11b Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1°C Huni: 45%



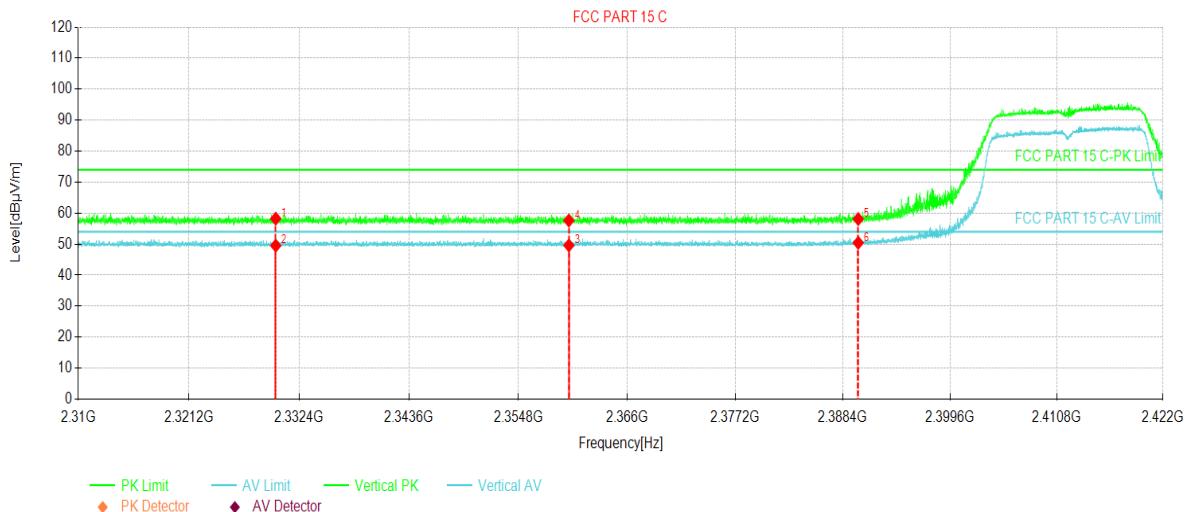
NO	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2483.5	14.77	50.49	35.72	54.00	3.51	349	145	AV	Horizontal
2	2483.5	22.02	57.74	35.72	74.00	16.26	18	134	PK	Horizontal
3	2489.0	21.36	57.07	35.71	74.00	16.93	310	159	PK	Horizontal
4	2489.0	14.39	50.10	35.71	54.00	3.90	51	165	AV	Horizontal
5	2495.0	14.49	50.18	35.69	54.00	3.82	49	148	AV	Horizontal
6	2495.0	22.58	58.27	35.69	74.00	15.73	325	137	PK	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.

802.11g mode:

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11g Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 °C Huni: 45%

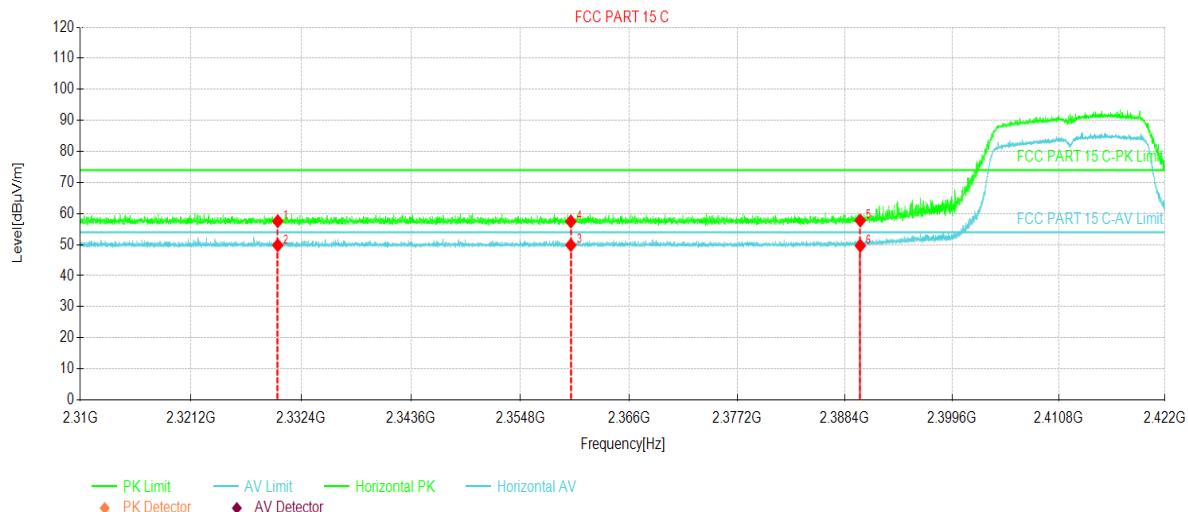


NO	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2330.0	22.83	58.24	35.41	74.00	15.76	120	150	PK	Vertical
2	2330.0	14.11	49.52	35.41	54.00	4.48	239	161	AV	Vertical
3	2360.0	13.98	49.61	35.63	54.00	4.39	340	147	AV	Vertical
4	2360.0	21.99	57.62	35.63	74.00	16.38	17	159	PK	Vertical
5	2390.0	22.26	58.10	35.84	74.00	15.90	34	141	PK	Vertical
6	2390.0	14.60	50.44	35.84	54.00	3.56	326	163	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.

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11g Tx mode
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1°C Huni: 45%

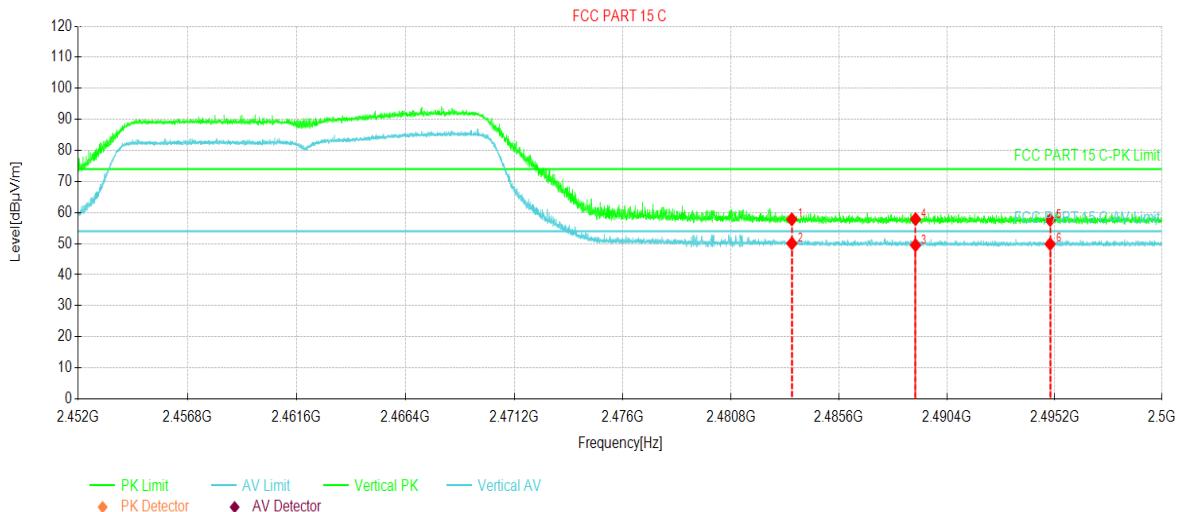


NO	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2330.0	22.13	57.54	35.41	74.00	16.46	115	133	PK	Horizontal
2	2330.0	14.38	49.79	35.41	54.00	4.21	243	154	AV	Horizontal
3	2360.0	14.20	49.83	35.63	54.00	4.17	317	161	AV	Horizontal
4	2360.0	21.83	57.46	35.63	74.00	16.54	51	144	PK	Horizontal
5	2390.0	21.91	57.75	35.84	74.00	16.25	37	159	PK	Horizontal
6	2390.0	13.81	49.65	35.84	54.00	4.35	328	137	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.

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11g Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1°C Huni: 45%

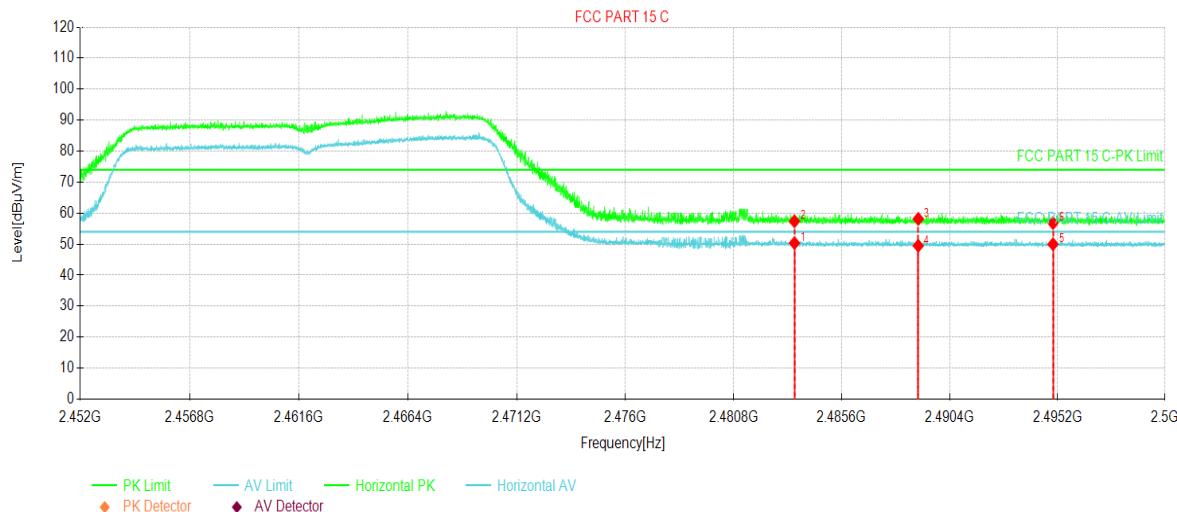


NO	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2483.5	22.11	57.83	35.72	74.00	16.17	71	131	PK	Vertical
2	2483.5	14.33	50.05	35.72	54.00	3.95	286	152	AV	Vertical
3	2489.0	13.78	49.49	35.71	54.00	4.51	318	140	AV	Vertical
4	2489.0	22.16	57.87	35.71	74.00	16.13	51	167	PK	Vertical
5	2495.0	21.90	57.59	35.69	74.00	16.41	44	159	PK	Vertical
6	2495.0	14.16	49.85	35.69	54.00	4.15	321	148	AV	Vertical

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.

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11g Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1°C Huni: 45%



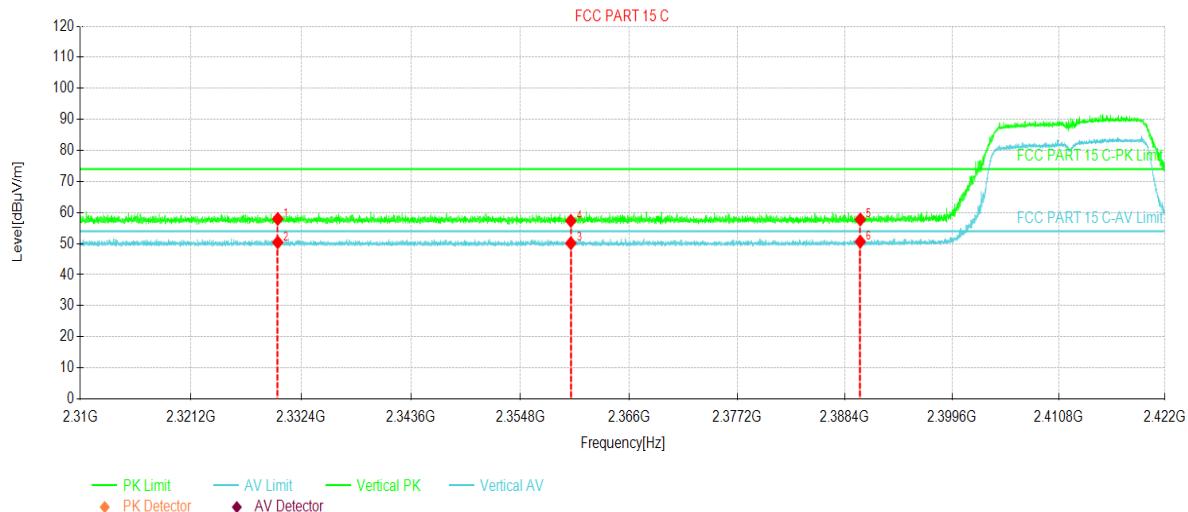
NO	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2483.5	14.63	50.35	35.72	54.00	3.65	111	161	AV	Horizontal
2	2483.5	21.67	57.39	35.72	74.00	16.61	247	154	PK	Horizontal
3	2489.0	22.45	58.16	35.71	74.00	15.84	347	146	PK	Horizontal
4	2489.0	13.76	49.47	35.71	54.00	4.53	15	137	AV	Horizontal
5	2495.0	14.30	49.99	35.69	54.00	4.01	314	159	AV	Horizontal
6	2495.0	21.11	56.80	35.69	74.00	17.20	52	142	PK	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.

802.11n(HT20):

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11n(HT20) Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 °C Huni: 45%

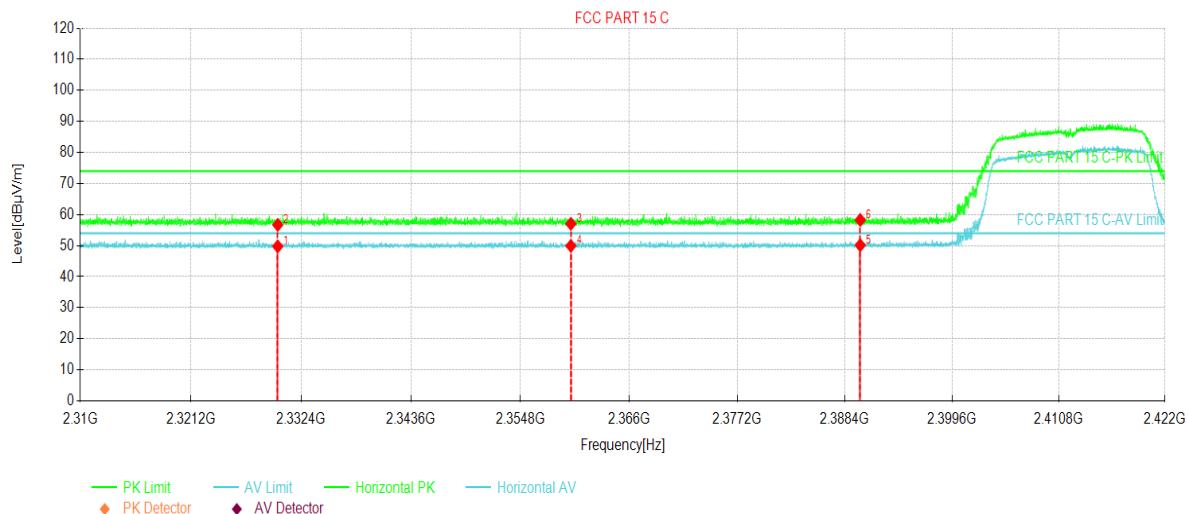


NO	Freq. [MHz]	Reading [dB _u V/m]	Level [dB _u V/m]	Factor [dB]	Limit [dB _u V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2330.0	22.54	57.95	35.41	74.00	16.05	61	135	PK	Vertical
2	2330.0	15.00	50.41	35.41	54.00	3.59	289	140	AV	Vertical
3	2360.0	14.51	50.14	35.63	54.00	3.86	76	162	AV	Vertical
4	2360.0	21.71	57.34	35.63	74.00	16.66	278	158	PK	Vertical
5	2390.0	21.92	57.76	35.84	74.00	16.24	89	149	PK	Vertical
6	2390.0	14.78	50.62	35.84	54.00	3.38	264	154	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.

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11n(HT20) Tx mode
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 °C Huni: 45%

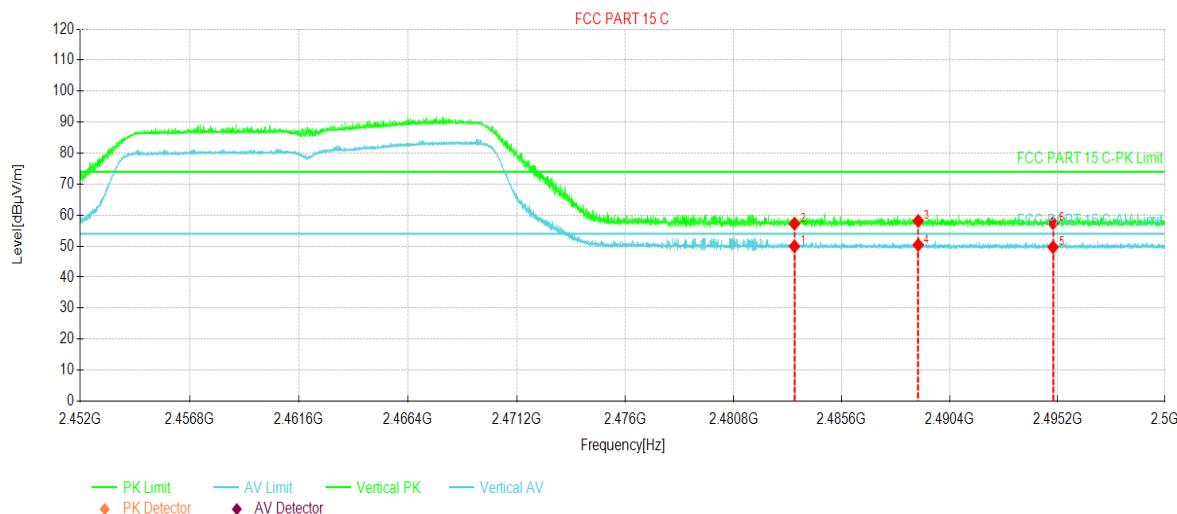


NO	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2330.0	14.34	49.75	35.41	54.00	4.25	223	143	AV	Horizontal
2	2330.0	21.28	56.69	35.41	74.00	17.31	137	156	PK	Horizontal
3	2360.0	21.38	57.01	35.63	74.00	16.99	259	149	PK	Horizontal
4	2360.0	14.29	49.92	35.63	54.00	4.08	107	134	AV	Horizontal
5	2390.0	14.29	50.13	35.84	54.00	3.87	317	156	AV	Horizontal
6	2390.0	22.42	58.26	35.84	74.00	15.74	49	160	PK	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.

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11n(HT20) Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1°C Huni: 45%

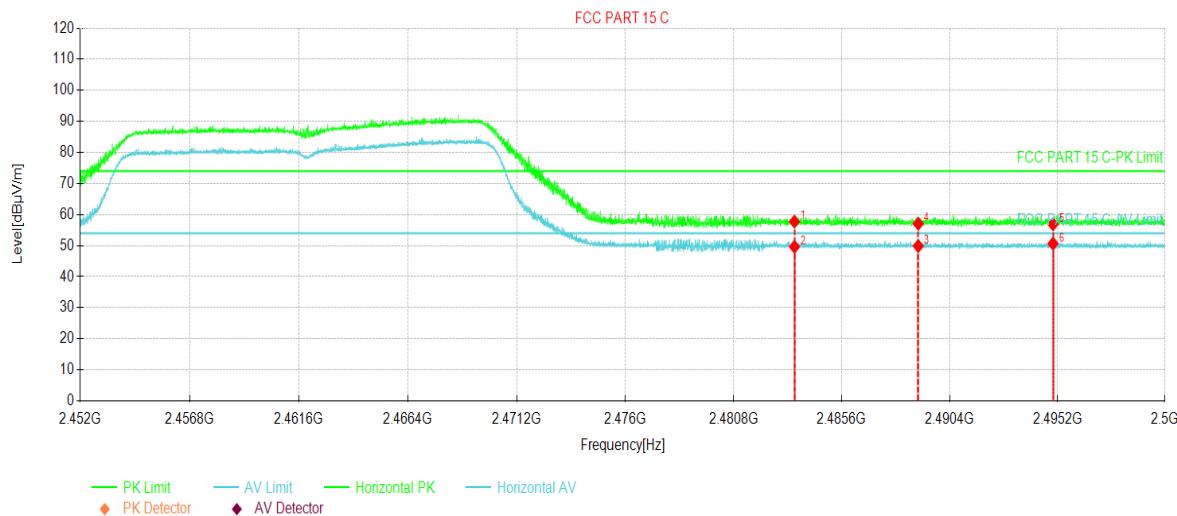


NO	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2483.5	14.21	49.93	35.72	54.00	4.07	216	154	AV	Vertical
2	2483.5	21.51	57.23	35.72	74.00	16.77	142	167	PK	Vertical
3	2489.0	22.43	58.14	35.71	74.00	15.86	312	137	PK	Vertical
4	2489.0	14.69	50.40	35.71	54.00	3.60	54	149	AV	Vertical
5	2495.0	13.97	49.66	35.69	54.00	4.34	267	131	AV	Vertical
6	2495.0	21.74	57.43	35.69	74.00	16.57	99	141	PK	Vertical

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.

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11n(HT20) Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1°C Huni: 45%



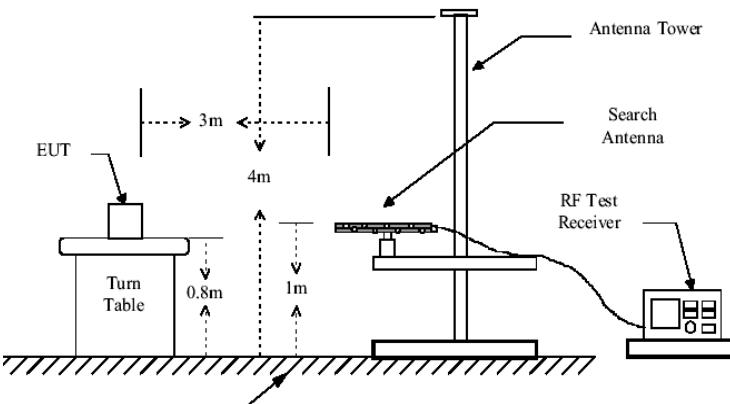
NO	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	2483.5	22.01	57.73	35.72	74.00	16.27	161	156	PK	Horizontal
2	2483.5	13.91	49.63	35.72	54.00	4.37	201	149	AV	Horizontal
3	2489.0	14.16	49.87	35.71	54.00	4.13	189	158	AV	Horizontal
4	2489.0	21.34	57.05	35.71	74.00	16.95	285	134	PK	Horizontal
5	2495.0	21.19	56.88	35.69	74.00	17.12	334	141	PK	Horizontal
6	2495.0	14.96	50.65	35.69	54.00	3.35	57	161	AV	Horizontal

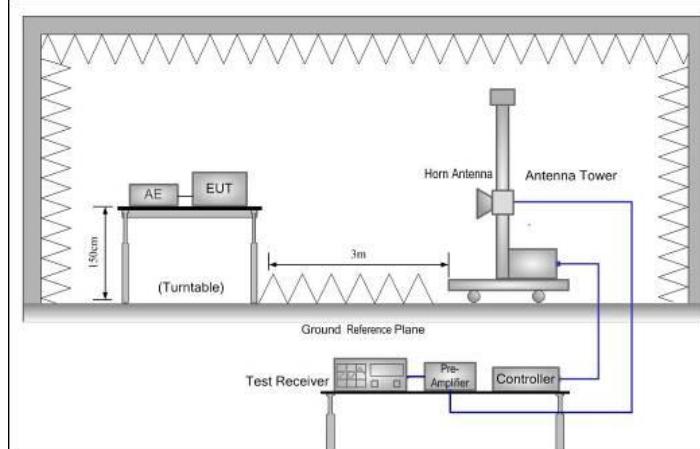
Remark:

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.

6.4 Spurious Emission

6.4.1 Radiated Emission Method

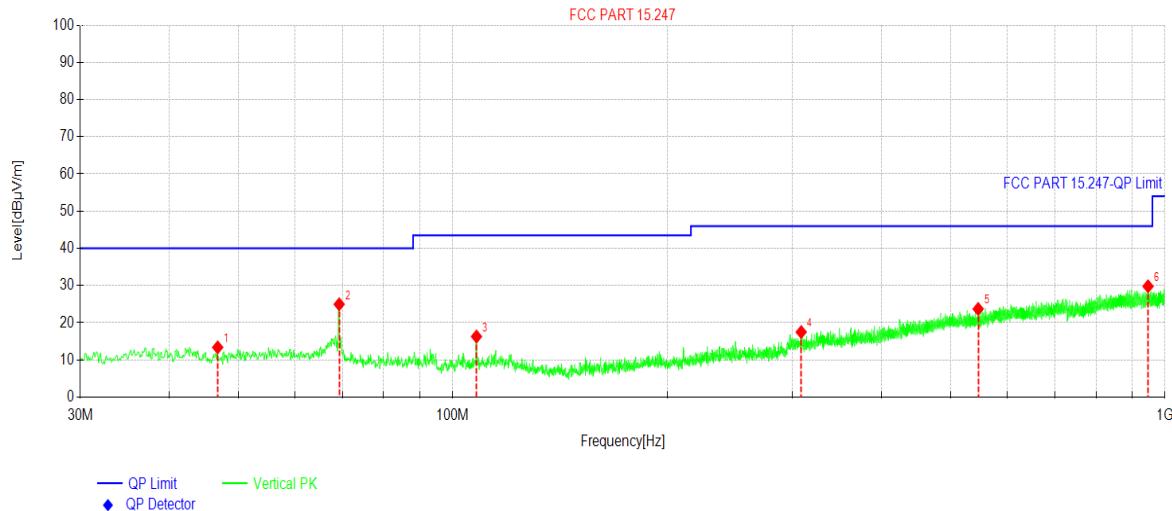
Test Requirement:	FCC Part 15 C Section 15.209 and 15.205								
Test Frequency Range:	9kHz to 25GHz								
Test Distance:	3m								
Receiver setup:	Frequency	Detector	RBW	VBW	Remark				
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value				
	Above 1GHz	Peak	1MHz	3MHz	Peak Value				
Limit:	Frequency	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"> 1. 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. 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 rota 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 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">1. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case.2. 9 kHz to 30MHz is lower than the limit 20dB, so only shows the data of above 30MHz in this report.

Measurement Data (worst case):**Below 1GHz:**

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	Wi-Fi Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1°C Huni: 45%

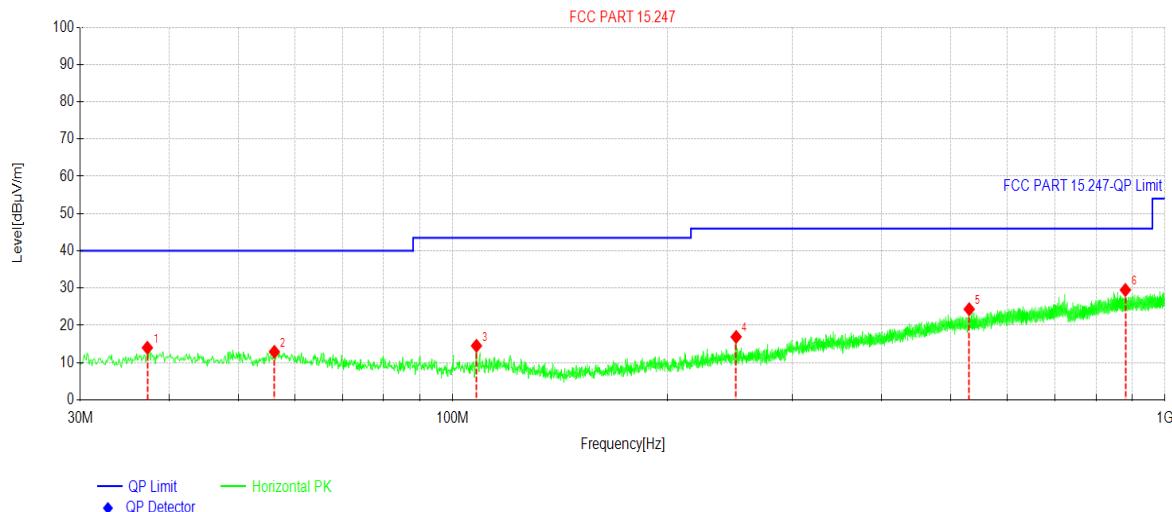


NO.	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	46.7827	28.30	13.38	-14.92	40.00	26.62	359	103	PK	Vertical
2	69.2889	41.71	24.96	-16.75	40.00	15.04	35	127	PK	Vertical
3	107.995	32.23	16.29	-15.94	43.50	27.21	127	105	PK	Vertical
4	308.514	29.97	17.50	-12.47	46.00	28.50	340	122	PK	Vertical
5	546.673	30.57	23.71	-6.86	46.00	22.29	128	115	PK	Vertical
6	946.741	30.86	29.80	-1.06	46.00	16.20	190	110	PK	Vertical

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	Wi-Fi Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1°C Huni: 45%



NO.	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	37.2757	28.75	13.99	-14.76	40.00	26.01	167	100	PK	Horizontal
2	56.1926	27.61	12.90	-14.71	40.00	27.10	38	120	PK	Horizontal
3	107.995	30.46	14.52	-15.94	43.50	28.98	150	105	PK	Horizontal
4	250.018	30.70	16.91	-13.79	46.00	29.09	49	115	PK	Horizontal
5	531.055	31.19	24.33	-6.86	46.00	21.67	346	126	PK	Horizontal
6	879.902	31.01	29.50	-1.51	46.00	16.50	357	111	PK	Horizontal

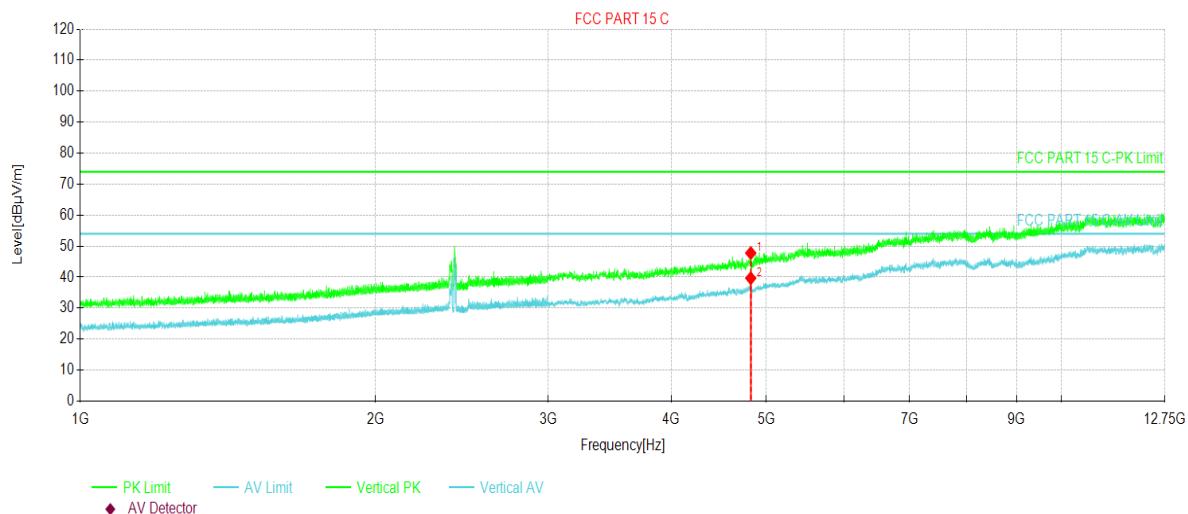
Remark:

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.

Above 1GHz

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11b Low CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Vertical
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

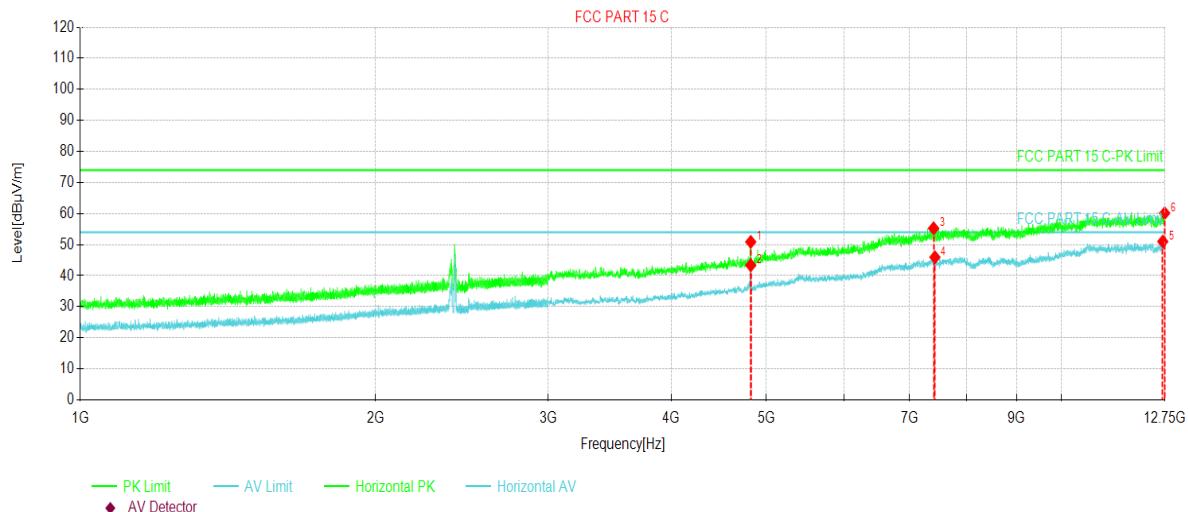


NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	4823.25	57.22	47.75	-9.47	74.00	26.25	302	132	PK	Vertical
2	4823.25	49.12	39.65	-9.47	54.00	14.35	295	140	AV	Vertical
3	7408.21	45.84	46.09	0.25	54.00	7.91	103	146	AV	Vertical
4	7409.43	54.87	55.11	0.24	74.00	18.89	97	149	PK	Vertical
5	10800.0	52.60	59.74	7.14	74.00	14.26	263	156	PK	Vertical
6	10835.3	42.80	50.00	7.20	54.00	4.00	251	160	AV	Vertical

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11b Low CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

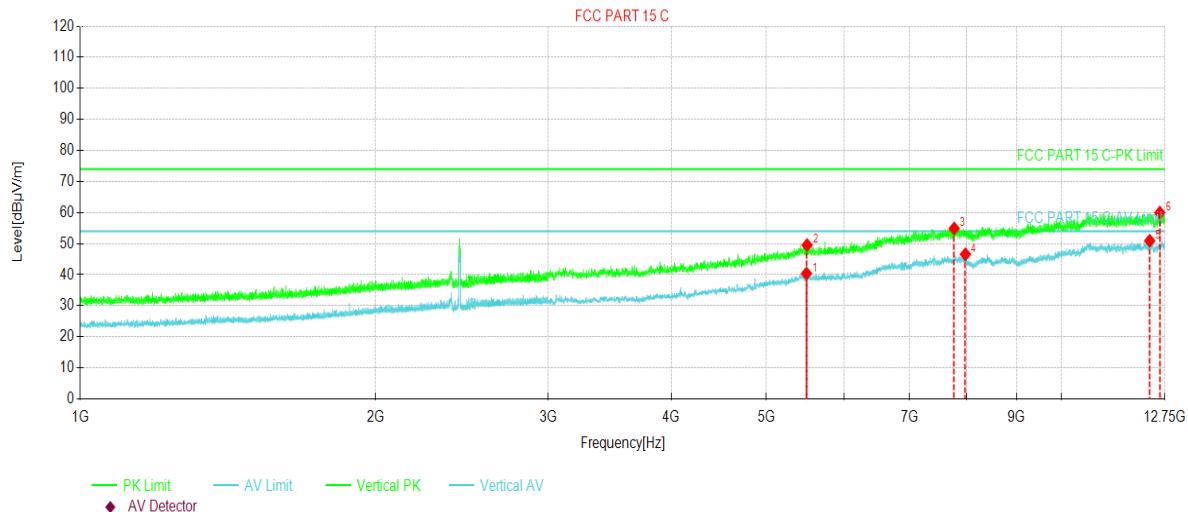


NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	4823.25	60.35	50.88	-9.47	74.00	23.12	23	143	PK	Horizontal
2	4823.25	52.81	43.34	-9.47	54.00	10.66	35	151	AV	Horizontal
3	7408.21	55.00	55.25	0.25	74.00	18.75	176	132	PK	Horizontal
4	7431.37	45.75	45.94	0.19	54.00	8.06	181	137	AV	Horizontal
5	12684.1	42.67	51.00	8.33	54.00	3.00	205	155	AV	Horizontal
6	12740.2	51.72	60.14	8.42	74.00	13.86	232	161	PK	Horizontal

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11b Mid CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Vertical
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

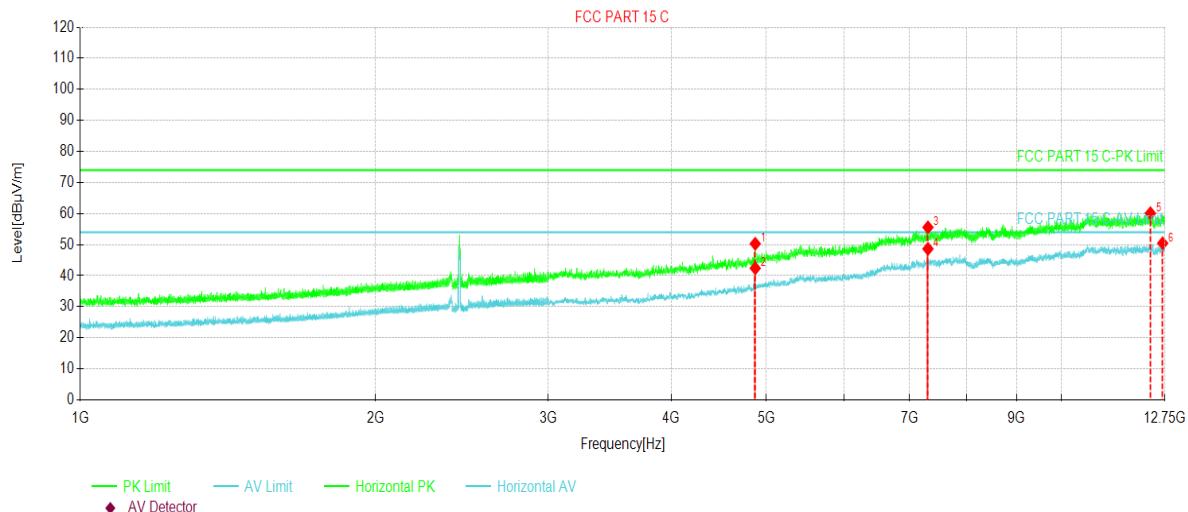


NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	5497.21	46.56	40.38	-6.18	54.00	13.62	123	143	AV	Vertical
2	5504.53	55.71	49.53	-6.18	74.00	24.47	108	138	PK	Vertical
3	7773.84	53.97	54.87	0.90	74.00	19.13	264	151	PK	Vertical
4	7981.03	45.65	46.57	0.92	54.00	7.43	238	156	AV	Vertical
5	12300.2	43.09	50.92	7.83	54.00	3.08	311	161	AV	Vertical
6	12595.2	51.97	59.96	7.99	74.00	14.04	329	170	PK	Vertical

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11b Mid CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

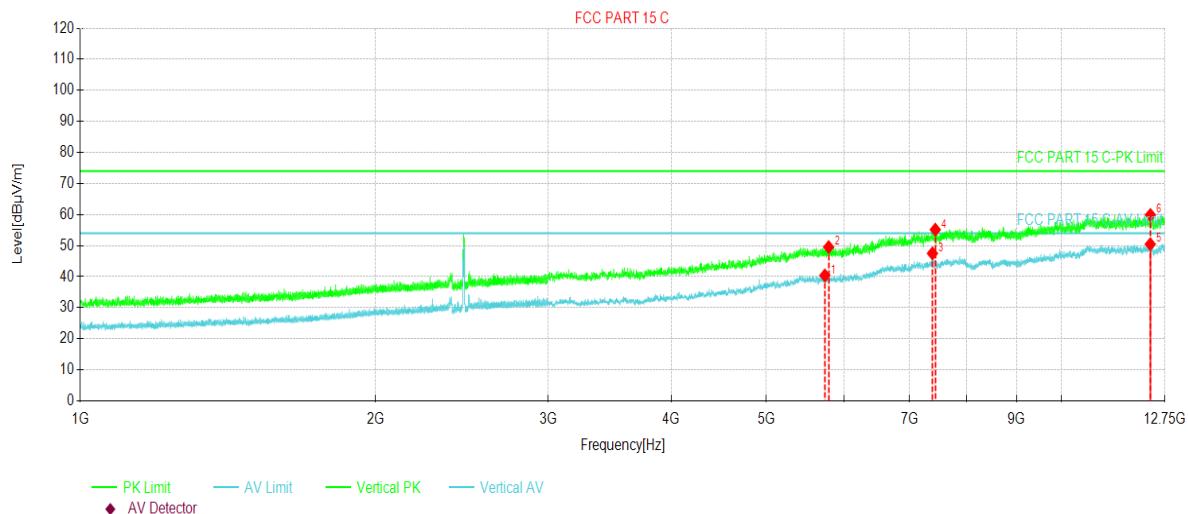


NO.	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	4874.43	59.39	50.28	-9.11	74.00	23.72	174	143	PK	Horizontal
2	4874.43	51.50	42.39	-9.11	54.00	11.61	180	151	AV	Horizontal
3	7310.71	55.64	55.57	-0.07	74.00	18.43	10	131	PK	Horizontal
4	7310.71	48.72	48.65	-0.07	54.00	5.35	356	136	AV	Horizontal
5	12321.0	52.27	60.10	7.83	74.00	13.90	219	148	PK	Horizontal
6	12681.7	42.11	50.43	8.32	54.00	3.57	228	159	AV	Horizontal

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11b High CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Vertical
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

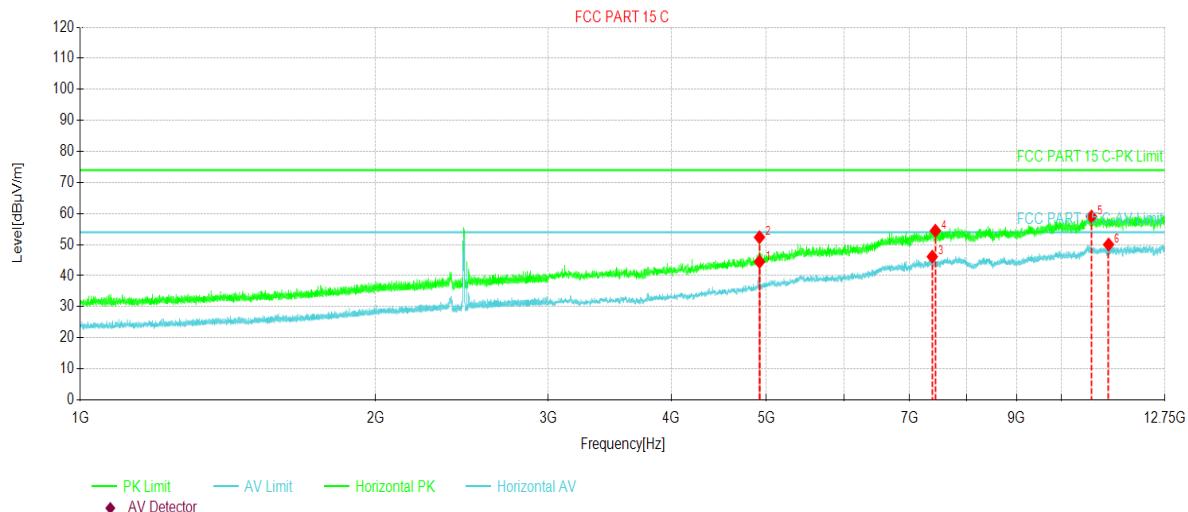


NO.	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	5739.75	45.87	40.39	-5.48	54.00	13.61	9	134	AV	Vertical
2	5790.93	54.76	49.53	-5.23	74.00	24.47	351	137	PK	Vertical
3	7387.50	47.29	47.51	0.22	54.00	6.49	116	142	AV	Vertical
4	7437.46	54.98	55.15	0.17	74.00	18.85	125	149	PK	Vertical
5	12317.3	42.63	50.46	7.83	54.00	3.54	204	156	AV	Vertical
6	12319.7	52.04	59.87	7.83	74.00	14.13	194	162	PK	Vertical

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11b High CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

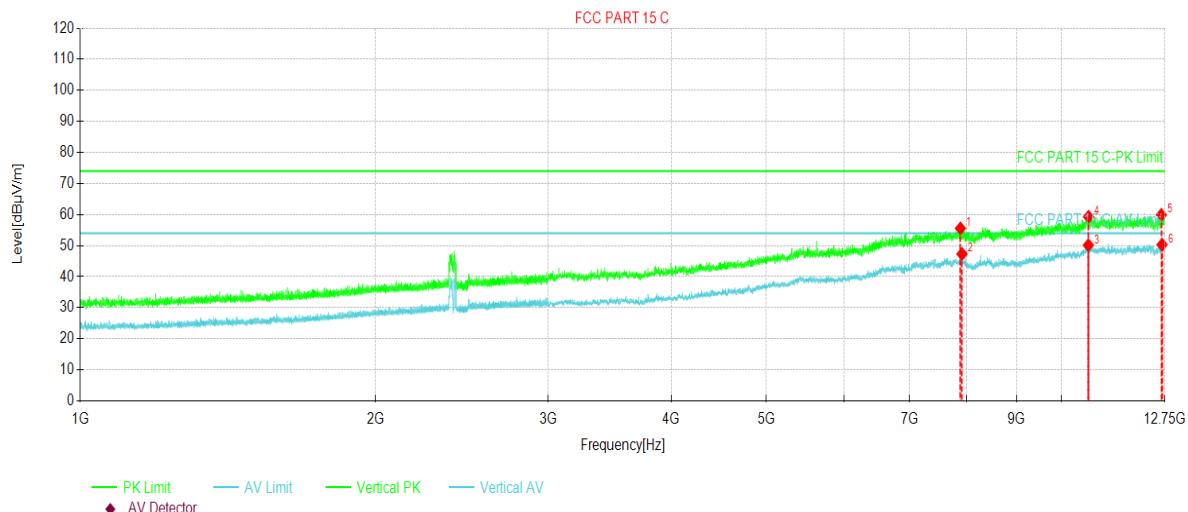


NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	4923.18	53.21	44.46	-8.75	54.00	9.54	236	134	AV	Horizontal
2	4923.18	61.11	52.36	-8.75	74.00	21.64	211	128	PK	Horizontal
3	7385.06	45.90	46.11	0.21	54.00	7.89	36	151	AV	Horizontal
4	7438.68	54.29	44.46	0.17	74.00	19.54	50	157	PK	Horizontal
5	10731.7	51.80	59.02	7.22	74.00	14.98	310	142	PK	Horizontal
6	11169.2	42.71	50.02	7.31	54.00	3.98	302	148	AV	Horizontal

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11g Low CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Vertical
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

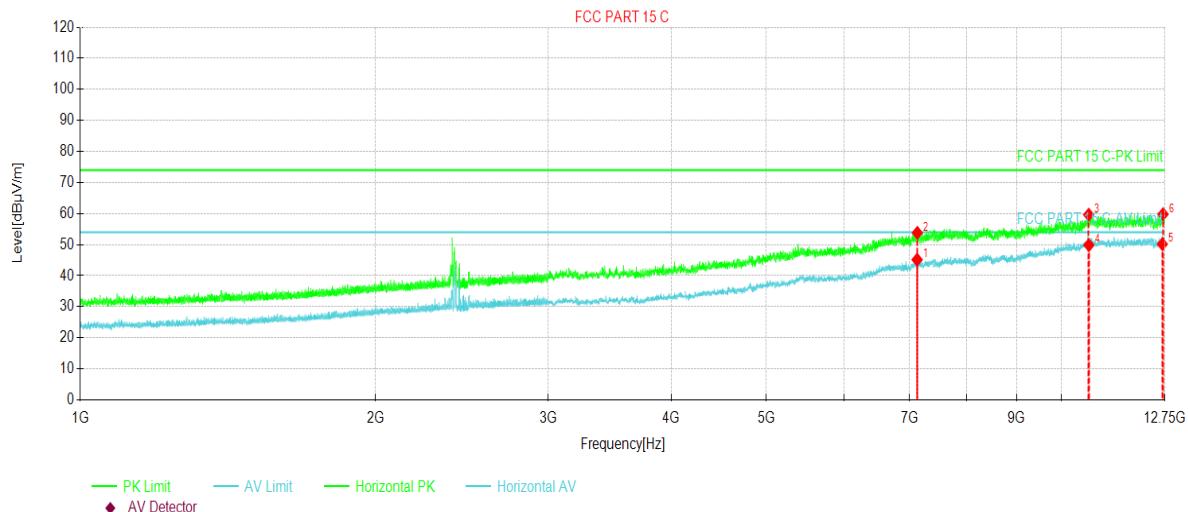


NO	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7889.62	54.53	55.54	1.01	74.00	18.46	266	131	PK	Vertical
2	7918.87	46.32	47.31	0.99	54.00	6.69	234	145	AV	Vertical
3	10650.0	43.03	50.13	7.10	54.00	3.87	36	152	AV	Vertical
4	10654.9	52.15	59.27	7.12	74.00	14.73	51	161	PK	Vertical
5	12641.5	51.72	59.91	8.19	74.00	14.09	102	157	PK	Vertical
6	12663.4	42.05	50.31	8.26	54.00	3.69	97	151	AV	Vertical

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11g Low CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

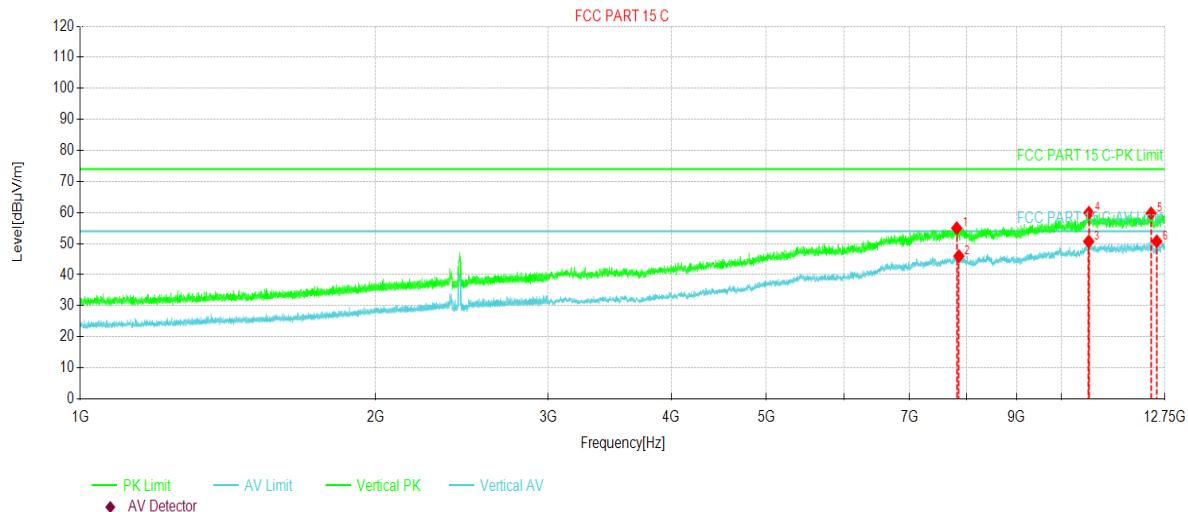


NO.	Freq. [MHz]	Reading [dBuV/m]	Level [dBuV/m]	Factor [dB]	Limit [dBuV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7126.68	45.24	45.15	-0.09	54.00	8.85	67	152	AV	Horizontal
2	7130.34	53.88	53.80	-0.08	74.00	20.20	82	149	PK	Horizontal
3	10659.8	52.50	59.63	7.13	74.00	14.37	209	143	PK	Horizontal
4	10664.7	42.70	49.85	7.15	54.00	4.15	233	136	AV	Horizontal
5	12670.7	41.88	50.16	8.28	54.00	3.84	314	157	AV	Horizontal
6	12693.9	51.44	59.80	8.36	74.00	14.20	329	163	PK	Horizontal

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11g Mid CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Vertical
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

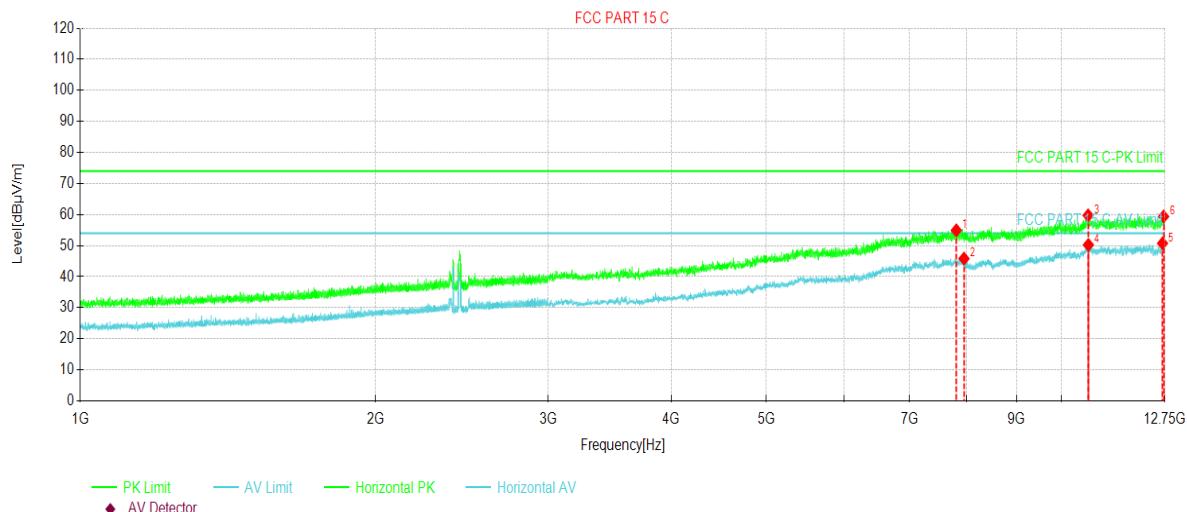


NO .	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7821.37	53.94	54.96	1.02	74.00	19.04	265	141	PK	Vertical
2	7860.37	44.97	45.98	1.01	54.00	8.02	271	148	AV	Vertical
3	10659.8	43.57	50.70	7.13	54.00	3.30	36	152	AV	Vertical
4	10664.7	52.78	59.93	7.15	74.00	14.07	21	156	PK	Vertical
5	12340.5	51.90	59.73	7.83	74.00	14.27	195	161	PK	Vertical
6	12505.0	43.91	50.73	6.82	54.00	3.27	201	169	AV	Vertical

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11g Mid CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

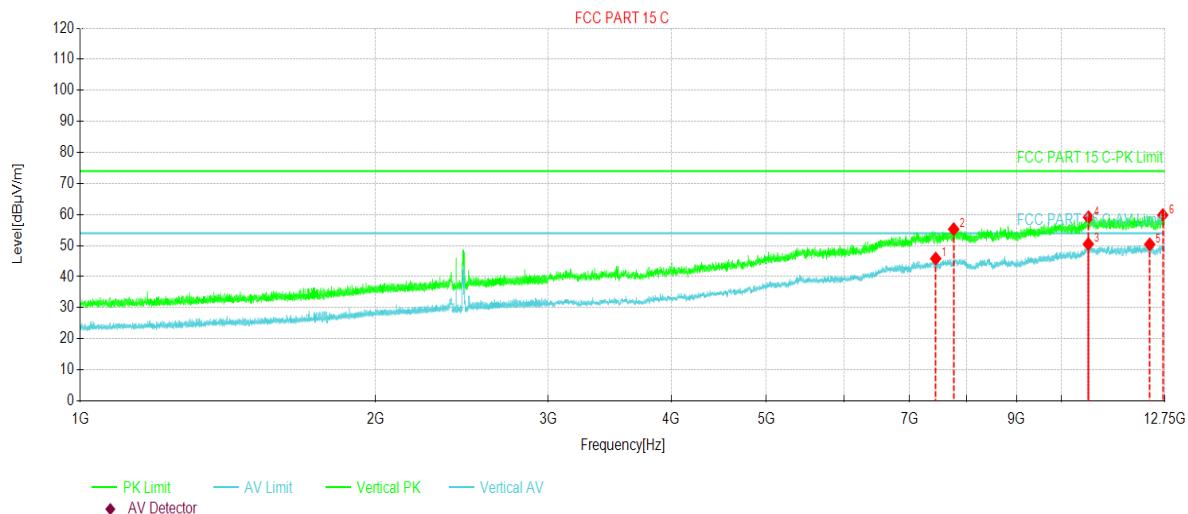


NO.	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7812.84	53.91	54.93	1.02	74.00	19.07	177	151	PK	Horizontal
2	7955.43	44.88	45.83	0.95	54.00	8.17	189	147	AV	Horizontal
3	10645.2	52.67	59.75	7.08	74.00	14.25	219	132	PK	Horizontal
4	10651.3	43.13	50.23	7.10	54.00	3.77	201	138	AV	Horizontal
5	12676.8	42.45	50.75	8.30	54.00	3.25	329	156	AV	Horizontal
6	12708.5	50.99	59.38	8.39	74.00	14.62	314	158	PK	Horizontal

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11g High CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Vertical
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

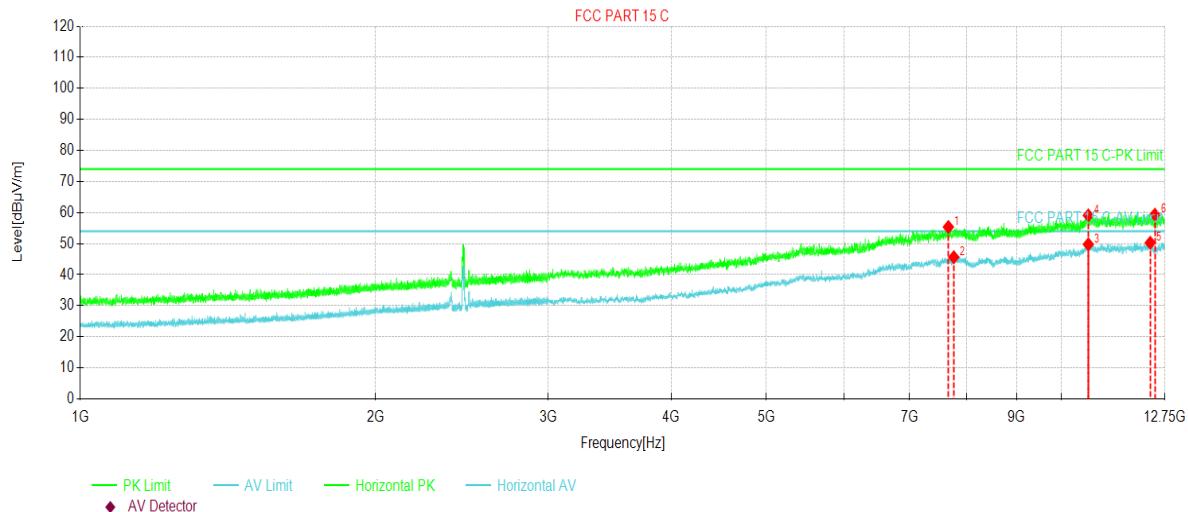


NO.	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7444.78	45.67	45.82	0.15	54.00	8.18	311	145	AV	Vertical
2	7765.31	54.44	55.30	0.86	74.00	18.70	297	157	PK	Vertical
3	10650.0	43.40	50.50	7.10	54.00	3.50	12	133	AV	Vertical
4	10654.9	52.01	59.13	7.12	74.00	14.87	29	139	PK	Vertical
5	12301.5	42.56	50.39	7.83	54.00	3.61	169	158	AV	Vertical
6	12685.4	51.52	59.85	8.33	74.00	14.15	180	167	PK	Vertical

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11g High CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

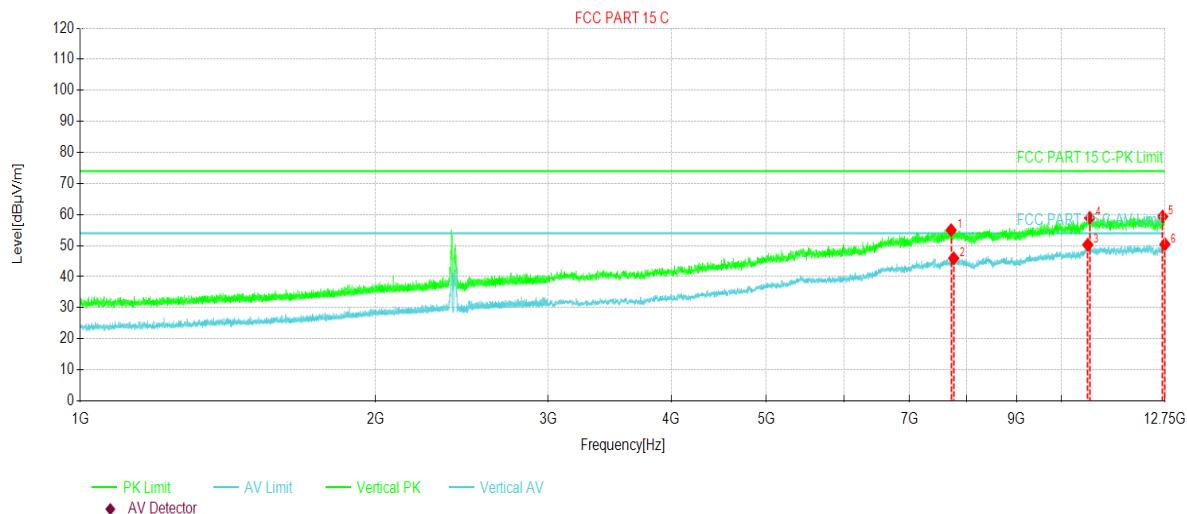


NO.	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7669.03	54.64	55.34	0.70	74.00	18.66	278	142	PK	Horizontal
2	7767.75	44.76	45.63	0.87	54.00	8.37	261	137	AV	Horizontal
3	10650.0	42.68	49.78	7.10	54.00	4.22	15	149	AV	Horizontal
4	10651.3	51.99	59.09	7.10	74.00	14.91	20	153	PK	Horizontal
5	12316.1	42.45	50.28	7.83	54.00	3.72	167	157	AV	Horizontal
6	12451.4	52.04	59.32	7.28	74.00	14.68	179	165	PK	Horizontal

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11n20 Low CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Vertical
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

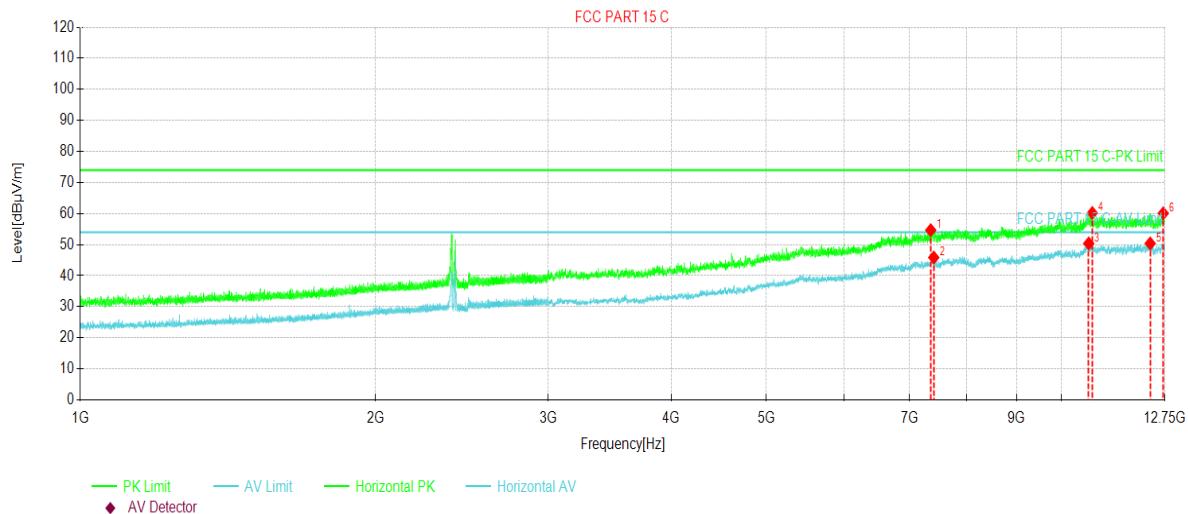


NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7719.00	54.34	54.98	0.64	74.00	19.02	308	133	PK	Vertical
2	7765.31	45.07	45.93	0.86	54.00	8.07	289	142	AV	Vertical
3	10637.9	43.21	50.27	7.06	54.00	3.73	102	148	AV	Vertical
4	10683.0	51.72	58.93	7.21	74.00	15.07	134	152	PK	Vertical
5	12681.7	51.04	59.36	8.32	74.00	14.64	49	157	PK	Vertical
6	12748.7	41.98	50.40	8.42	54.00	3.60	62	164	AV	Vertical

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11n20 Low CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

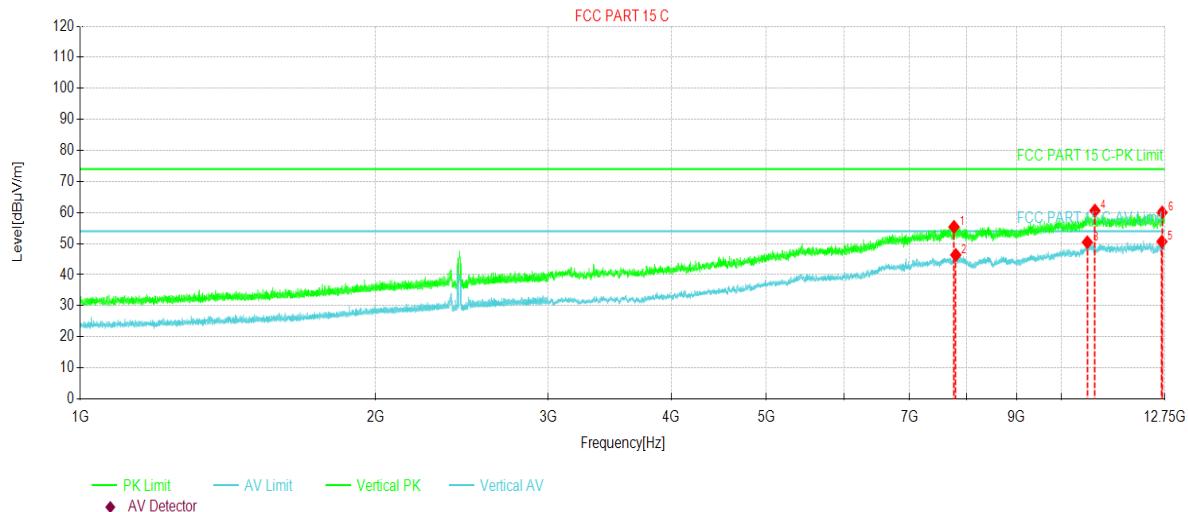


NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7358.25	54.55	54.66	0.11	74.00	19.34	304	146	PK	Horizontal
2	7410.65	45.61	45.85	0.24	54.00	8.15	295	140	AV	Horizontal
3	10659.8	43.24	50.37	7.13	54.00	3.63	68	135	AV	Horizontal
4	10750.0	52.99	60.19	7.20	74.00	13.81	81	139	PK	Horizontal
5	12314.9	42.54	50.37	7.83	54.00	3.63	324	152	AV	Horizontal
6	12700.0	51.70	60.08	8.38	74.00	13.92	357	159	PK	Horizontal

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11n20 Mid CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Vertical
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

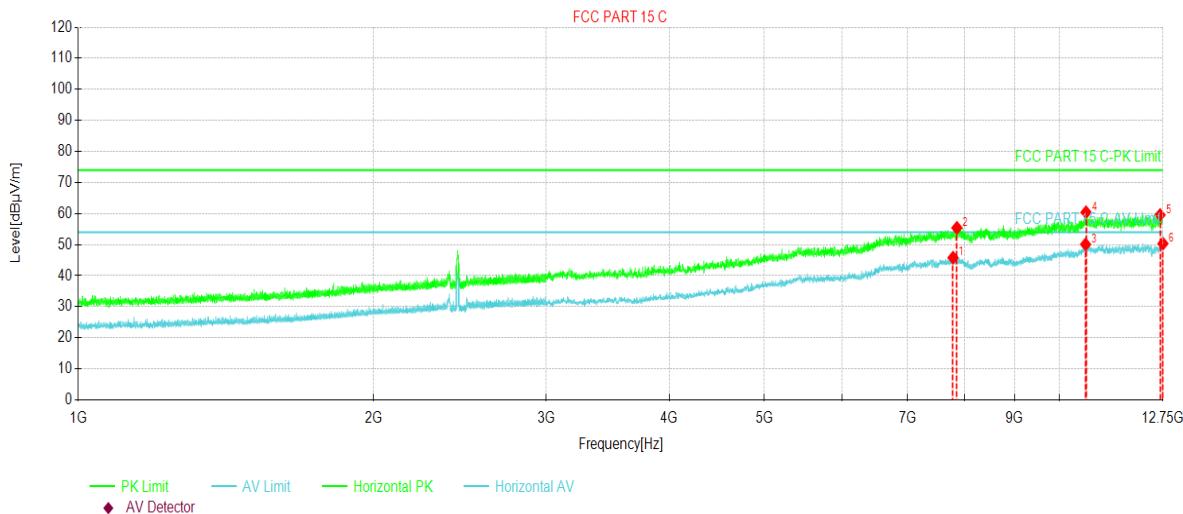


NO.	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7771.40	54.49	55.38	0.89	74.00	18.62	333	134	PK	Vertical
2	7803.09	45.33	46.35	1.02	54.00	7.65	315	141	AV	Vertical
3	10625.7	43.41	50.43	7.02	54.00	3.57	10	146	AV	Vertical
4	10817.0	53.45	60.62	7.17	74.00	13.38	25	149	PK	Vertical
5	12659.8	42.40	50.65	8.25	54.00	3.35	107	153	AV	Vertical
6	12664.6	51.78	60.04	8.26	74.00	13.96	125	157	PK	Vertical

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11n20 Mid CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

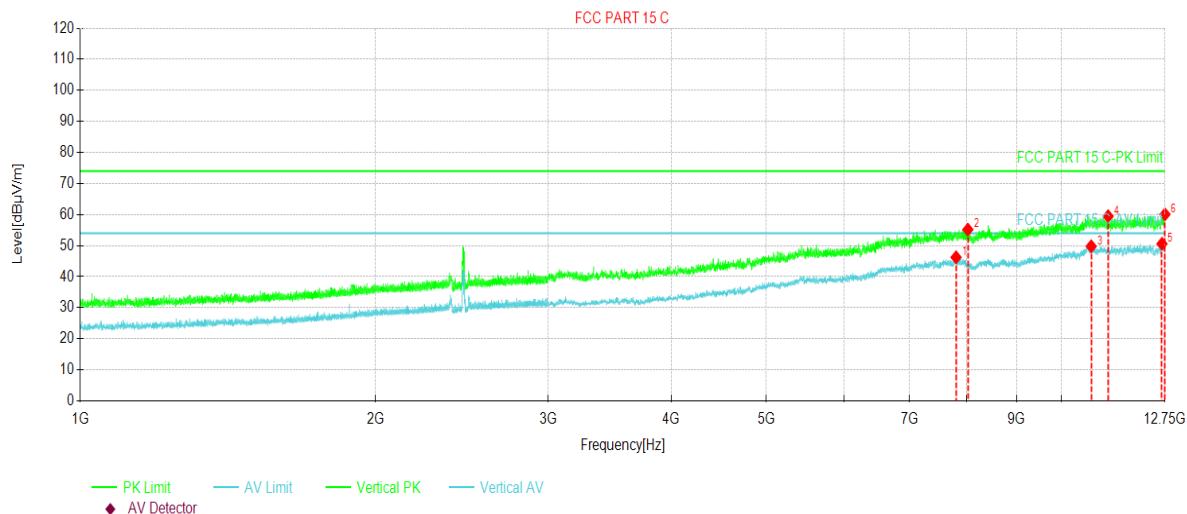


NO	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor	Limit [dBμV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7789.68	44.81	45.78	0.97	54.00	8.22	357	153	AV	Horizontal
2	7860.37	54.38	55.39	1.01	74.00	18.61	13	159	PK	Horizontal
3	10633.0	43.03	50.08	7.05	54.00	3.92	124	142	AV	Horizontal
4	10644.0	53.33	60.41	7.08	74.00	13.59	109	146	PK	Horizontal
5	12663.4	51.28	59.54	8.26	74.00	14.46	248	131	PK	Horizontal
6	12748.7	41.90	50.32	8.42	54.00	3.68	231	137	AV	Horizontal

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11n20 High CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Vertical
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%

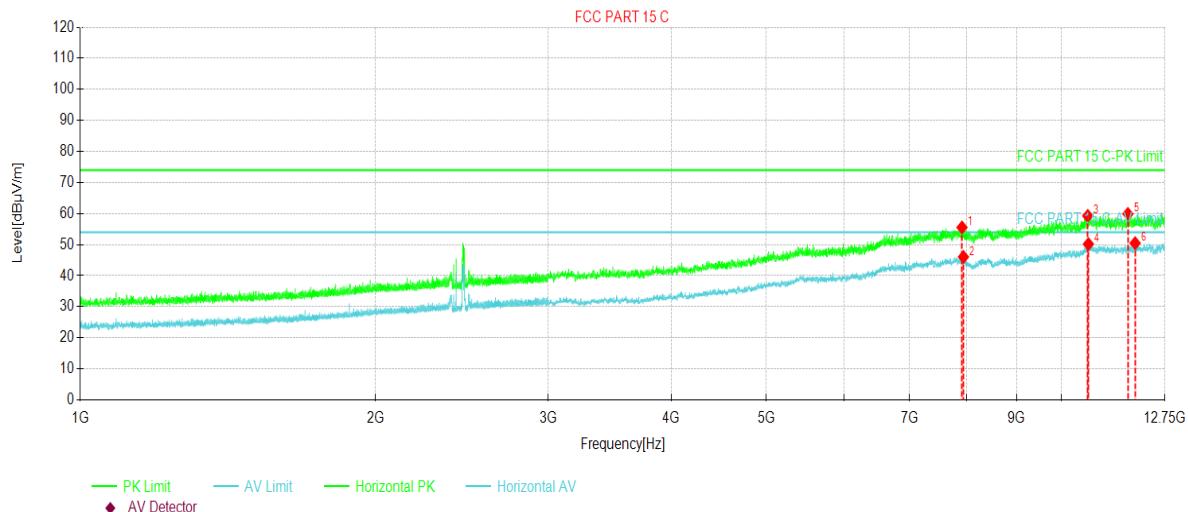


NO.	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7809.18	45.21	46.23	1.02	54.00	7.77	23	152	AV	Vertical
2	8027.34	54.30	55.17	0.87	74.00	18.83	37	158	PK	Vertical
3	10722.0	42.55	49.78	7.23	54.00	4.22	188	143	AV	Vertical
4	11157.0	52.20	59.48	7.28	74.00	14.52	193	137	PK	Vertical
5	12659.8	42.33	50.58	8.25	54.00	3.42	247	161	AV	Vertical
6	12750.0	51.63	60.06	8.43	74.00	13.94	261	167	PK	Vertical

Remark:

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

Product Name:	Smartphone	Product Model:	U683CL
Test By:	Mike	Test mode:	802.11n20 High CH
Test Frequency:	1 GHz ~ 25 GHz	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Environment:	Temp: 21.1 Huni: 45%



NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Height [cm]	Trace	Polarity
1	7918.87	54.55	55.54	0.99	74.00	18.46	3	149	PK	Horizontal
2	7945.68	45.08	46.04	0.96	54.00	7.96	358	153	AV	Horizontal
3	10636.6	52.20	59.26	7.06	74.00	14.74	172	134	PK	Horizontal
4	10652.5	43.07	50.18	7.11	54.00	3.82	186	148	AV	Horizontal
5	11687.2	51.94	59.89	7.95	74.00	14.11	214	152	PK	Horizontal
6	11887.1	42.94	50.46	7.52	54.00	3.54	229	158	AV	Horizontal

Remark:

- Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Preamplifier 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: 2019/1/10-2019/1/24)..

Appendix	Item
Appendix - 2.4GWIFI	2.4G WIFI