FCC REPORT
(BLE)

Applicant:	HMD global Oy
Address of Applicant:	Bertel Jungin aukio 9, 02600 Espoo, Finland

Equipment Under Test (EUT)

Product Name:	Smart Phone
Model No.:	TA-1390
Trade mark:	NOKIA
FCC ID:	2AJOTTA-1390
Applicable standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.247
Date of sample receipt:	19 Aug., 2021
Date of Test:	20 Aug., to 28 Aug., 2021
Date of report issued:	29 Aug., 2021
Test Result:	PASS *

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

Authorized Signature:

Bruce Zhang
Laboratory Manager

2 Version

Version No.	Date	Description
00	*29 Aug., 2021*	*Original*

Tested by: Mike.ou ***Date:*** *29 Aug., 2021*

Test Engineer

Reviewed by: Winner Zhang ***Date:*** *29 Aug., 2021*

Project Engineer

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4 Test Summary

Test Items	Section in CFR 47	Test Data	Result
Antenna requirement	15.203 & 15.247 (b)	See Section 6.1	Pass
AC Power Line Conducted Emission	15.207	See Section 6.2	Pass
Conducted Peak Output Power	15.247 (b)(3)	Refer to the report: SRTC2021-9004(F)-21082801(E)	Refer to the report: SRTC2021-9004(F)-21082801(E)
6dB Emission Bandwidth	15.247 (a)(2)	Refer to the report: SRTC2021-9004(F)-21082801(E)	Refer to the report: SRTC2021-9004(F)-21082801(E)
Power Spectral Density	15.247 (e)	Refer to the report: SRTC2021-9004(F)-21082801(E)	Refer to the report: SRTC2021-9004(F)-21082801(E)
Conducted Band Edge	15.247 (d)	Refer to the report: SRTC2021-9004(F)-21082801(E)	Refer to the report: SRTC2021-9004(F)-21082801(E)
Radiated Band Edge		See Section 6.3.1	Pass
Conducted Spurious Emission	15.205 & 15.209 & 15.247 (d)	Refer to the report: SRTC2021-9004(F)-21082801(E)	Refer to the report: SRTC2021-9004(F)-21082801(E)
Radiated Spurious Emission		See Section 6.4.1	Pass

Remark:

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

2. The report: SRTC2021-9004(F)-21082801(E), issued by The State Radio_monitoring_center Testing Center.

Test Method:	*ANSI C63.10-2013* *KDB 558074 D01 15.247 Meas Guidance v05r02*

5 General Information

5.1 Client Information

Applicant:	HMD global Oy
Address:	Bertel Jungin aukio 9, 02600 Espoo, Finland
Manufacturer:	HMD global Oy
Address:	Bertel Jungin aukio 9, 02600 Espoo, Finland

5.2 General Description of E.U.T.

Product Name:	Smart Phone
Model No.:	TA-1390
Operation Frequency:	2402-2480 MHz
Channel numbers:	40
Channel separation:	2 MHz
Modulation technology:	GFSK
Data speed :	1Mbps
Antenna Type:	Internal Antenna
Antenna gain:	-2.5dBi
Power supply:	Rechargeable Lithium ion Polymer Battery DC3.85V, 4.85Ah
AC adapter:	Adapter 1: Model: TN-050200U3, TN-050200E3, TN-050200C3A Input: AC100-240V, 50/60Hz, 0.35A Output: DC 5.0V, 2.0A 10.0W Note: Only the pins are different between different models Adapter 2: Model: TN-050200U3, TN-050200A3, TN-050200C3A Input: AC100-240V, 50/60Hz, 0.35A Output: DC 5.0V, 2.0A 10.0W Note: Only the pins are different between different models Adapter 3: Model: AD-010A, AD-010X Input: AC100-240V, 50/60Hz, 0.35A Output: DC 5.0V, 2.0A 10.0W Note: Only the pins are different between different models
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	10	2422MHz	20	2442MHz	30	2462MHz
1	2404MHz	11	2424MHz	21	2444MHz	31	2464MHz
2	2406MHz	12	2426MHz	22	2446MHz	32	2466MHz
3	2408MHz	13	2428MHz	23	2448MHz	33	2468MHz
4	2410MHz	14	2430MHz	24	2450MHz	34	2470MHz
5	2412MHz	15	2432MHz	25	2452MHz	35	2472MHz
6	2414MHz	16	2434MHz	26	2454MHz	36	2474MHz
7	2416MHz	17	2436MHz	27	2456MHz	37	2476MHz
8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz
9	2420MHz	19	2440MHz	29	2460MHz	39	2480MHz

Note:
In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test. Channel No. 0, 20 & 39 were selected 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

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. Duty cycle setting during the transmission is 100% with maximum power setting for all modulations.

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%(U = 2Uc(y)))
Conducted Emission (9kHz ~ 30MHz)	±2.62 dB (k=2)
Radiated Emission (9kHz ~ 30MHz) (3m SAC)	±3.13 dB
Radiated Emission (30MHz ~ 1000MHz) (3m SAC)	±4.45 dB
Radiated Emission (1GHz ~ 18GHz) (3m SAC)	±5.34 dB
Radiated Emission (18GHz ~ 40GHz) (3m SAC)	±5.34 dB

Note: *The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.26-2015. All the measurement uncertainty value were shown with a coverage k=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.*

5.6 Laboratory Facility

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

- **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

- **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 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

5.7 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

5.8 Test Instruments list

Radiated Emission:					
Test Equipment	**Manufacturer**	**Model No.**	**Management Number**	**Cal.Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
3m SAC	SAEMC	9m*6m*6m	WXJ001-1	01-19-2021	01-18-2024
BiConiLog Antenna	SCHWARZBECK	VULB9163	WXJ002	03-03-2021	03-02-2022
Biconical Antenna	SCHWARZBECK	VUBA9117	WXJ002-1	06-20-2021	06-19-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	WXJ002-2	03-03-2021	03-02-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	WXJ002-3	06-18-2021	06-17-2022
Loop Antenna	SCHWARZBECK	FMZB 1519 B	WXJ002-4	03-07-2021	03-06-2022
Pre-amplifier (30MHz ~ 1GHz)	HP	8447D	WXG001-2	03-07-2021	03-06-2022
Pre-amplifier (1GHz ~ 18GHz)	SKET	LNPA_0118G-50	WXG001-3	03-07-2021	03-06-2022
Pre-amplifier (18GHz ~ 40GHz)	RF System	TRLA-180400G45B	WXG001-9	03-07-2021	03-06-2022
EMI Test Receiver	Rohde & Schwarz	ESRP7	WXJ003-1	03-03-2021	03-02-2022
Spectrum analyzer	Rohde & Schwarz	FSP30	WXJ004	03-03-2021	03-02-2022
Spectrum Analyzer	KEYSIGHT	N9010B	WXJ004-2	11-27-2020	11-26-2021
Coaxial Cable (30MHz ~ 1GHz)	JYT	JYT3M-1G-NN-8M	WXG001-4	03-07-2021	03-06-2022
Coaxial Cable (1GHz ~ 18GHz)	JYT	JYT3M-18G-NN-8M	WXG001-5	03-07-2021	03-06-2022
Coaxial Cable (9kHz ~ 30MHz)	JYT	JYT3M-1G-BB-5M	WXG001-6	03-07-2021	03-06-2022
Coaxial Cable (1GHz ~ 18GHz)	JYT	JYT3M-40G-SS-8M	WXG001-7	03-07-2021	03-06-2022
RF Switch Unit	Tonscend	JS0806-F	WXJ089	N/A	
Test Software	Tonscend	TS+	Version: 3.0.0.1		

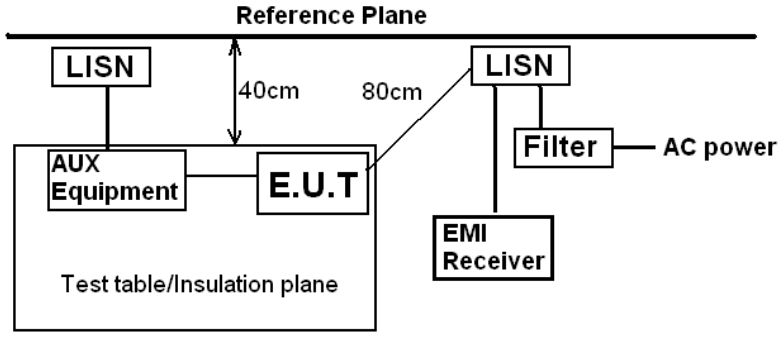
Conducted Emission:					
Test Equipment	**Manufacturer**	**Model No.**	**Management Number**	**Cal. Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
EMI Test Receiver	Rohde & Schwarz	ESCI	WXJ003	03-03-2021	03-02-2022
LISN	Rohde & Schwarz	ENV432	WXJ005-2	04-06-2021	04-05-2022
LISN	Rohde & Schwarz	ESH3-Z5	WXJ005-1	06-17-2020	06-16-2022
Coaxial Cable	JYT	JYTCE-1G-NN-2M	WXG003-1	03-03-2021	03-02-2022
RF Switch	Top Precision	RSU0301	WXG003	N/A	N/A
EMI Test Software	AUDIX	E3	Version: 6.110919b		

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 BLE antenna is an Internal antenna which cannot replace by end-user, the best-case gain of the antenna is -2.6 dBi.	

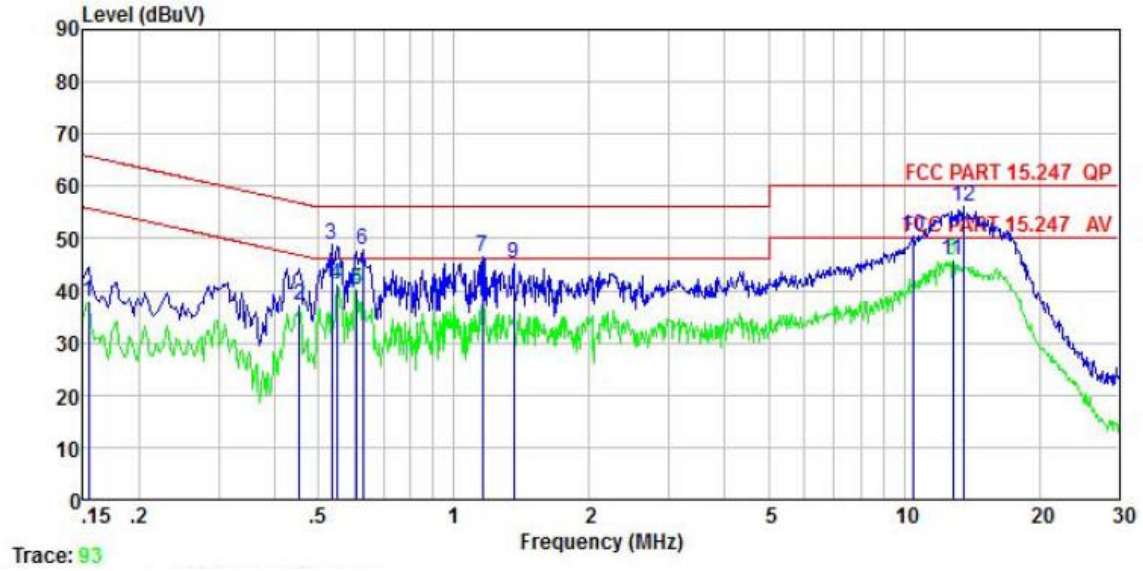
6.2 Conducted Emission

<table>
<tr><td>Test Requirement:</td><td colspan="3">FCC Part 15 C Section 15.207</td></tr>
<tr><td>Test Frequency Range:</td><td colspan="3">150 kHz to 30 MHz</td></tr>
<tr><td>Class / Severity:</td><td colspan="3">Class B</td></tr>
<tr><td>Receiver setup:</td><td colspan="3">RBW=9kHz, VBW=30kHz</td></tr>
<tr><td rowspan="5">Limit:</td><td rowspan="2">Frequency range (MHz)</td><td colspan="2">Limit (dBuV)</td></tr>
<tr><td>Quasi-peak</td><td>Average</td></tr>
<tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr>
<tr><td>0.5-5</td><td>56</td><td>46</td></tr>
<tr><td>5-30</td><td>60</td><td>50</td></tr>
<tr><td colspan="3">* Decreases with the logarithm of the frequency.</td></tr>
<tr><td>Test procedure:</td><td colspan="3">1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.), which provides a 50ohm/50uH coupling impedance for the measuring equipment.
2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).
3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10(latest version) on conducted measurement.</td></tr>
<tr><td>Test setup:</td><td colspan="3"> 

Remark:
E.U.T: Equipment Under Test
LISN: Line Impedence Stabilization Network
Test table height=0.8m</td></tr>
<tr><td>Test Instruments:</td><td colspan="3">Refer to section 5.8 for details</td></tr>
<tr><td>Test mode:</td><td colspan="3">Refer to section 5.3 for details</td></tr>
<tr><td>Test results:</td><td colspan="3">Passed</td></tr>
<tr><td>Remark:</td><td colspan="3">Pre-Scan all adapter and all modulation , And the report only reflects the worst mode</td></tr>
</table>

Measurement Data:

Product name:	Smart Phone	Product model:	TA-1390
Test by:	Mike	Test mode:	BLE Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%

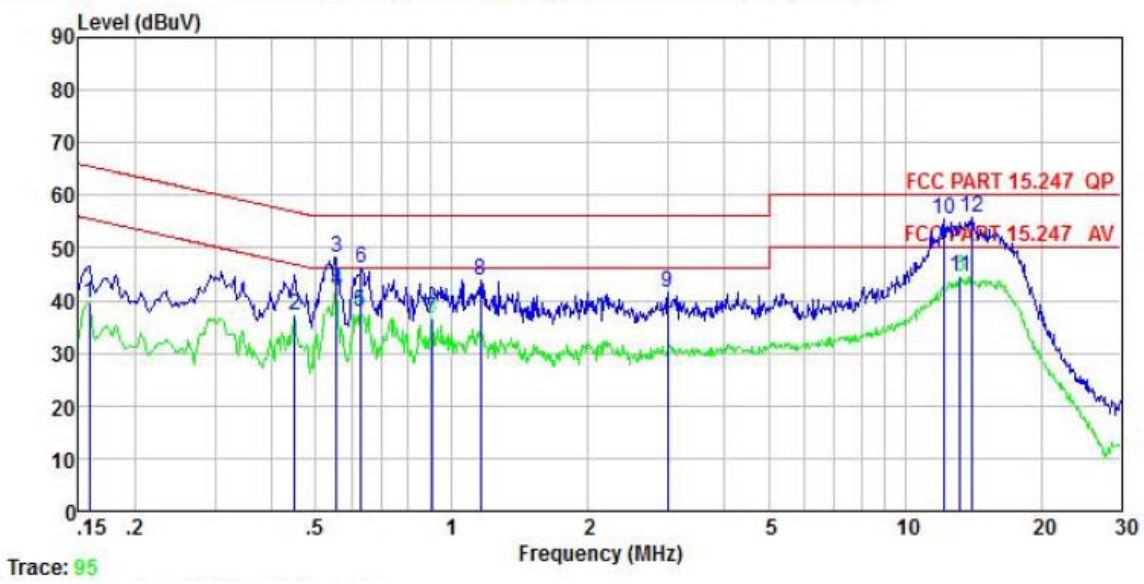


	Freq	Read Level	LISN Factor	Aux Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.154	27.73	10.22	-0.06	0.01	37.90	55.78	-17.88	Average
2	0.454	26.90	10.28	-0.01	0.03	37.20	46.80	-9.60	Average
3	0.535	38.94	10.29	-0.36	0.03	48.90	56.00	-7.10	QP
4	0.549	31.38	10.29	-0.36	0.02	41.33	46.00	-4.67	Average
5	0.608	30.39	10.30	-0.38	0.02	40.33	46.00	-5.67	Average
6	0.627	37.88	10.30	-0.38	0.02	47.82	56.00	-8.18	QP
7	1.160	35.67	10.32	0.29	0.08	46.36	56.00	-9.64	QP
8	1.160	29.32	10.32	0.29	0.08	40.01	46.00	-5.99	Average
9	1.359	34.78	10.32	0.11	0.12	45.33	56.00	-10.67	QP
10	10.452	37.70	10.62	2.12	0.12	50.56	60.00	-9.44	QP
11	12.852	31.91	10.70	2.95	0.11	45.67	50.00	-4.33	Average
12	13.551	41.95	10.73	3.18	0.12	55.98	60.00	-4.02	QP

Notes:

1. *An initial pre-scan was performed on the line and neutral lines with peak detector.*
2. *Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.*
3. *Final Level =Receiver Read level + LISN Factor + Aux Factor + Cable Loss.*

Product name:	Smart Phone	Product model:	TA-1390
Test by:	Mike	Test mode:	BLE Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%



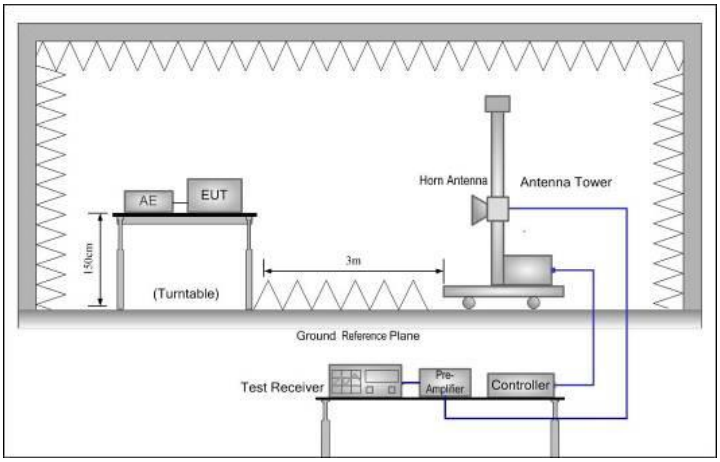
	Freq	Read Level	LISN Factor	Aux Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.158	29.30	10.20	0.01	0.01	39.52	55.56	-16.04	Average
2	0.449	26.93	10.27	-0.01	0.03	37.22	46.89	-9.67	Average
3	0.555	37.87	10.29	0.03	0.02	48.21	56.00	-7.79	QP
4	0.555	31.60	10.29	0.03	0.02	41.94	46.00	-4.06	Average
5	0.627	27.51	10.29	0.04	0.02	37.86	46.00	-8.14	Average
6	0.630	35.80	10.29	0.04	0.02	46.15	56.00	-9.85	QP
7	0.904	26.23	10.31	0.07	0.04	36.65	46.00	-9.35	Average
8	1.160	33.25	10.31	0.10	0.08	43.74	56.00	-12.26	QP
9	2.993	30.77	10.34	0.31	0.07	41.49	56.00	-14.51	QP
10	12.188	42.43	10.66	2.23	0.10	55.42	60.00	-4.58	QP
11	13.267	31.09	10.69	2.57	0.11	44.46	50.00	-5.54	Average
12	14.063	42.01	10.71	2.84	0.12	55.68	60.00	-4.32	QP

Notes:

1. *An initial pre-scan was performed on the line and neutral lines with peak detector.*
2. *Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.*
3. *Final Level = Receiver Read level + LISN Factor + Aux Factor + Cable Loss.*

6.3 Band Edge

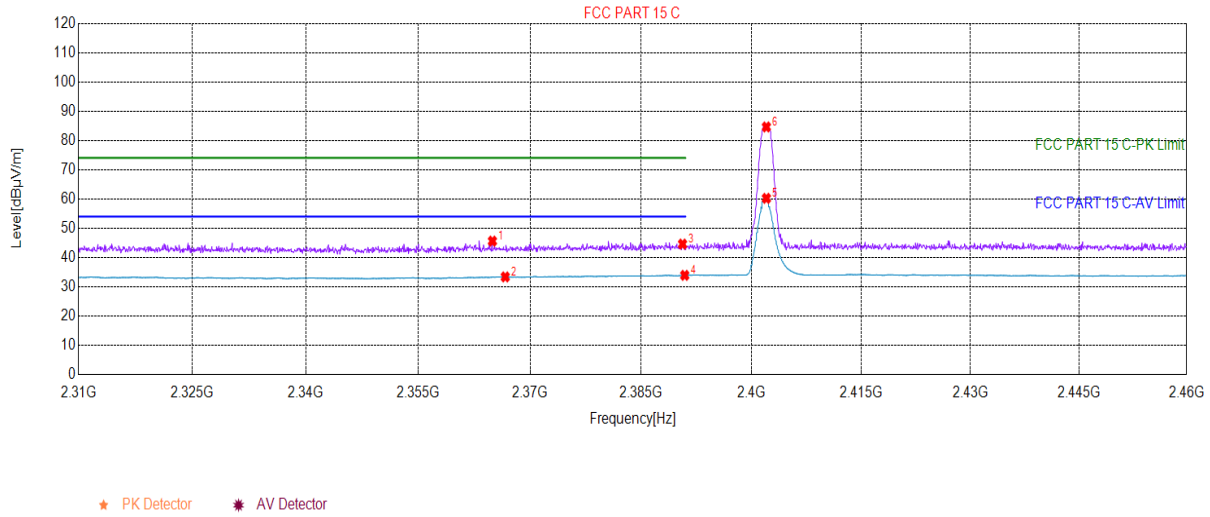
6.3.1 Radiated Emission Method

<table>
<tr><td>Test Requirement:</td><td colspan="5">FCC Part 15 C Section 15.205 and 15.209</td></tr>
<tr><td>Test Frequency Range:</td><td colspan="5">2310 MHz to 2390 MHz and 2483.5MHz to 2500 MHz</td></tr>
<tr><td>Test Distance:</td><td colspan="5">3m</td></tr>
<tr><td rowspan="4">Receiver setup:</td><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>RMS</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr>
<tr><td></td><td colspan="4"></td></tr>
<tr><td rowspan="3">Limit:</td><td colspan="2">Frequency</td><td colspan="2">Limit (dBuV/m @3m)</td><td>Remark</td></tr>
<tr><td colspan="2" rowspan="2">Above 1GHz</td><td colspan="2">54.00</td><td>Average Value</td></tr>
<tr><td colspan="2">74.00</td><td>Peak Value</td></tr>
<tr><td>Test Procedure:</td><td colspan="5">1. 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.
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 10 dB 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 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</td></tr>
<tr><td>Test setup:</td><td colspan="5"> 
</td></tr>
<tr><td>Test Instruments:</td><td colspan="5">Refer to section 5.8 for details</td></tr>
<tr><td>Test mode:</td><td colspan="5">Refer to section 5.3 for details</td></tr>
<tr><td>Test results:</td><td colspan="5">Passed</td></tr>
</table>

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE_1M _Channel 0

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2364.92	38.11	45.60	7.49	74.00	28.40	261	302	Vertical
2	2366.65	25.84	33.37	7.53	54.00	20.63	320	211	Vertical
3	2390.59	36.45	44.58	8.13	74.00	29.42	272	26	Vertical
4	2390.89	25.78	33.91	8.13	54.00	20.09	275	271	Vertical
5	2402.00	51.86	60.21	8.35	0.00	-60.21	261	22	Vertical
6	2402.00	76.25	84.60	8.35	0.00	-84.60	288	132	Vertical

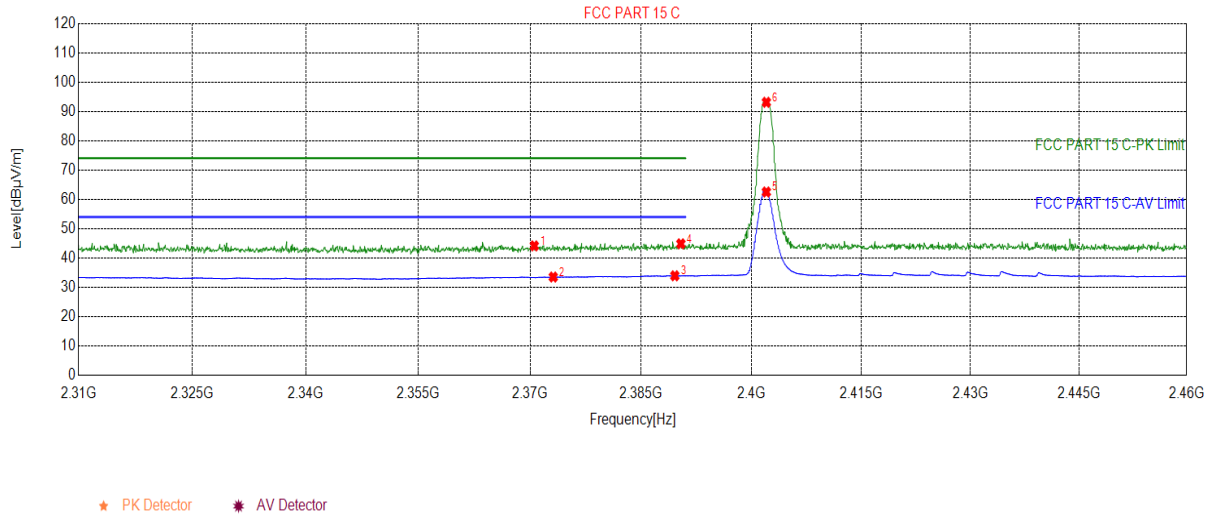
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE_1M _Channel 0

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2370.55	36.51	44.14	7.63	74.00	29.86	163	321	Horizonta
2	2373.10	25.82	33.51	7.69	54.00	20.49	152	302	Horizonta
3	2389.53	25.83	33.93	8.10	54.00	20.07	172	162	Horizonta
4	2390.36	36.73	44.85	8.12	74.00	29.15	155	107	Horizonta
5	2402.00	54.16	62.51	8.35	0.00	-62.51	167	196	Horizonta
6	2402.00	84.74	93.09	8.35	0.00	-93.09	169	5	Horizonta

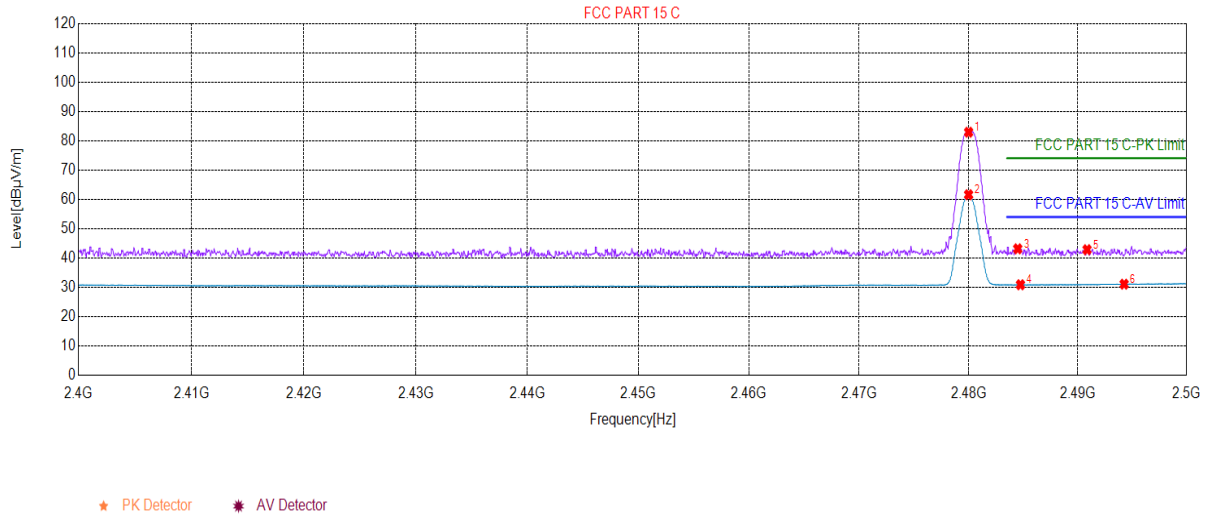
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE_1M _Channel 39

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2480.00	76.10	82.89	6.79	0.00	-82.89	263	21	Vertical
2	2480.00	54.79	61.58	6.79	0.00	-61.58	242	6	Vertical
3	2484.49	36.35	43.14	6.79	74.00	30.86	257	106	Vertical
4	2484.74	24.09	30.88	6.79	54.00	23.12	281	315	Vertical
5	2490.84	36.04	42.85	6.81	74.00	31.15	269	289	Vertical
6	2494.24	24.20	31.08	6.88	54.00	22.92	233	216	Vertical

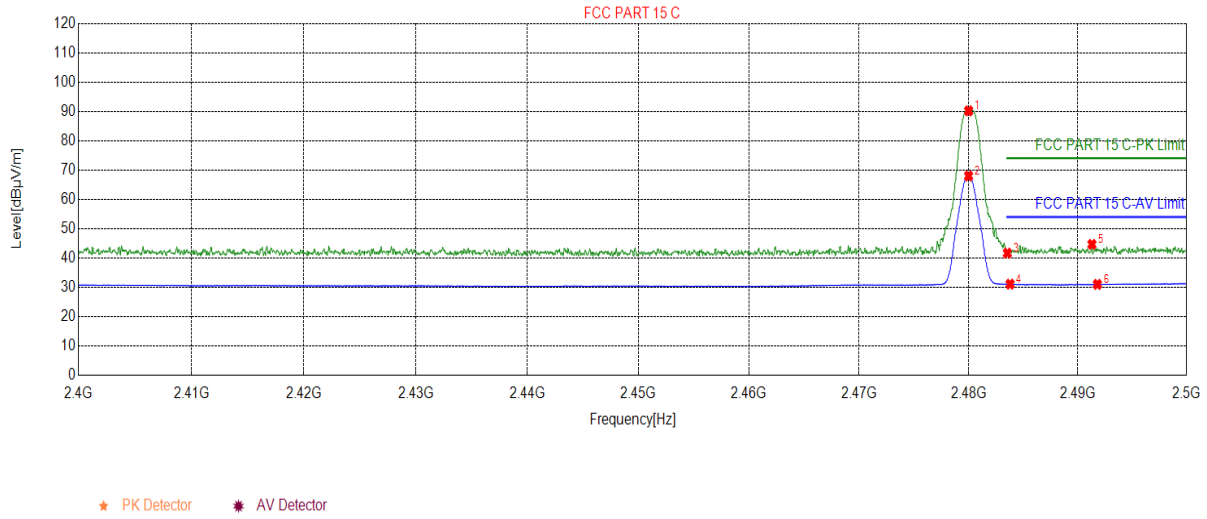
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE_1M _Channel 39

Test Graph



Suspected List

Suspected Lis									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2480.00	83.38	90.17	6.79	0.00	-90.17	175	2	Horizonta
2	2480.00	61.18	67.97	6.79	0.00	-67.97	206	212	Horizonta
3	2483.54	34.87	41.66	6.79	74.00	32.34	272	151	Horizonta
4	2483.79	24.30	31.09	6.79	54.00	22.91	186	261	Horizonta
5	2491.29	37.83	44.65	6.82	74.00	29.35	126	255	Horizonta
6	2491.79	24.18	31.01	6.83	54.00	22.99	106	110	Horizonta

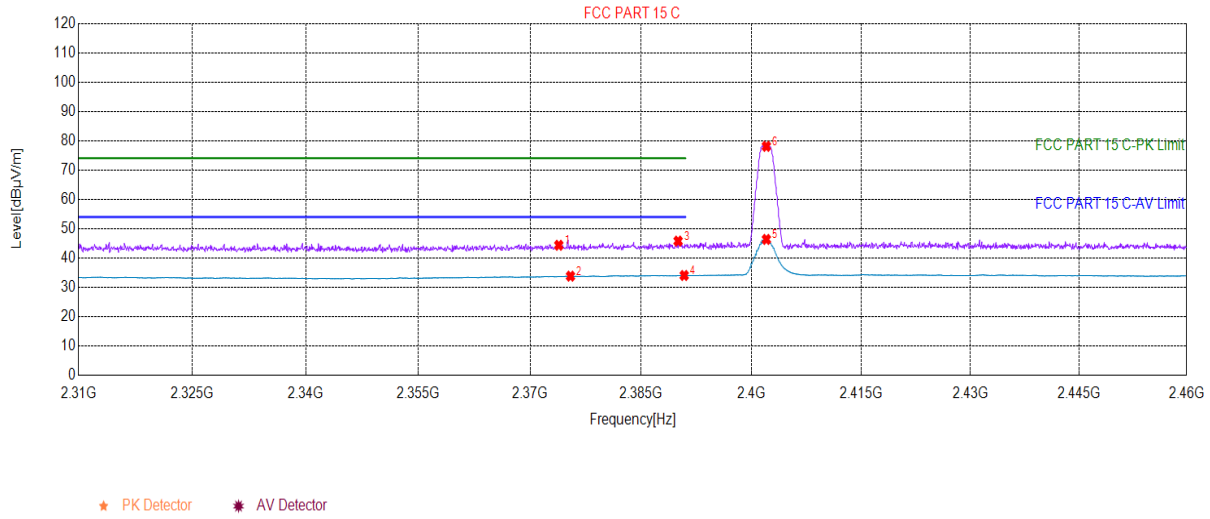
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE_2M _Channel 0

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2373.85	36.64	44.35	7.71	74.00	29.65	216	39	Vertical
2	2375.43	26.05	33.80	7.75	54.00	20.20	252	152	Vertical
3	2389.99	37.67	45.78	8.11	74.00	28.22	231	62	Vertical
4	2390.81	25.91	34.04	8.13	54.00	19.96	278	162	Vertical
5	2402.00	37.99	46.34	8.35	0.00	-46.34	211	188	Vertical
6	2402.00	69.72	78.07	8.35	0.00	-78.07	264	169	Vertical

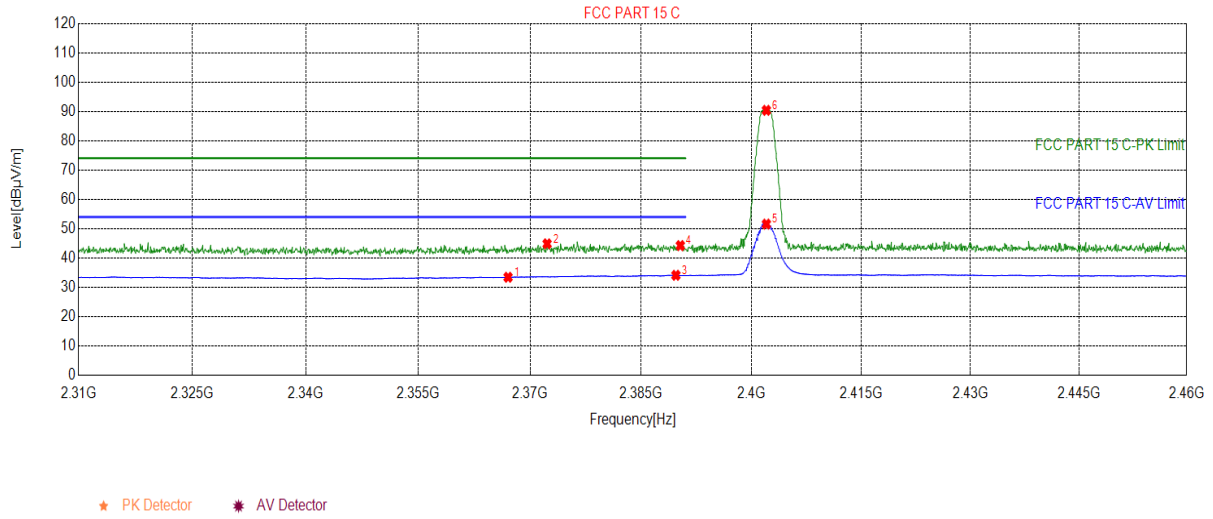
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE_2M _Channel 0

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2367.02	25.89	33.43	7.54	54.00	20.57	263	261	Horizonta
2	2372.28	37.18	44.85	7.67	74.00	29.15	241	25	Horizonta
3	2389.68	26.00	34.10	8.10	54.00	19.90	125	9	Horizonta
4	2390.29	36.11	44.23	8.12	74.00	29.77	152	209	Horizonta
5	2402.00	43.21	51.56	8.35	0.00	-51.56	133	173	Horizonta
6	2402.00	82.00	90.35	8.35	0.00	-90.35	200	18	Horizonta

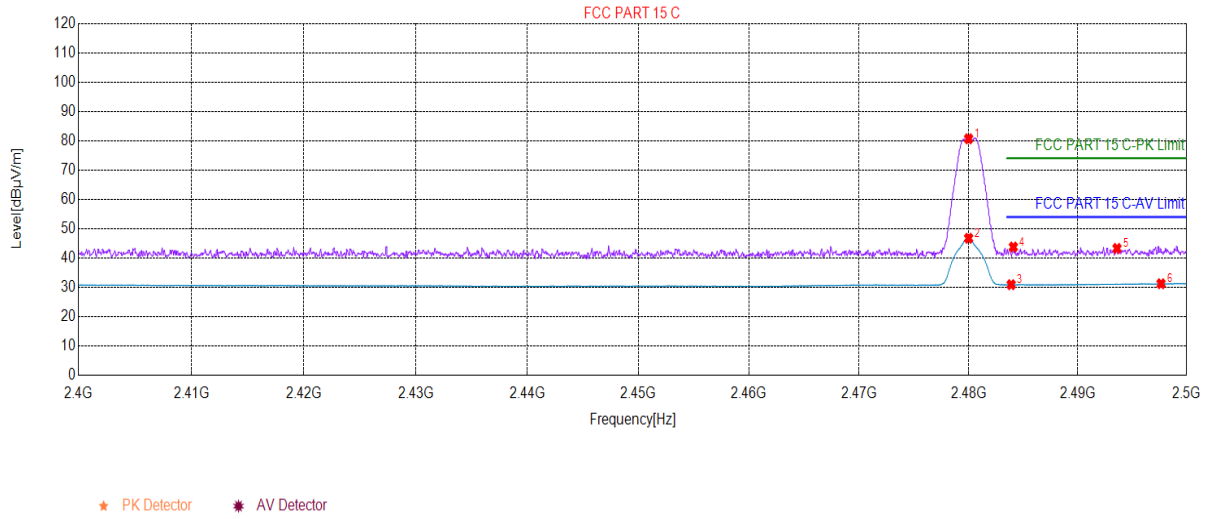
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE_2M _Channel 39

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2480.00	73.86	80.65	6.79	0.00	-80.65	178	263	Vertical
2	2480.00	39.94	46.73	6.79	0.00	-46.73	260	34	Vertical
3	2483.89	24.12	30.91	6.79	54.00	23.09	153	101	Vertical
4	2484.09	36.96	43.75	6.79	74.00	30.25	236	91	Vertical
5	2493.59	36.41	43.27	6.86	74.00	30.73	272	34	Vertical
6	2497.64	24.29	31.23	6.94	54.00	22.77	216	6	Vertical

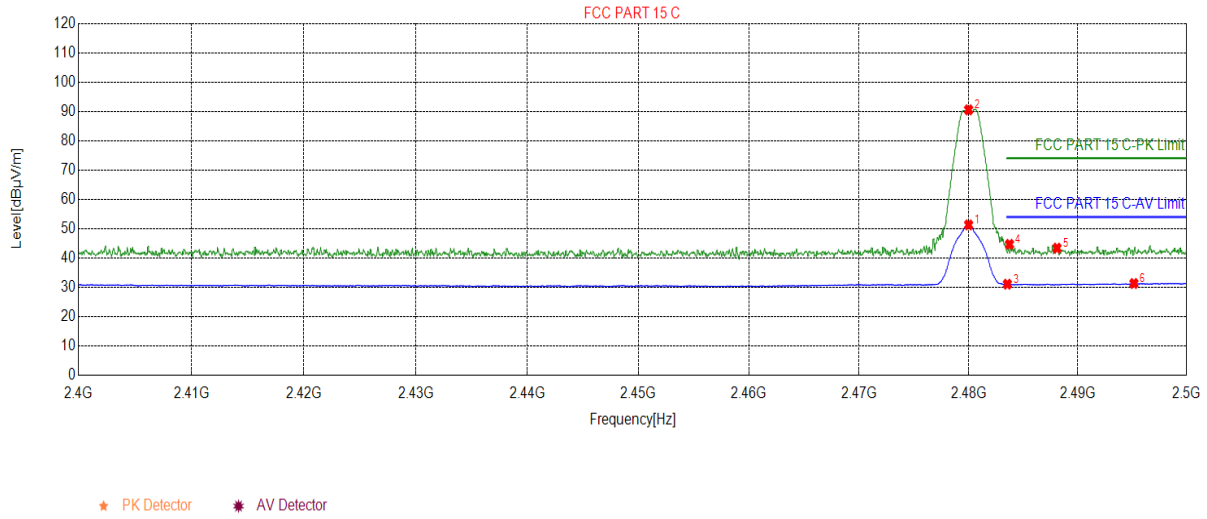
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE_2M _Channel 39

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2480.00	44.49	51.28	6.79	0.00	-51.28	263	301	Horizonta
2	2480.00	83.72	90.51	6.79	0.00	-90.51	242	221	Horizonta
3	2483.54	24.29	31.08	6.79	54.00	22.92	151	272	Horizonta
4	2483.74	37.87	44.66	6.79	74.00	29.34	163	23	Horizonta
5	2488.09	36.58	43.37	6.79	74.00	30.63	177	16	Horizonta
6	2495.14	24.43	31.32	6.89	54.00	22.68	200	9	Horizonta

Remark:

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

6.4 Spurious Emission

6.4.1 Radiated Emission Method

Test Requirement:	FCC Part 15 C Section 15.205 and 15.209
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:

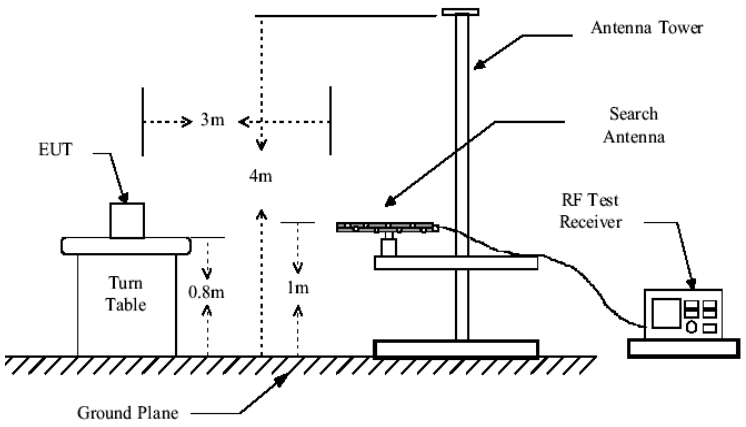
Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.0	Quasi-peak Value
88MHz-216MHz	43.5	Quasi-peak Value
216MHz-960MHz	46.0	Quasi-peak Value
960MHz-1GHz	54.0	Quasi-peak Value
Above 1GHz	54.0	Average Value
	74.0	Peak Value

Test Procedure:

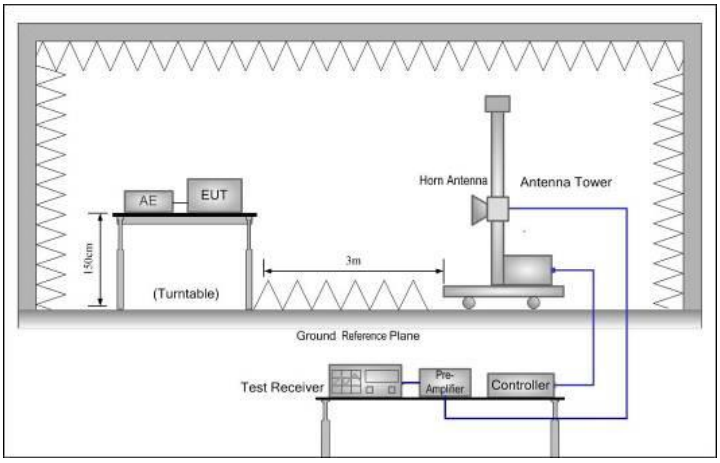
1. The EUT was placed on the top of a rotating table 0.8m(below 1GHz)/1.5m(above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the 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 10 dB 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 10 dB 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:

Below 1GHz



Above 1GHz

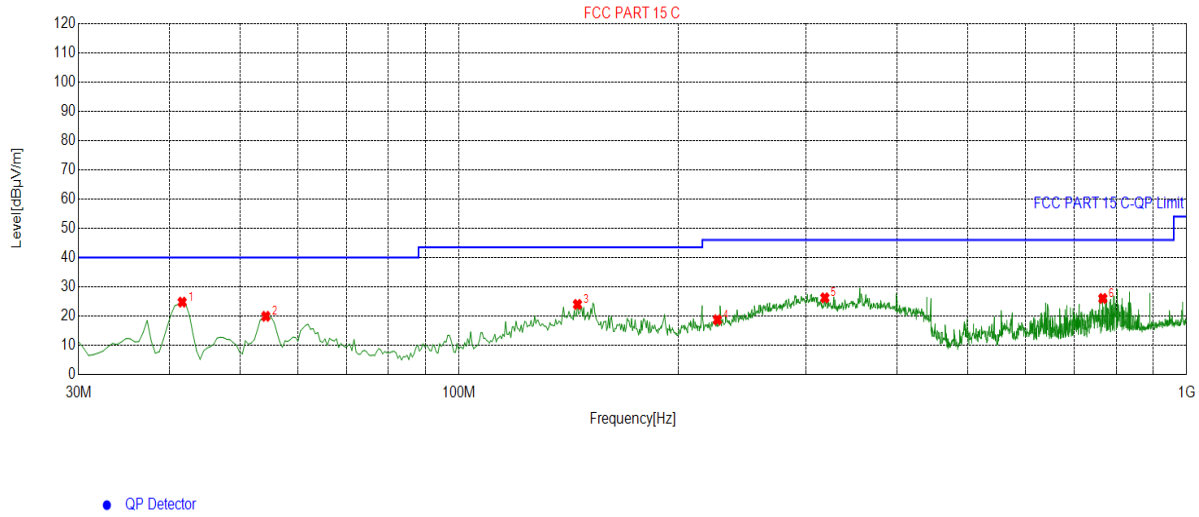
	
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	1. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the z-axis is the worst case. 2. Pre-Scan all adapter, And the report only reflects the worst mode. 3. 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:	Smart Phone	**Product Model:**	TA-1390
Test By:	Mike	**Test mode:**	BLE 1M Tx mode
Test Frequency:	30 MHz ~ 1 GHz	**Polarization:**	Horizontal
Test Voltage:	AC 120V/60Hz	**Environment:**	Temp: 24℃ Huni: 57%

Test Graph



Suspected List

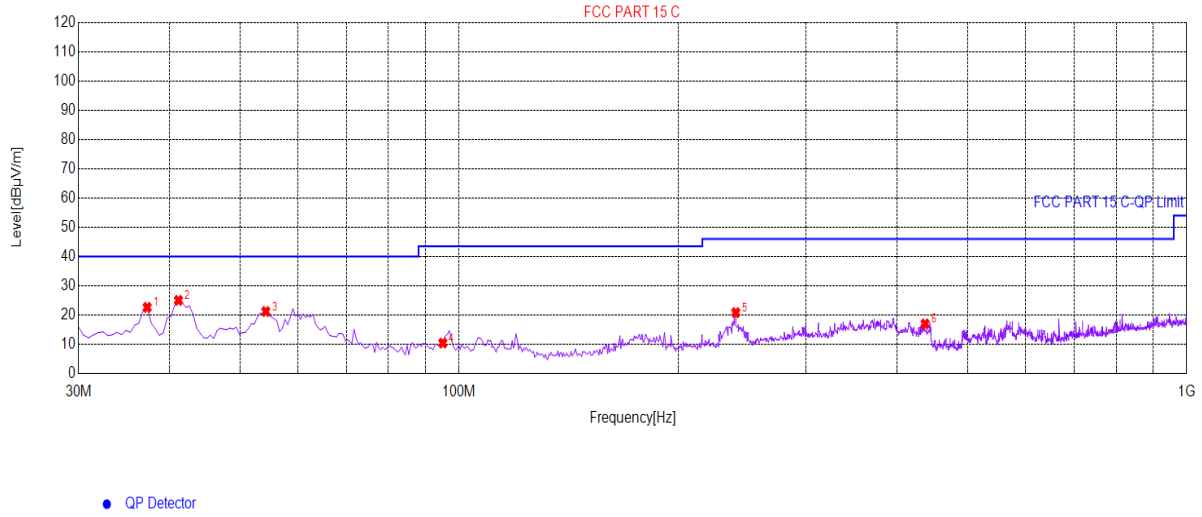
Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	41.6458	47.65	24.75	-22.90	40.00	15.25	263	331	Horizonta
2	54.2621	41.99	19.91	-22.08	40.00	20.09	152	2	Horizonta
3	145.487	48.37	23.98	-24.39	43.50	19.52	171	256	Horizonta
4	226.523	39.90	18.71	-21.19	46.00	27.29	121	212	Horizonta
5	318.234	44.88	26.23	-18.65	46.00	19.77	123	224	Horizonta
6	767.083	36.79	26.00	-10.79	46.00	20.00	114	228	Horizonta

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:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Test mode:	BLE 1M Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

Test Graph



Suspected List

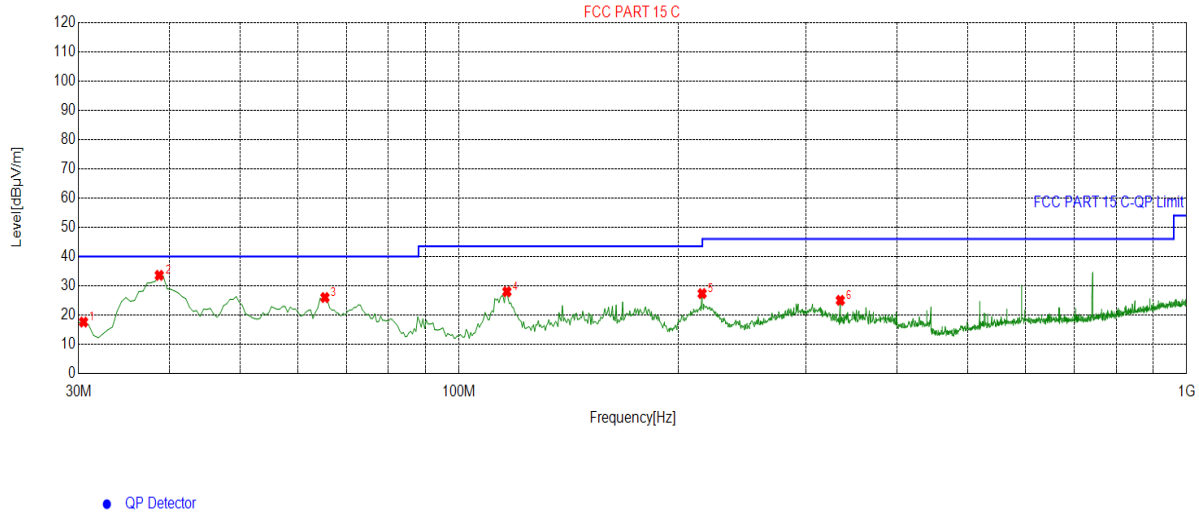
Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	37.2786	45.96	22.62	-23.34	40.00	17.38	268	108	Vertical
2	41.1606	47.90	25.01	-22.89	40.00	14.99	285	154	Vertical
3	54.2621	43.30	21.22	-22.08	40.00	18.78	261	179	Vertical
4	95.0225	34.11	10.42	-23.69	43.50	33.08	271	47	Vertical
5	240.110	41.67	20.84	-20.83	46.00	25.16	258	136	Vertical
6	437.118	33.04	16.98	-16.06	46.00	29.02	231	183	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:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Test mode:	BLE 2M Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

Test Graph



Suspected List

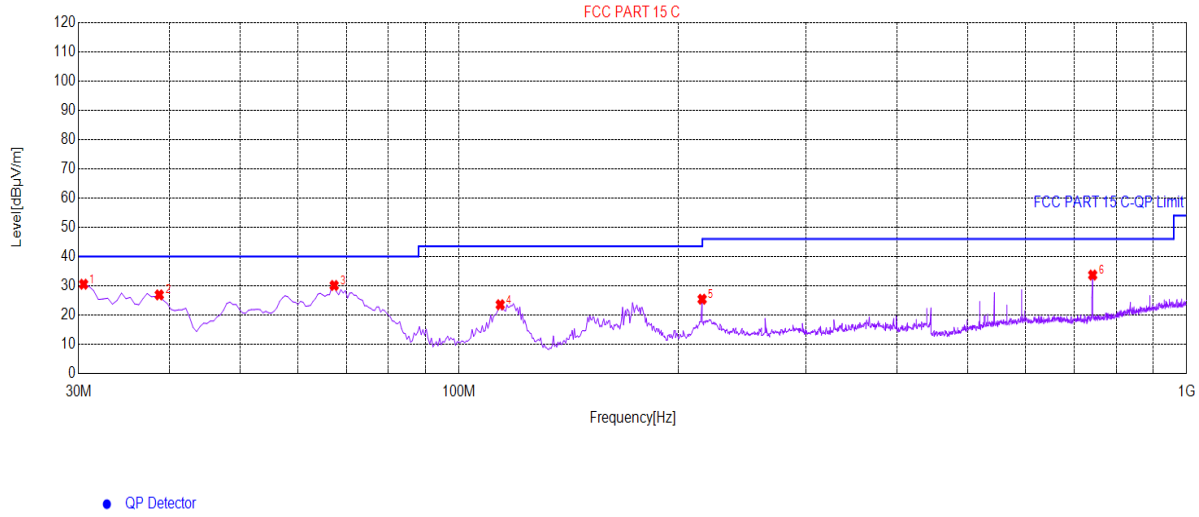
Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	30.4852	41.52	17.60	-23.92	40.00	22.40	133	302	Horizonta
2	38.7344	56.65	33.57	-23.08	40.00	6.43	172	21	Horizonta
3	65.4227	49.07	25.98	-23.09	40.00	14.02	145	73	Horizonta
4	116.373	50.82	27.97	-22.85	43.50	15.53	196	316	Horizonta
5	215.847	48.78	27.33	-21.45	43.50	16.17	151	313	Horizonta
6	334.247	43.05	25.02	-18.03	46.00	20.98	136	208	Horizonta

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:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Test mode:	BLE 2M Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	30.4852	54.44	30.52	-23.92	40.00	9.48	163	222	Vertical
2	38.7344	49.97	26.89	-23.08	40.00	13.11	233	55	Vertical
3	67.3637	53.48	30.10	-23.38	40.00	9.90	277	151	Vertical
4	113.947	46.30	23.53	-22.77	43.50	19.97	231	199	Vertical
5	215.847	46.86	25.41	-21.45	43.50	18.09	209	216	Vertical
6	742.821	44.61	33.66	-10.95	46.00	12.34	251	35	Vertical

Remark:

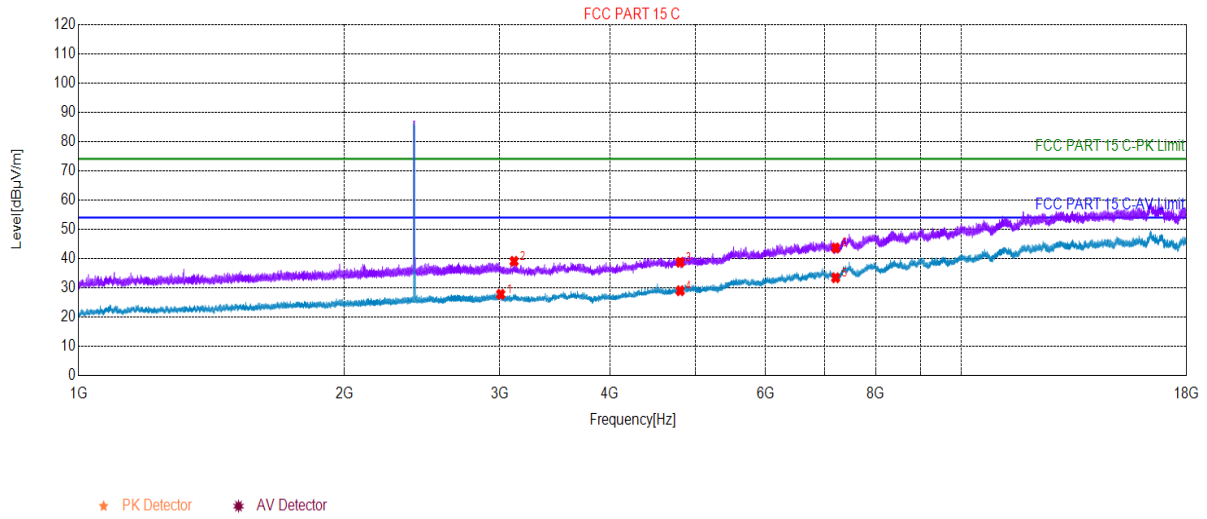
1. *Final Level = Receiver Read level + Factor (Antenna Factor + Cable Loss – Preamplifier Factor).*
2. *The emission levels of other frequencies are lower than the limit 20dB and not show in test report.*

Above 1GHz

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE-1M _Channel 0

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3007.80	51.61	27.76	-23.85	54.00	26.24	192	356	Vertical
2	3114.60	62.84	39.05	-23.79	74.00	34.95	263	112	Vertical
3	4804.00	57.00	38.71	-18.29	74.00	35.29	242	313	Vertical
4	4804.00	47.28	28.99	-18.29	54.00	25.01	263	25	Vertical
5	7206.00	44.06	33.41	-10.65	54.00	20.59	296	126	Vertical
6	7206.00	54.23	43.58	-10.65	74.00	30.42	231	214	Vertical

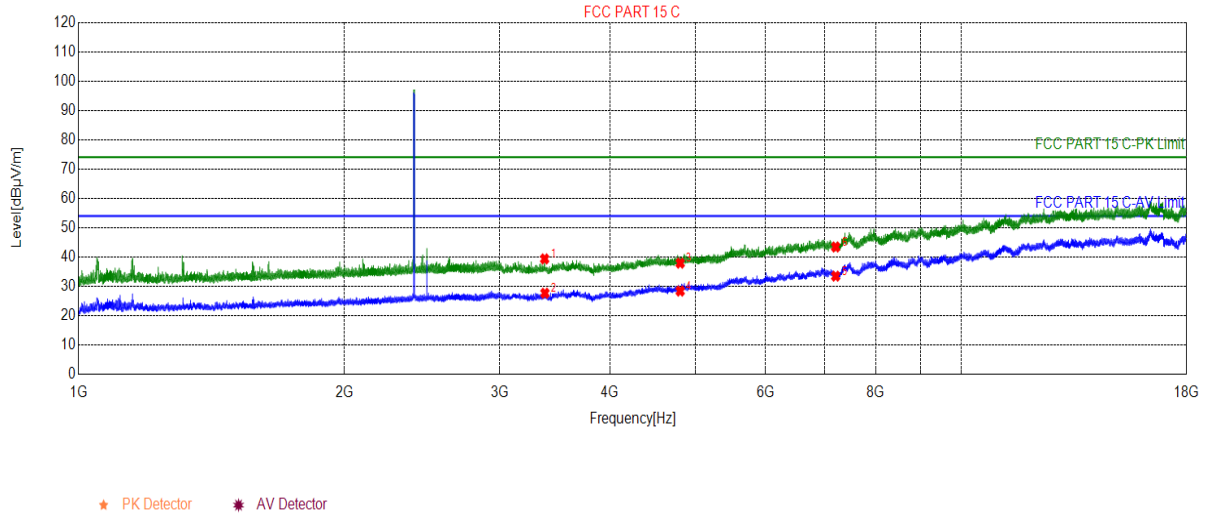
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE-1M_Channel 0

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3373.21	62.62	39.35	-23.27	74.00	34.65	211	284	Horizonta
2	3375.61	50.95	27.66	-23.29	54.00	26.34	171	155	Horizonta
3	4804.00	56.18	37.89	-18.29	74.00	36.11	195	141	Horizonta
4	4804.00	46.68	28.39	-18.29	54.00	25.61	136	2	Horizonta
5	7206.00	44.12	33.47	-10.65	54.00	20.53	102	84	Horizonta
6	7206.00	54.08	43.43	-10.65	74.00	30.57	175	141	Horizonta

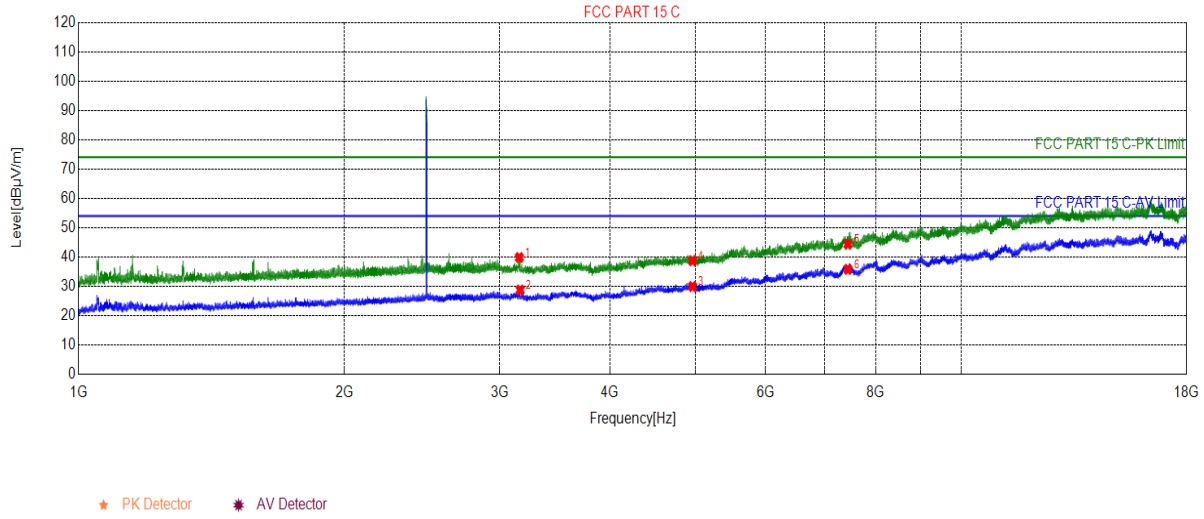
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE-1M _Channel 39

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3157.20	63.16	39.84	-23.32	74.00	34.16	185	286	Horizonta
2	3164.40	52.20	28.76	-23.44	54.00	25.24	122	286	Horizonta
3	4960.00	47.31	29.93	-17.38	54.00	24.07	103	214	Horizonta
4	4960.00	56.11	38.73	-17.38	74.00	35.27	123	301	Horizonta
5	7440.00	53.35	44.35	-9.00	74.00	29.65	171	41	Horizonta
6	7440.00	44.79	35.79	-9.00	54.00	18.21	162	184	Horizonta

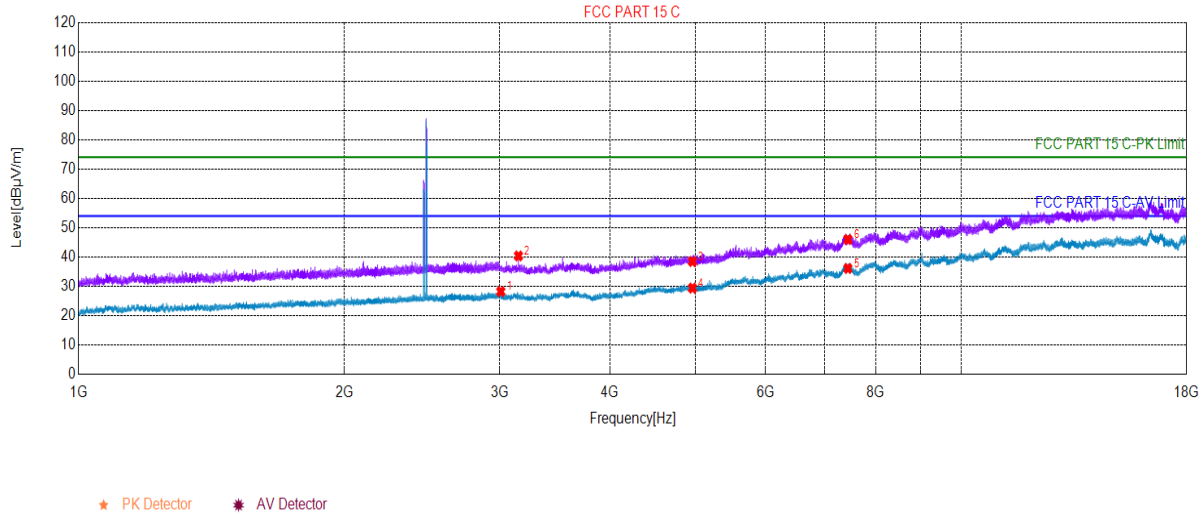
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE-1M _Channel 39

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3008.40	52.07	28.22	-23.85	54.00	25.78	263	185	Vertical
2	3150.60	63.57	40.36	-23.21	74.00	33.64	210	272	Vertical
3	4960.00	55.84	38.46	-17.38	74.00	35.54	251	127	Vertical
4	4960.00	46.77	29.39	-17.38	54.00	24.61	175	55	Vertical
5	7440.00	45.10	36.10	-9.00	54.00	17.90	196	55	Vertical
6	7440.00	54.97	45.97	-9.00	74.00	28.03	132	128	Vertical

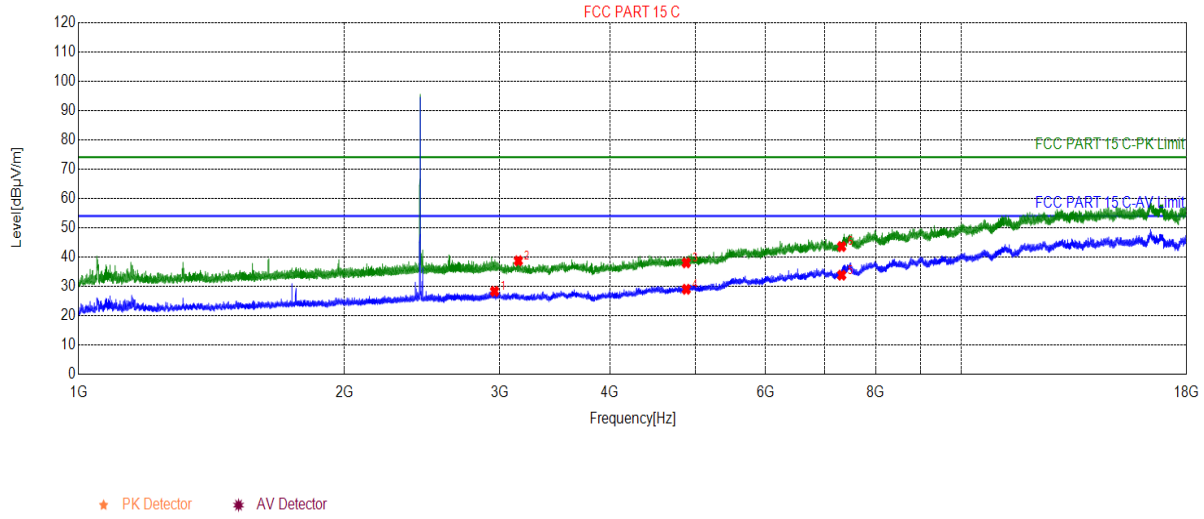
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE-1M _Channel 19

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2959.89	20.38	28.29	7.91	54.00	25.71	189	261	Horizonta
2	3149.40	61.91	38.70	-23.21	74.00	35.30	152	98	Horizonta
3	4880.00	56.01	38.01	-18.00	74.00	35.99	136	40	Horizonta
4	4880.00	47.00	29.00	-18.00	54.00	25.00	172	83	Horizonta
5	7320.00	44.32	33.81	-10.51	54.00	20.19	197	98	Horizonta
6	7320.00	54.09	43.58	-10.51	74.00	30.42	166	300	Horizonta

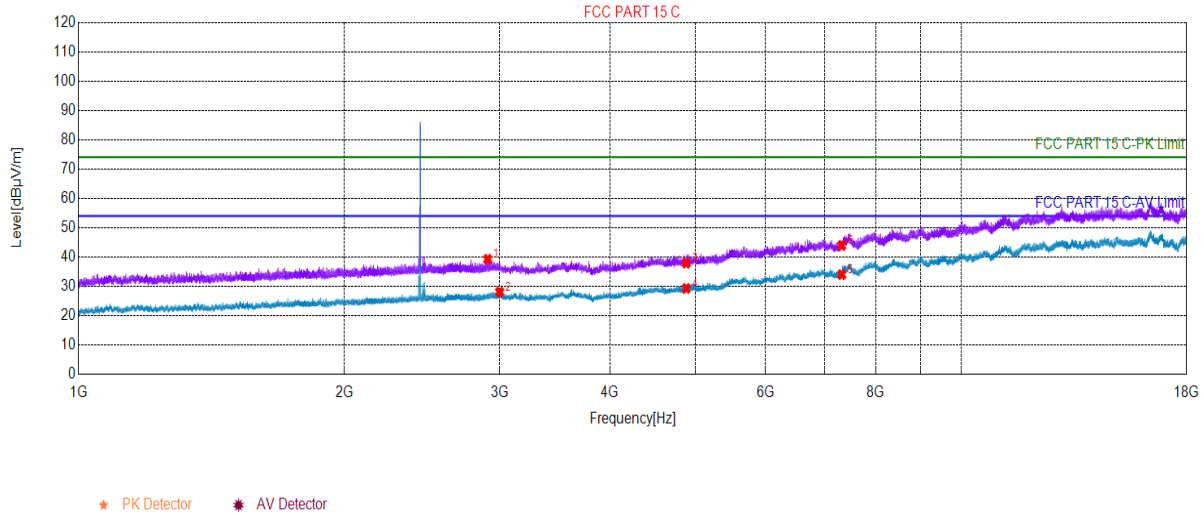
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE-1M _Channel 19

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2906.99	31.50	39.21	7.71	74.00	34.79	252	122	Vertical
2	2999.90	19.90	28.03	8.13	54.00	25.97	172	324	Vertical
3	4880.00	55.89	37.89	-18.00	74.00	36.11	196	2	Vertical
4	4880.00	47.29	29.29	-18.00	54.00	24.71	233	360	Vertical
5	7320.00	44.50	33.99	-10.51	54.00	20.01	264	302	Vertical
6	7320.00	54.44	43.93	-10.51	74.00	30.07	283	288	Vertical

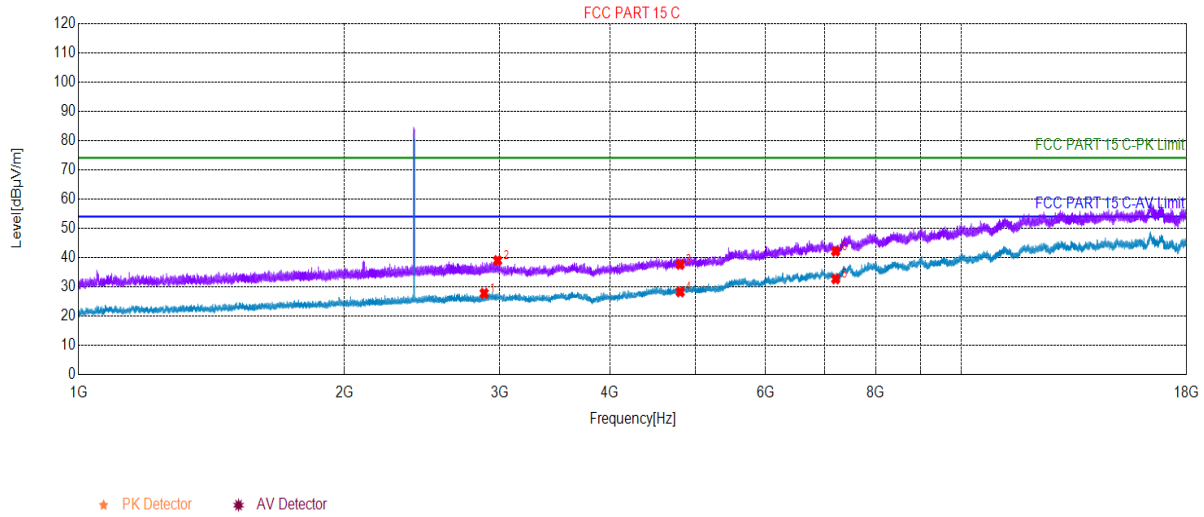
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE-2M_Channel 0

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2880.89	20.33	27.77	7.44	54.00	26.23	265	97	Vertical
2	2983.19	31.08	38.96	7.88	74.00	35.04	272	10	Vertical
3	4804.00	55.92	37.63	-18.29	74.00	36.37	288	156	Vertical
4	4804.00	46.54	28.25	-18.29	54.00	25.75	269	272	Vertical
5	7206.00	43.32	32.67	-10.65	54.00	21.33	263	330	Vertical
6	7206.00	52.79	42.14	-10.65	74.00	31.86	296	112	Vertical

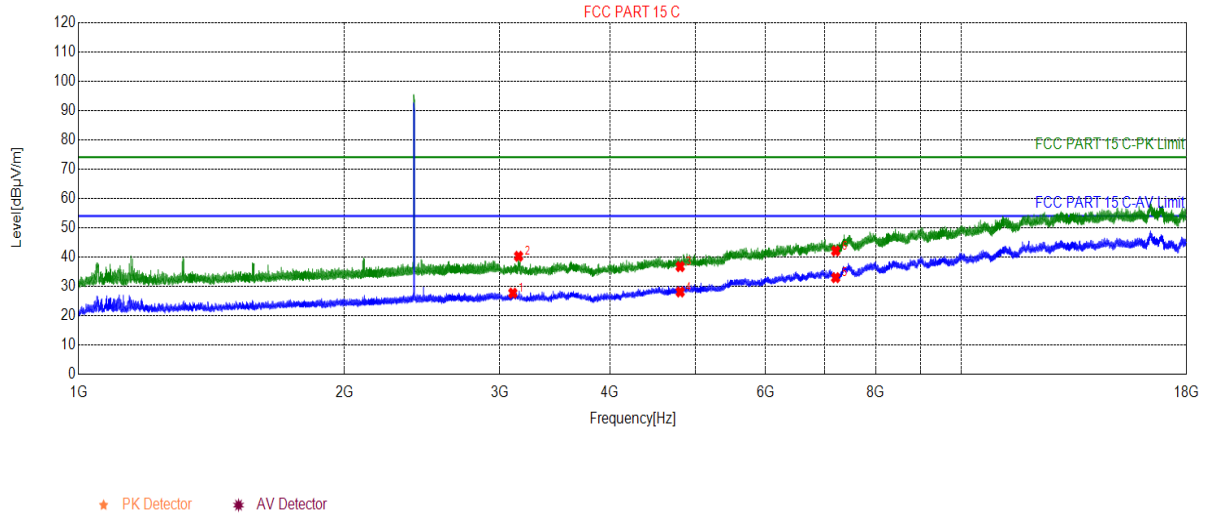
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE-2M_Channel 0

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3104.40	51.65	27.69	-23.96	54.00	26.31	183	257	Horizonta
2	3151.20	63.46	40.24	-23.22	74.00	33.76	172	271	Horizonta
3	4804.00	55.02	36.73	-18.29	74.00	37.27	133	329	Horizonta
4	4804.00	46.38	28.09	-18.29	54.00	25.91	117	300	Horizonta
5	7206.00	43.60	32.95	-10.65	54.00	21.05	196	242	Horizonta
6	7206.00	52.72	42.07	-10.65	74.00	31.93	163	2	Horizonta

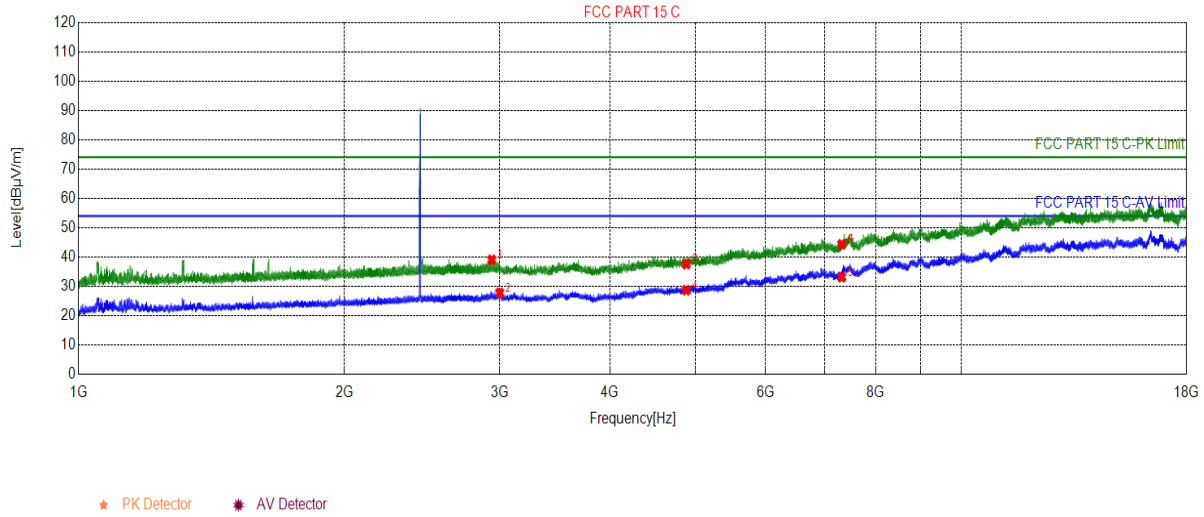
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE-2M_Channel 19

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2937.99	31.09	39.04	7.95	74.00	34.96	163	161	Horizonta
2	2999.90	19.63	27.76	8.13	54.00	26.24	171	161	Horizonta
3	4880.00	55.57	37.57	-18.00	74.00	36.43	122	170	Horizonta
4	4880.00	46.69	28.69	-18.00	54.00	25.31	131	98	Horizonta
5	7320.00	43.66	33.15	-10.51	54.00	20.85	197	314	Horizonta
6	7320.00	54.82	44.31	-10.51	74.00	29.69	188	356	Horizonta

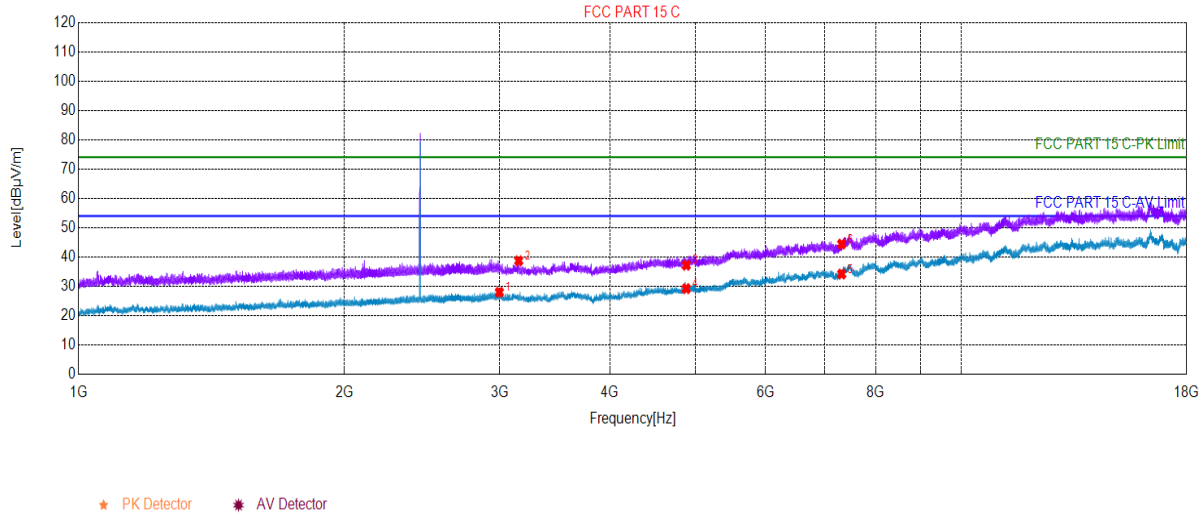
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE-2M_Channel 19

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2997.49	19.91	27.96	8.05	54.00	26.04	230	325	Vertical
2	3152.40	61.94	38.70	-23.24	74.00	35.30	274	274	Vertical
3	4880.00	55.20	37.20	-18.00	74.00	36.80	282	316	Vertical
4	4880.00	47.22	29.22	-18.00	54.00	24.78	169	143	Vertical
5	7320.00	44.71	34.20	-10.51	54.00	19.80	137	42	Vertical
6	7320.00	54.93	44.42	-10.51	74.00	29.58	177	114	Vertical

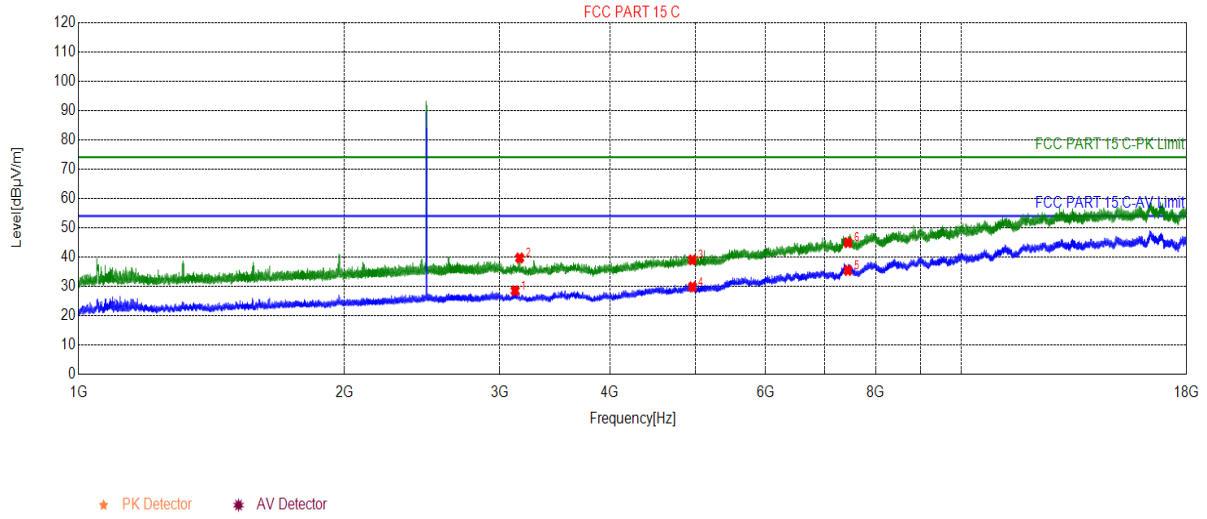
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE-2M_Channel 39

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3123.00	52.16	28.51	-23.65	54.00	25.49	183	200	Horizonta
2	3160.20	63.03	39.66	-23.37	74.00	34.34	196	285	Horizonta
3	4960.00	56.41	39.03	-17.38	74.00	34.97	131	171	Horizonta
4	4960.00	47.21	29.83	-17.38	54.00	24.17	172	221	Horizonta
5	7440.00	44.42	35.42	-9.00	54.00	18.58	122	171	Horizonta
6	7440.00	53.88	44.88	-9.00	74.00	29.12	189	336	Horizonta

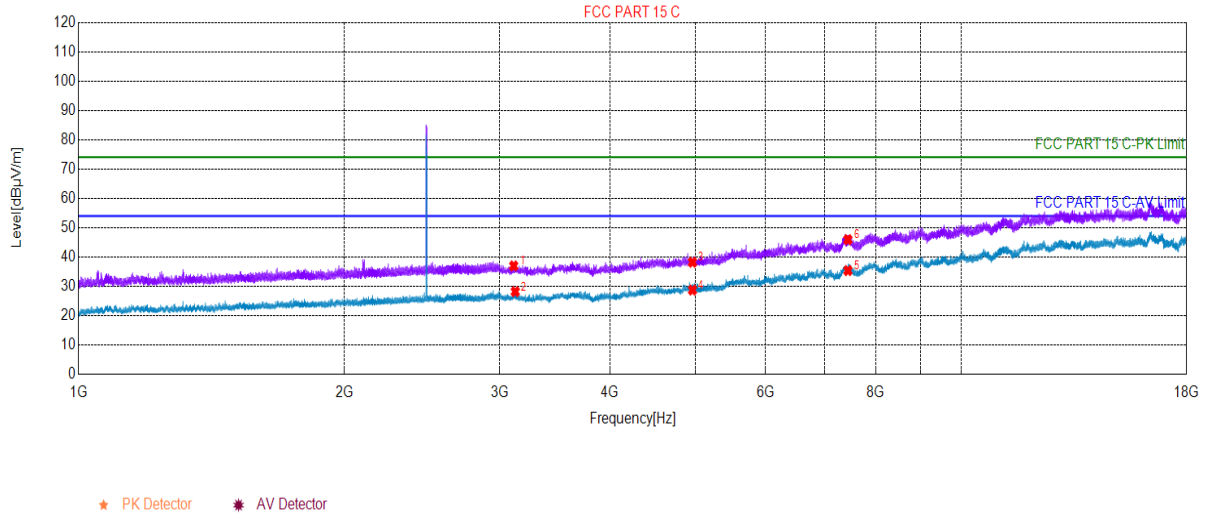
Remark:

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

Product Name:	Smart Phone	Product Model:	TA-1390
Test By:	Mike	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz	Environment:	Temp: 24℃ Huni: 57%

BLE-2M_Channel 39

Test Graph



Suspected List

Suspected List									
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3111.60	60.80	36.96	-23.84	74.00	37.04	155	224	Vertical
2	3124.20	51.83	28.20	-23.63	54.00	25.80	123	2	Vertical
3	4960.00	55.58	38.20	-17.38	74.00	35.80	172	42	Vertical
4	4960.00	46.11	28.73	-17.38	54.00	25.27	131	182	Vertical
5	7440.00	44.36	35.36	-9.00	54.00	18.64	169	42	Vertical
6	7440.00	54.92	45.92	-9.00	74.00	28.08	191	340	Vertical

Remark:

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

7 Test Setup Photo

Reference to the test setup photos: BT & Wi-Fi & NII Setup Photos.

8 EUT Constructional Details

Reference to the External photo and Internal photo.

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