

TEST REPORT

Application No:

SUCR2504000342WM

Applicant:

FCNT LLC.

Address of Applicant:

Sanki Yamato Bldg. 3F, 7-10-1, Chuorinkan, Yamato-shi, Kanagawa, 242-0007, Japan

Manufacturer:

FCNT LLC.

Address of Manufacturer:

Sanki Yamato Bldg. 3F, 7-10-1, Chuorinkan, Yamato-shi, Kanagawa, 242-0007, Japan

EUT Description:

Mobile Cellular Phone

Model No.:

M08, F-51F -----♦

♦

Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.

Trade Mark:

FCNT LLC.

FCC ID:

2BEPUFMP203

Standard(s):

FCC 47 CFR Part 15, Subpart B

Date of Receipt:

April 18, 2025

Date of Test:

April 27, 2025

Date of Issue:

May 26, 2025

Test Result:

Pass*

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

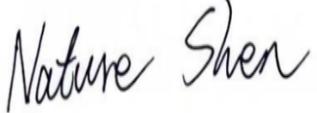
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Version

<i>Revision Record</i>			
<i>Version</i>	<i>Description</i>	<i>Date</i>	<i>Remark</i>
01	Original	May 26, 2025	/

Authorized for issue by:			
Tested By		 Nature Shen	
		Nature Shen / Project Manager	
Approved By		 Cloud Peng	
		Cloud Peng/Technical Manager	

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SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

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1 Test Summary

Emission Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at Mains Terminals (150kHz-30MHz)	FCC 47 CFR Part 15, Subpart B	ANSI C63.4:2014	Class B	Pass
Radiated Emissions (30MHz-1GHz)	FCC 47 CFR Part 15, Subpart B	ANSI C63.4:2014	Class B	Pass
Radiated Emissions (above 1GHz)	FCC 47 CFR Part 15, Subpart B	ANSI C63.4:2014	Class B	Pass

Internal Source	Upper Frequency
Below 1.705MHz	30MHz
1.705MHz to 108MHz	1GHz
108MHz to 500MHz	2GHz
500MHz to 1GHz	5GHz
Above 1GHz	5th harmonic of the highest frequency or 40GHz, whichever is lower

2 General Information

Product Name:	Mobile Cellular Phone		
Model No. (EUT):	M08, F-51F		
Trade Mark:	FCNT.LLC		
Hardware Version:	DVT2		
Software Version:	V2VH35.58-5		
IMEI:	RE/CE	Sample 1: 354977560032584 Sample 2: 354977560048127	
Frequency Bands:	Band	Tx (MHz)	Rx (MHz)
	GSM850	824~849	869~894
	GSM1900	1850~1910	1930~1990
	WCDMA Band V	824~849	869~894
	LTE Band 2	1850~1910	1930~1990
	LTE Band 4	1710~1755	2110~2155
	LTE Band 5	824~849	869~894
	LTE Band 12	699~716	729~746
	LTE Band 38	2570~2620	2570~2620
	LTE Band 41	2496~2690	2496~2690
	LTE Band 42	3400~3600	3400~3600
	NR Band n5	824~849	869~894
	NR Band n41	2496~2690	2496~2690
	NR Band n77	3700~3980	3700~3980
	NR Band n78	3700~3800	3700~3800
	Wi-Fi 2.4G	2412~2462	2412~2462
	Bluetooth	2402~2480	2402~2480
	Wi-Fi 5G	5150~5850	5150~5850
	Wi-Fi 6E	5925~6425	5925~6425
		6425~6525	6425~6525
		6525~6875	6525~6875
		6875~7125	6875~7125
	NFC	13.56	13.56
	GNSS(GPS+Glonass +Beidou+Galileo+SBAS)	1559~1610, 1164~1215	1559~1610, 1164~1215

Note:

1. As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.
2. The two models named M08, F-51F are the same product except that their model names are different for different market segments.

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Accessories Information				
AC Adapter	Brand Name	Motorola (AOHAI)	Model Name	MC-901
	Power Rating	I/P: 100 - 240 Vac, 2000 mA, O/P: 5/9/15/20/5-15/5-20 Vdc, 3000/3000/3000/4500/3000~6000/3000~4500 mA		
	Power Cord	0 meter, non-shielded cable, with w/o ferrite core		
Battery	Brand Name	ATL	Model Name	SA18E67963
	Power Rating	3.91Vdc, 5000 mAh	Type	Li-ion
USB Cable 1	Brand Name	Saibao	Model Name	SC18D71644
	Signal Line	1 meter, shielded cable, w/o ferrite core		
USB Cable 2	Brand Name	Luxshare	Model Name	SC18E08104
	Signal Line	1 meter, shielded cable, w/o ferrite core		

2.1 Description of Support Units

Description	Manufacturer	Model No.	Inventory No.
Router	Smawave Technology Co.,Ltd	SRT 421	SUWI-04-34-01
Computer	Lenovo	T14	SUWI-03-33-04

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2.2 Test Location

All tests were performed at:

Company:	SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.
Address:	South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone
Post code:	215000
Test engineer:	King-p Li

2.3 Test Facility

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

- **A2LA (Certificate No. 6336.01)**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

- **FCC –Designation Number: CN1312**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an accredited testing laboratory.

Designation Number: CN1312.

Test Firm Registration Number: 717327

2.4 Deviation from Standards

None

2.5 Abnormalities from Standard Conditions

None

3 Equipment List

CE Test System					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	1/15/2025	1/14/2026
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-06	2/13/2025	2/12/2026
Artificial network	ROHDE&SCHWARZ	ENV216	SUWI-01-19-03	5/6/2024	5/5/2025
Artificial network	ROHDE&SCHWARZ	ENV216	SUWI-01-19-04	5/6/2024	5/5/2025
Measurement Software	Tonscend	JS32-CE 4.0.0.2	SUWI-02-09-05	NCR	NCR
Wideband Radio Communication Tester	Anritsu	MT8821C	SUWI-01-26-03	11/19/2024	11/18/2025
Radio Communication Analyzer	StarPoint	SP9500E	SUWI-01-28-02	11/19/2024	11/18/2025

RE Test System					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Semi-Anechoic Chamber	Brilliant-emc	N/A	SUWI-04-02-01	6/3/2023	6/2/2026
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-05	2/13/2025	2/12/2026
Signal Analyzer	ROHDE&SCHWARZ	FSW43	SUWI-01-02-04	5/8/2024	5/7/2025
Signal Analyzer	KEYSIGHT	N9020A	SUWI-01-02-07	11/21/2024	11/20/2025
Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	1/15/2025	1/14/2026
Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	VULB 9168	SUWI-01-11-04	11/25/2023	11/24/2025
Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	BBHA 9120D	SUWI-01-11-02	5/13/2023	5/12/2025
Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	BBHA 9170	SUWI-01-11-03	5/12/2023	5/11/2025
Amplifier	Tonscend	TAP9K3G40	SUWI-01-14-01	1/16/2025	1/15/2026
Amplifier	Tonscend	TAP01018050	SUWI-01-14-02	1/16/2025	1/15/2026
Amplifier	Tonscend	TAP18040048	SUWI-01-14-03	1/20/2025	1/19/2026
Wideband Radio Communication Tester	Anritsu	MT8821C	SUWI-01-26-03	11/19/2024	11/18/2025
Measurement Software	Tonscend	JS32-RE V4.0.0.0	SUWI-02-09-04	NCR	NCR
Radio Communication Analyzer	StarPoint	SP9500E	SUWI-01-28-02	11/19/2024	11/18/2025

Remark: NCR=No Calibration Requirement.

4 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Conduction Emission	± 2.9dB (150kHz to 30MHz)
2	Radiated Emission	± 4.8dB (30M -1GHz)
		± 4.8dB (1GHz to 18GHz)
		± 4.80dB (Above 18GHz)

Remark:

The U_{lab} (lab Uncertainty) is less than $U_{cisp/ETSI}$ (CISPR/ETSI Uncertainty), so the test results

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

5 Emission Test Results

5.1 Conducted Emissions at Mains Terminals (150kHz-30MHz)

Test Requirement:	47 CFR Part 15, Subpart B		
Test Method:	ANSI C63.4:2014		
Frequency Range:	150kHz to 30MHz		
Receiver Setup:	RBW = 9kHz, VBW = 30kHz		
Limit:	Frequency Range (MHz)		Limit(dB μ V)
		Quasi-peak	average
	0.15M-0.5MHz	66 ~ 56*	56 ~ 46*
	0.5M-5MHz	56	46
5M-30MHz		60	50
*Decreases with the logarithm of the frequency Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz			

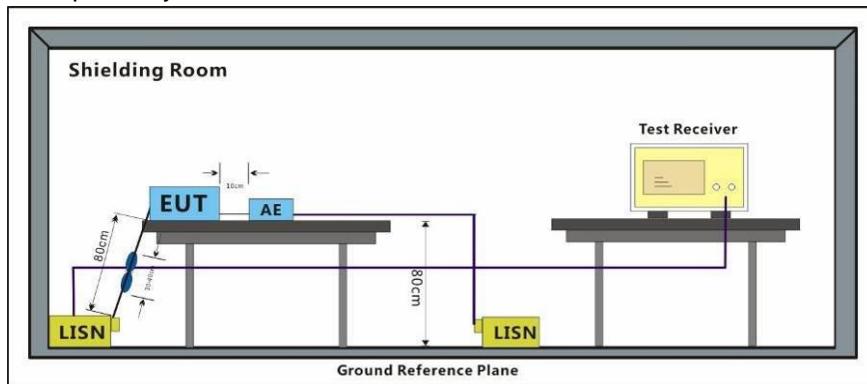
2.1.1 E.U.T. Operation

Operating Environment:

Temperature:	22~23°C
Humidity:	44~46%RH
Atmospheric Pressure:	101kPa
Pretest these modes to find the worst case:	a: adapter+usb Cable+BT(Idle)+2.4G WLAN(Idle)+Camera(Rear)+GSM850 (RX) Low b: adapter+usb Cable+BT(Idle)+BT(Idle)+5G WLAN(Idle)+Camera(Front)+WCDMA Band 5 (RX) Mid c: adapter+usb Cable+BT(Idle)+BT(Idle)+WLAN6E(Idle)+MP4+LTE Band 5 (RX) High d: adapter+usb Cable+BT(Idle)+BT(Idle)+2.4G WLAN(Idle)+NFC ON+LTE Band 12 (RX) Low e: adapter+usb Cable+BT(Idle)+BT(Idle)+WLAN6E(Idle)+GNSS+SA Band 77 (RX) Mid f: Transfer data between the EUT and the PC+USB cable+BT(Idle)+5G WLAN(Idle)+LTE Band 41 (RX) High
The worst case for final test:	a: adapter+usb Cable+BT(Idle)+2.4G WLAN(Idle)+Camera(Rear)+GSM850 (RX) Low

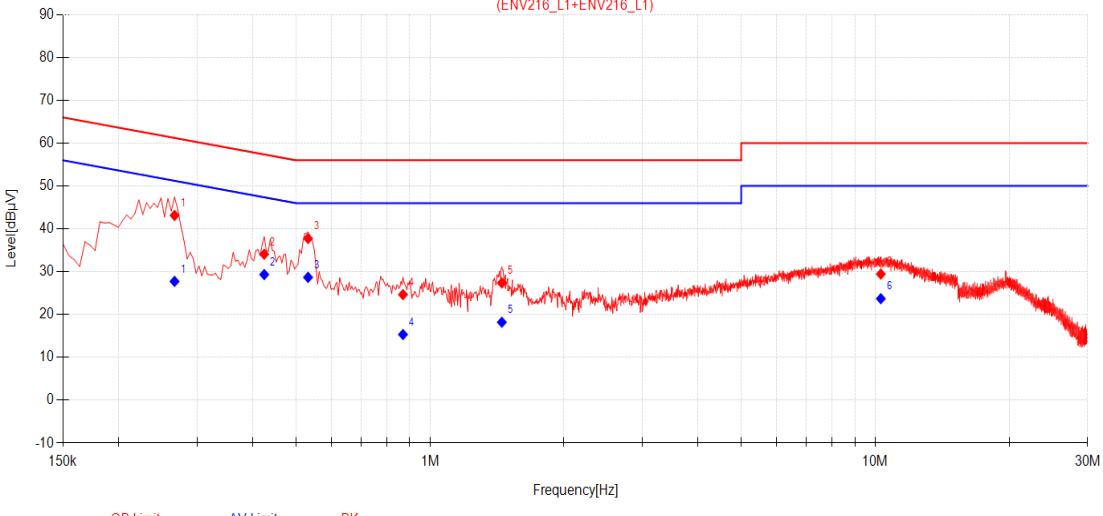
2.1.2 Test Setup Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

**2.1.3 Measurement Data**

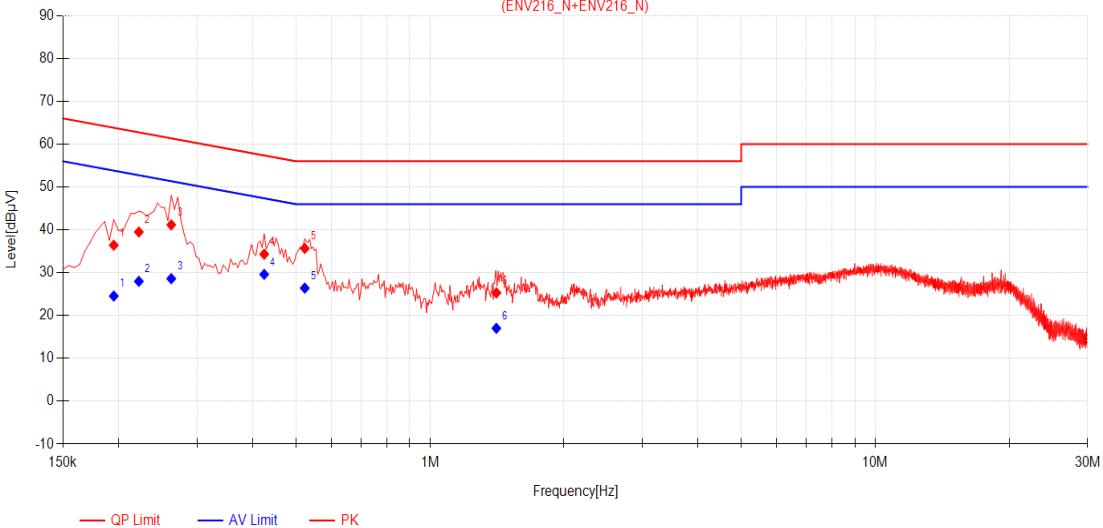
An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.

Sample 1:

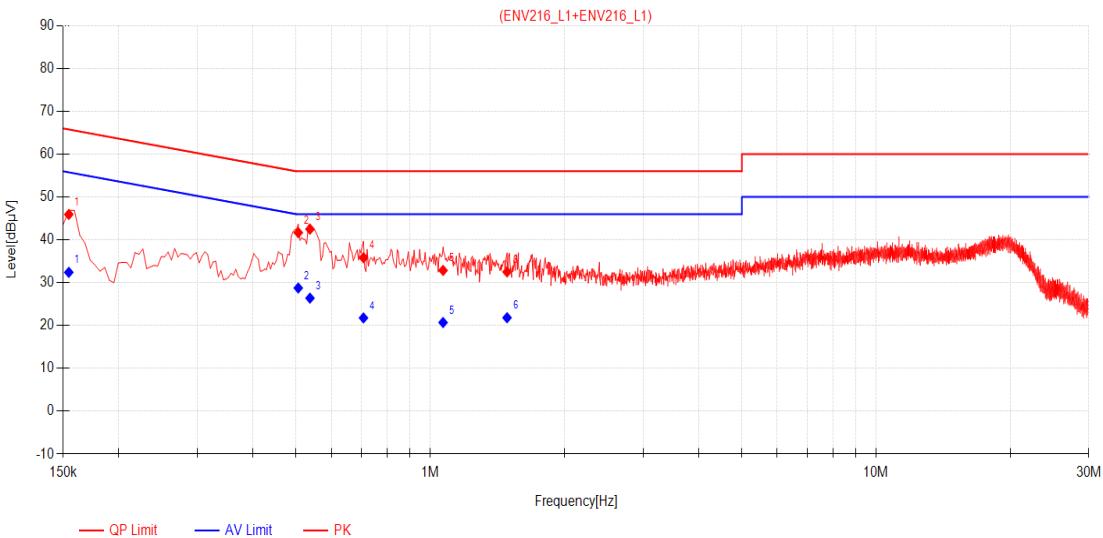
Final Test Mode:	Mode a	Phase:	Line								
(ENV216_L1+ENV216_L1)											
											
Final Data List											
NO.	Frequency [MHz]	Factor [dB]	QP Reading [dBμV]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Reading [dBμV]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Verdict
1	0.2670	10.15	32.99	43.14	61.21	18.07	17.58	27.73	51.21	23.48	PASS
2	0.4245	10.17	23.90	34.07	57.36	23.29	19.16	29.33	47.36	18.03	PASS
3	0.5325	10.18	27.57	37.75	56.00	18.25	18.50	28.68	46.00	17.32	PASS
4	0.8700	10.13	14.53	24.66	56.00	31.34	5.21	15.34	46.00	30.66	PASS
5	1.4505	10.08	17.30	27.38	56.00	28.62	8.13	18.21	46.00	27.79	PASS
6	10.2930	10.10	19.34	29.44	60.00	30.56	13.60	23.70	50.00	26.30	PASS

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Value =Reading[dBμV] + Factor(Lisn factor[dB] + cable loss[dB]).
3. Margin = Limit[dBμV] – Value[dBμV]

Final Test Mode:	Mode a	Phase:	Neutral																																																																																				
																																																																																							
Final Data List																																																																																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th><th>Frequency [MHz]</th><th>Factor [dB]</th><th>QP Reading [dBμV]</th><th>QP Value [dBμV]</th><th>QP Limit [dBμV]</th><th>QP Margin [dB]</th><th>AV Reading [dBμV]</th><th>AV Value [dBμV]</th><th>AV Limit [dBμV]</th><th>AV Margin [dB]</th><th>Verdict</th></tr> </thead> <tbody> <tr> <td>1</td><td>0.1950</td><td>10.19</td><td>26.22</td><td>36.41</td><td>63.82</td><td>27.41</td><td>14.36</td><td>24.55</td><td>53.82</td><td>29.27</td><td>PASS</td></tr> <tr> <td>2</td><td>0.2220</td><td>10.18</td><td>29.32</td><td>39.50</td><td>62.74</td><td>23.24</td><td>17.79</td><td>27.97</td><td>52.74</td><td>24.77</td><td>PASS</td></tr> <tr> <td>3</td><td>0.2625</td><td>10.16</td><td>31.00</td><td>41.16</td><td>61.35</td><td>20.19</td><td>18.44</td><td>28.60</td><td>51.35</td><td>22.75</td><td>PASS</td></tr> <tr> <td>4</td><td>0.4245</td><td>10.16</td><td>24.16</td><td>34.32</td><td>57.36</td><td>23.04</td><td>19.45</td><td>29.61</td><td>47.36</td><td>17.75</td><td>PASS</td></tr> <tr> <td>5</td><td>0.5235</td><td>10.17</td><td>25.50</td><td>35.67</td><td>56.00</td><td>20.33</td><td>16.23</td><td>26.40</td><td>46.00</td><td>19.60</td><td>PASS</td></tr> <tr> <td>6</td><td>1.4100</td><td>10.11</td><td>15.19</td><td>25.30</td><td>56.00</td><td>30.70</td><td>6.91</td><td>17.02</td><td>46.00</td><td>28.98</td><td>PASS</td></tr> </tbody> </table>				NO.	Frequency [MHz]	Factor [dB]	QP Reading [dBμV]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Reading [dBμV]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Verdict	1	0.1950	10.19	26.22	36.41	63.82	27.41	14.36	24.55	53.82	29.27	PASS	2	0.2220	10.18	29.32	39.50	62.74	23.24	17.79	27.97	52.74	24.77	PASS	3	0.2625	10.16	31.00	41.16	61.35	20.19	18.44	28.60	51.35	22.75	PASS	4	0.4245	10.16	24.16	34.32	57.36	23.04	19.45	29.61	47.36	17.75	PASS	5	0.5235	10.17	25.50	35.67	56.00	20.33	16.23	26.40	46.00	19.60	PASS	6	1.4100	10.11	15.19	25.30	56.00	30.70	6.91	17.02	46.00	28.98	PASS
NO.	Frequency [MHz]	Factor [dB]	QP Reading [dBμV]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Reading [dBμV]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Verdict																																																																												
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Remark: <ol style="list-style-type: none"> 1. The following Quasi-Peak and Average measurements were performed on the EUT: 2. Value =Reading[dBμV] + Factor(Lisn factor[dB] + cable loss[dB]). 3. Margin = Limit[dBμV] – Value[dBμV] 																																																																																							

Sample 2:

Final Test Mode:	Mode a	Phase:	Line								
(ENV216_L1+ENV216_L1)											
											
Final Data List											
NO.	Frequency [MHz]	Factor [dB]	QP Reading [dB μ V]	QP Value [dB μ V]	QP Limit [dB μ V]	QP Margin [dB]	AV Reading [dB μ V]	AV Value [dB μ V]	AV Limit [dB μ V]	AV Margin [dB]	Verdict
1	0.1545	10.08	35.85	45.93	65.75	19.82	22.34	32.42	55.75	23.33	PASS
2	0.5055	10.07	31.61	41.68	56.00	14.32	18.69	28.76	46.00	17.24	PASS
3	0.5370	10.07	32.43	42.50	56.00	13.50	16.33	26.40	46.00	19.60	PASS
4	0.7080	10.06	25.78	35.84	56.00	20.16	11.71	21.77	46.00	24.23	PASS
5	1.0680	9.94	22.93	32.87	56.00	23.13	10.77	20.71	46.00	25.29	PASS
6	1.4865	9.90	22.62	32.52	56.00	23.48	11.92	21.82	46.00	24.18	PASS

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Value =Reading[dB μ V] + Factor(Lisn factor[dB] + cable loss[dB]).
3. Margin = Limit[dB μ V] – Value[dB μ V]

Final Test Mode: Mode a Phase: Neutral

(ENV216_N+ENV216_N)

Level[dB μ V]

Frequency[Hz]

Legend:

- QP Limit (Red line)
- QP Detector (Red diamond)
- AV Limit (Blue line)
- AV Detector (Blue diamond)
- PK (Red line)

5.2 Radiated Emissions (30MHz-1GHz)

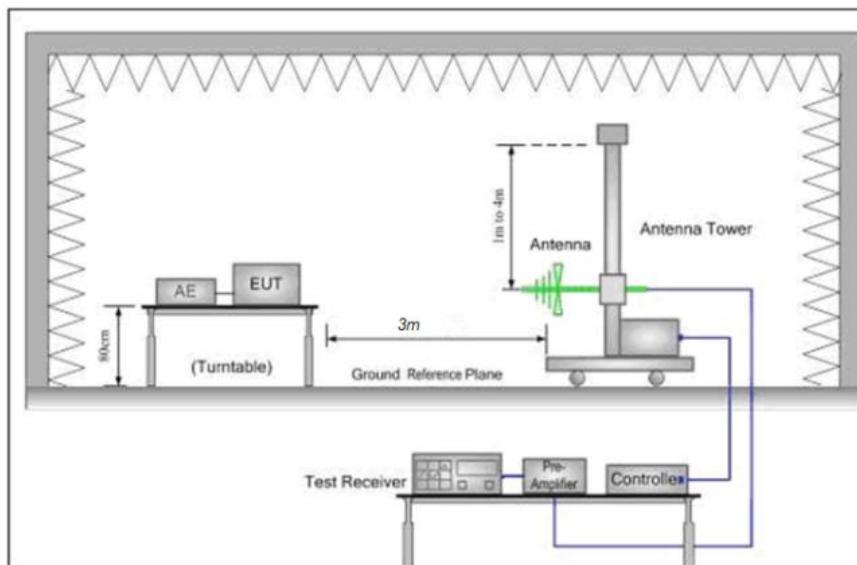
Test Requirement:	47 CFR Part 15, Subpart B		
Test Method:	ANSI C63.4:2014		
Frequency Range:	30MHz to 1GHz		
Measurement Distance:	3m		
Limit:	Frequency Range (MHz)	Limit(dB μ V/m)	Detector
	30MHz -88MHz	40.0	Quasi-peak
	88MHz-216MHz	43.5	Quasi-peak
	216MHz-960MHz	46.0	Quasi-peak
	960MHz-1000MHz	54.0	Quasi-peak
Detector:	Peak for pre-scan (120kHz resolution bandwidth) 30M to1000MHz		

5.2.1 E.U.T. Operation

Temperature:	22~23°C
Humidity:	44~46% RH
Atmospheric Pressure:	101kPa
Pretest these modes to find the worst case:	a: adapter+usb Cable+BT(Idle)+2.4GWLAN(Idle)+Camera(Rear)+GSM850 (RX) Low b: adapter+usb Cable+BT(Idle)+BT(Idle)+5GWLAN(Idle)+Camera(Front)+WCDMA Band 5(RX) Mid c: adapter+usb Cable+BT(Idle)+BT(Idle)+WLAN6E(Idle)+MP4+LTE Band 5 (RX) High d: adapter+usb Cable+BT(Idle)+BT(Idle)+2.4GWLAN(Idle)+NFC ON+LTE Band 12 (RX) Low e: adapter+usb Cable+BT(Idle)+BT(Idle)+WLAN6E(Idle)+GNSS+SA Band 77 (RX) Mid f: Transfer data between the EUT and the PC+USB cable+BT(Idle)+5GWLAN(Idle)+LTE Band 41 (RX) High
The worst case for final test:	d: adapter+usb Cable+BT(Idle)+BT(Idle)+2.4GWLAN(Idle)+NFC ON+LTE Band 12 (RX) Low

5.2.2 Test Setup Procedures

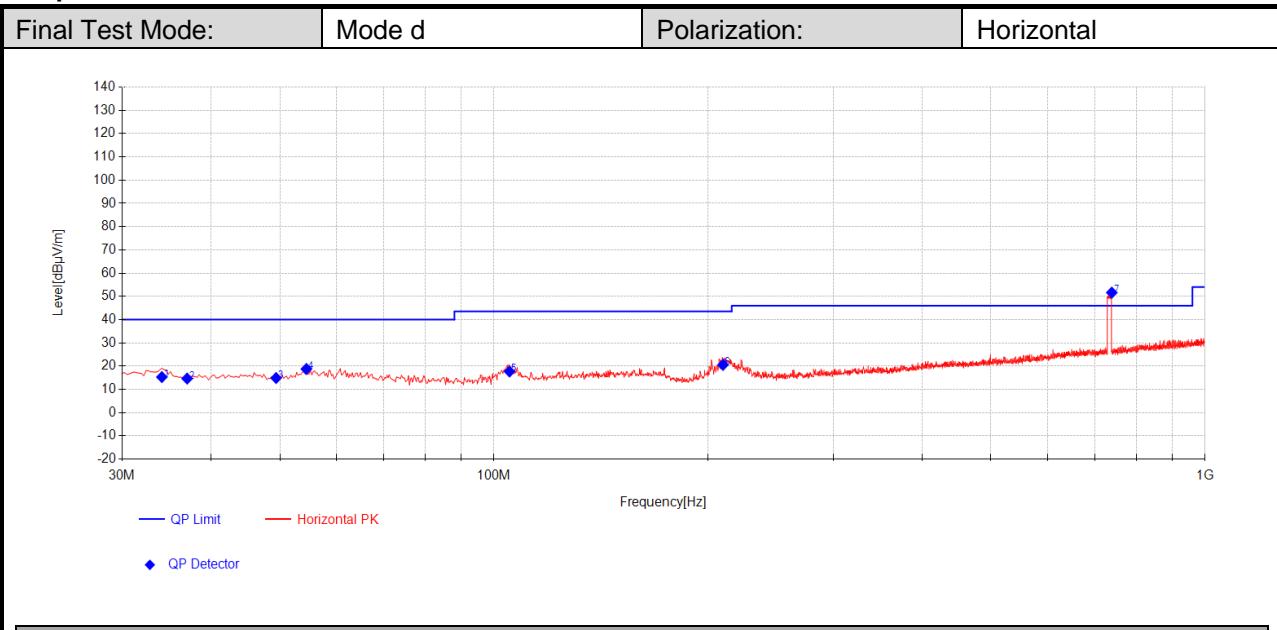
1. The EUT was placed in a semi Anechoic Chamber as show below
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna height is adjusted between 1 to 4 meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak Detect Function with specified bandwidth with Maximum Hold Mode, and the trace was allowed to stabilize.
7. If the emission level of the EUT in peak mode was 6 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.



5.2.3 Measurement Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.

The three polarities of X,Y,Z were measured by EUT, but only the worst data had been displayed.

Sample 1:


Final Data List										
NO.	Frequency [MHz]	Reading [dB μ V]	AF [dB/m]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	34.1225	31.05	18.20	-33.96	15.29	40.00	24.71	196	319	Horizontal
2	37.0325	30.06	18.50	-33.91	14.65	40.00	25.35	254	91	Horizontal
3	49.4	29.86	18.72	-33.70	14.88	40.00	25.12	174	298	Horizontal
4	54.4925	34.25	18.15	-33.63	18.77	40.00	21.23	185	4	Horizontal
5	105.175	35.26	15.48	-33.06	17.69	43.50	25.81	263	4	Horizontal
6	209.935	37.32	15.40	-32.17	20.55	43.50	22.95	225	247	Horizontal
7	739.3125	55.28	25.69	-29.35	51.62	-	-	138	172	Horizontal

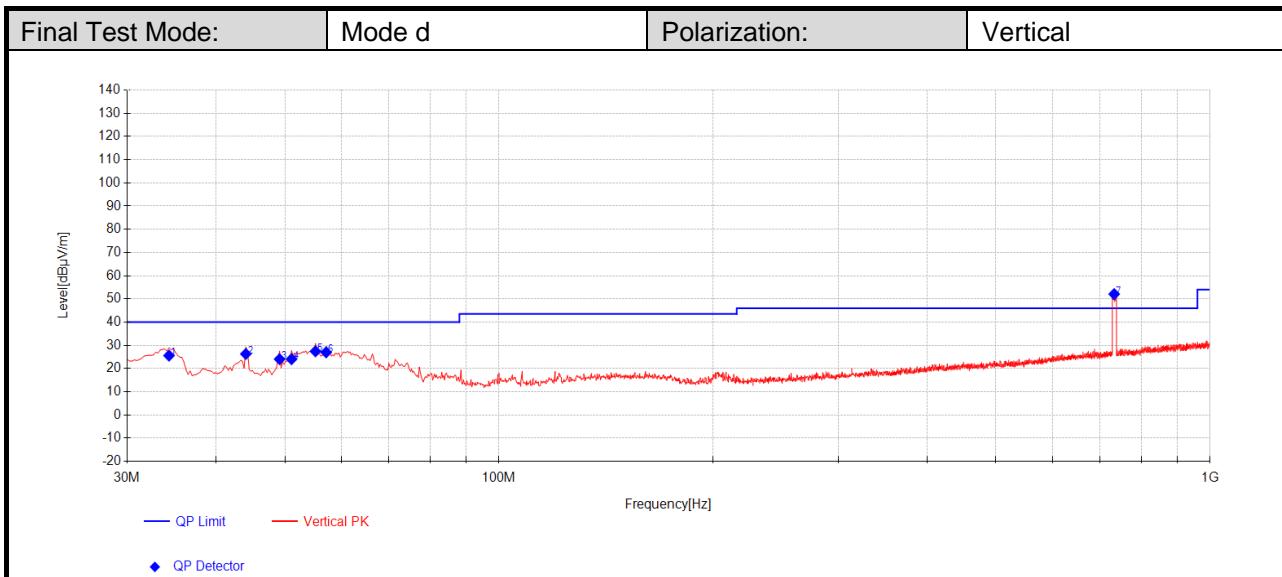
Remark:

1. #7 30M-1G is system simulator signal which can be ignored
2. The Quasi-Peak measurements were performed on the EUT.
3. Value = Reading + AF + Factor:

AF = Antenna Factor(dB/m)

Factor = Cable Factor(dB) - Preamplifier (dB)

Margin = Limit[dB μ V/m] - Value[dB μ V/m]



Final Data List										
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	34.365	41.35	18.20	-33.96	25.59	40.00	14.41	196	50	Vertical
2	44.065	41.26	18.81	-33.79	26.28	40.00	13.72	254	328	Vertical
3	49.1575	38.99	18.77	-33.70	24.05	40.00	15.95	174	338	Vertical
4	51.0975	39.24	18.49	-33.68	24.06	40.00	15.94	185	296	Vertical
5	55.22	42.86	18.20	-33.62	27.44	40.00	12.56	263	0	Vertical
6	57.16	42.54	18.04	-33.59	26.98	40.00	13.02	224	40	Vertical
7	733.0075	55.74	25.68	-29.34	52.08	-	-	133	338	Vertical

Remark:

1. #7 30M-1G is system simulator signal which can be ignored

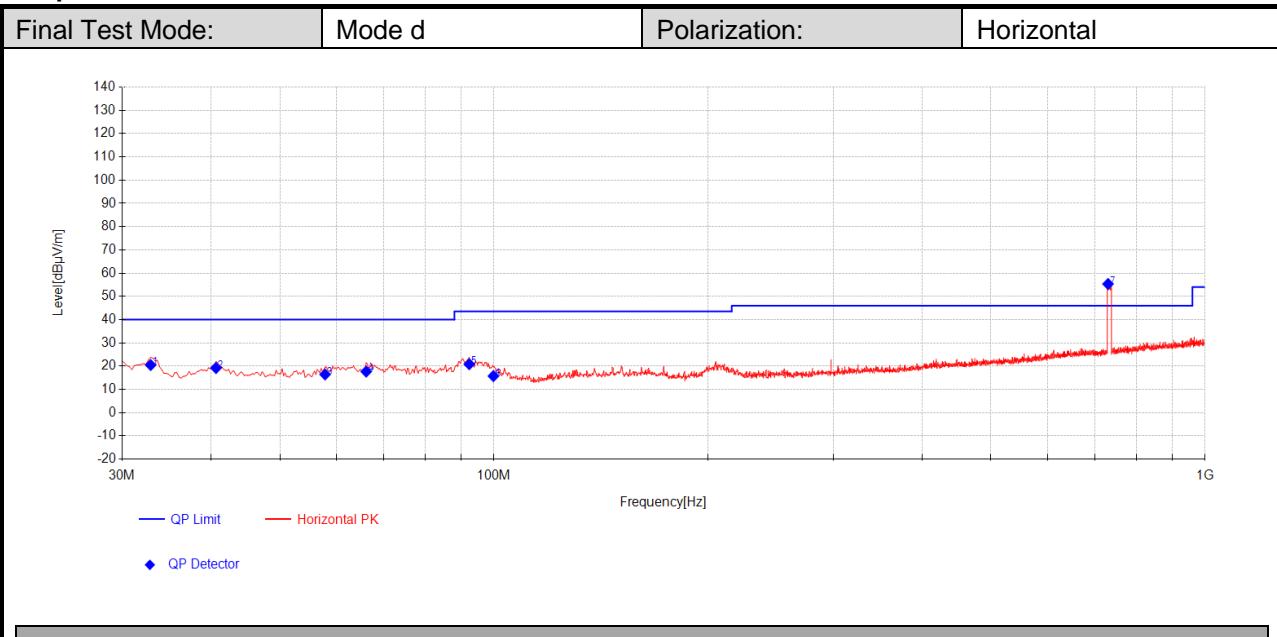
2. The Quasi-Peak measurements were performed on the EUT.

3. Value = Reading + AF + Factor:

AF = Antenna Factor(dB/m)

Factor = Cable Factor(dB) - Preamplifier (dB)

Margin = Limit[dBμV/m] - Value[dBμV/m]

Sample 2:


Final Data List										
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	32.91	36.35	18.10	-33.98	20.47	40.00	19.53	185	341	Horizontal
2	40.67	34.25	18.80	-33.85	19.20	40.00	20.80	265	185	Horizontal
3	57.8875	32.26	17.75	-33.58	16.42	40.00	23.58	254	341	Horizontal
4	66.1325	33.85	17.27	-33.47	17.65	40.00	22.35	174	18	Horizontal
5	92.3225	39.43	14.63	-33.23	20.83	43.50	22.67	175	19	Horizontal
6	99.84	34.26	14.58	-33.13	15.72	43.50	27.78	293	359	Horizontal
7	730.34	58.89	25.79	-29.33	55.35	-	-	183	342	Horizontal

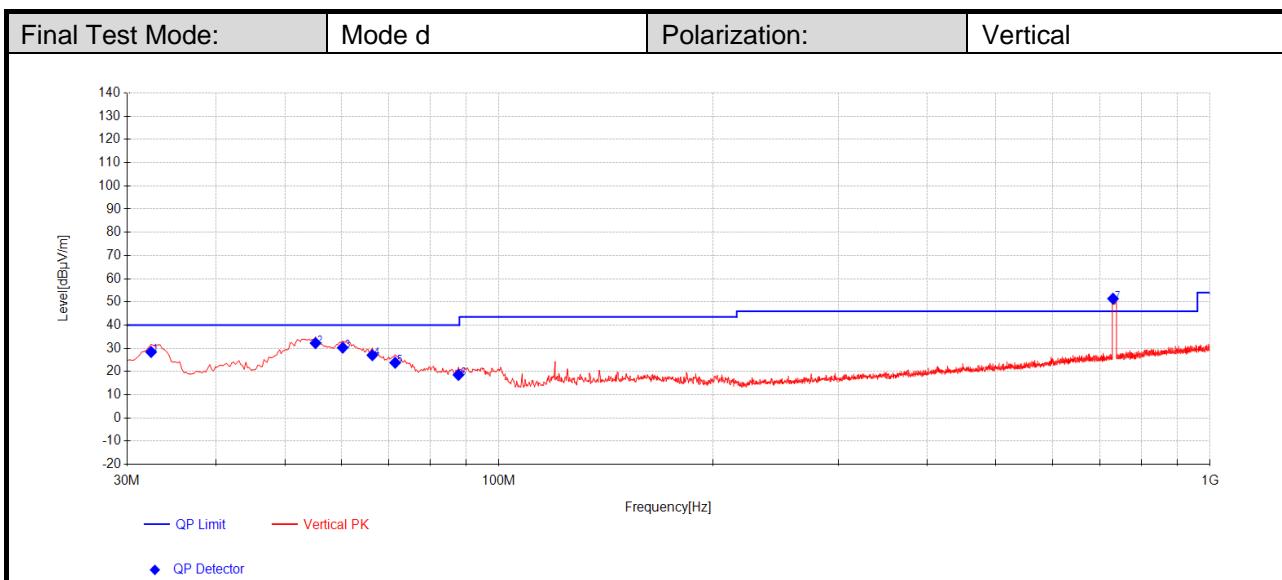
Remark:

1. #7 30M-1G is system simulator signal which can be ignored
2. The Quasi-Peak measurements were performed on the EUT.
3. Value = Reading + AF + Factor:

AF = Antenna Factor(dB/m)

Factor = Cable Factor(dB) - Preamplifier (dB)

Margin = Limit[dBμV/m] – Value[dBμV/m]



Final Data List										
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	32.425	44.32	18.10	-33.99	28.43	40.00	11.57	225	360	Vertical
2	55.22	47.68	18.20	-33.62	32.26	40.00	7.74	254	357	Vertical
3	60.3125	46.35	17.50	-33.55	30.30	40.00	9.70	174	235	Vertical
4	66.375	43.28	17.23	-33.47	27.04	40.00	12.96	185	354	Vertical
5	71.4675	41.06	16.15	-33.41	23.80	40.00	16.20	263	87	Vertical
6	87.715	37.23	14.60	-33.28	18.55	40.00	21.45	225	141	Vertical
7	730.34	54.93	25.79	-29.33	51.39	-	-	163	264	Vertical

Remark:

1. #7 30M-1G is system simulator signal which can be ignored
2. The Quasi-Peak measurements were performed on the EUT.
3. Value = Reading + AF + Factor:

AF = Antenna Factor(dB/m)

Factor = Cable Factor(dB) - Preamplifier (dB)

Margin = Limit[dBμV/m] - Value[dBμV/m]

5.3 Radiated Emissions (above 1GHz)

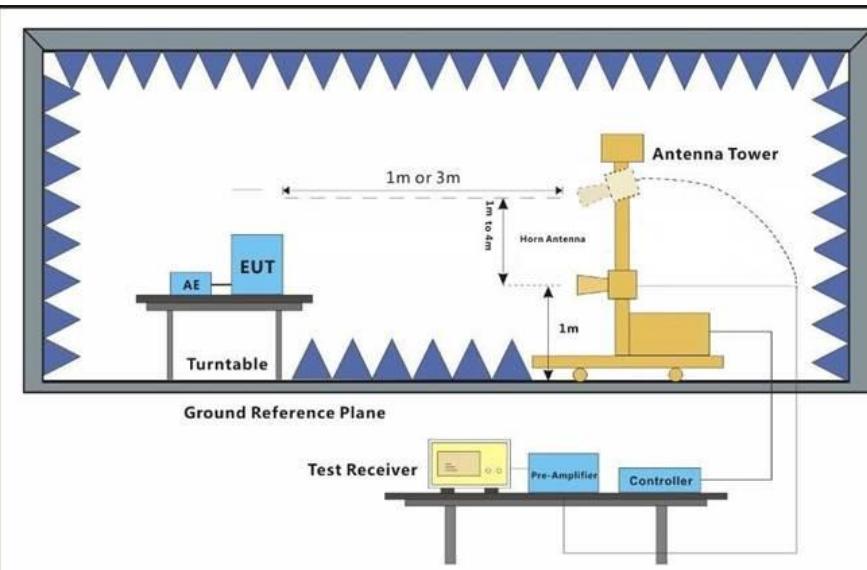
Test Requirement:	47 CFR Part 15, Subpart B		
Test Method:	ANSI C63.4:2014		
Frequency Range:	Above 1GHz		
Measurement Distance:	3m		
Limit:	Frequency (MHz)	Limit (dB μ V/m)	Detector
	Above 1GHz	74 54	Peak Average
Detector:	Peak for pre-scan (1000kHz resolution bandwidth) 5th harmonic of the highest frequency or 40GHz, whichever is lower.		

5.3.1 E.U.T. Operation

Temperature:	22~23°C
Humidity:	44~46% RH
Atmospheric Pressure:	101kPa
Pretest these modes to find the worst case:	a: adapter+usb Cable+BT(Idle)+2.4G WLAN(Idle)+Camera(Rear)+GSM850 (RX) Low b: adapter+usb Cable+BT(Idle)+BT(Idle)+5G WLAN(Idle)+Camera(Front)+WCDMA Band 5(RX) Mid c: adapter+usb Cable+BT(Idle)+BT(Idle)+WLAN6E(Idle)+MP4+LTE Band 5 (RX) High d: adapter+usb Cable+BT(Idle)+BT(Idle)+2.4G WLAN(Idle)+NFC ON+LTE Band 12 (RX) Low e: adapter+usb Cable+BT(Idle)+BT(Idle)+WLAN6E(Idle)+GNSS+SA Band 77 (RX) Mid f: Transfer data between the EUT and the PC+USB cable+BT(Idle)+5G WLAN(Idle)+LTE Band 41 (RX) High
The worst case for final test:	d: adapter+usb Cable+BT(Idle)+BT(Idle)+2.4G WLAN(Idle)+NFC ON+LTE Band 12 (RX) Low

5.3.2 Test Setup Procedures

1. The EUT was placed in a full Anechoic Chamber as show below
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation (Distance from antenna to EUT is 1m for measurements >18GHz).
4. The antenna height is adjusted between 1 to 4 meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak and AV Detect Function with specified bandwidth with Maximum Hold Mode, and the trace was allowed to stabilize.
7. At a measurement distance of 1 meter the limit line was increased by $20 \times \text{LOG}(3/1) = 9.54 \text{ dB}$.

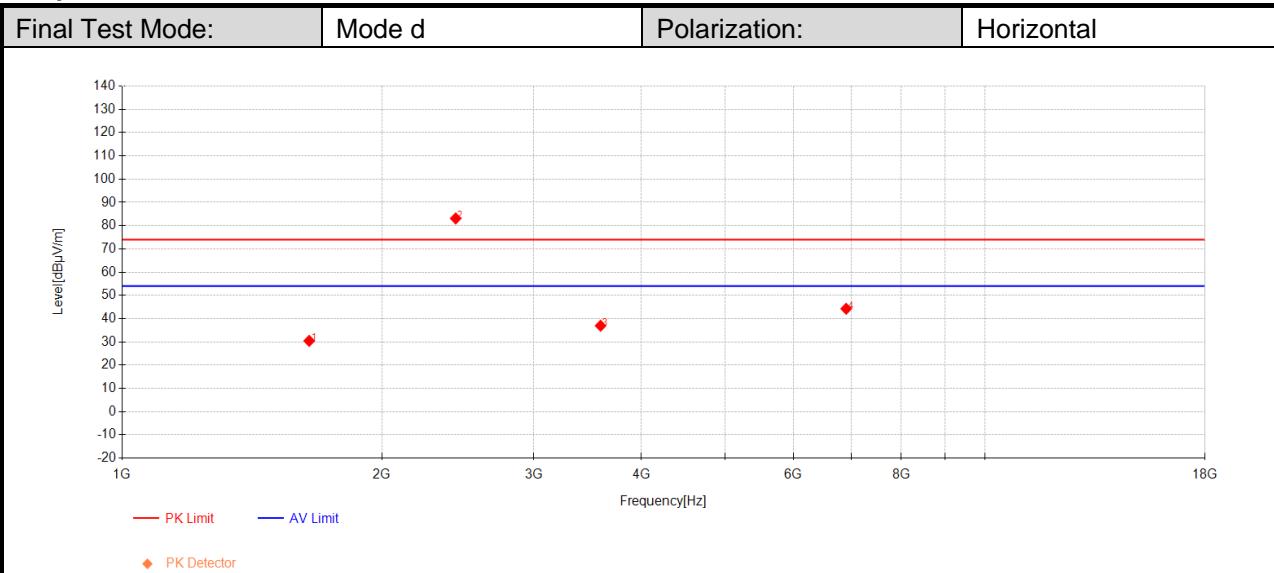


5.3.3 Measurement Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Average measurements were conducted based on the peak sweep graph. The EUT was measured by Horn antenna with 2 orthogonal polarities.

The three polarities of X, Y, Z were measured by EUT, but only the worst data had been displayed.

Scan from 5th harmonic of the highest frequency or 40GHz, whichever is lower, the disturbance above 18GHz was very low. The points marked on below plots are the highest emissions could be found when testing, so only below points had been displayed.

Sample 1:


Data List								
NO.	Frequency [MHz]	Reading [dB μ V]	AF [dB/m]	Factor [dB]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Polarity
1	1647.7	52.51	24.60	-46.67	30.44	74.00	43.56	Horizontal
2	2436.075	100.99	27.26	-45.15	83.09	-	-	Horizontal
3	3586.125	50.31	29.89	-43.25	36.95	74.00	37.05	Horizontal
4	6906.65	46.74	35.96	-38.46	44.24	74.00	29.76	Horizontal

Remark:

1. #2 1G-18G is RF signal which come from Wi-Fi access point used to connect the EUT, and which can be ignored.

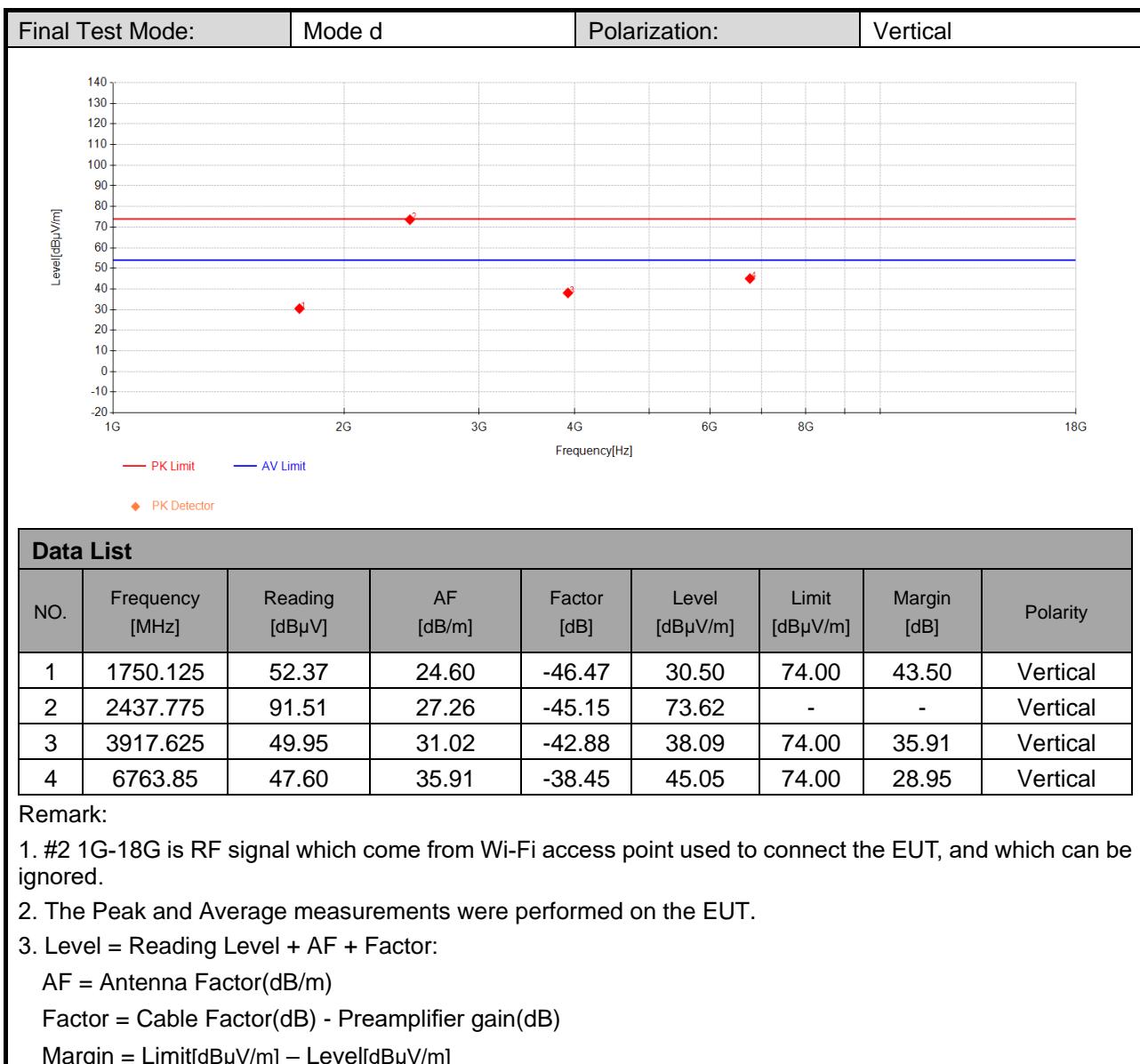
2. The Peak and Average measurements were performed on the EUT.

3. Level = Reading Level + AF + Factor:

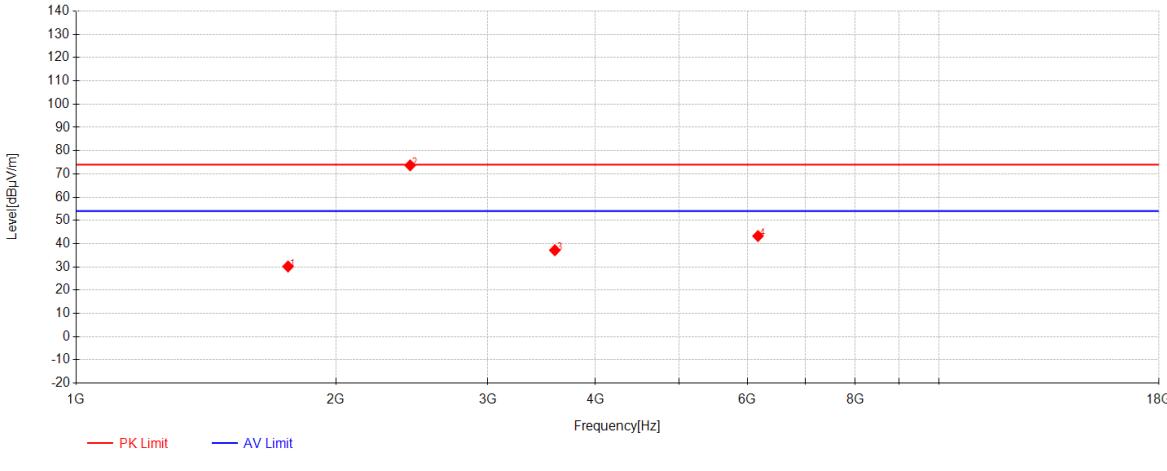
AF = Antenna Factor(dB/m)

Factor = Cable Factor(dB) - Preamplifier gain(dB)

Margin = Limit[dB μ V/m] – Level[dB μ V/m]



Sample 2:

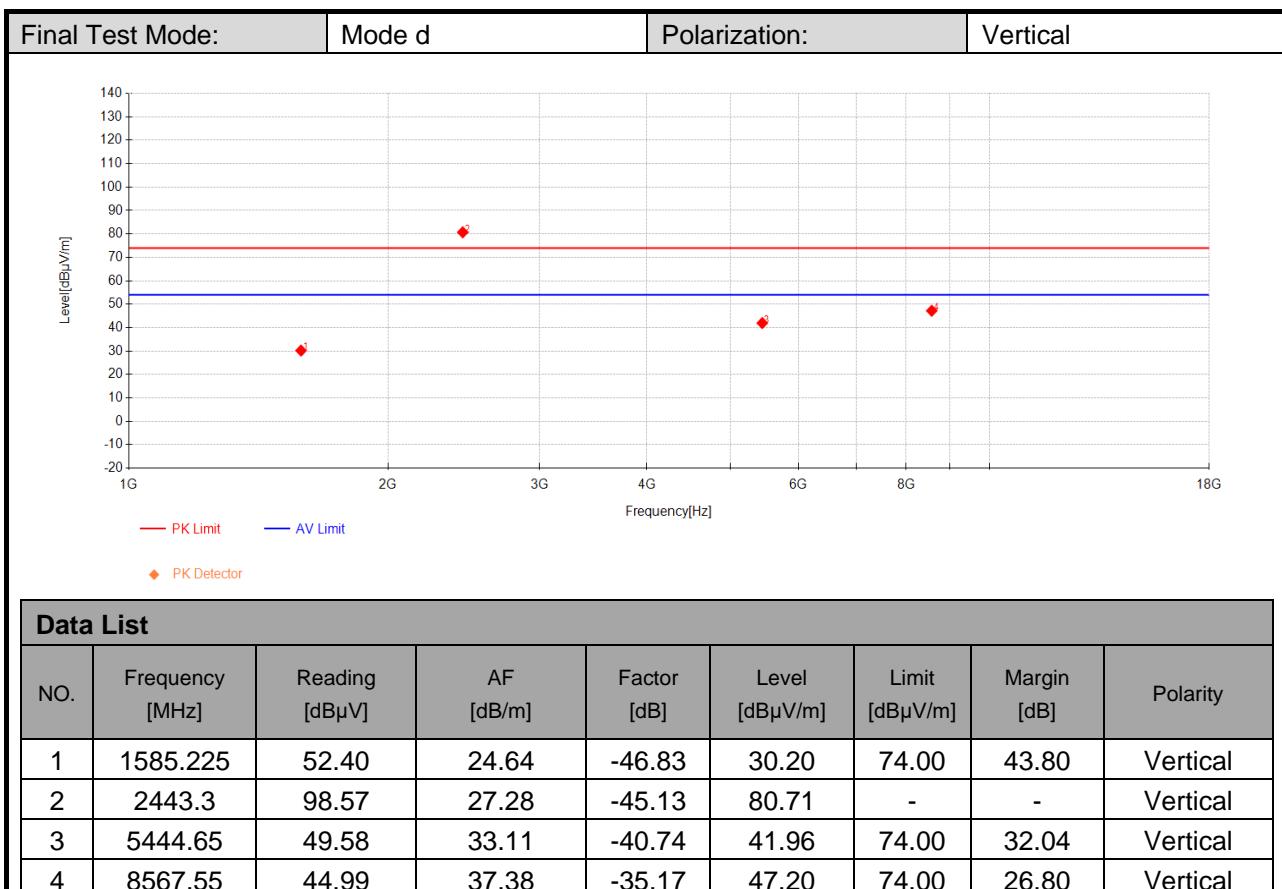
Final Test Mode:	Mode d	Polarization:	Horizontal																																													
																																																
Data List																																																
<table border="1"> <thead> <tr> <th>NO.</th><th>Frequency [MHz]</th><th>Reading [dBμV]</th><th>AF [dB/m]</th><th>Factor [dB]</th><th>Level [dBμV/m]</th><th>Limit [dBμV/m]</th><th>Margin [dB]</th><th>Polarity</th></tr> </thead> <tbody> <tr> <td>1</td><td>1760.75</td><td>52.03</td><td>24.60</td><td>-46.46</td><td>30.17</td><td>74.00</td><td>43.83</td><td>Horizontal</td></tr> <tr> <td>2</td><td>2439.05</td><td>91.55</td><td>27.27</td><td>-45.15</td><td>73.67</td><td>-</td><td>-</td><td>Horizontal</td></tr> <tr> <td>3</td><td>3588.675</td><td>50.51</td><td>29.90</td><td>-43.25</td><td>37.16</td><td>74.00</td><td>36.84</td><td>Horizontal</td></tr> <tr> <td>4</td><td>6170.975</td><td>47.96</td><td>35.14</td><td>-39.84</td><td>43.27</td><td>74.00</td><td>30.73</td><td>Horizontal</td></tr> </tbody> </table>				NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	1	1760.75	52.03	24.60	-46.46	30.17	74.00	43.83	Horizontal	2	2439.05	91.55	27.27	-45.15	73.67	-	-	Horizontal	3	3588.675	50.51	29.90	-43.25	37.16	74.00	36.84	Horizontal	4	6170.975	47.96	35.14	-39.84	43.27	74.00	30.73	Horizontal
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity																																								
1	1760.75	52.03	24.60	-46.46	30.17	74.00	43.83	Horizontal																																								
2	2439.05	91.55	27.27	-45.15	73.67	-	-	Horizontal																																								
3	3588.675	50.51	29.90	-43.25	37.16	74.00	36.84	Horizontal																																								
4	6170.975	47.96	35.14	-39.84	43.27	74.00	30.73	Horizontal																																								
Remark: <ol style="list-style-type: none"> #2 1G-18G is RF signal which come from Wi-Fi access point used to connect the EUT, and which can be ignored. The Peak and Average measurements were performed on the EUT. Level = Reading Level + AF + Factor: $AF = \text{Antenna Factor(dB/m)}$ $\text{Factor} = \text{Cable Factor(dB)} - \text{Preamplifier gain(dB)}$ $\text{Margin} = \text{Limit[dBμV/m]} - \text{Level[dBμV/m]}$ 																																																

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Remark:

1. #2 1G-18G is RF signal which come from Wi-Fi access point used to connect the EUT, and which can be ignored.

2. The Peak and Average measurements were performed on the EUT.

3. Level = Reading Level + AF + Factor:

AF = Antenna Factor(dB/m)

Factor = Cable Factor(dB) - Preamplifier gain(dB)

Margin = Limit[dB μ V/m] – Level[dB μ V/m]

6 Photographs

6.1 Test Setup

Refer to Appendix A.1 15B Setup Photos.

---End of Report---