TEST REPORT

Application No.:	ZR/2020/40003
Applicant:	Xiaomi Communications Co., Ltd.
Address of Applicant:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085
Manufacturer:	Xiaomi Communications Co., Ltd.
Address of Manufacturer:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085
EUT Description:	Mobile Phone
Model No.:	M2004J19G
Trade Mark:	Redmi
FCC ID:	2AFZZJ19G
Standard(s) :	47 CFR Part 15, Subpart B
Date of Receipt:	2020-04-09
Date of Test:	2020-04-09 to 2020-04-21
Date of Issue:	2020-04-30
Test Result:	**Pass***

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

Authorized Signature:

Derek Yang

Derek Yang
Wireless Laboratory Manager

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Revision Record				
Version	***Chapter***	***Date***	***Modifier***	***Remark***
01		*2020-04-30*		*Original*

Authorized for issue by:				
		Louis He **(Louis He) /Project Engineer**		
		David Chen **(David Chen) /Reviewer**		

2 Test Summary

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

3 Contents

Page

1 COVER PAGE 1

2 TEST SUMMARY 3

3 CONTENTS 4

4 GENERAL INFORMATION 5

4.1 DESCRIPTION OF SUPPORT UNITS 6
4.2 MEASUREMENT UNCERTAINTY 6
4.3 TEST LOCATION 7
4.4 TEST FACILITY 7
4.5 DEVIATION FROM STANDARDS 7
4.6 ABNORMALITIES FROM STANDARD CONDITIONS 7

5 EQUIPMENT LIST 8

6 EMISSION TEST RESULTS 9

6.1 CONDUCTED EMISSIONS AT MAINS TERMINALS (150KHZ-30MHZ) 9
6.1.1 E.U.T. Operation 9
6.1.2 Test Setup Diagram 10
6.1.3 Measurement Data 10
6.2 RADIATED EMISSIONS (30MHZ-1GHZ) 15
6.2.1 E.U.T. Operation 15
6.2.2 Test Setup Diagram 16
6.2.3 Measurement Data 16
6.3 RADIATED EMISSIONS (ABOVE 1GHZ) 21
6.3.1 E.U.T. Operation 21
6.3.2 Test Setup Diagram 22
6.3.3 Measurement Data 22

7 PHOTOGRAPHS 27

7.1 CONDUCTED EMISSIONS AT MAINS TERMINALS (150KHZ-30MHZ) TEST SETUP 27
7.2 RADIATED EMISSIONS (30MHZ-1GHZ) TEST SETUP 27
7.3 RADIATED EMISSIONS (ABOVE 1GHZ) TEST SETUP 27
7.4 EUT CONSTRUCTIONAL DETAILS (EUT PHOTOS) 27

4 General Information

Device Type :	portable device		
Exposure Category:	uncontrolled environment / general population		
Product Name:	Mobile Phone		
Model No.(EUT):	M2004J19G		
Trade Mark:	Redmi		
Product Phase:	Identical Prototype		
FCC ID:	2AFZZJ19G		
Hardware Version:	P2		
Software Version:	MIUI 11		
Antenna Type:	PIFA Antenna		
Device Operating Configurations :			
Modulation Mode:	**GSM:** GMSK, 8PSK; **WCDMA:** QPSK, 16QAM; **LTE:** QPSK,16QAM,64QAM **WIFI:** DSSS, OFDM **BT:** GFSK, π/4DQPSK,8DPSK		
Device Class:	B		
GPRS Multi-slots Class:	12	EGPRS Multi-slots Class:	12
HSDPA UE Category:	24	HSUPA UE Category	6
Power Class	4,tested with power level 5(GSM850)		
	1,tested with power level 0(GSM1900)		
	3, tested with power control "all 1"(WCDMA Band II/IV/V)		
	3, tested with power control Max Power(LTE Band 2/4/5/7/38/41)		
Frequency Bands:	Band	Tx (MHz)	Rx (MHz)
	GSM850	824~849	869~894
	GSM1900	1850~1910	1930~1990
	WCDMA Band II	1850~1910	1930~1990
	WCDMA Band IV	1710~1755	2110~2155
	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 7	2500~2570	2620~2690
	LTE Band 38	2570~2620	2570~2620
	LTE Band 41	2540~2640	2540~2640
	WIFI 2.4G	2412~2462	2412~2462
	WIFI 5G	5150~5825	5150~5825
	BT	2402~2480	2402~2480
	GNSS(GPS/BDS/GLONASS/Galileo)	/	1559~1610
	FM	87.5~108	
Adaptor Information1 #:	Model:	MDY-09-EQ	
	Brand Name:	MI	
	SEC:	I/P: 100 - 240 Vac, 0.35 A, O/P:5.0V,2A;	
	Manufacturer:	Jiangsu Chenyang Electron Co.,Ltd.	
Adaptor Information2 #:	Model:	MDY-09-EQ	
	Brand Name:	MI	
	SEC:	I/P: 100 - 240 Vac, 0.35 A, O/P:5.0V,2A;	
	Manufacturer:	Jiangxi jian Aohai Technology Co.,Ltd.	

Battery Information #:	Model:	BN54
	Brand Name:	+3.87V
	Normal Voltage:	4920mAh
	Rated capacity:	Ningde Amperex Technology Limited
	Manufacturer:	BN54
Headset Information:	Model:	EM023
	Manufacturer:	Tiinlab Acoustic Technology (Shenzhen) Co., Ltd.
USB Cable1 Information :	Model:	H73312
	Signal Line	1.0 meter, shielded cable
	Manufacturer:	Dehong
USB Cable2 Information :	Model:	B73312
	Signal Line	1.0 meter, shielded cable,
	Manufacturer:	Broad

Note: There are 2 types of EUT sample, differences between them is Memory, EUT 1(4+64); EUT 2(3+32); Except listings above, the others are all the same

4.1 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Laptop	Lenovo	T430u	REF. No.SEA1800
Mouse	Lenovo	M-U0025-O	REF. No.:SEA2400
Router	NETGEAR	DGN2200	REF. No.SEA2200

4.2 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Conduction Emission	± 3.4dB (150kHz to 30MHz)
2	Radiated Emission	± 4.8dB (30MHz-1GHz)
		± 5.2dB (1GHz-6GHz)
		± 5.5dB (6GHz-18GHz)
		± 5.02dB (18GHz-40GHz)
3	Temperature test	± 1°C
4	Humidity test	± 3%

4.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Xi'an Branch

Single floor D, building 1, Kanghong orange square science and technology park, No.137 keyuan 3rd road, fengdong new town, Xi 'an city, shanxi China. 518057.

Tel: +86 (0) 29 6282 7885 Fax: +86 (0) 29 6282 7885

No tests were sub-contracted.

4.4 Test Facility

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

• A2LA (Certificate No. 4854.01)

SGS-CSTC STANDARDS TECHNICAL SERVICES CO., LTD. XIAN BRANCH

is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 4854.01.

Test Site No.:	**SGS Xian Site No.**		**FCC Designation No.**
	CO01-XA	03CH01-XA	CN1271

4.5 Deviation from Standards

None

4.6 Abnormalities from Standard Conditions

None

5 Equipment List

Radiated Emissions (30MHz~ 40GHz)					
Test Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal. date (yyyy-mm-dd)**	**Cal.Due date (yyyy-mm-dd)**
966 Test chamber	Brilliant-emc	NA	XAW040101	2019/6/11	2022/6/9
BiConiLog Antenna (30MHz-3GHz)	rosenberge	VULB 9163	XAW010901	2018/8/8	2021/8/7
Horn Antenna (800MHz-18GHz)	rosenberger	BBHA 9120D	XAW010902	2018/7/18	2021/7/17
Horn Antenna (18-40GHz)	rosenberge	BBHA 9170	XAW010903	2018/8/1	2021/7/31
Amplifier(9kHz-3GHz)	Tonscend	TAP00903040	XAW030601	2019/11/18	2020/11/18
Amplifier(100MHz-18GHz)	Tonscend	TAP01018048	XAW030602	2019/11/18	2020/11/18
Amplifier(18-40GHz)	Tonscend	TAP18040048	XAW030603	2019/11/18	2020/11/18
Radio Communication Analyzers	Anritsu	Mt8820c	XAW020223	2019/6/27	2020/6/26
Test receiver	Rohde & Schwarz	ESR	XAW010801	2019/9/7	2020/9/6
MXA signal analyzer	Rohde & Schwarz	FSV	XAW040103	2020/4/2	2021/4/3
Measurement Software	Tonscend	TS+	N/A	N/A	N/A
Filter bank	Tonscend	JS0806-F	N/A	N/A	N/A
Filter bank	Tonscend	JS0806s	N/A	N/A	N/A
Artificial network	Rohde & Schwarz	ENV216	N/A	2019/7/16	2020/7/16

Conducted Emissions at Mains Terminals (150kHz-30MHz)					
Test Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal. date (yyyy-mm-dd)**	**Cal.Due date (yyyy-mm-dd)**
Shield Room	Brilliant-emc	NA	XAW08043	NA	NA
Test receiver	Rohde & Schwarz	ESR	XAW010801	9/7/2019	9/6/2020
Artificial network	Rohde & Schwar	ENV216	XAW010401	7/16/2019	7/15/2020
Artificial network	Rohde & Schwar	ENV216	XAW013001	7/16/2019	7/15/2020
Cabel	SGS	NA	NA	NA	NA

6 Emission Test Results

6.1 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
Limit:	
0.15M-0.5MHz	66dB(μV)-56dB(μV) quasi-peak, 56dB(μV)-46dB(μV) average
0.5M-5MHz	56dB(μV) quasi-peak, 46dB(μV) average
5M-30MHz	60dB(μV) quasi-peak, 50dB(μV) average
Detector:	Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 18.9 °C Humidity: 55.1 % RH Atmospheric Pressure: 1000 mbar

Pretest these modes to find the worst case:

a:Transfer data between the EUT1 and the PC+USB cable1

b:Transfer data between the EUT1 and the PC+USB cable2

c:GSM850 Link down ant+BT +WLAN2.4G+GPS Rx+playing MP4 (SD card)+earphone+EUT1+USB cable1+adapter1

d:GSM1900 Link down ant+BT +WLAN5G+GPS Rx+camera (Back)+earphone+EUT1+USB cable1+adapter1

e:WCDMA II Link down ant+BT +WLAN2.4G+GPS Rx+camera (Front)+earphone+EUT1+USB cable1+adapter1

f:WCDMA V Link down ant+BT +WLAN2.4G+GPS Rx+camera (Front)+earphone+EUT1+USB cable1+adapter1

g:WCDMA VI Link down ant+BT +WLAN5G+GPS Rx+camera (Back)+earphone+EUT1+USB cable1+adapter1

h:LTE band 2 Link down ant+BT + WLAN5G+GPS Rx +earphone+EUT1+USB cable1+adapter1

o:LTE band 4 Idle down ant+BT+FM +WLAN2.4G+GPS Rx+earphone+EUT1+USB cable1+adapter1

p:LTE band 5 Idle down ant +BT+FM +WLAN5G+GPS Rx+earphone+EUT1+USB cable1+adapter1

q:LTE band 7 Idle down ant+BT+FM +WLAN2.4G+GPS Rx+earphone+EUT1+USB cable1+adapter1

r:LTE band 38 Link down ant+BT +WLAN5G+GPS Rx +earphone+EUT1+USB cable1+adapter1

s:LTE band 41 Link down ant+BT+WLAN5G+GPS Rx +earphone+EUT1+USB cable1+adapter1

t:GSM850 Link top ant+BT +WLAN5G+GPS Rx+camera (Back)+earphone+EUT1+USB cable1+adapter2

u:GSM850 Link down ant+BT +WLAN5G+GPS Rx+camera (Back)+earphone+EUT1+USB cable1+adapter2

v:GSM850 Link down ant+BT +WLAN5G+GPS Rx+camera (Back)+earphone+EUT1+USB cable2+adapter2

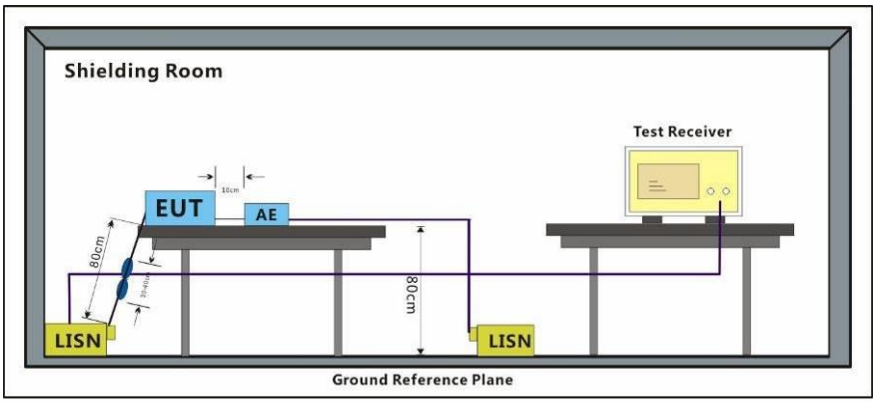
w: WCDMA II Link down ant+BT+WLAN2.4G+GPS Rx+camera (Back)+earphone+EUT2+USB cable2+adapter2

The worst case for final test:

a:Transfer data between the EUT1 and the PC+USB cable1

e:WCDMA II Link down ant+BT+WLAN2.4G+GPS Rx+camera (Front)+earphone+EUT1+USB cable1+adapter1

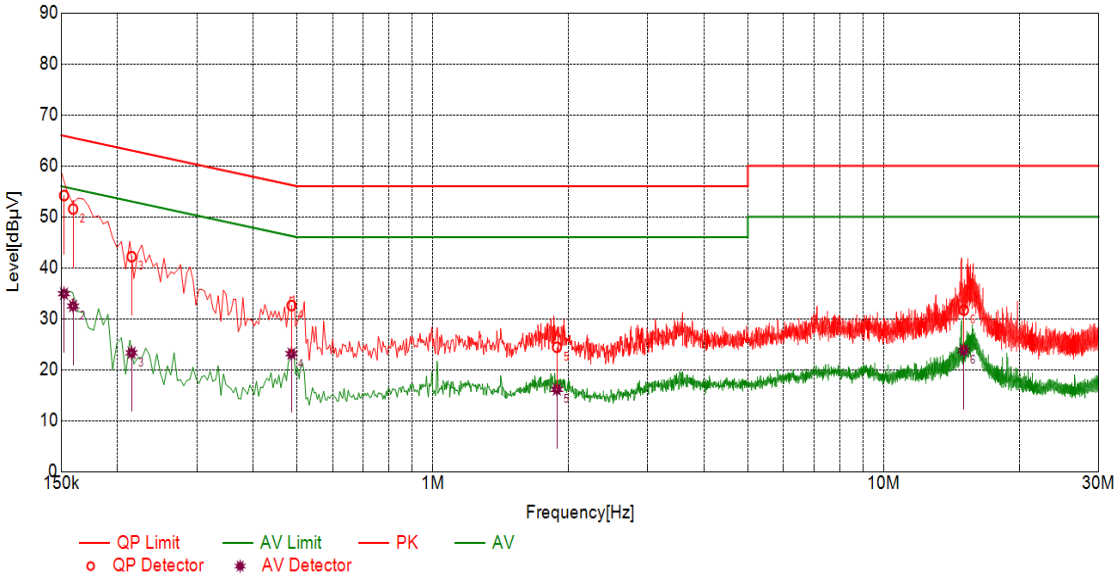
6.1.2 Test Setup Diagram



6.1.3 Measurement Data

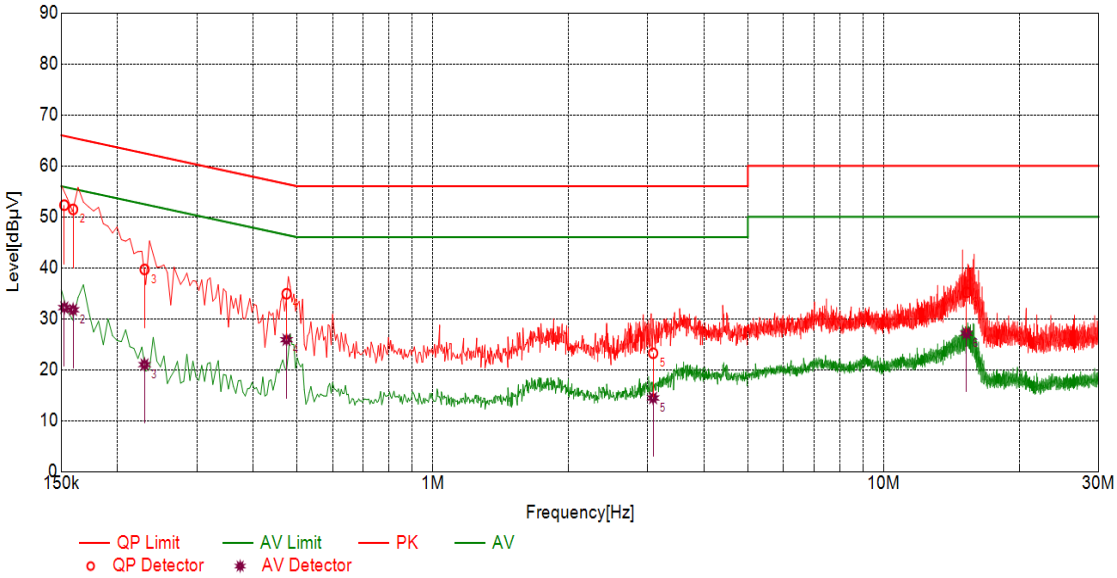
An initial pre-scan was performed with peak detector.Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.

Mode:a; Line:Live Line



Final Data List									
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Type
1	0.1522	10.10	54.18	65.88	11.70	34.91	55.88	20.97	L
2	0.1594	10.10	51.53	65.49	13.96	32.49	55.49	23.00	L
3	0.2149	10.10	42.19	63.01	20.82	23.31	53.01	29.70	L
4	0.4863	10.10	32.60	56.23	23.63	23.14	46.23	23.09	L
5	1.8856	10.10	24.41	56.00	31.59	16.13	46.00	29.87	L
6	15.0660	10.11	31.68	60.00	28.32	23.81	50.00	26.19	L

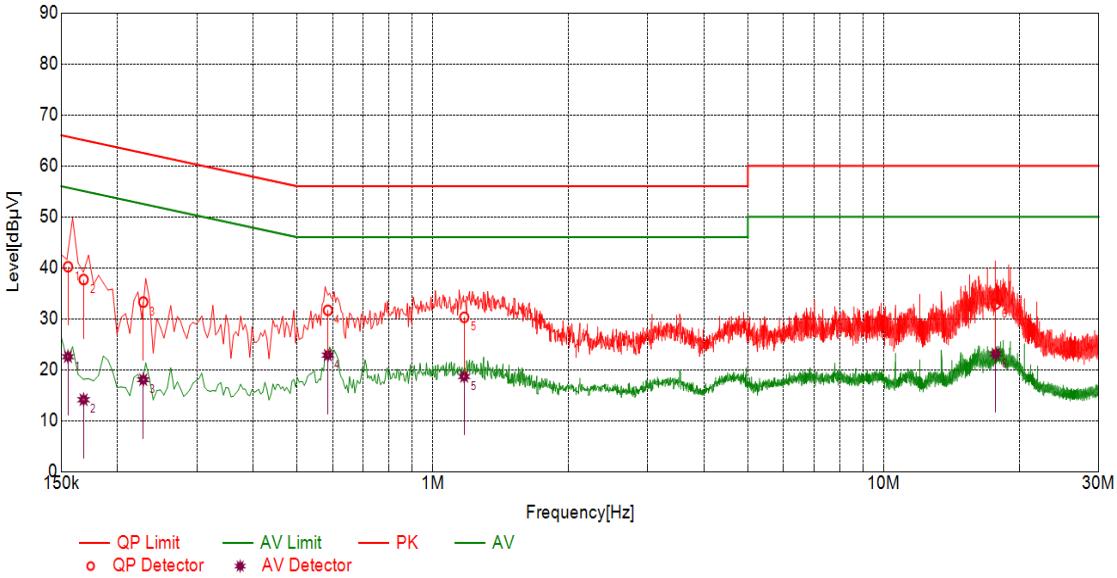
Mode:a; Line:Neutral Line



Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Type
1	0.1524	10.10	52.29	65.87	13.58	32.18	55.87	23.69	N
2	0.1594	10.10	51.45	65.49	14.04	31.75	55.49	23.74	N
3	0.2296	10.10	39.67	62.46	22.79	21.00	52.46	31.46	N
4	0.4741	10.10	34.91	56.44	21.53	25.88	46.44	20.56	N
5	3.0821	10.10	23.24	56.00	32.76	14.45	46.00	31.55	N
6	15.2673	10.11	35.18	60.00	24.82	27.15	50.00	22.85	N

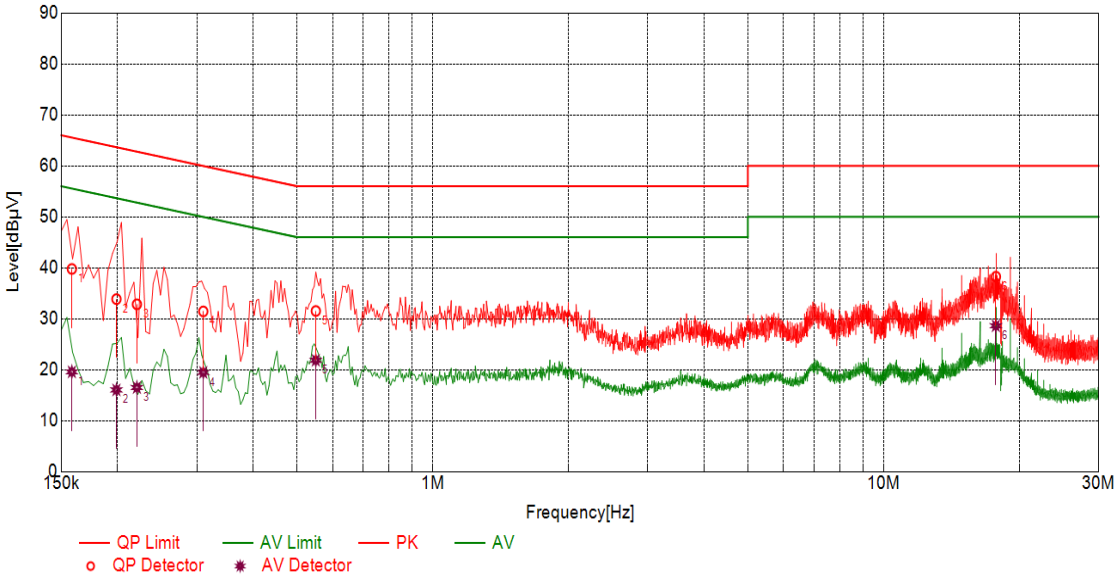
Mode:e; Line:Live Line



Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Type
1	0.1553	10.10	40.20	65.71	25.51	22.55	55.71	33.16	L
2	0.1682	10.10	37.69	65.05	27.36	14.11	55.05	40.94	L
3	0.2281	10.10	33.27	62.52	29.25	18.03	52.52	34.49	L
4	0.5856	10.10	31.66	56.00	24.34	22.86	46.00	23.14	L
5	1.1746	10.10	30.28	56.00	25.72	18.66	46.00	27.34	L
6	17.7315	10.11	32.88	60.00	27.12	23.10	50.00	26.90	L

Mode:e; Line:Neutral Line



Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Type
1	0.1584	10.10	39.77	65.55	25.78	19.57	55.55	35.98	N
2	0.1989	10.10	33.86	63.66	29.80	16.03	53.66	37.63	N
3	0.2208	10.10	32.84	62.79	29.95	16.50	52.79	36.29	N
4	0.3099	10.10	31.44	59.97	28.53	19.46	49.97	30.51	N
5	0.5505	10.10	31.53	56.00	24.47	21.85	46.00	24.15	N
6	17.7417	10.11	38.26	60.00	21.74	28.61	50.00	21.39	N

6.2 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:	
30MHz -88MHz	40.0(dBμV/m) quasi-peak
88MHz-216MHz	43.5(dBμV/m) quasi-peak
216MHz-960MHz	46.0(dBμV/m) quasi-peak
960MHz-1000MHz	54.0(dBμV/m) quasi-peak
Detector:	Peak for pre-scan (120kHz resolution bandwidth) 30M to1000MHz

6.2.1 E.U.T. Operation

Operating Environment:

Temperature: 25 °C Humidity: 66.5 % RH Atmospheric Pressure: 1010 mbar

Pretest these modes to find the worst case:

a:Transfer data between the EUT1 and the PC+USB cable1

b:Transfer data between the EUT1 and the PC+USB cable2

c:GSM850 Idle down ant+BT+FM+WLAN2.4G+GPS Rx+playing MP4 (SD card)+earphone+EUT1+USB cable1+adapter1

d:GSM1900 Idle down ant+BT+FM+WLAN5G+GPS Rx+camera (Back)+earphone+EUT1+USB cable1+adapter1

e:WCDMA II Idle down ant+BT+FM+WLAN2.4G+GPS Rx+camera (Front)+earphone+EUT1+USB cable1+adapter1

f:WCDMA V Idle down ant+BT+FM+WLAN2.4G+GPS Rx+camera (Front)+earphone+EUT1+USB cable1+adapter1

g:WCDMA VI Idle down ant+BT+FM+WLAN5G+GPS Rx+camera (Back)+earphone+EUT1+USB cable1+adapter1

h:LTE band 2 Idle down ant+BT+FM+ WLAN5G+GPS Rx +earphone+EUT1+USB cable1+adapter1

o:LTE band 4 Idle down ant+BT+FM+WLAN2.4G+GPS Rx+earphone+EUT1+USB cable1+adapter1

p:LTE band 5 Idle down ant +BT+FM+WLAN5G+GPS Rx+earphone+EUT1+USB cable1+adapter1

q:LTE band 7 Idle down ant+BT+FM+WLAN2.4G+GPS Rx+earphone+EUT1+USB cable1+adapter1

r:LTE band 38 Idle down ant+BT+FM+WLAN5G+GPS Rx +earphone+EUT1+USB cable1+adapter1

s:LTE band 41 Idle down ant+BT+FM+WLAN5G+GPS Rx +earphone+EUT1+USB cable1+adapter1

t:p:LTE band 5 Idle top ant +BT+FM+WLAN5G+GPS Rx+earphone+EUT1+USB cable1+adapter1

u: LTE band 38 Idle down ant+BT+FM+WLAN5G+GPS Rx +earphone+EUT1+USB cable1+adapter2

v: LTE band 38 Idle down ant+BT+FM+WLAN5G+GPS Rx +earphone+EUT1+USB cable2+adapter2

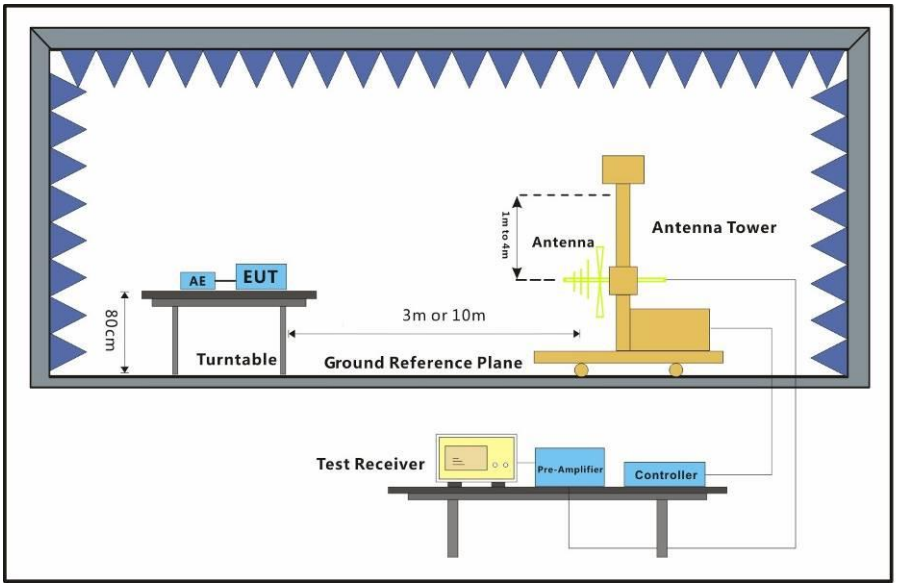
y: LTE band 38 Idle down ant+BT+FM+WLAN5G+GPS Rx +earphone+EUT2+USB cable1+adapter2

The worst case for final test:

a:Transfer data between the EUT1 and the PC+USB cable1

u: LTE band 38 Idle down ant+BT+FM+WLAN5G+GPS Rx +earphone+EUT1+USB cable1+adapter2

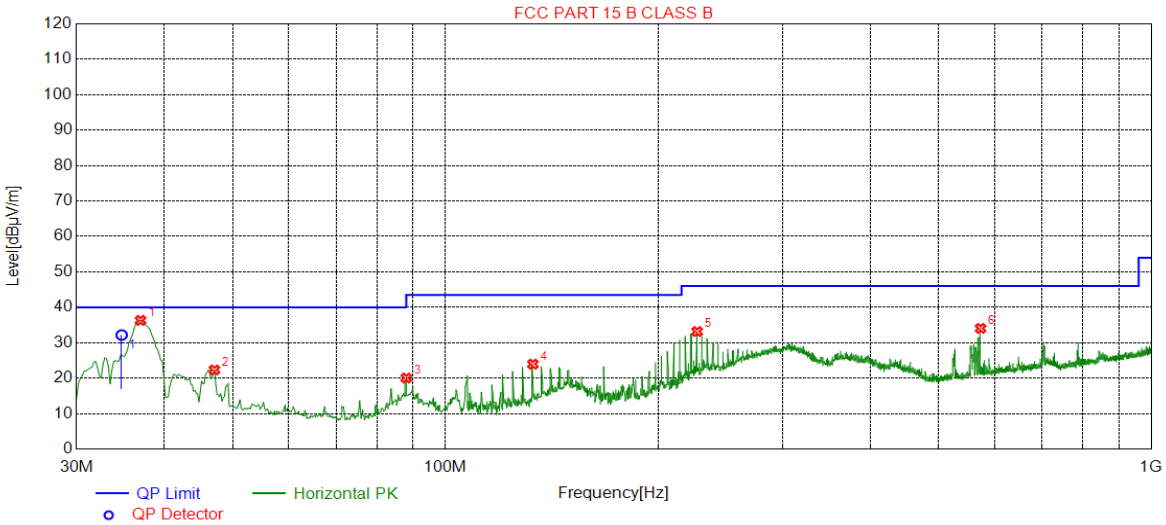
6.2.2 Test Setup Diagram



6.2.3 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.

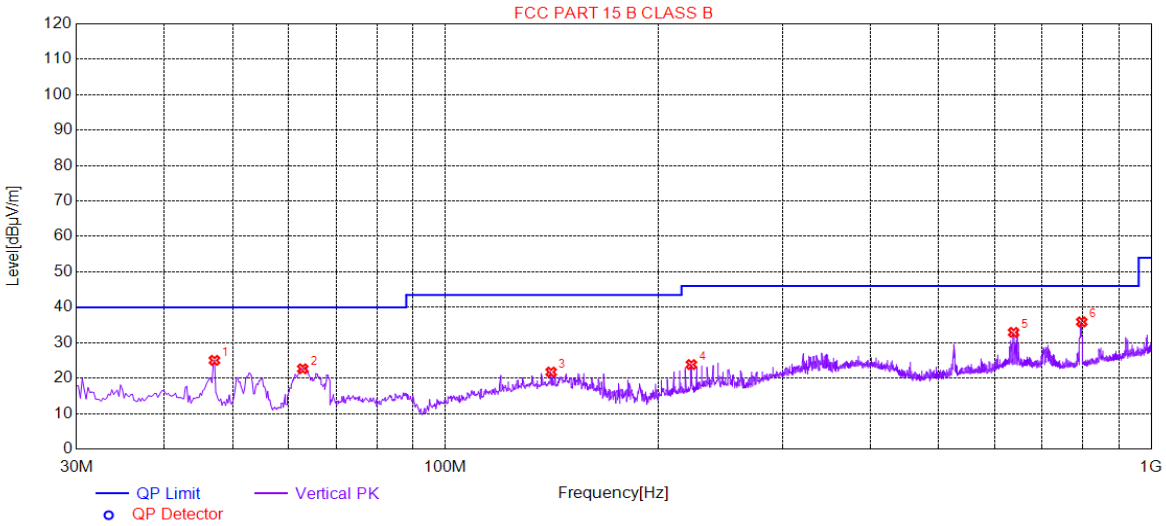
Mode:a; Polarization:Horizontal



Suspected List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.9854	36.31	-29.32	40.00	3.69	200	128	Horizontal
2	47.0754	22.33	-30.40	40.00	17.67	200	12	Horizontal
3	88.0176	20.05	-34.20	43.50	23.45	200	61	Horizontal
4	133.034	23.95	-35.22	43.50	19.55	200	283	Horizontal
5	227.337	33.17	-30.49	46.00	12.83	100	242	Horizontal
6	573.114	34.05	-21.39	46.00	11.95	200	139	Horizontal

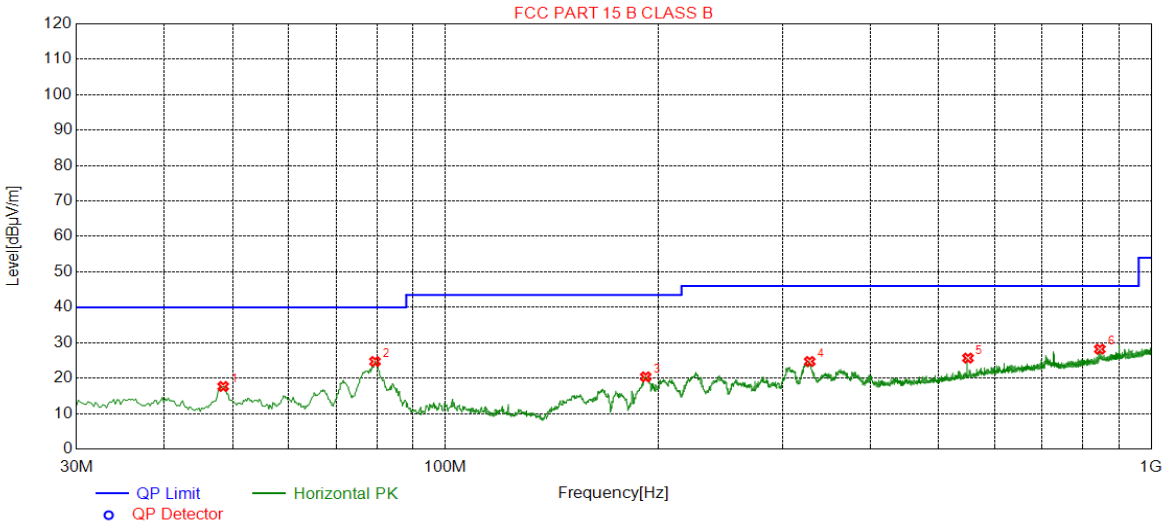
Final Data List								
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	34.771	-29.97	32.17	40.00	7.83	141.2	170.7	Horizontal

Mode:a; Polarization:Vertical



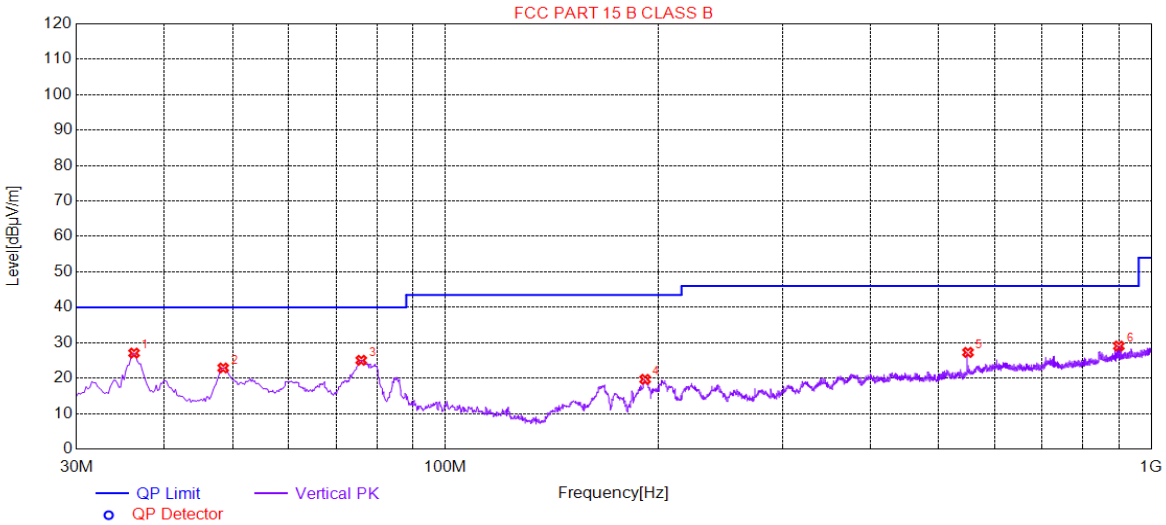
Suspected List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	47.0754	25.03	-30.40	40.00	14.97	100	275	Vertical
2	62.7926	22.65	-32.58	40.00	17.35	200	288	Vertical
3	141.184	21.73	-35.49	43.50	21.77	100	360	Vertical
4	223.068	23.84	-30.62	46.00	22.16	200	337	Vertical
5	638.311	32.92	-20.17	46.00	13.08	100	186	Vertical
6	797.229	35.88	-17.82	46.00	10.12	100	168	Vertical

Mode u; Polarization:Horizontal



Suspected List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	48.4337	17.65	-30.38	40.00	22.35	200	79	Horizontal
2	79.4799	24.70	-36.06	40.00	15.30	200	280	Horizontal
3	192.216	20.37	-32.01	43.50	23.13	100	232	Horizontal
4	328.237	24.71	-27.47	46.00	21.29	100	31	Horizontal
5	550.024	25.66	-22.04	46.00	20.34	200	346	Horizontal
6	845.739	28.19	-16.96	46.00	17.81	100	221	Horizontal

Mode:u; Polarization:Vertical



Suspected List

NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.2092	27.07	-29.57	40.00	12.93	100	163	Vertical
2	48.4337	22.88	-30.38	40.00	17.12	100	14	Vertical
3	75.9872	25.05	-35.43	40.00	14.95	200	295	Vertical
4	191.828	19.68	-32.05	43.50	23.82	100	66	Vertical
5	550.024	27.27	-22.04	46.00	18.73	100	222	Vertical
6	899.681	29.07	-16.04	46.00	16.93	200	341	Vertical

6.3 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:	
Above 1GHz	74(dBμV/m) peak, 54(dBμV/m) average
Detector:	Peak for pre-scan (1000kHz resolution bandwidth) 1000M to18000MHz

6.3.1 E.U.T. Operation

Operating Environment:

Temperature: 21.7 °C Humidity: 56.4 % RH Atmospheric Pressure: 1010 mbar

Pretest these modes to find the worst case:

a:Transfer data between the EUT1 and the PC+USB cable1

b:Transfer data between the EUT1 and the PC+USB cable2

c:GSM850 Idle down ant+BT+FM+WLAN2.4G+GPS Rx+playing MP4 (SD card)+earphone+EUT1+USB cable1+adapter1

d:GSM1900 Idle down ant+BT+FM+WLAN5G+GPS Rx+camera (Back)+earphone+EUT1+USB cable1+adapter1

e:WCDMA II Idle down ant+BT+FM+WLAN2.4G+GPS Rx+camera (Front)+earphone+EUT1+USB cable1+adapter1

f:WCDMA V Idle down ant+BT+FM+WLAN2.4G+GPS Rx+camera (Front)+earphone+EUT1+USB cable1+adapter1

g:WCDMA VI Idle down ant+BT+FM+WLAN5G+GPS Rx+camera (Back)+earphone+EUT1+USB cable1+adapter1

h:LTE band 2 Idle down ant+BT+FM+ WLAN5G+GPS Rx +earphone+EUT1+USB cable1+adapter1

o:LTE band 4 Idle down ant+BT+FM+WLAN2.4G+GPS Rx+earphone+EUT1+USB cable1+adapter1

p:LTE band 5 Idle down ant +BT+FM+WLAN5G+GPS Rx+earphone+EUT1+USB cable1+adapter1

q:LTE band 7 Idle down ant+BT+FM+WLAN2.4G+GPS Rx+earphone+EUT1+USB cable1+adapter1

r:LTE band 38 Idle down ant+BT+FM+WLAN5G+GPS Rx +earphone+EUT1+USB cable1+adapter1

s:LTE band 41 Idle down ant+BT+FM+WLAN5G+GPS Rx +earphone+EUT1+USB cable1+adapter1

t:p:LTE band 5 Idle top ant +BT+FM+WLAN5G+GPS Rx+earphone+EUT1+USB cable1+adapter1

u: LTE band 38 Idle down ant+BT+FM+WLAN5G+GPS Rx +earphone+EUT1+USB cable1+adapter2

v: LTE band 38 Idle down ant+BT+FM+WLAN5G+GPS Rx +earphone+EUT1+USB cable2+adapter2

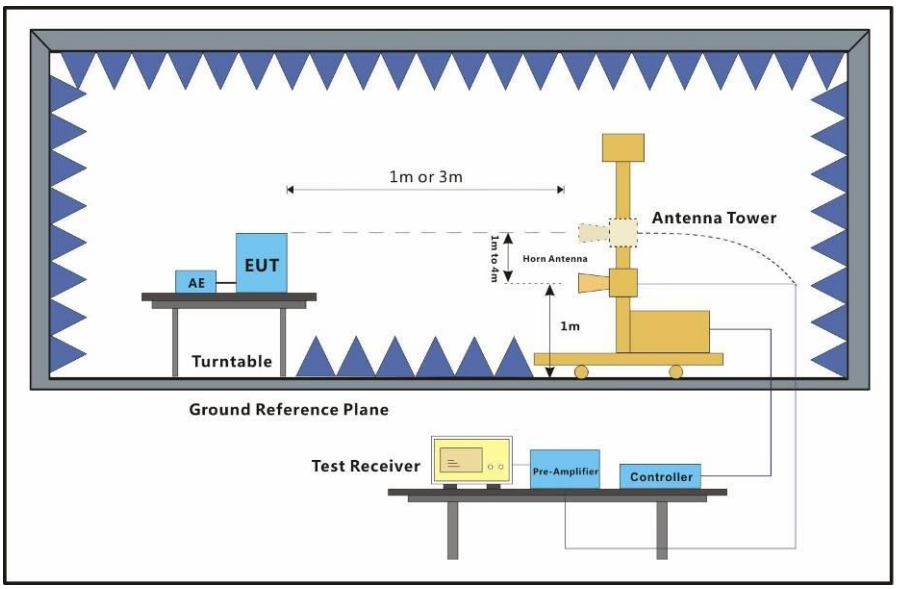
y: LTE band 38 Idle down ant+BT+FM+WLAN5G+GPS Rx +earphone+EUT2+USB cable1+adapter2

The worst case for final test:

a:Transfer data between the EUT1 and the PC+USB cable1

u: LTE band 38 Idle down ant+BT+FM+WLAN5G+GPS Rx +earphone+EUT1+USB cable1+adapter2

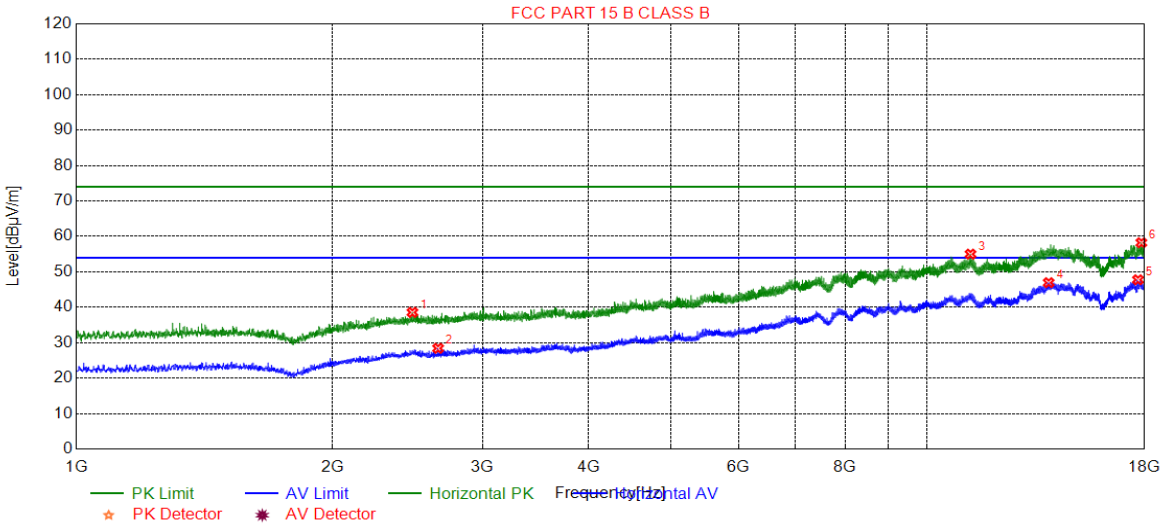
6.3.2 Test Setup Diagram



6.3.3 Measurement Data

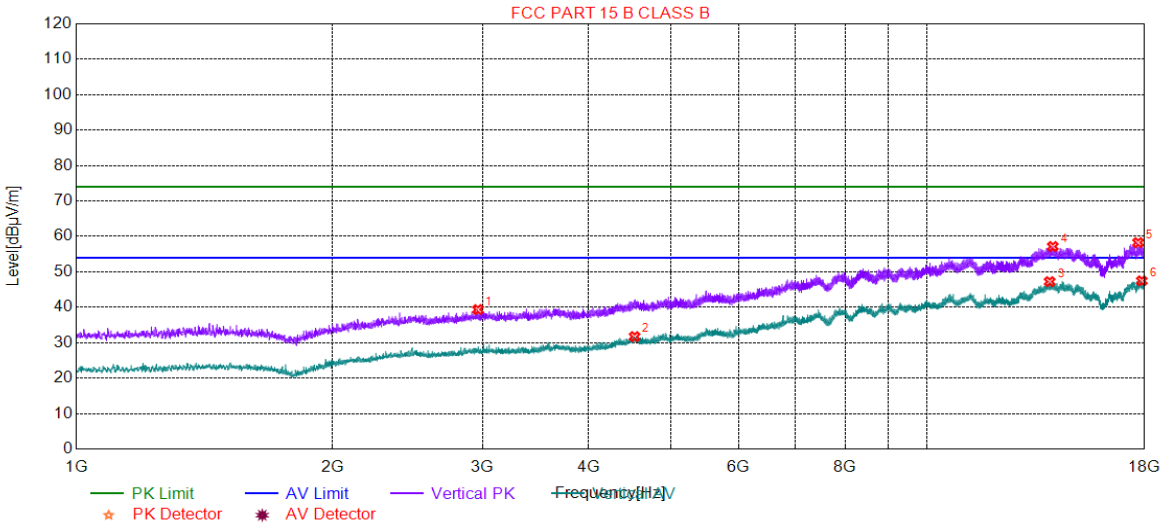
An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Average measurements were conducted based on the peak sweep graph. The EUT was measured by Horn antenna with 2 orthogonal polarities.

Mode:a; Polarization:Horizontal



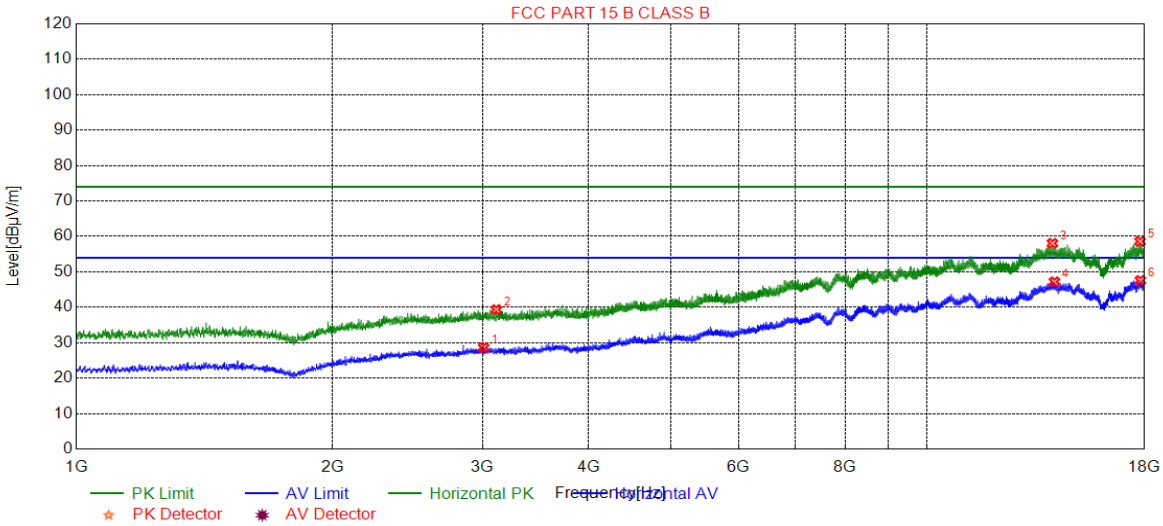
Suspected List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2482.47	38.56	-25.96	74.00	35.44	200	166	Horizontal
2	2660.98	28.42	-25.71	54.00	25.58	200	53	Horizontal
3	11237.9	55.01	-2.80	74.00	18.99	200	16	Horizontal
4	13884.0	46.95	2.11	54.00	7.05	200	354	Horizontal
5	17678.6	47.76	1.03	54.00	6.24	100	119	Horizontal
6	17843.5	58.22	0.44	74.00	15.78	100	156	Horizontal

Mode:a; Polarization:Vertical



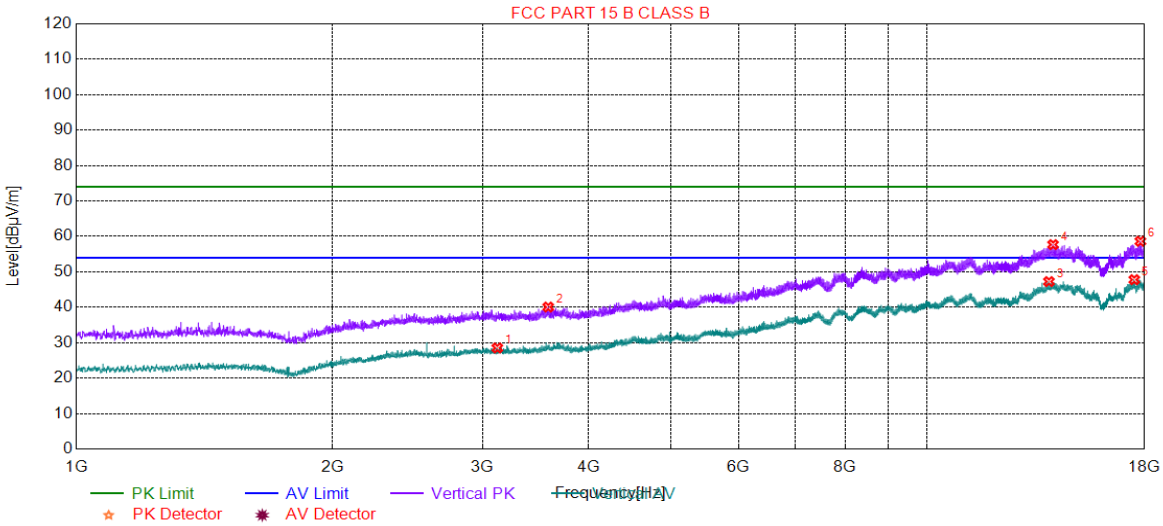
Suspected List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2963.59	39.36	-24.60	74.00	34.64	200	118	Vertical
2	4528.52	31.72	-19.21	54.00	22.28	200	307	Vertical
3	13922.3	47.23	2.19	54.00	6.77	200	6	Vertical
4	14039.6	57.15	2.29	74.00	16.85	200	81	Vertical
5	17683.7	58.25	1.03	74.00	15.75	200	6	Vertical
6	17862.2	47.46	0.33	54.00	6.54	100	16	Vertical

Mode:u; Polarization:Horizontal



Suspected List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3010.35	28.62	-24.50	54.00	25.38	200	156	Horizontal
2	3114.90	39.36	-24.31	74.00	34.64	100	166	Horizontal
3	14025.2	58.05	2.27	74.00	15.95	100	166	Horizontal
4	14101.7	47.19	2.36	54.00	6.81	100	91	Horizontal
5	17778.1	58.58	0.76	74.00	15.42	100	317	Horizontal
6	17795.9	47.57	0.70	54.00	6.43	100	53	Horizontal

Mode:u; Polarization:Vertical



Suspected List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3123.40	28.51	-24.29	54.00	25.49	200	269	Vertical
2	3584.97	40.07	-22.85	74.00	33.93	200	43	Vertical
3	13894.2	47.26	2.15	54.00	6.74	100	167	Vertical
4	14049.8	57.69	2.30	74.00	16.31	100	242	Vertical
5	17502.7	47.79	1.62	54.00	6.21	200	194	Vertical
6	17795.9	58.62	0.70	74.00	15.38	100	129	Vertical

Remark:

1) Scan from 1GHz to 30GHz,The disturbance above 18GHz was very low and all noise floor. The above radiated emissions were the highest point could be found when testing, so only the above radiated emissions had been displayed.

7 Photographs

7.1 Conducted Emissions at Mains Terminals (150kHz-30MHz) Test Setup

7.2 Radiated Emissions (30MHz-1GHz) Test Setup

7.3 Radiated Emissions (above 1GHz) Test Setup

7.4 EUT Constructional Details (EUT Photos)

Refer to Photographs of EUT Constructional Details

- End of the Report -