



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: 2021-05-10

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Simon Ling

Wireless Laboratory Manager



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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2020-04-30		Original
02		2021-05-10	Leah Chen	1. Modify data conversion error of antenna height 2. Updated equipment list

*This report supersedes our previous report ZR/2020/4000307, issued on 2020-4-30, which is hereby deemed null and void.

Authorized for issue by:	
Prepared By	 (Leah Chen) / Engineer
Checked By	 (Daniel Wang) /Reviewer



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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



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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;	



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	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%



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4.3 Test Location

Company:	SGS-CSTC STANDARDS TECHNICAL SERVICES (XI 'AN) CO., LTD.
Address:	1/F, Unit D, Building 1, Kanghong Orange Technology Park, No.137, Keyuan 3rd Road, Fengdong New City, Xi'an, Shaanxi China
Post code:	710086
Test engineer:	Ben Huang, Leah Chen

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 (XI 'AN) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 4854.01.

• **FCC –Designation Number: CN1271.**

4.5 Deviation from Standards

None

4.6 Abnormalities from Standard Conditions

None



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5 Equipment List

CE Test System					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Shielding Room	Brilliant-emc	N/A	XAW03-35-01	2019-09-11	2022-09-10
Test receiver	ROHDE&SCHWARZ	ESR	XAW01-08-01	2019-09-07	2020-09-06
Artificial network	ROHDE&SCHWARZ	ENV216	XAW01-04-01	2019-07-16	2020-07-15
Temperature and humidity meter	MingGao	TH101B	XAW01-01-01	2019-12-06	2020-12-05
Measurement Software	Tonscend	TS+ CE V2.5	XAW02-05-02	NCR	NCR
Radio communication analyzer	ROHDE&SCHWARZ	CMW 500	XAW01-03-02	2019-06-27	2020-06-26

RSE Test System					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Semi-Anechoic Chamber	Brilliant-emc	N/A	XAW03-35-01	2019-09-11	2022-09-10
MXA signal analyzer	Keysight	N9020A	XAW01-06-01	2019-06-27	2020-06-26
Test receiver	ROHDE&SCHWARZ	ESR	XAW01-08-01	2019-09-07	2020-09-06
Receiving antenna (30MHz~3GHz)	Schwarzbeck	VULB 9163	XAW01-09-01	2019-10-13	2021-10-12
Receiving antenna (1GHz~18GHz)	Schwarzbeck	BBHA 9120D	XAW01-09-02	2019-10-13	2021-10-12
Receiving antenna (15GHz~40GHz)	Schwarzbeck	BBHA 9170	XAW01-09-03	2019-10-13	2021-10-12
Directional antenna rack controller	Max-Full	MF-7802BS	XAW03-03-01	NCR	NCR
High-speed antenna rack controller	Max-Full	MF-7802	XAW03-04-01	NCR	NCR
Filter bank	Tonscend	JS0806-F	XAW03-05-01	NCR	NCR
Filter bank	Tonscend	JS0806s	XAW03-05-02	NCR	NCR
Amplifier	Tonscend	TAP00903040	XAW01-41-01	2019-11-18	2020-11-17
Amplifier	Tonscend	TAP01018048	XAW01-41-02	2019-11-18	2020-11-17
Amplifier	Tonscend	TAP18040048	XAW01-41-03	2019-12-03	2020-12-02
Amplifier	Shanghai Steed	YX28980930	XAW01-41-06	2019-11-18	2020-11-17
Temperature and humidity meter	MingGao	TH101B	XAW01-01-01	2019-12-06	2020-12-05
Measurement Software	Tonscend	TS+ RSE V3.0.0.2	XAW02-05-01	NCR	NCR
Radio communication analyzer	ROHDE&SCHWARZ	CMW 500	XAW01-03-02	2019-06-27	2020-06-26



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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



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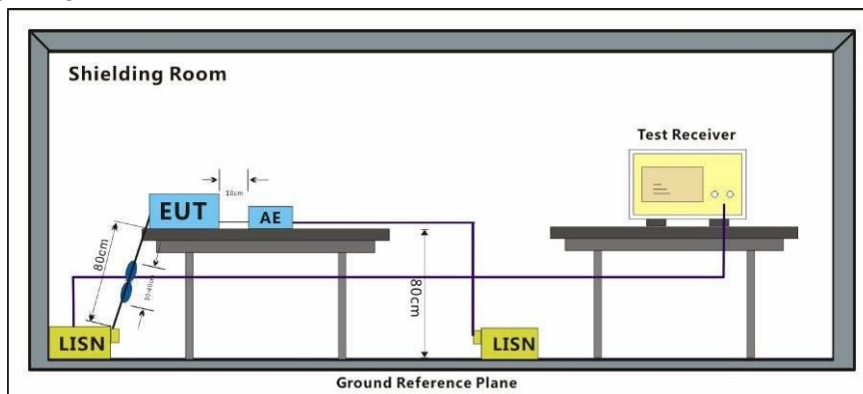
The worst case
for final test:

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

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.



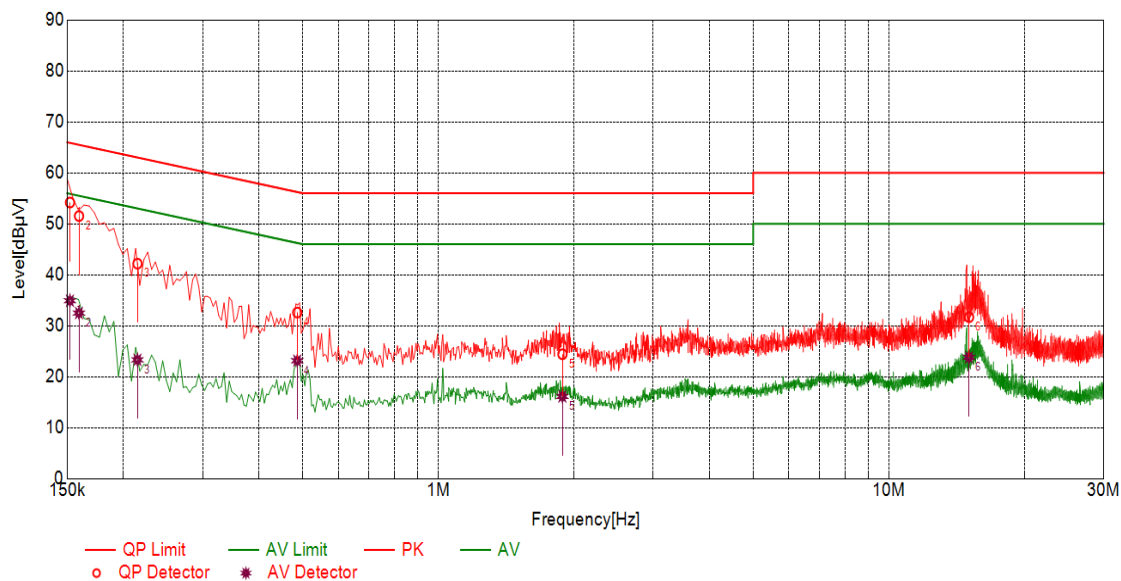
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Mode:a; Line:Live Line



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



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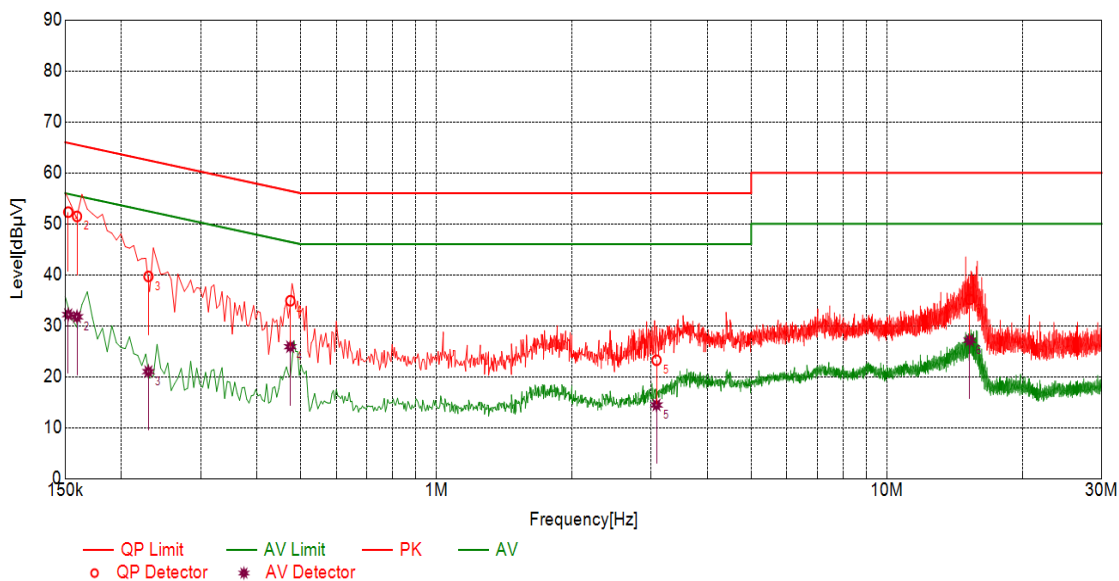
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Mode:a; Line:Neutral Line



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

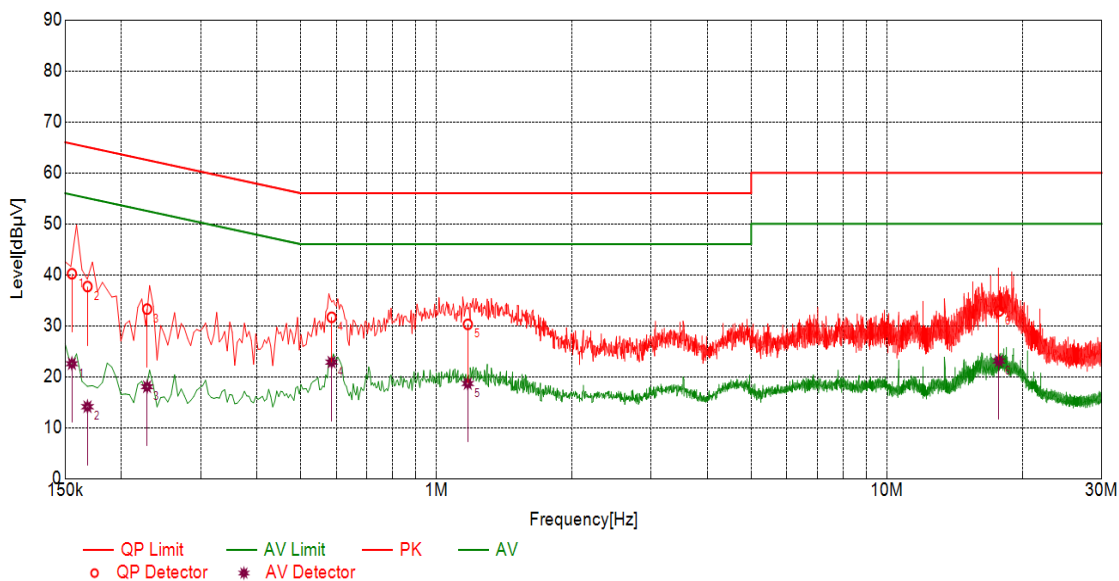


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Mode:e; Line:Live Line



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

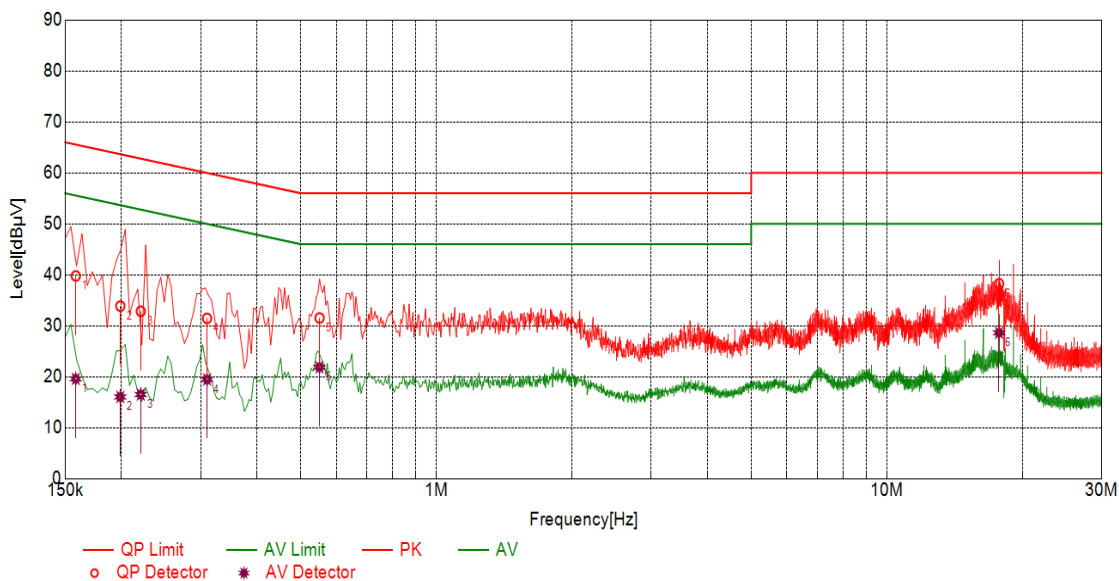


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Mode:e; Line:Neutral Line



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



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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: $2 \pm 5^{\circ}\text{C}$ 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



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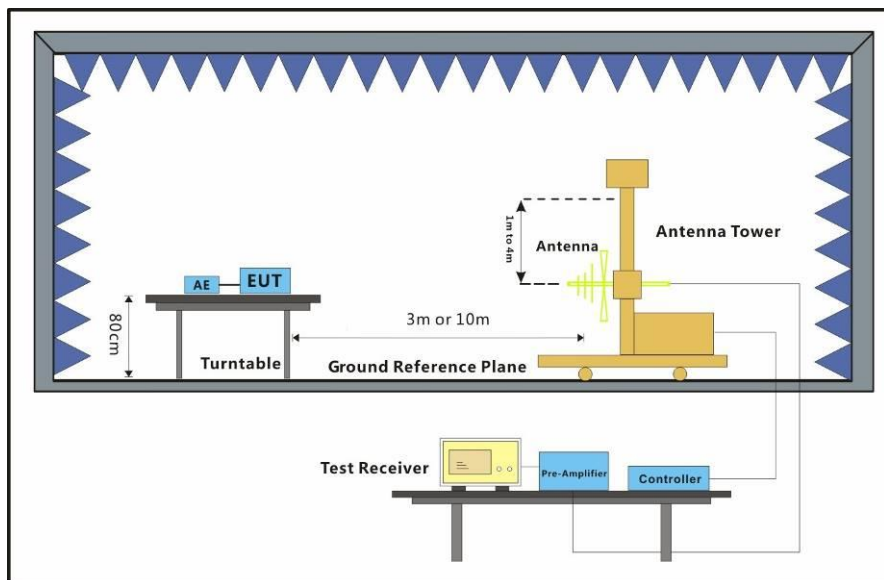
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The worst case for
final test:

+earphone+EUT1+USB cable2+adapter2
y: LTE band 38 Idle down ant+BT+FM+WLAN5G+GPS Rx
+earphone+EUT2+USB cable1+adapter2
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

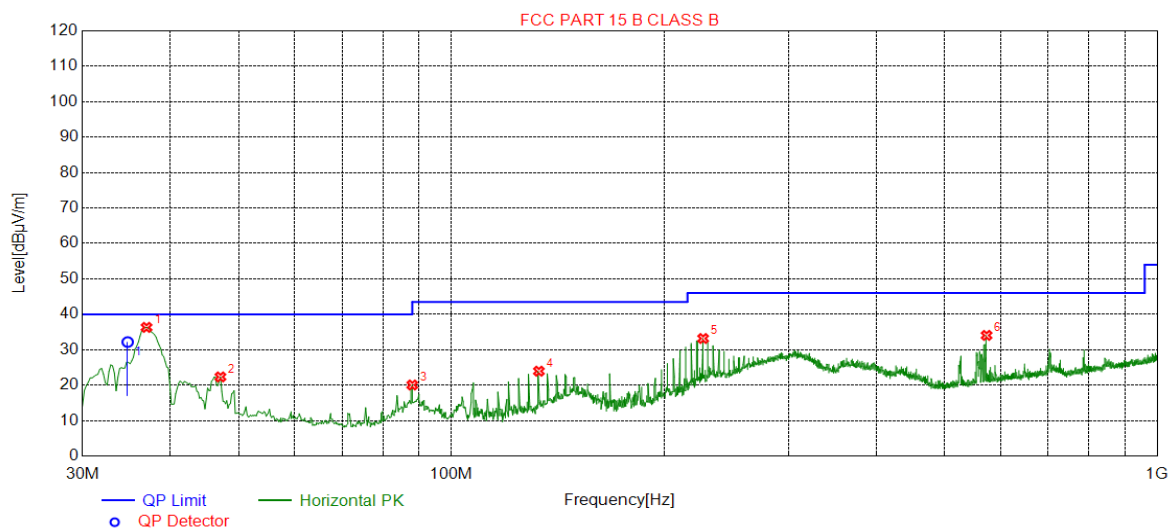
6.2.2 Test Setup Diagram



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	145	128	Horizontal
2	47.0754	22.33	-30.40	40.00	17.67	133	12	Horizontal
3	88.0176	20.05	-34.20	43.50	23.45	112	61	Horizontal
4	133.034	23.95	-35.22	43.50	19.55	107	283	Horizontal
5	227.337	33.17	-30.49	46.00	12.83	123	242	Horizontal
6	573.114	34.05	-21.39	46.00	11.95	103	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



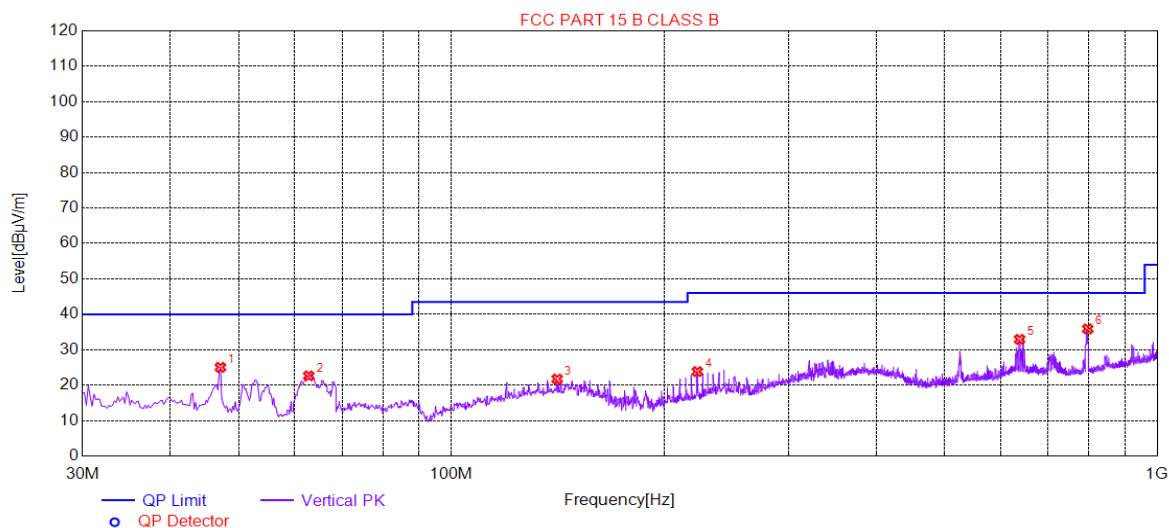
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Mode:a; Polarization:Vertical



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	108	275	Vertical
2	62.7926	22.65	-32.58	40.00	17.35	231	288	Vertical
3	141.184	21.73	-35.49	43.50	21.77	110	360	Vertical
4	223.068	23.84	-30.62	46.00	22.16	105	337	Vertical
5	638.311	32.92	-20.17	46.00	13.08	103	186	Vertical
6	797.229	35.88	-17.82	46.00	10.12	114	168	Vertical



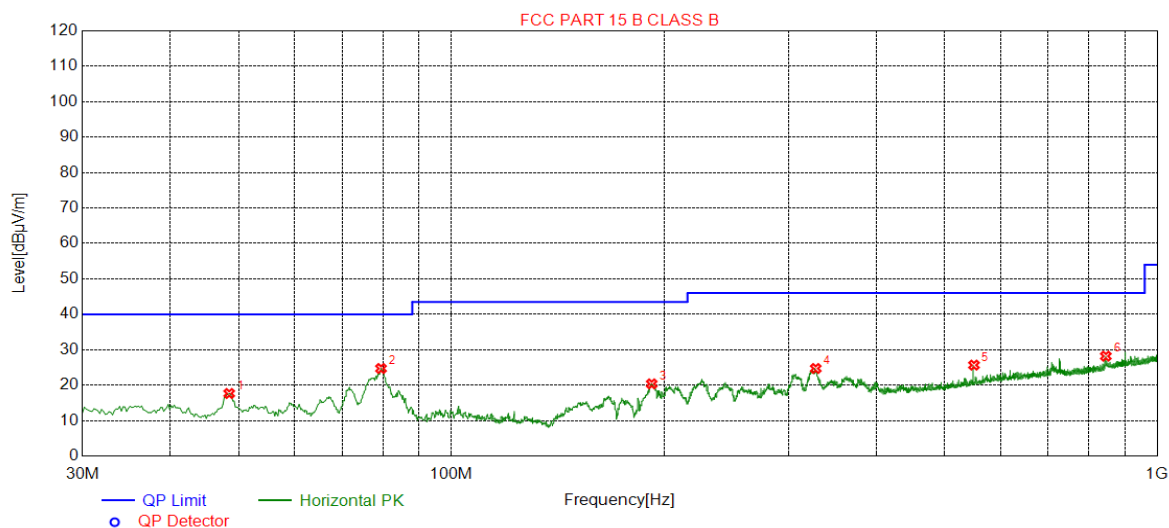
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Mode u; Polarization:Horizontal



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	201	79	Horizontal
2	79.4799	24.70	-36.06	40.00	15.30	109	280	Horizontal
3	192.216	20.37	-32.01	43.50	23.13	136	232	Horizontal
4	328.237	24.71	-27.47	46.00	21.29	122	31	Horizontal
5	550.024	25.66	-22.04	46.00	20.34	119	346	Horizontal
6	845.739	28.19	-16.96	46.00	17.81	101	221	Horizontal

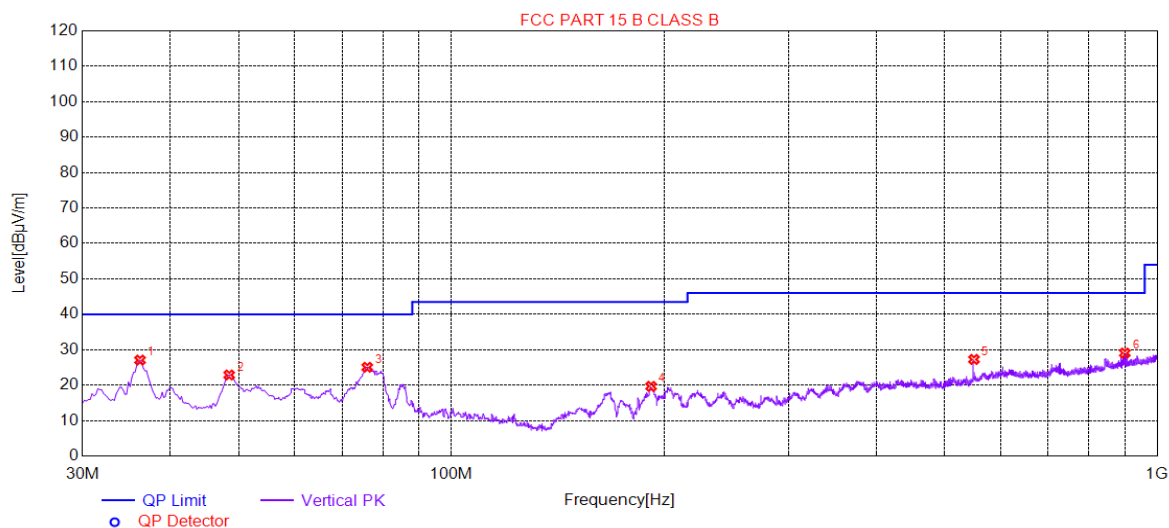


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Mode:u; Polarization:Vertical



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	119	163	Vertical
2	48.4337	22.88	-30.38	40.00	17.12	111	14	Vertical
3	75.9872	25.05	-35.43	40.00	14.95	108	295	Vertical
4	191.828	19.68	-32.05	43.50	23.82	172	66	Vertical
5	550.024	27.27	-22.04	46.00	18.73	120	222	Vertical
6	899.681	29.07	-16.04	46.00	16.93	211	341	Vertical



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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:

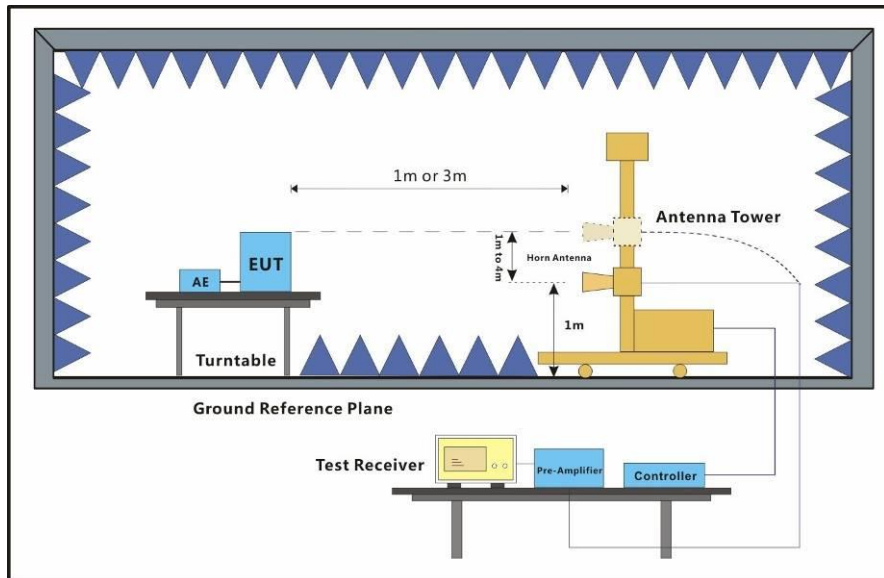
- a: Transfer data between the EUT1 and the PC+USB cable1
- b: Transfer data between the EUT1 and the PC+USB cable2
- c: GSM850 Idle down ant+BT+FM+WLAN2.4G+GPS Rx+playing MP4 (SD card)+earphone+EUT1+USB cable1+adapter1
- d: GSM1900 Idle down ant+BT+FM+WLAN5G+GPS Rx+camera (Back)+earphone+EUT1+USB cable1+adapter1
- 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 a: Transfer data between the EUT1 and the PC+USB cable1



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

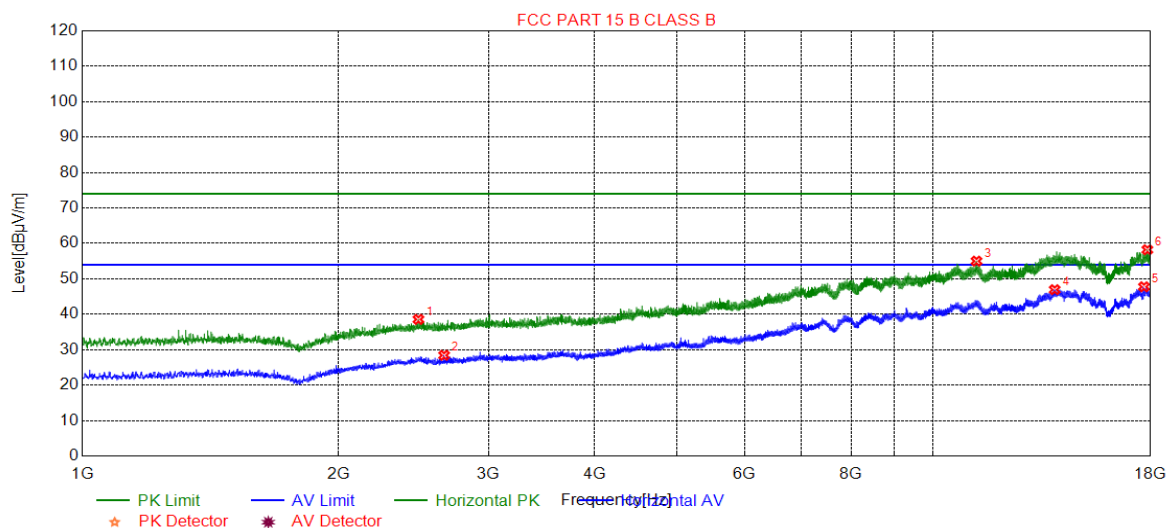
6.3.2 Test Setup Diagram



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	201	166	Horizontal
2	2660.98	28.42	-25.71	54.00	25.58	118	53	Horizontal
3	11237.9	55.01	-2.80	74.00	18.99	198	16	Horizontal
4	13884.0	46.95	2.11	54.00	7.05	222	354	Horizontal
5	17678.6	47.76	1.03	54.00	6.24	105	119	Horizontal
6	17843.5	58.22	0.44	74.00	15.78	121	156	Horizontal

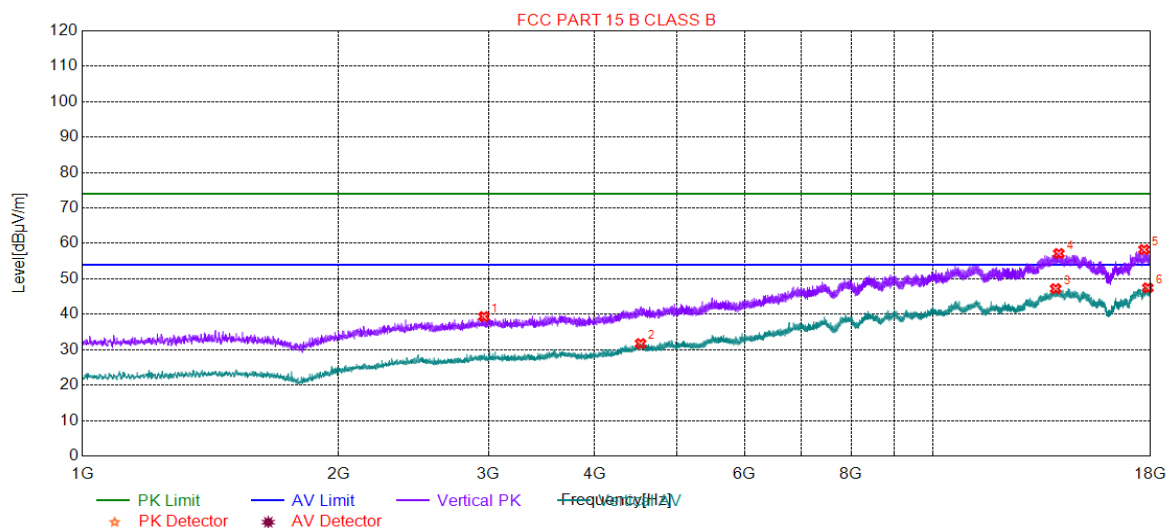


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Mode:a; Polarization:Vertical



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	211	118	Vertical
2	4528.52	31.72	-19.21	54.00	22.28	187	307	Vertical
3	13922.3	47.23	2.19	54.00	6.77	199	6	Vertical
4	14039.6	57.15	2.29	74.00	16.85	214	81	Vertical
5	17683.7	58.25	1.03	74.00	15.75	150	6	Vertical
6	17862.2	47.46	0.33	54.00	6.54	142	16	Vertical



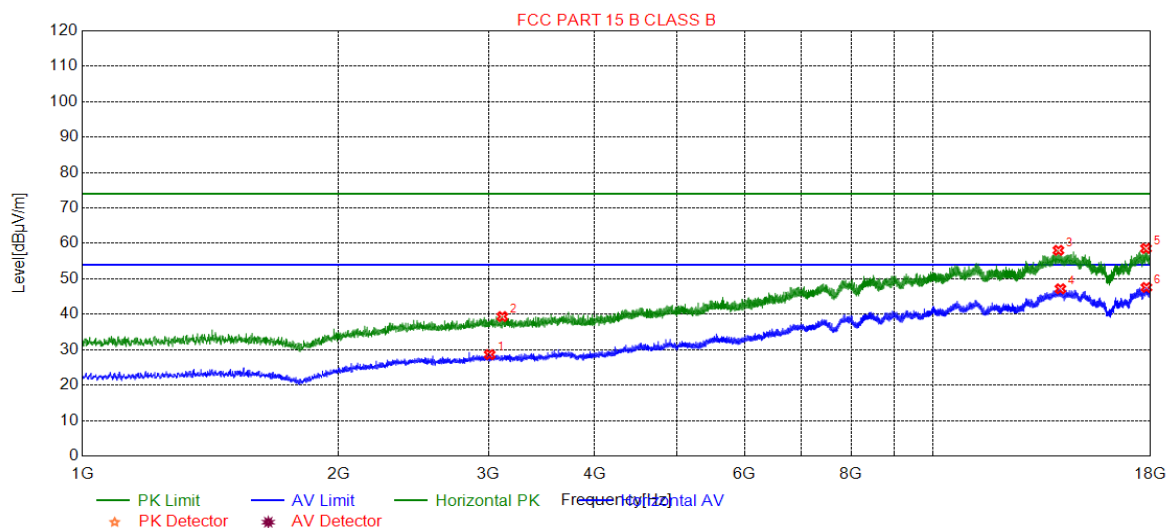
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Mode:u; Polarization:Horizontal



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	182	156	Horizontal
2	3114.90	39.36	-24.31	74.00	34.64	114	166	Horizontal
3	14025.2	58.05	2.27	74.00	15.95	122	166	Horizontal
4	14101.7	47.19	2.36	54.00	6.81	107	91	Horizontal
5	17778.1	58.58	0.76	74.00	15.42	123	317	Horizontal
6	17795.9	47.57	0.70	54.00	6.43	113	53	Horizontal



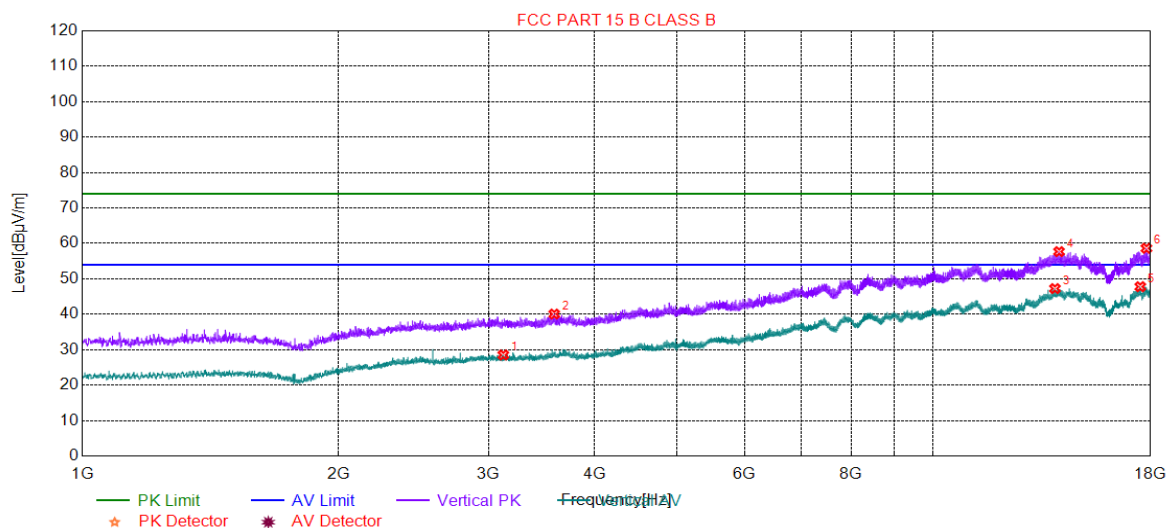
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Mode:u; Polarization:Vertical



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	108	269	Vertical
2	3584.97	40.07	-22.85	74.00	33.93	199	43	Vertical
3	13894.2	47.26	2.15	54.00	6.74	104	167	Vertical
4	14049.8	57.69	2.30	74.00	16.31	113	242	Vertical
5	17502.7	47.79	1.62	54.00	6.21	154	194	Vertical
6	17795.9	58.62	0.70	74.00	15.38	122	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.



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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 -



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