

# TEST REPORT

**Application No:** ZR/2021/30014  
**Applicant:** vivo Mobile Communication Co., Ltd.  
**Address of Applicant:** No.168 Jinghai East Rd., Chang'an, Dongguan, Guangdong, China  
**Manufacturer:** vivo Mobile Communication Co., Ltd.  
**Address of Manufacturer:** No.168 Jinghai East Rd., Chang'an, Dongguan, Guangdong, China  
**EUT Description:** Mobile Phone  
**Model No.:** V2050  
**Trade Mark:** vivo  
**FCC ID:** 2AUCY-V2066  
**Standard(s) :** 47 CFR Part 15, Subpart B  
**Date of Receipt:** 2021/3/29  
**Date of Test:** 2021/3/29 to 2021/4/14  
**Date of Issue:** 2020/4/28(for original report XZR/2021/3001401)  
 2020/5/10(for report XZR/2021/3001402)

<b>Test Result:</b>	<b>Pass*</b>
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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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<i>Revision Record</i>				
<i>Version</i>	<i>Chapter</i>	<i>Date</i>	<i>Modifier</i>	<i>Remark</i>
01		2021/5/10		Original

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



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## 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

### Remark :

Model No.: V2050, V2066

This test report (Ref. No.: XZR/2021/3001402) is based on the original test report (Ref. No.: XZR/2021/3001401).

Review this report and original report, this report just changing the parts according to the declaration letter from client.

NO	Initial	Variant	Difference Description
1	V2066	V2050	The hardware is the same, V2050 the software turn on the 5G band

Considering to the difference, pre-scan was performed on the sample in this report to find the items which can be influential to the result in the original test report for fully retest.

Therefore in this report all items do not need to retest and all test data in this report are base on the previous report with report number XZR/2021/3001401.



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## 1 General Information

Product Name:	Mobile Phone		
Model No.(EUT):	V2050		
Trade Mark:	vivo		
Hardware Version:	MP_0.1		
Software Version:	PD2083CF_EX_A_3.6.2		
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 12	699~716	729~746
	LTE Band 17	704~716	734~746
	LTE Band 26	814~849	859~894
	LTE Band 38	2570~2620	2570~2620
	LTE Band 41	2496~2690	2496~2690
	LTE Band 66	1710~1780	2110~2200
	Wi-Fi 2.4G	2412~2462	2412~2462
	Bluetooth	2402~2480	2402~2480
	Wi-Fi 5G	5150~5850	5150~5850
	GNSS(GPS+Glonass + Beidou+Galileo+SBAS)	1599~1610	



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**Accessory:**

Adapter No.	Model No.	Specification
1	V3330L0A1-US	DC5V/2A-9V/2A-11V/3A
2	V3330L0A1-EU	DC5V/2A-9V/2A-11V/3A
3	V3330L0A1-UK	DC5V/2A-9V/2A-11V/3A

Remark: Adapter 1 were selected to conduct test in this report, the others are with same design to both adapters.

Battery No.	Model No.	Manufacturer
1	B-P9	Dongguan NVT Technology Co.,Ltd

Cable No.	Model No.	Manufacturer
1	BK-C-33	vivo

Earphone No.	Model No.	Manufacturer
1	XE160	/



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### 1.1 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Laptop	Lenovo	L480	REF. No.SEA1800
Mouse	Lenovo	3D optical Mouse	REF. No.:SEA2400
Router	NETGEAR	R6020	REF. No.SEA2200

### 1.2 Test Location

All tests were performed at:

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:	Leah Chen, Ken Liu, Andy Yao

No tests were sub-contracted.

### 1.3 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.

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

### 1.4 Deviation from Standards

None

### 1.5 Abnormalities from Standard Conditions

None



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## 2 Emission Test Results

### 2.1 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

#### 2.1.1 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 EUT and the PC+USB cable
  - b: GSM 850 Idle+BT+WLAN +GPS Rx+playing MP4 (SD card) +battery1+Cable+adapter/earphone
  - c: WCDMA Band V Idle +BT+WLAN +GPS Rx+playing MP4 (SD card) +battery1+Cable+adapter/earphone
  - d: LTE Band 5 Idle+BT+WLAN +GPS Rx+camera (Front) +battery1+Cable+adapter/earphone
  - e: LTE Band 12 Idle+BT+WLAN +GPS Rx+camera (Front) +battery1+Cable+adapter/earphone
  - f: LTE Band 17 Idle+BT+WLAN +GPS Rx+camera (Back) +battery1+Cable+adapter/earphone
  - g: LTE Band 26 Idle+BT+WLAN +GPS Rx+camera (Back) +battery1+Cable+adapter/earphone

- The worst case for final test:
- a: Transfer data between the EUT and the PC+USB cable
  - f: LTE Band 17 Idle+BT+WLAN +GPS Rx+camera (Back) +battery1+Cable+adapter/earphone

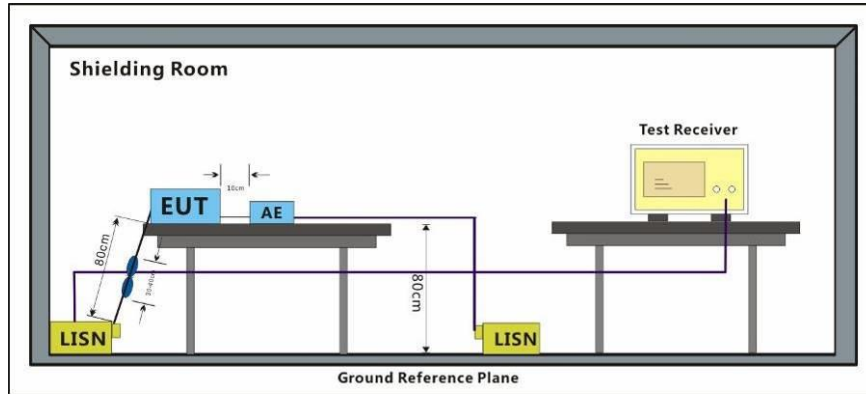


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**2.1.2 Test Setup Procedures**

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.



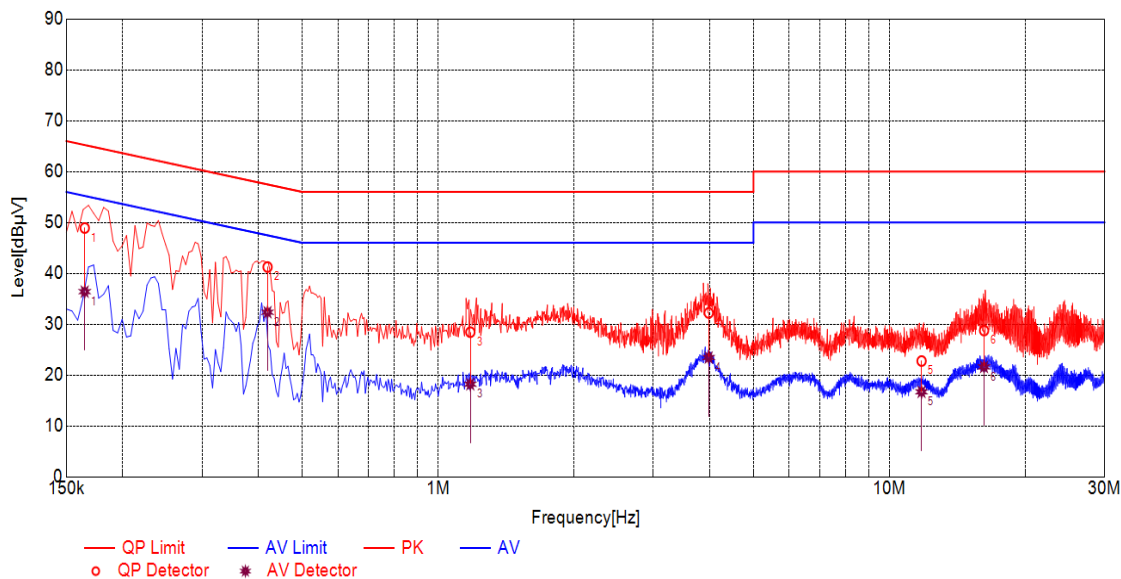
**2.1.3 Measurement Data**

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.



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Mode:a; Line:Live Line



**Test Graph**

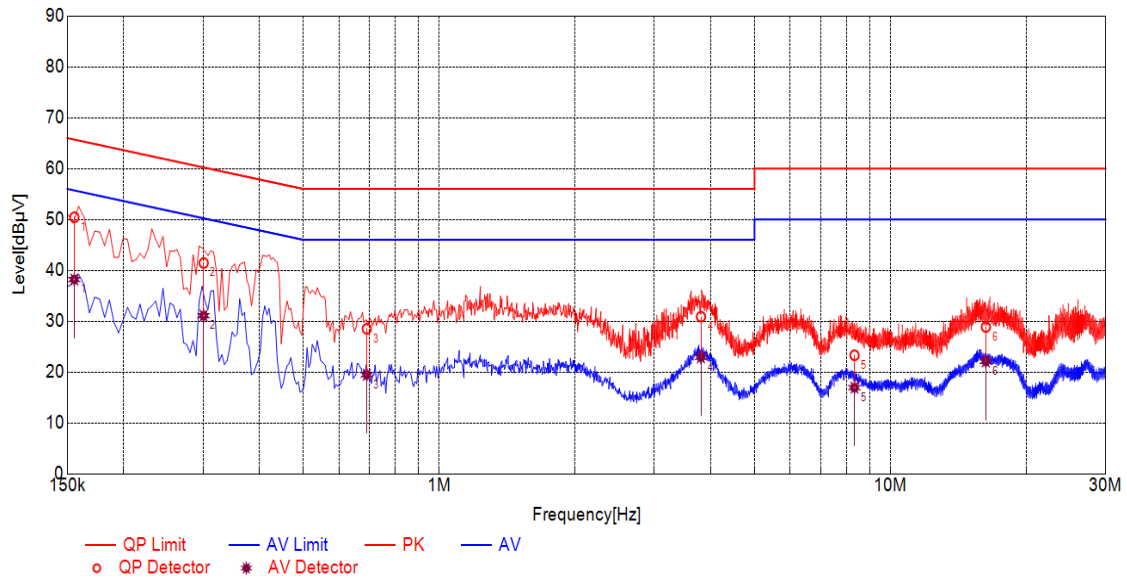
Final Data List								
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]
1	0.1648	10.10	48.91	65.22	16.31	36.40	55.22	18.82
2	0.4189	10.10	41.24	57.47	16.23	32.35	47.47	15.12
3	1.1787	10.10	28.44	56.00	27.56	18.21	46.00	27.79
4	3.9783	10.10	32.21	56.00	23.79	23.45	46.00	22.55
5	11.7845	10.10	22.76	60.00	37.24	16.70	50.00	33.30
6	16.2104	10.11	28.76	60.00	31.24	21.60	50.00	28.40



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Mode:a; Line:Neutral Line



**Test Graph**

**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]
1	0.1555	10.10	50.43	65.70	15.27	38.19	55.70	17.51
2	0.3008	10.10	41.44	60.22	18.78	31.09	50.22	19.13
3	0.6915	10.10	28.51	56.00	27.49	19.46	46.00	26.54
4	3.8044	10.10	30.89	56.00	25.11	22.90	46.00	23.10
5	8.3263	10.10	23.31	60.00	36.69	16.94	50.00	33.06
6	16.2757	10.11	28.87	60.00	31.13	22.09	50.00	27.91



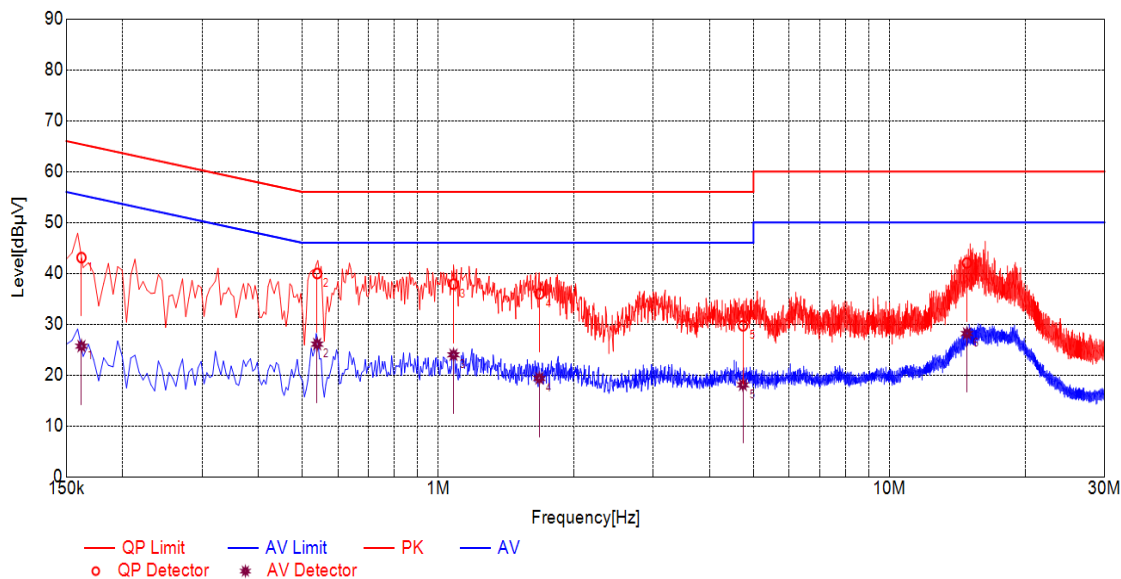
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t (86-29) 6282 7885 sgs.china@sgs.com

Mode:f; Line:Live Line



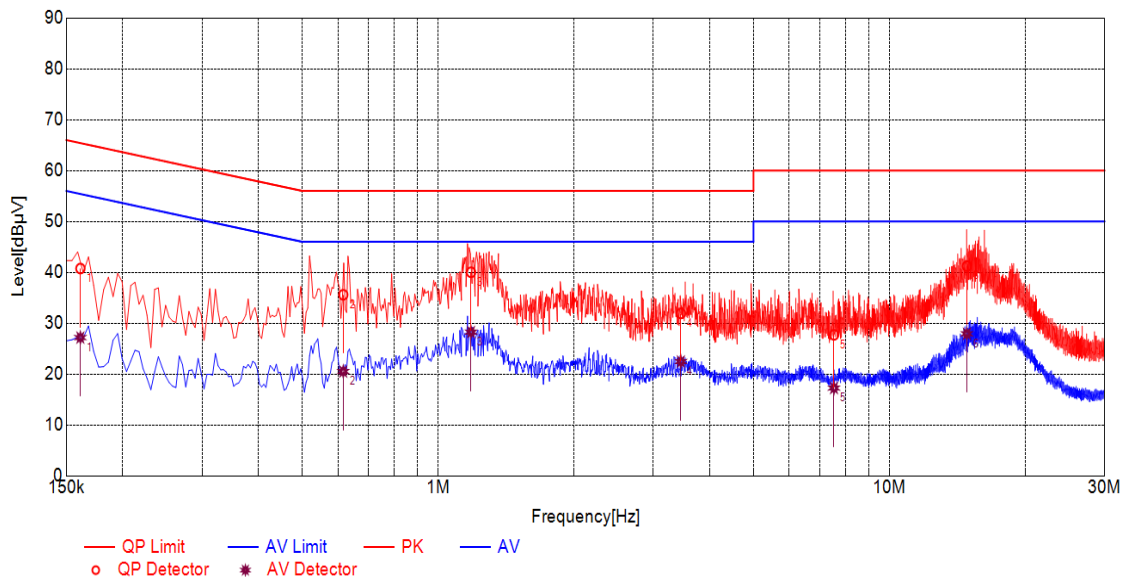
**Test Graph**

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]
1	0.1621	10.10	43.09	65.36	22.27	25.68	55.36	29.68
2	0.5396	10.10	39.96	56.00	16.04	26.08	46.00	19.92
3	1.0819	10.10	37.88	56.00	18.12	23.98	46.00	22.02
4	1.6768	10.10	35.98	56.00	20.02	19.36	46.00	26.64
5	4.7375	10.10	29.70	56.00	26.30	18.09	46.00	27.91
6	14.8557	10.11	42.04	60.00	17.96	28.17	50.00	21.83



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Mode:f; Line:Neutral Line



**Test Graph**

**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]
1	0.1612	10.10	40.75	65.40	24.65	27.17	55.40	28.23
2	0.6164	10.10	35.59	56.00	20.41	20.50	46.00	25.50
3	1.1830	10.10	40.01	56.00	15.99	28.25	46.00	17.75
4	3.4519	10.10	31.93	56.00	24.07	22.46	46.00	23.54
5	7.5397	10.10	27.72	60.00	32.28	17.25	50.00	32.75
6	14.8496	10.11	41.22	60.00	18.78	27.92	50.00	22.08



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**2.2 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

**2.2.1 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 EUT and the PC+USB cable
- b: GSM 850 Idle+BT+WLAN +GPS Rx+playing MP4 (SD card) +battery1+Cable+adapter/earphone
- c: WCDMA Band V Idle +BT+WLAN +GPS Rx+playing MP4 (SD card) +battery1+Cable+adapter/earphone
- d: LTE Band 5 Idle+BT+WLAN +GPS Rx+camera (Front) +battery1+Cable+adapter/earphone
- e: LTE Band 12 Idle+BT+WLAN +GPS Rx+camera (Front) +battery1+Cable+adapter/earphone
- f: LTE Band 17 Idle+BT+WLAN +GPS Rx+camera (Back) +battery1+Cable+adapter/earphone
- g: LTE Band 26 Idle+BT+WLAN +GPS Rx+camera (Back) +battery1+Cable+adapter/earphone

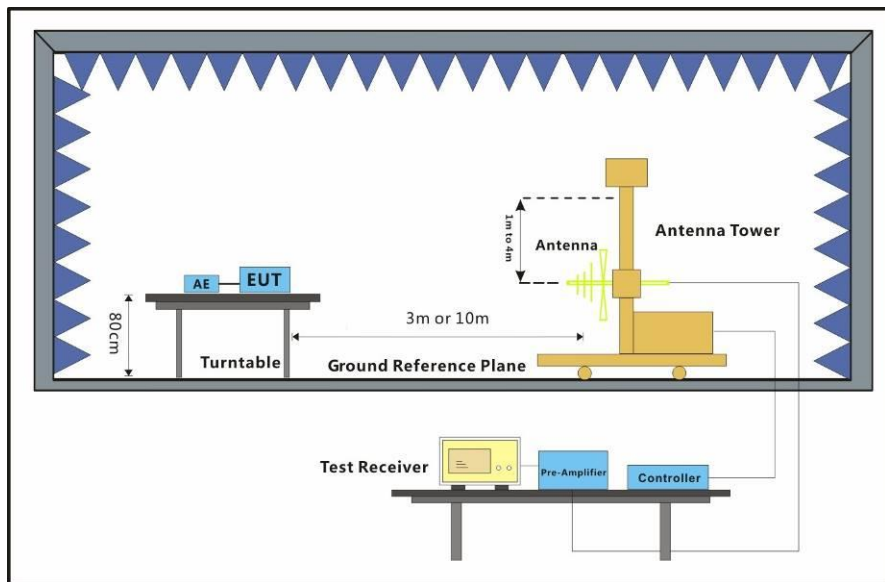
The worst case for final test:

- a: Transfer data between the EUT and the PC+USB cable
- d: LTE Band 5 Idle+BT+WLAN +GPS Rx+camera (Front) +battery1+Cable+adapter/earphone



**2.2.2 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.

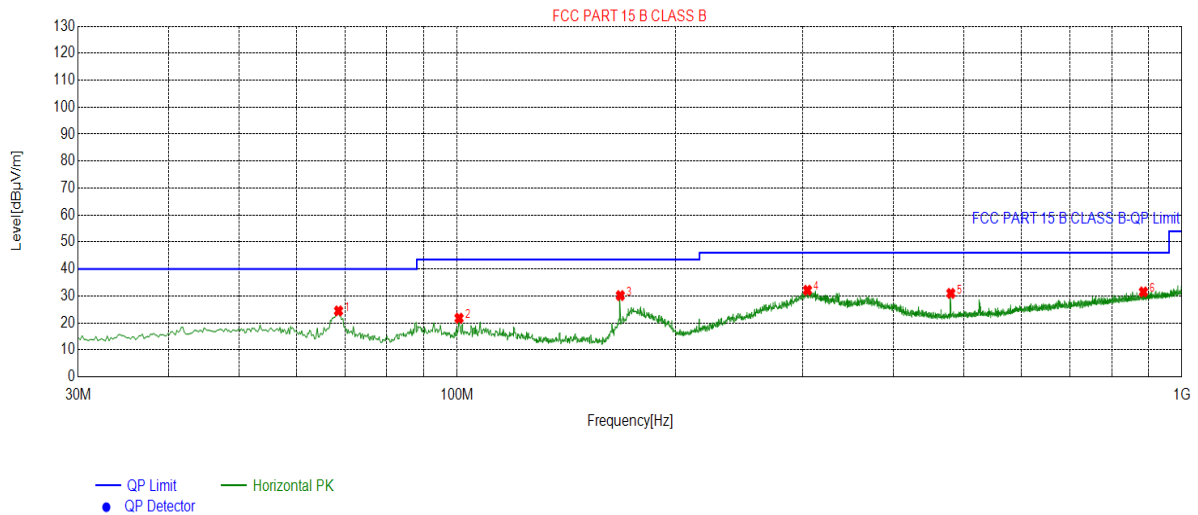


**2.2.3 Measurement Data**

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.



Mode:a; Polarization:Horizontal



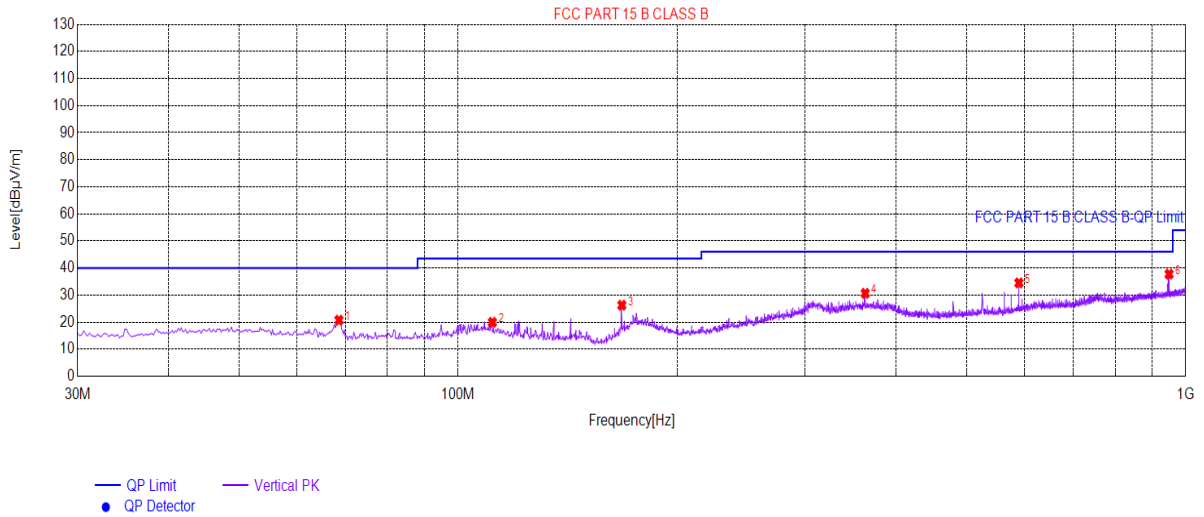
### Suspected List

Suspected List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	68.6137	24.47	-30.16	40.00	15.53	352	360	Horizontal
2	100.630	21.76	-28.13	43.50	21.74	294	179	Horizontal
3	167.961	30.14	-30.27	43.50	13.36	246	54	Horizontal
4	304.370	32.12	-25.77	46.00	13.88	258	1	Horizontal
5	479.976	30.96	-21.31	46.00	15.04	164	74	Horizontal
6	884.935	31.50	-14.45	46.00	14.50	381	79	Horizontal



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Mode:a; Polarization:Vertical



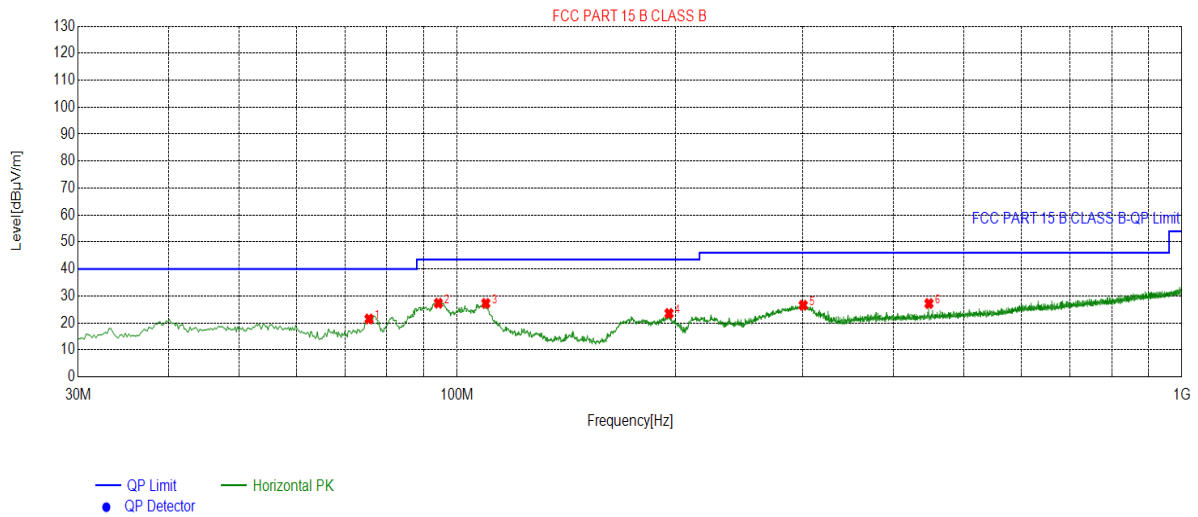
**Suspected List**

Suspected List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	68.6137	20.74	-30.16	40.00	19.26	152	156	Vertical
2	111.496	19.93	-28.35	43.50	23.57	351	164	Vertical
3	167.961	26.26	-30.27	43.50	17.24	382	57	Vertical
4	362.776	30.66	-23.20	46.00	15.34	246	8	Vertical
5	589.996	34.49	-18.97	46.00	11.51	254	21	Vertical
6	948.967	37.75	-13.88	46.00	8.25	102	178	Vertical



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Mode:d; Polarization:Horizontal



### Suspected List

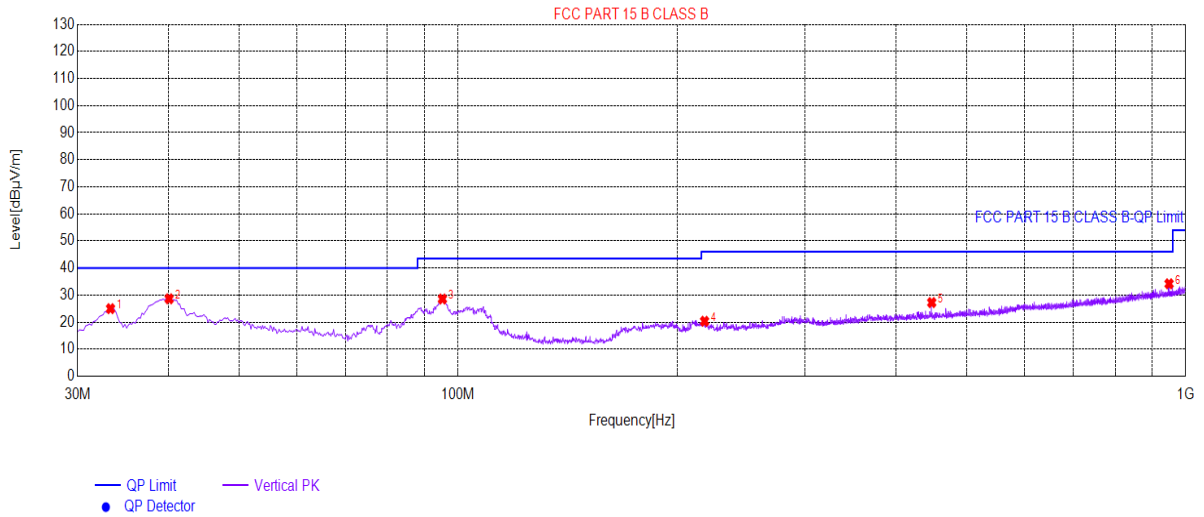
Suspected List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	75.5991	21.48	-31.51	40.00	18.52	320	245	Horizontal
2	94.2268	27.31	-29.11	43.50	16.19	290	103	Horizontal
3	109.555	27.25	-28.12	43.50	16.25	213	111	Horizontal
4	196.097	23.52	-28.31	43.50	19.98	225	230	Horizontal
5	300.296	26.54	-25.90	46.00	19.46	122	87	Horizontal
6	447.765	27.19	-22.05	46.00	18.81	200	286	Horizontal



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Mode:d; Polarization:Vertical



**Suspected List**

Suspected List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	33.2987	24.99	-29.20	40.00	15.01	261	337	Vertical
2	40.0900	28.64	-27.46	40.00	11.36	240	313	Vertical
3	95.1970	28.56	-28.95	43.50	14.94	325	267	Vertical
4	218.217	20.34	-27.56	46.00	25.66	330	348	Vertical
5	447.765	27.24	-22.05	46.00	18.76	228	40	Vertical
6	948.967	34.18	-13.88	46.00	11.82	273	47	Vertical



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### 2.3 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

#### 2.3.1 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 EUT and the PC+USB cable
- b: GSM 850 Idle+BT+WLAN +GPS Rx+playing MP4 (SD card) +battery1+Cable+adapter/earphone
- c: WCDMA Band V Idle +BT+WLAN +GPS Rx+playing MP4 (SD card) +battery1+Cable+adapter/earphone
- d: LTE Band 5 Idle+BT+WLAN +GPS Rx+camera (Front) +battery1+Cable+adapter/earphone
- e: LTE Band 12 Idle+BT+WLAN +GPS Rx+camera (Front) +battery1+Cable+adapter/earphone
- f: LTE Band 17 Idle+BT+WLAN +GPS Rx+camera (Back) +battery1+Cable+adapter/earphone
- g: LTE Band 26 Idle+BT+WLAN +GPS Rx+camera (Back) +battery1+Cable+adapter/earphone

The worst case for final test:

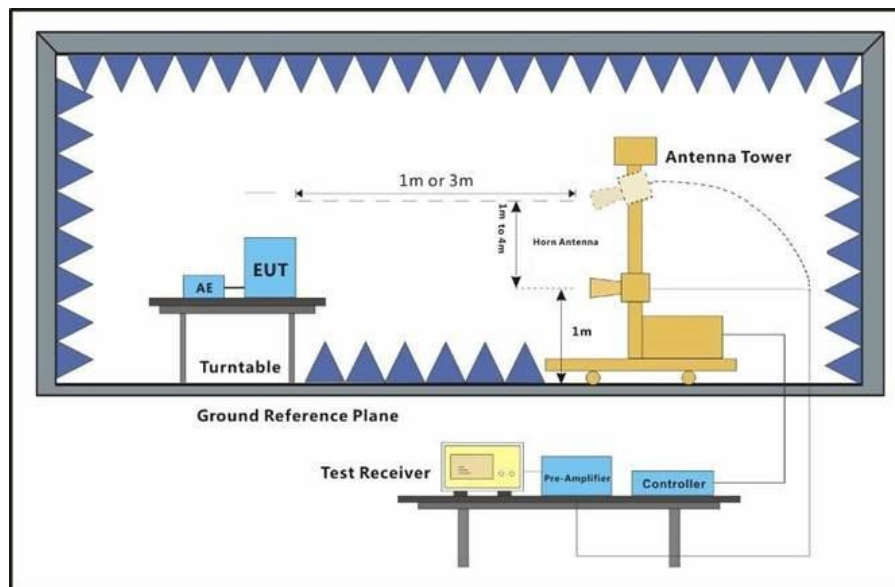
- a: Transfer data between the EUT and the PC+USB cable
- g: LTE Band 26 Idle+BT+WLAN +GPS Rx+camera (Back) +battery1+Cable+adapter/earphone



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### 2.3.2 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.
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.



### 2.3.3 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.

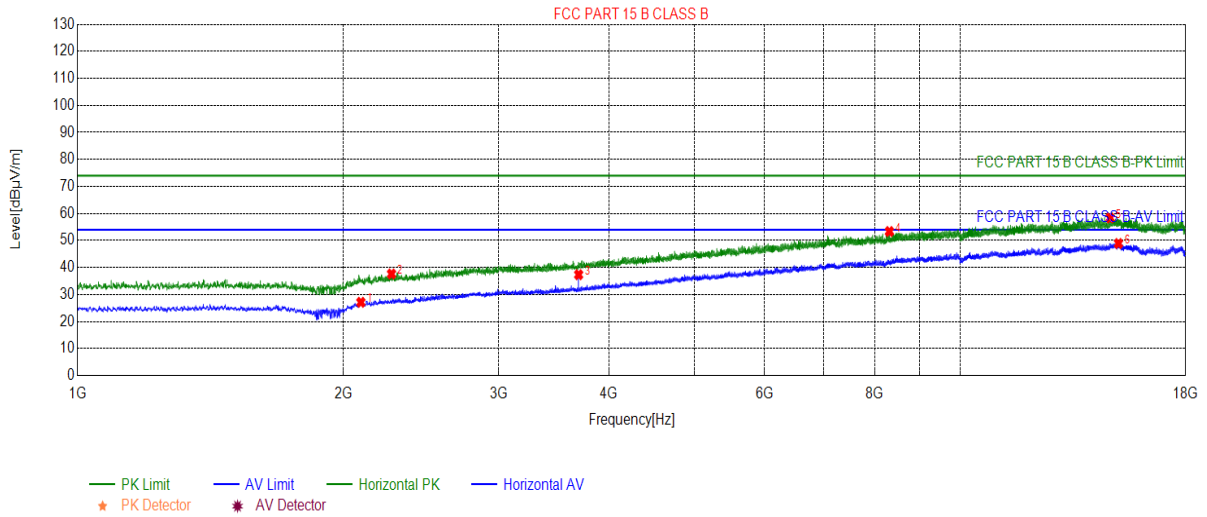
The three polarities of X,Y,Z were measured by EUT, but only the worst data had been displayed.

Scan from 1GHz to 30GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed.



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Mode:a; Polarization:Horizontal



**Suspected List**

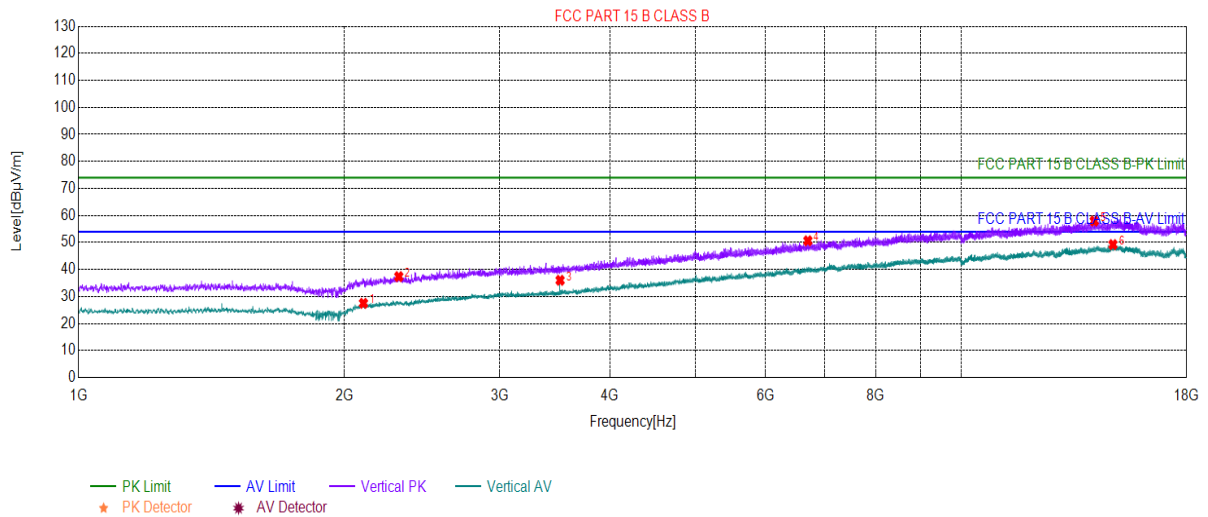
Suspected List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2094.00	27.13	-26.66	54.00	26.87	152	162	Horizontal
2	2268.26	37.61	-26.05	74.00	36.39	351	197	Horizontal
3	3695.48	37.34	-20.57	54.00	16.66	260	206	Horizontal
4	8312.06	53.33	-6.31	74.00	20.67	228	20	Horizontal
5	14782.5	58.35	1.99	74.00	15.65	276	110	Horizontal
6	15108.1	48.89	1.93	54.00	5.11	121	170	Horizontal



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Mode:a; Polarization:Vertical



### Suspected List

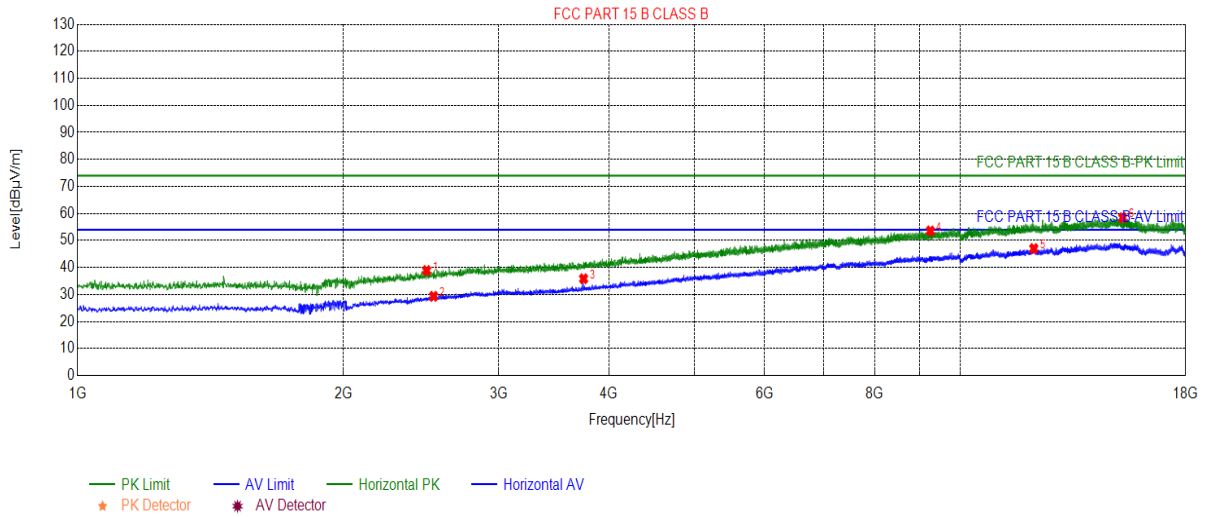
Suspected List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2102.50	27.50	-26.61	54.00	26.50	261	308	Vertical
2	2305.66	37.37	-25.75	74.00	36.63	260	111	Vertical
3	3511.87	36.01	-21.02	54.00	17.99	194	274	Vertical
4	6702.08	50.64	-10.00	74.00	23.36	312	350	Vertical
5	14143.3	57.93	2.92	74.00	16.07	205	274	Vertical
6	14851.4	49.21	2.51	54.00	4.79	213	153	Vertical



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Mode:g; Polarization:Horizontal



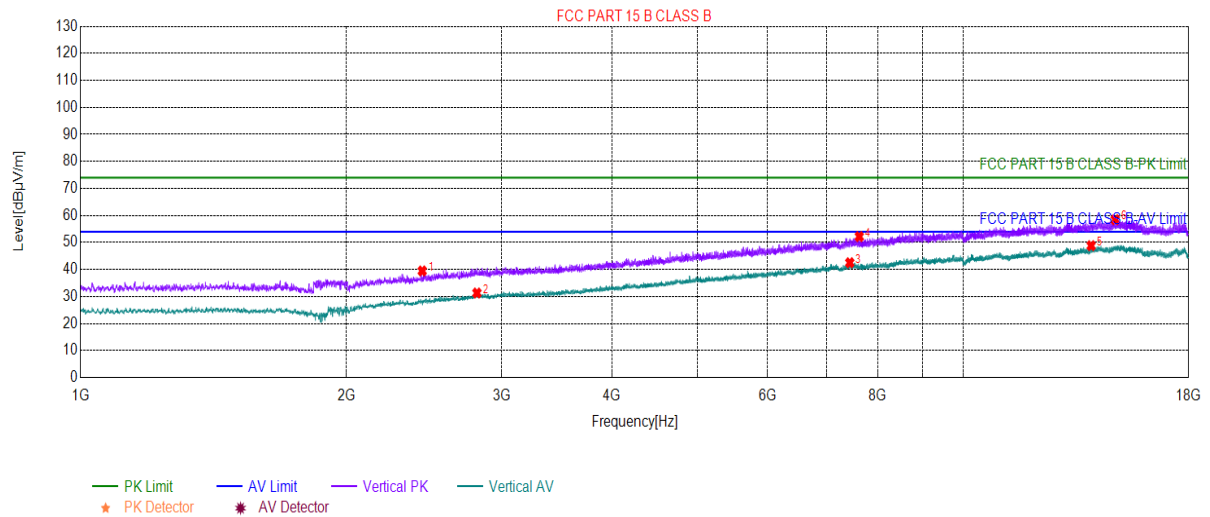
**Suspected List**

Suspected List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2485.87	38.87	-25.05	74.00	35.13	150	154	Horizontal
2	2530.92	29.34	-24.59	54.00	24.66	126	358	Horizontal
3	3743.08	35.84	-19.96	54.00	18.16	320	328	Horizontal
4	9248.81	53.53	-4.22	74.00	20.47	254	28	Horizontal
5	12113.4	47.00	0.47	54.00	7.00	268	39	Horizontal
6	15278.1	58.41	1.69	74.00	15.59	121	258	Horizontal



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Mode:g; Polarization:Vertical



**Suspected List**

Suspected List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2438.27	39.47	-25.19	74.00	34.53	251	2	Vertical
2	2812.29	31.30	-22.81	54.00	22.70	264	200	Vertical
3	7437.37	42.51	-8.15	54.00	11.49	394	139	Vertical
4	7624.38	52.19	-8.13	74.00	21.81	165	139	Vertical
5	13958.8	48.81	3.13	54.00	5.19	245	166	Vertical
6	14862.4	58.42	2.43	74.00	15.58	213	310	Vertical



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### 3 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	2020-09-11	2021-09-10
Artificial network	ROHDE&SCHWARZ	ENV216	XAW01-04-01	2020-08-04	2021-08-03
5G UXM	Keysight	E7515B	XAW01-19-02	2020-09-11	2021-09-10
Temperature and humidity meter	MingGao	TH101B	XAW01-01-01	2020-11-06	2021-11-05
Measurement Software	Tonscend	TS+ CE V2.5	XAW02-05-02	NCR	NCR



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RE 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	2021-04-01	2022-03-31
				2020-04-02	2021-04-01
Spectrum Analyzer	Keysight	N9020B	XAW01-11-03	2020-04-15	2021-04-14
Radio communication analyzer	ROHDE&SCHWARZ	CMW 500	XAW01-03-02	2021-04-01	2022-03-31
				2020-04-02	2021-04-01
Test receiver	ROHDE&SCHWARZ	ESR	XAW01-08-01	2020-09-11	2021-09-10
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
Amplifier	Tonscend	TAP00903040	XAW01-41-01	2020-10-26	2021-10-25
Amplifier	Tonscend	TAP01018048	XAW01-41-02	2020-10-26	2021-10-25
Amplifier	Tonscend	TAP18040048	XAW01-41-03	2020-10-27	2021-10-26
Amplifier	Shanghai Steed	YX28980930	XAW01-41-06	2020-10-26	2021-10-25
5G UXM	Keysight	E7515B	XAW01-04-01	2020-09-11	2021-09-10
Temperature and humidity meter	MingGao	TH101B	XAW01-01-01	2020-11-06	2021-11-05
Measurement Software	Tonscend	TS+ RE V3.0.0.2	XAW02-05-01	NCR	NCR



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## 4 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Conduction Emission	± 3.0dB (150kHz to 30MHz)
2	Radiated Emission	± 4.8dB (Below 1GHz)
		± 4.8dB (1GHz to 6GHz)
		± 4.5dB (6GHz to 18GHz)
		± 5.02dB (Above 18GHz)



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## 5 Photographs

### 5.1 Test Setup

Refer to Appendix A JBP Setup Photos.

### 5.2 EUT Constructional Details (EUT Photos)

Refer to Photographs of EUT Constructional Details

- End of the Report -

