

APPLICATION CERTIFICATION FCC Part 15C & RSS-210  
On Behalf of  
Country Mate Technology Ltd.

5.8GHz Digital Wireless Headphone  
Model No.: NS-HAWHP2, NS-HAWHP2-C

FCC ID: MV3-HAWHP2  
IC: 9029A-HAWHP2

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## 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

Product	: 5.8GHz Digital Wireless Headphone (The headphone part is just the receiving end, powered by DC 3.7V lithium batteries)
Model No.	: NS-HAWHP2, NS-HAWHP2-C (Note: Above series are identical in schematic, structure and critical components, Only the model name is different from the market requirement, NS-HAWHP2 For the FCC reports, NS-HAWHP2-C For the IC reports.)
Operating Frequency Band	: 5725MHz ~ 5825MHz
Operating Frequency	: 5729MHz ~ 5820MHz
Number Frequency	: 47
Modulation Type	: FSK
Type of Antenna	: PCB Layout Antenna
Max Antenna Gain	: 1.57dBi
HVIN	: HAWHP2T
Rating	: DC 5V $\overline{=}$ 500mA (Powered by adapter)
AC Adapter	: Model: XH-UL0505-A1 Input: 100-240V~50/60Hz 0.3A Max Output: 5V $\overline{=}$ 0.5A
Trade Name	: INSIGNIA
Applicant Address	: Country Mate Technology Ltd. 5/F., Block E, Hing Yip Centre 31 Hing Yip St., Kwun Tong, Kln., H.K.
Manufacturer Address	: Concord Electronic (Huizhou) Ltd 21 Ping An Rd Shuikou Hui Cheng District Huizhou, Guangdong

## 1.2. Carrier Frequency of Channels

Channel	RF Channel	Channel	RF Channel
1	5729	25	5777
2	5731	26	5779
3	5733	27	5781
4	5735	28	5783
5	5737	29	5785
6	5739	30	5787
7	5741	31	5789
8	5743	32	5791
9	5745	33	5793
10	5747	34	5795
11	5749	35	5797
12	5751	36	5799
13	5753	37	5801
14	5755	38	5803
15	5757	39	5805
16	5759	40	5807
17	5761	41	5809
18	5763	42	5811
19	5765	43	5813
20	5767	44	5815
21	5769	45	5817
22	5771	46	5819
23	5773	47	5820
24	5775		

### 1.3.Special Accessory and Auxiliary Equipment

N/A

### 1.4.Description of Test Facility

EMC Lab	:	Recognition of accreditation by Federal Communications Commission (FCC) The Designation Number is CN1189 The Registration Number is 708358
		Listed by Innovation, Science and Economic Development Canada (ISED) The Registration Number is 5077A-2
		Accredited by China National Accreditation Service for Conformity Assessment (CNAS) The Registration Number is CNAS L3193
		Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 4297.01
Name of Firm	:	Shenzhen Accurate Technology Co., Ltd.
Site Location	:	1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

### 1.5.Measurement Uncertainty

Conducted Emission Expanded Uncertainty	=	2.23dB, k=2
Radiated emission expanded uncertainty (9kHz-30MHz)	=	3.08dB, k=2
Radiated emission expanded uncertainty (30MHz-1000MHz)	=	4.42dB, k=2
Radiated emission expanded uncertainty (Above 1GHz)	=	4.06dB, k=2

## 2. MEASURING DEVICE AND TEST EQUIPMENT

**Table 1: List of Test and Measurement Equipment**

Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 06, 2018	Jan. 05, 2019
EMI Test Receiver	Rohde& Schwarz	ESR	101817	Jan. 06, 2018	Jan. 05, 2019
Spectrum Analyzer	Rohde&Schwarz	FSV-40	101495	Jan. 06, 2018	Jan. 05, 2019
Pre-Amplifier	Agilent	8447D	294A10619	Jan. 06, 2018	Jan. 05, 2019
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 06, 2018	Jan. 05, 2019
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 06, 2018	Jan. 05, 2019
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 06, 2018	Jan. 05, 2019
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 06, 2018	Jan. 05, 2019
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 06, 2018	Jan. 05, 2019
Open Switch and Control Unit	Rohde&Schwarz	OSP120 + OSP-B157	101244 + 100866	Jan. 06, 2018	Jan. 05, 2019
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 06, 2018	Jan. 05, 2019
Highpass Filter	Wainwright Instruments	WHKX3.6/18 G-10SS	N/A	Jan. 06, 2018	Jan. 05, 2019
Band Reject Filter	Wainwright Instruments	WRCG2400/2 485-2375/2510 -60/11SS	N/A	Jan. 06, 2018	Jan. 05, 2019
Conducted Emission Measurement Software: ES-K1 V1.71					
Radiated Emission Measurement Software: EZ_EMV V1.1.4.2					



### 3. OPERATION OF EUT DURING TESTING

#### 3.1. Operating Mode

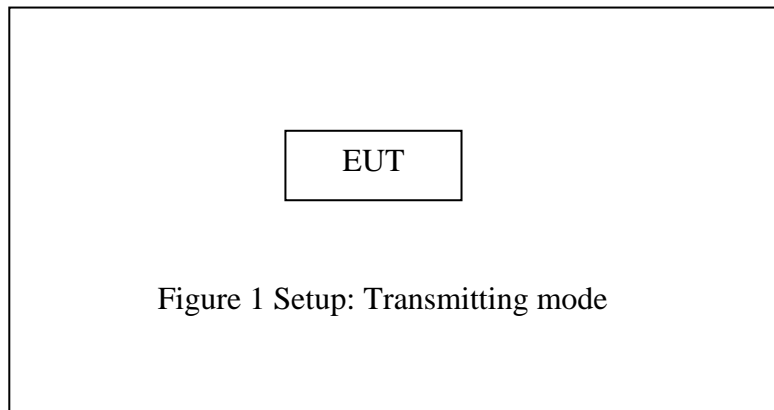
The mode is used: **Transmitting mode**

Low Channel: 5729MHz

Middle Channel: 5775MHz

High Channel: 5820MHz

#### 3.2. Configuration and peripherals

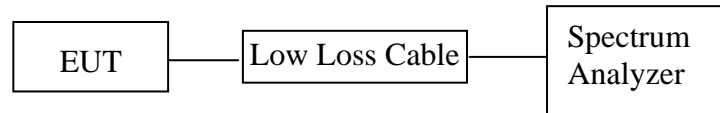


#### 4. TEST PROCEDURES AND RESULTS

<b>FCC &amp; IC Rules</b>	<b>Description of Test</b>	<b>Result</b>
Section 15.215(c)	20dB Bandwidth	Compliant
RSS-Gen Section 6.7	99% Occupied Bandwidth	Compliant
Section 15.205(a) Section 15.209(a) Section 15.249(d) RSS-210 Section B.10	Band Edge Compliance Test	Compliant
Section 15.209(a) Section 15.249 Section 15.35 RSS-210 Section B.10 RSS-Gen Section 6.13 RSS-Gen Section 8.9	Radiated Spurious Emission Test	Compliant
Section 15.207 RSS-Gen Section 8.8	AC Power Line Conducted Emission Test	Compliant
Section 15.203 RSS-Gen Section 6.8	Antenna Requirement	Compliant

## 5. 20DB BANDWIDTH MEASUREMENT

### 5.1. Block Diagram of Test Setup



### 5.2. The Requirement For Section 15.215(c)

The bandwidth of a frequency hopping channel is the 20 dB emission bandwidth, measured with the hopping stopped. The system RF bandwidth is equal to the channel bandwidth multiplied by the number of channels in the hopset. The hopset shall be such that the near-term distribution of frequencies appears random, with sequential hops randomly distributed in both direction and magnitude of change in the hopset while the long-term distribution appears evenly distributed.

### 5.3. Operating Condition of EUT

5.3.1. Setup the EUT and simulator as shown as Section 5.1.

5.3.2. Turn on the power of all equipment.

5.3.3. Let the EUT work in TX modes measure it. The transmit frequency are 5729-5820 MHz. We select 5729MHz, 5775MHz, and 5820MHz TX frequency to transmit.

### 5.4. Test Procedure

5.4.1. Place the EUT on the table and set it in transmitting mode.

5.4.2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

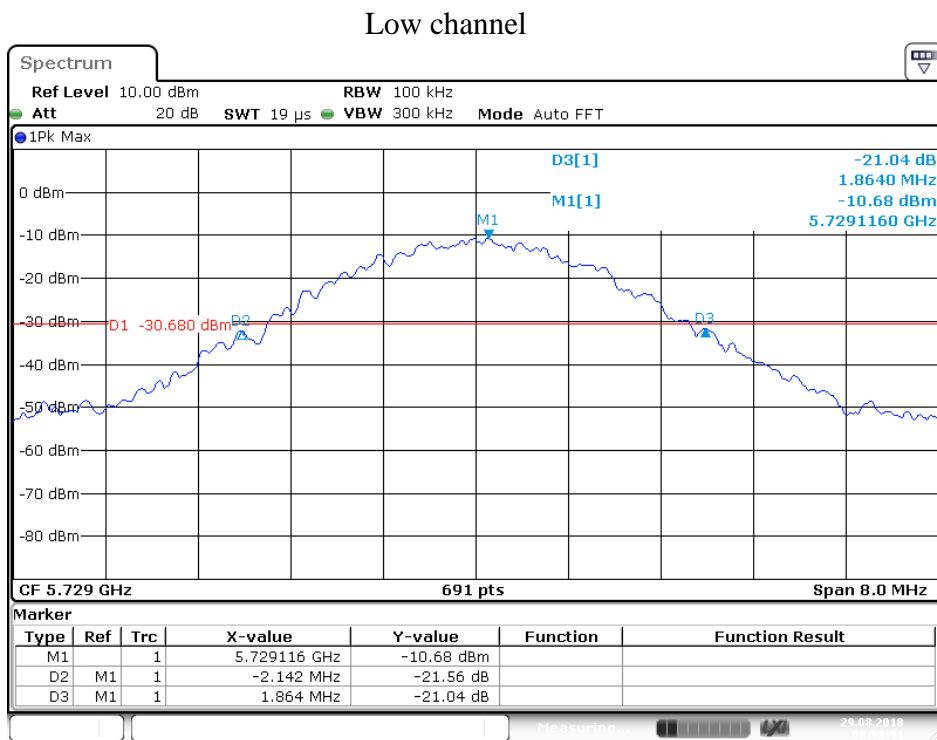
5.4.3. Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz, Detector function=peak, Trace=max hold, Sweep=auto.

5.4.4. Set the measured low, middle and high frequency and test 20dB bandwidth with spectrum analyzer.

### 5.5. Test Result

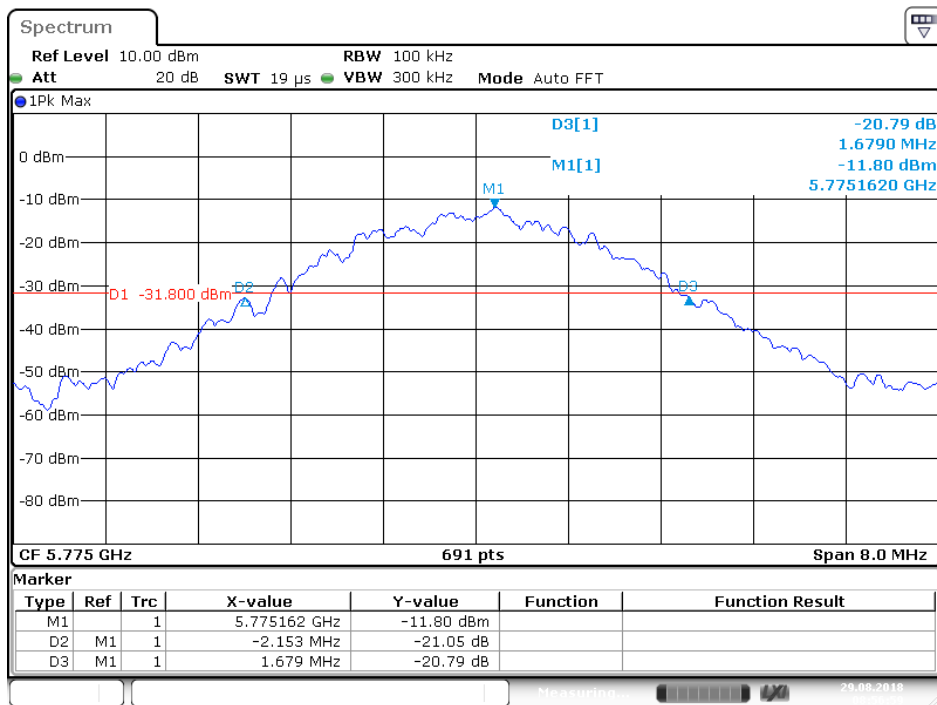
Channel	Frequency (MHz)	20 dB Bandwidth (MHz)
Low	5729	4.006
Middle	5775	3.832
High	5820	4.052

The spectrum analyzer plots are attached as below.



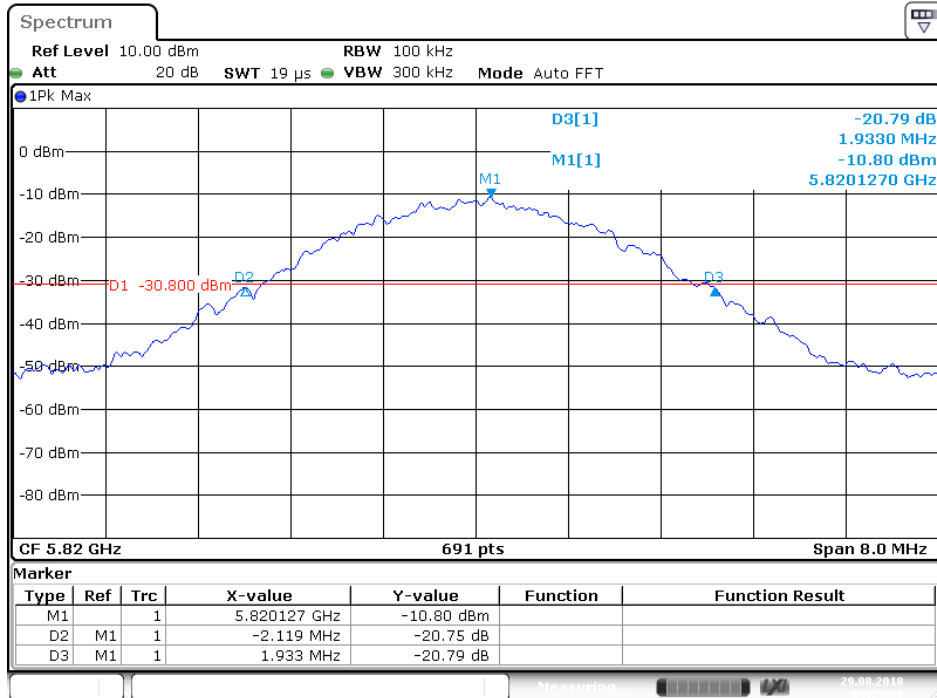
Date: 29.AUG.2018 08:58:51

### Middle channel



Date: 29.AUG.2018 08:57:00

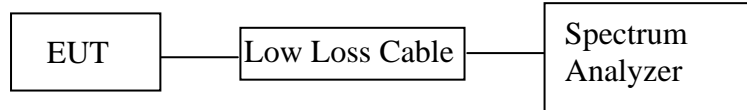
### High channel



Date: 29.AUG.2018 08:55:09

## 6. 99% OCCUPIED BANDWIDTH

### 6.1. Block Diagram of Test Setup



### 6.2. The Requirement for RSS-Gen Clause 6.7

The occupied bandwidth or the “99% emission bandwidth” is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

In some cases, the “x dB bandwidth” is required, which is defined as the frequency range between two points, one at the lowest frequency below and one at the highest frequency above the carrier frequency, at which the maximum power level of the transmitted emission is attenuated x dB below the maximum in-band power level of the modulated signal, where the two points are on the outskirts of the in-band emission.

### 6.3. EUT Configuration on Measurement

The following equipment is installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

### 6.4. Operating Condition of EUT

6.4.1. Setup the EUT and simulator as shown as Section 6.1.

6.4.2. Turn on the power of all equipment.

6.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 5729-5820 MHz. We select 5729MHz, 5775MHz, and 5820MHz TX frequency to transmit.

## 6.5. Test Procedure

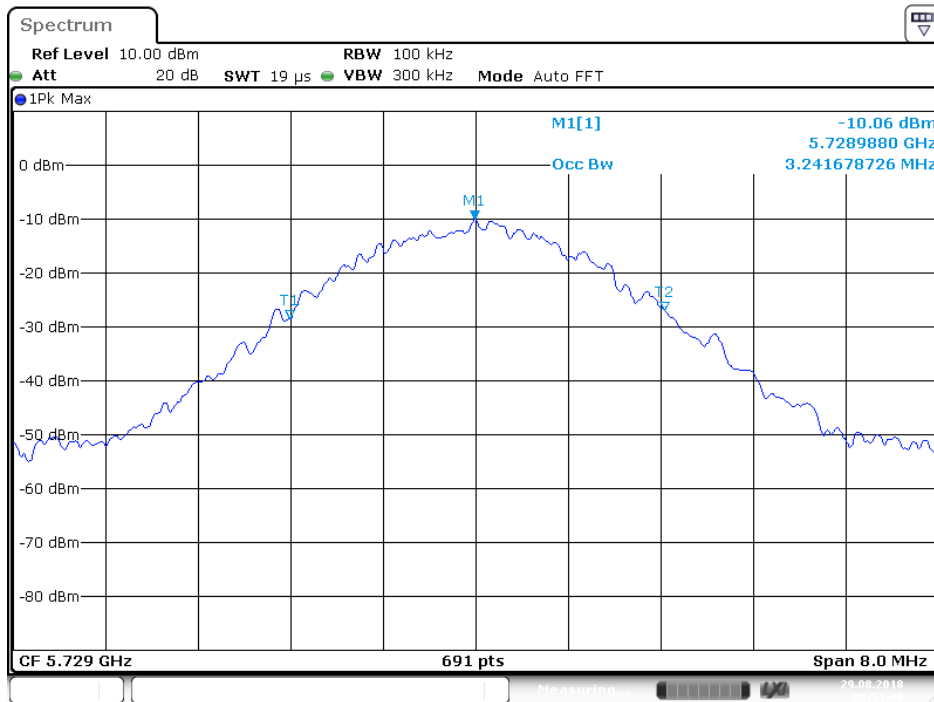
- 6.5.1. The transmitter shall be operated at its maximum carrier power measured under normal test conditions. The transmitter output was connected to the spectrum analyzer through a low loss cable.
- 6.5.2. The span of the spectrum analyzer shall be set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency, but small enough to avoid having other emissions (e.g. on adjacent channels) within the span.
- 6.5.3. The detector of the spectrum analyzer shall be set to “Sample”. However, a peak, or peak hold, may be used in place of the sampling detector since this usually produces a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold (or “Max Hold”) may be necessary to determine the occupied / x dB bandwidth if the device is not transmitting continuously.
- 6.5.4. The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the actual occupied / x dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value. Video averaging is not permitted.

## 6.6. Measurement Result

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5729	3.242
Middle	5775	3.346
High	5820	3.253

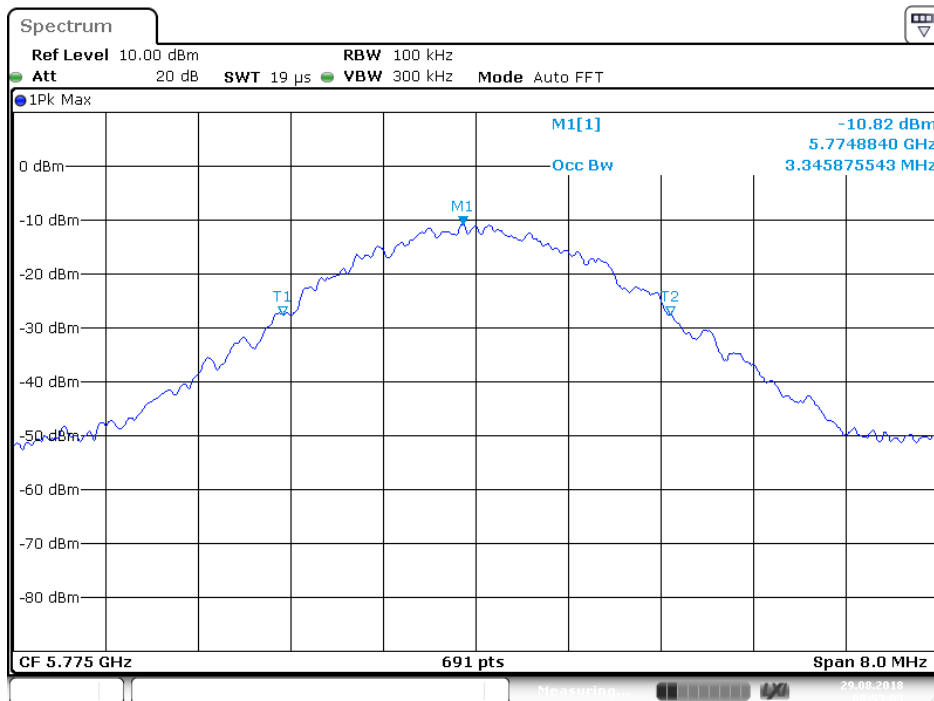
The spectrum analyzer plots are attached as below.

## Low Channel



Date: 29.AUG.2018 08:51:00

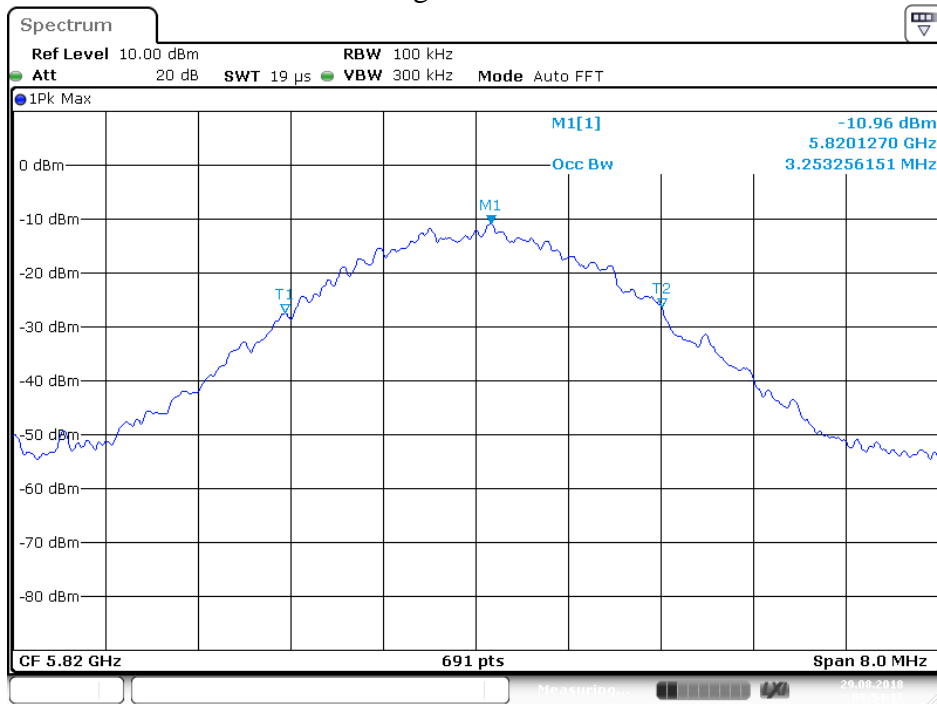
## Middle channel



Date: 29.AUG.2018 08:53:05



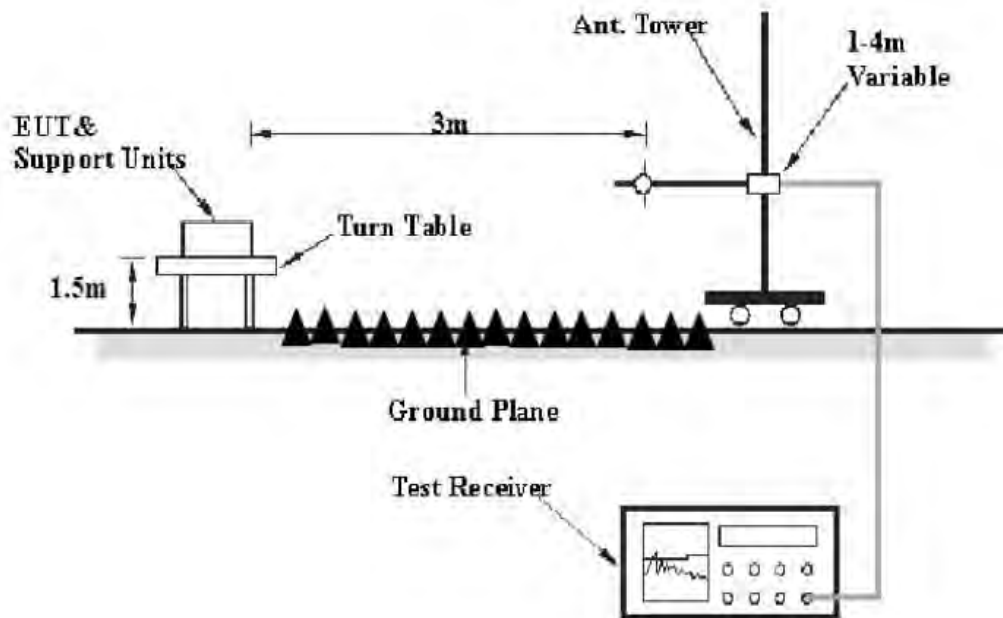
### High channel



Date: 29.AUG.2018 08:54:18

## 7. BAND EDGE COMPLIANCE TEST

### 7.1. Block Diagram of Test Setup



### 7.2. The Requirement For Section 15.249

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph A8.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

### 7.3. The Requirement For RSS-210 Section B.10

Emissions radiated outside of the specified frequency bands, except for harmonic emissions, shall be attenuated by at least 50 dB below the level of the fundamental emissions or to the general field strength limits listed in RSS-Gen, whichever is less stringent

#### 7.4.EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

#### 7.5.Operating Condition of EUT

7.5.1.Setup the EUT and simulator as shown as Section 7.1.

7.5.2.Turn on the power of all equipment.

7.5.3.Let the EUT work in TX modes measure it. The transmit frequency are 5729-5820 MHz. We select 5729MHz, 5820MHz TX frequency to transmit.

#### 7.6.Test Procedure

Radiate Band Edge:

7.6.1. The EUT is placed on a turntable, which is 1.5m above the ground plane and worked at highest radiated power.

7.6.2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.

7.6.3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.

7.6.4.Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

RBW=1MHz, VBW=1MHz

7.6.5.The band edges was measured and recorded.

## 7.7. Test Result

### **Pass.**

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

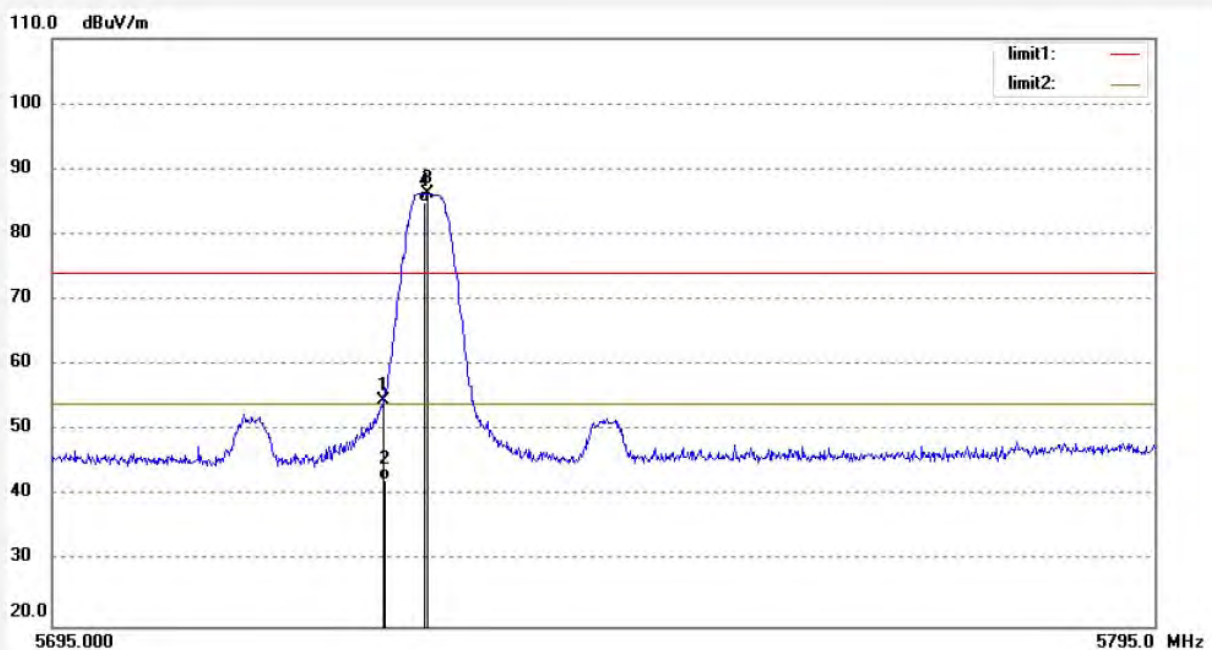
3. Display the measurement of peak values.

4. The average measurement was not performed when peak measured data under the limit of average detection.

The spectral diagrams are attached as below.

Job No.: LGW2018 #1803	Polarization: Horizontal
Standard: FCC PART 15C PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/07/18/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 5.8GHz Digital Wireless Headphone	Engineer Signature: WADE
Mode: TX 5729MHz	Distance: 3m
Model: NS-HAWHP2	
Manufacturer: Country Mate Technology Ltd	

Note:

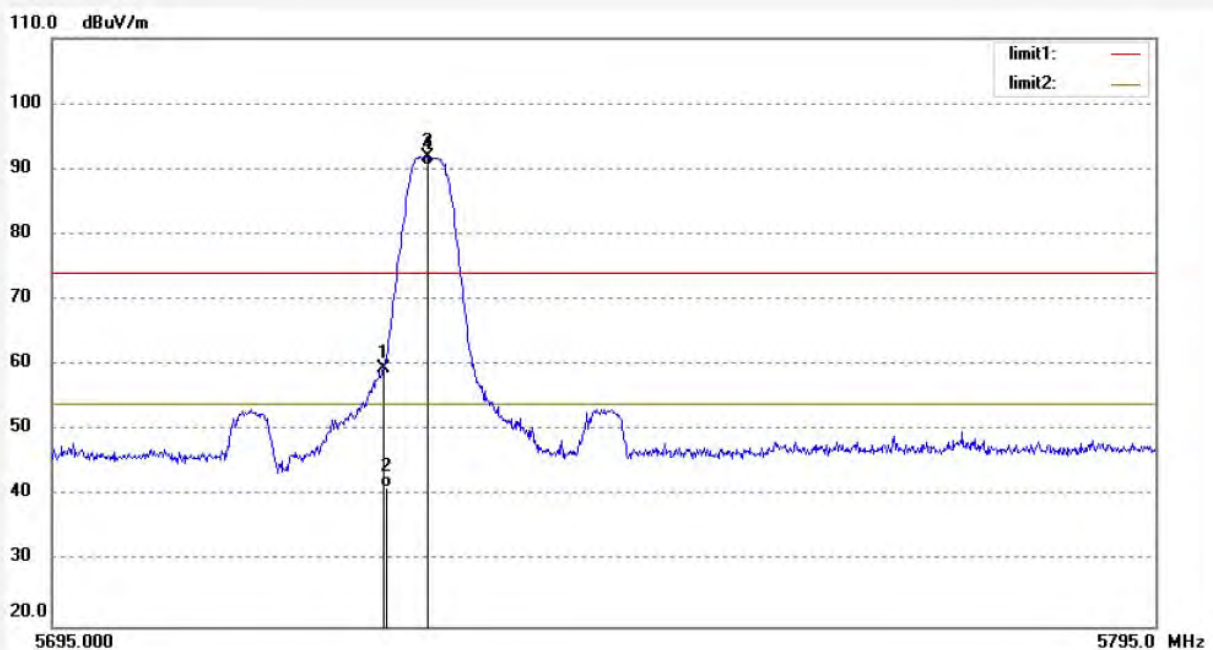


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5725.000	44.38	10.15	54.53	74.00	-19.47	peak			
2	5725.000	32.26	10.15	42.41	54.00	-11.59	AVG			
3	5729.000	76.08	10.18	86.26	74.00	12.26	peak			
4	5729.000	74.78	10.18	84.96	54.00	30.96	AVG			

Job No.: LGW2018 #1802  
 Standard: FCC PART 15C PK  
 Test item: Radiation Test  
 Temp.( C)/Hum.(%) 23 C / 48 %  
 EUT: 5.8GHz Digital Wireless Headphone  
 Mode: TX 5729MHz  
 Model: NS-HAWHP2  
 Manufacturer: Country Mate Technology Ltd

Polarization: Vertical  
 Power Source: AC 120V/60Hz  
 Date: 18/07/18/  
 Time:  
 Engineer Signature: WADE  
 Distance: 3m

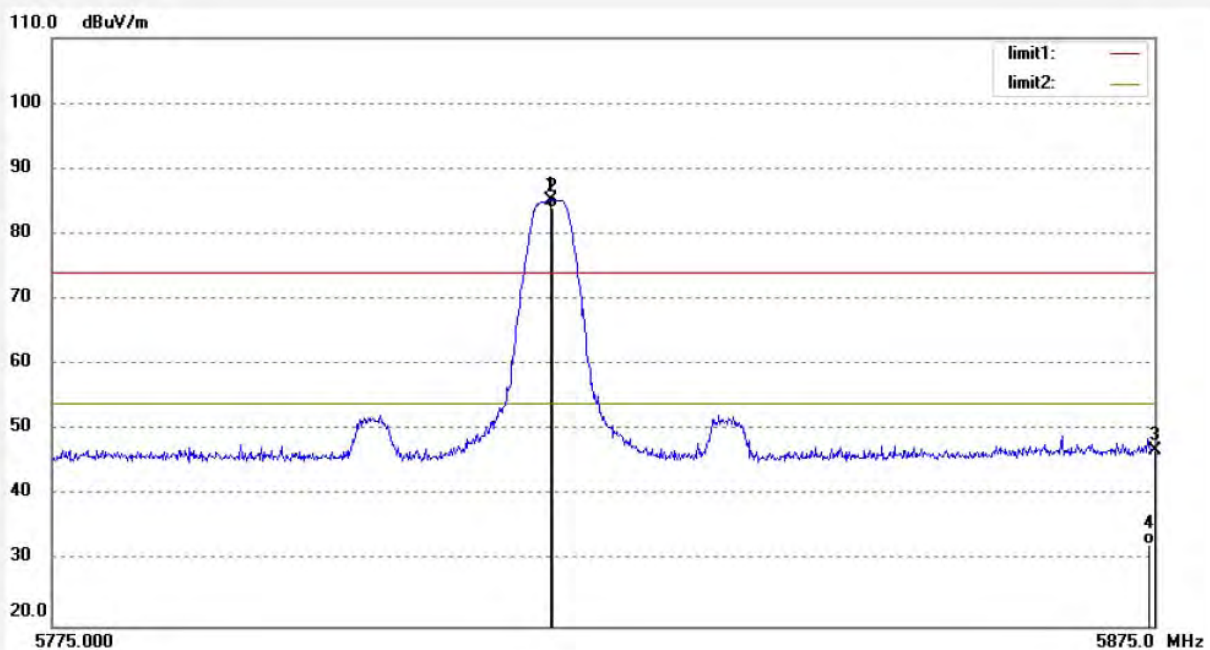
Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5725.000	49.37	10.15	59.52	74.00	-14.48	peak			
2	5725.000	31.08	10.15	41.23	54.00	-12.77	AVG			
3	5729.000	81.62	10.18	91.80	74.00	17.80	peak			
4	5729.000	80.32	10.18	90.50	54.00	36.50	AVG			

Job No.: LGW2018 #1808	Polarization: Horizontal
Standard: FCC PART 15C PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/07/18/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 5.8GHz Digital Wireless Headphone	Engineer Signature: WADE
Mode: TX 5820MHz	Distance: 3m
Model: NS-HAWHP2	
Manufacturer: Country Mate Technology Ltd	

Note:

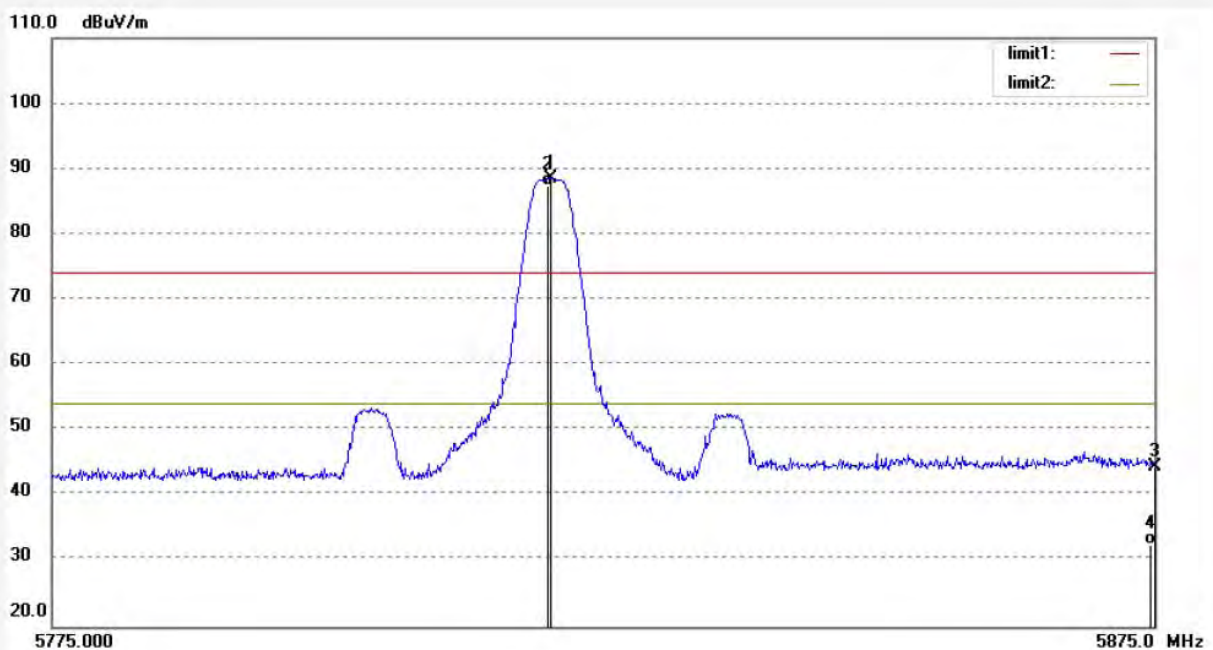


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5820.000	74.52	10.66	85.18	74.00	11.18	peak			
2	5820.000	73.42	10.66	84.08	54.00	30.08	AVG			
3	5875.000	36.07	10.83	46.90	74.00	-27.10	peak			
4	5875.000	21.64	10.83	32.47	54.00	-21.53	AVG			

Job No.: LGW2018 #1809  
 Standard: FCC PART 15C PK  
 Test item: Radiation Test  
 Temp.( C)/Hum.(%) 23 C / 48 %  
 EUT: 5.8GHz Digital Wireless Headphone  
 Mode: TX 5820MHz  
 Model: NS-HAWHP2  
 Manufacturer: Country Mate Technology Ltd

Polarization: Vertical  
 Power Source: AC 120V/60Hz  
 Date: 18/07/18/  
 Time:  
 Engineer Signature: WADE  
 Distance: 3m

Note:



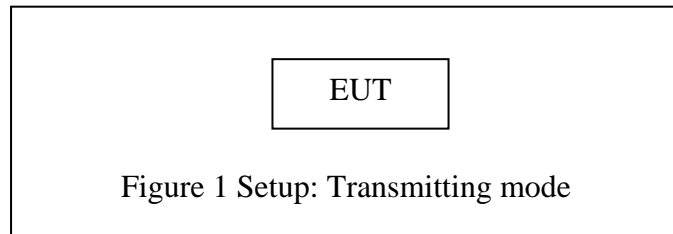
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5820.000	77.80	10.66	88.46	74.00	14.46	peak			
2	5820.000	76.70	10.66	87.36	54.00	33.36	AVG			
3	5875.000	33.69	10.83	44.52	74.00	-29.48	peak			
4	5875.000	21.71	10.83	32.54	54.00	-21.46	AVG			



## 8. RADIATED SPURIOUS EMISSION TEST

### 8.1. Block Diagram of Test Setup

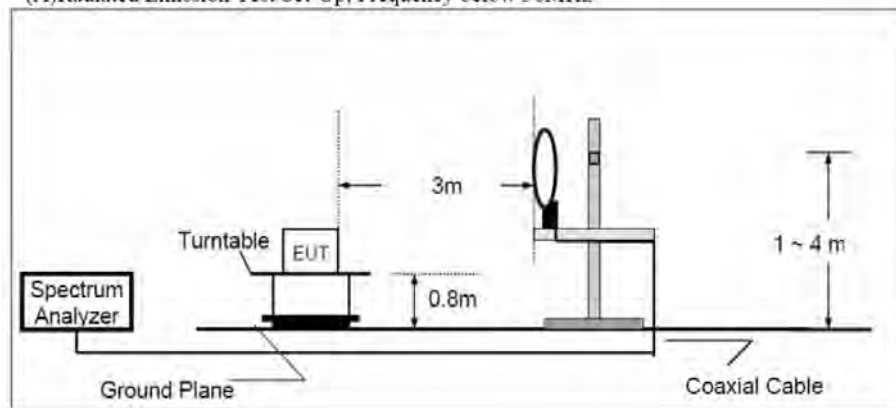
#### 8.1.1. Block diagram of connection between the EUT and peripherals



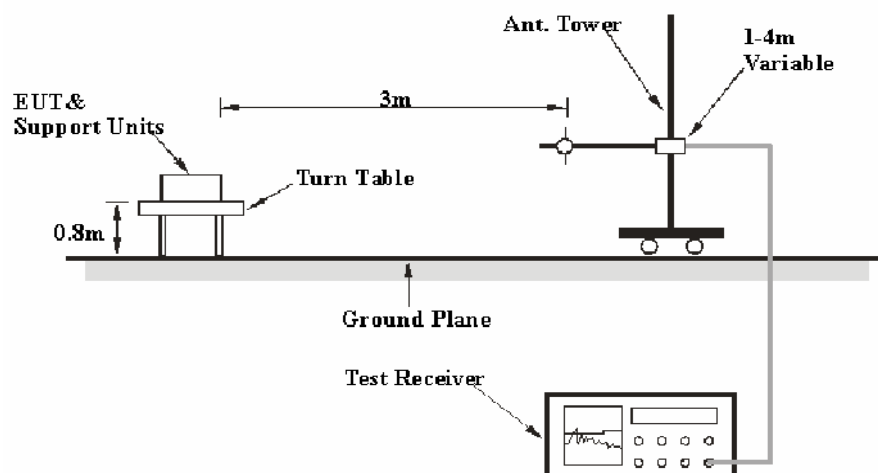
(EUT: 5.8GHz Digital Wireless Headphone)

#### 8.1.2. Semi-Anechoic Chamber Test Setup Diagram

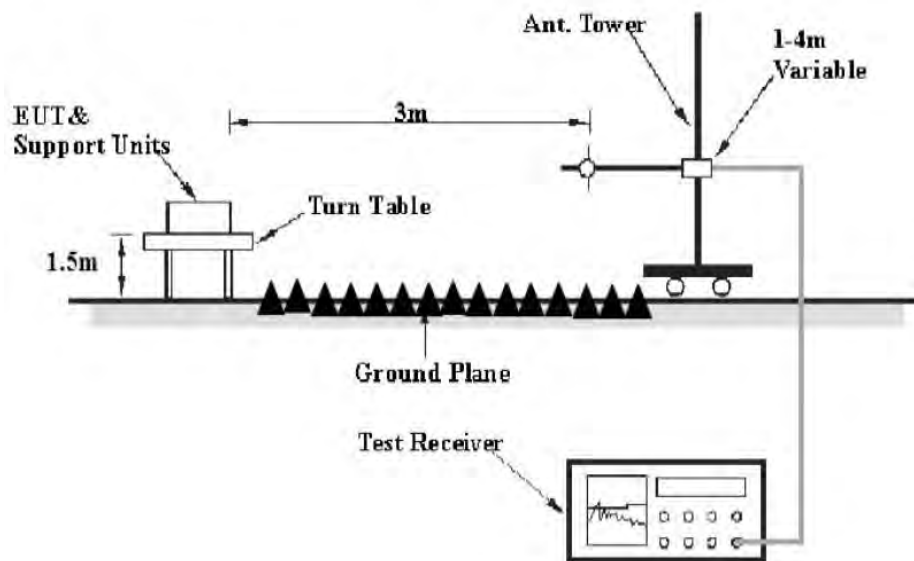
(A) Radiated Emission Test Set-Up, Frequency below 30MHz



(B) Radiated Emission Test Set-Up, Frequency 30-1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1GHz



## 8.2. The Limit For Section 15.249

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph A8.4(4), the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

## 8.3. The Requirement For RSS-210 Section B.10

Emissions radiated outside of the specified frequency bands, except for harmonic emissions, shall be attenuated by at least 50 dB below the level of the fundamental emissions or to the general field strength limits listed in RSS-Gen, whichever is less stringent

#### 8.4. Transmitter Emission Limit

Radiated emissions shall comply with the field strength limits shown in table 5 and table 6. Additionally, the level of any transmitter unwanted emission shall not exceed the level of the transmitter's fundamental emission.

**Table 5 – General field strength limits at frequencies above 30 MHz**

Frequency (MHz)	Field strength ( $\mu\text{V/m}$ at 3 m)
30 – 88	100
88 – 216	150
216 – 960	200
Above 960	500

**Table 6 – General field strength limits at frequencies below 30 MHz**

Frequency	Magnetic field strength (H-Field) ( $\mu\text{A/m}$ )	Measurement distance (m)
9 - 490 kHz <sup>1</sup>	$6.37/F$ (F in kHz)	300
490 - 1705 kHz	$63.7/F$ (F in kHz)	30
1.705 - 30 MHz	0.08	30

**Note 1:** The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

### 8.5.Restricted bands of operation

#### 8.5.1.FCC Part 15.205 Restricted bands of operation

(a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
<sup>1</sup> 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	( <sup>2</sup> )
13.36-13.41			

<sup>1</sup>Until February 1, 1999, this restricted band shall be 0.490-0.510

<sup>2</sup>Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

### 8.5.2.RSS-Gen 8.10 Restricted bands of operation

Restricted frequency bands, identified in table 7, are designated primarily for safety-of-life services (distress calling and certain aeronautical activities), certain satellite downlinks, radio astronomy and some government uses. Except where otherwise indicated, the following conditions related to the restricted frequency bands apply:

(a) The transmit frequency, including fundamental components of modulation, of licence-exempt radio apparatus shall not fall within the restricted frequency bands listed in table 7 except for apparatus compliant with RSS-287, *Emergency Position Indicating Radio Beacons (EPIRB), Emergency Locator Transmitters (ELT), Personal Locator Beacons (PLB), and Maritime Survivor Locator Devices (MSLD)*.

(b) Unwanted emissions that fall into restricted frequency bands listed in table 7 shall comply with the limits specified in table 5 and table 6.

(c) Unwanted emissions that fall into restricted frequency bands listed in table 7 shall comply with the limits specified in table 5 and table 6.

**Table 7 – Restricted frequency bands\***

MHz	MHz	GHz
0.090 - 0.110	149.9 - 150.05	9.0 - 9.2
0.495 - 0.505	156.52475 - 156.52525	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 - 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12
6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	
8.37625 - 8.38675	1718.8 - 1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 - 2390	
12.51975 - 12.52025	2483.5 - 2500	
12.57675 - 12.57725	2655 - 2900	
13.36 - 13.41	3260 - 3267	
16.42 - 16.423	3332 - 3339	
16.69475 - 16.69525	3345.8 - 3358	
16.80425 - 16.80475	3500 - 4400	
25.5 - 25.67	4500 - 5150	
37.5 - 38.25	5350 - 5460	
73 - 74.6	7250 - 7750	
74.8 - 75.2	8025 - 8500	
108 - 138	--	

\* Certain frequency bands listed in table 7 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

## 8.6. Configuration of EUT on Measurement

The equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

## 8.7. Operating Condition of EUT

8.7.1. Setup the EUT and simulator as shown as Section 8.1.

8.7.2. Turn on the power of all equipment.

8.7.3. Let the EUT work in TX modes measure it. The transmit frequency are 5729-5820 MHz. We select 5729MHz, 5775MHz, and 5820MHz TX frequency to transmit.

## 8.8. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground (Below 1GHz). The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground (Above 1GHz). The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

The bandwidth of test receiver is set at 9 kHz in below 30MHz. and set at 120 kHz in 30-1000MHz, and 1MHz in above 1000MHz.

The final measurement in band 9-90 kHz, 110-490 kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

RBW (120 kHz), VBW (300 kHz) for QP detector below 1GHz

Peak detector above 1GHz

RBW(1MHz), VBW(3MHz) for Spurious Emission measurement

RBW(5MHz), VBW(5MHz) for Fundamental Emission measurement

### 8.9.Data Sample

Frequency(MHz)	Reading (dB $\mu$ v)	Factor (dB/m)	Result (dB $\mu$ v/m)	Limit (dB $\mu$ v/m)	Margin (dB)	Remark
X.XX	30.21	-17.87	12.34	40.00	-27.66	QP

Frequency(MHz) = Emission frequency in MHz

Reading(dB $\mu$ v) = Uncorrected Analyzer/Receiver reading

Factor (dB/m) = Antenna factor + Cable Loss – Amplifier gain

Result(dB $\mu$ v/m) = Reading(dB $\mu$ v) + Factor(dB/m)

Limit (dB $\mu$ v/m) = Limit stated in standard

Margin (dB) = Result(dB $\mu$ v/m) - Limit (dB $\mu$ v/m)

QP = Quasi-peak Reading

Calculation Formula:

Margin(dB) = Result (dB $\mu$ V/m)–Limit(dB $\mu$ V/m)

Result(dB $\mu$ V/m)= Reading(dB $\mu$ V)+ Factor(dB/m)

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the limit.

### 8.10.The Field Strength of Radiation Emission Measurement Results

**Pass.**

**Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.**

**2. \*: Denotes restricted band of operation.**

**3. The EUT is tested radiation emission at Low, Middle, High channel in three axes. The worst emissions are reported in all channels.**

From 9KHz to 30MHz:

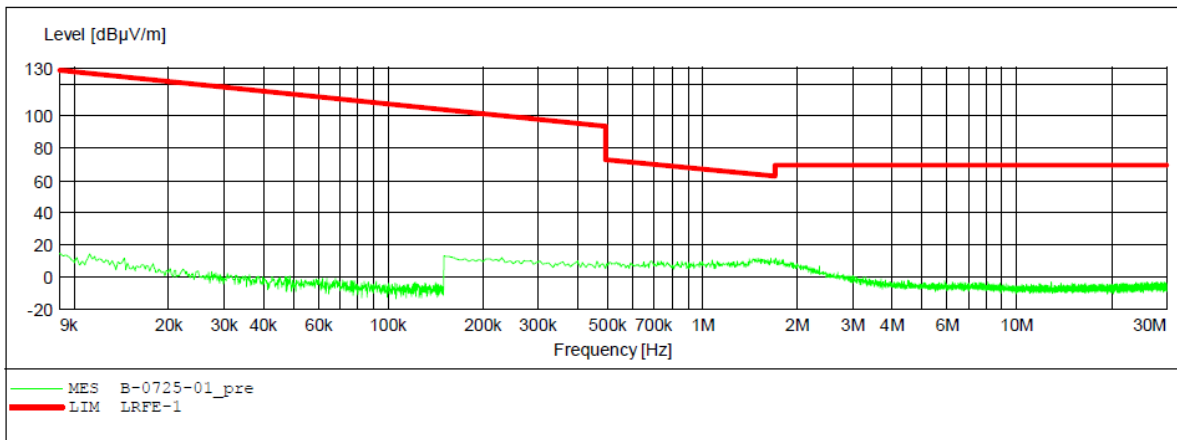
**ACCURATE TECHNOLOGY CO.,LTD**

**FCC PART 15C 3M Radiated**

EUT: 5.8GHz Digital Wireless Headphone M/N:NS-HAWHP2  
 Manufacturer: Country Mate Technology Ltd  
 Operating Condition: TX 5729MHz  
 Test Site: 2# Chamber  
 Operator: WADE  
 Test Specification: AC 120V/60Hz  
 Comment: X  
 Start of Test: 2018-7-25 /

**SCAN TABLE: "LFRE Fin"**

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M





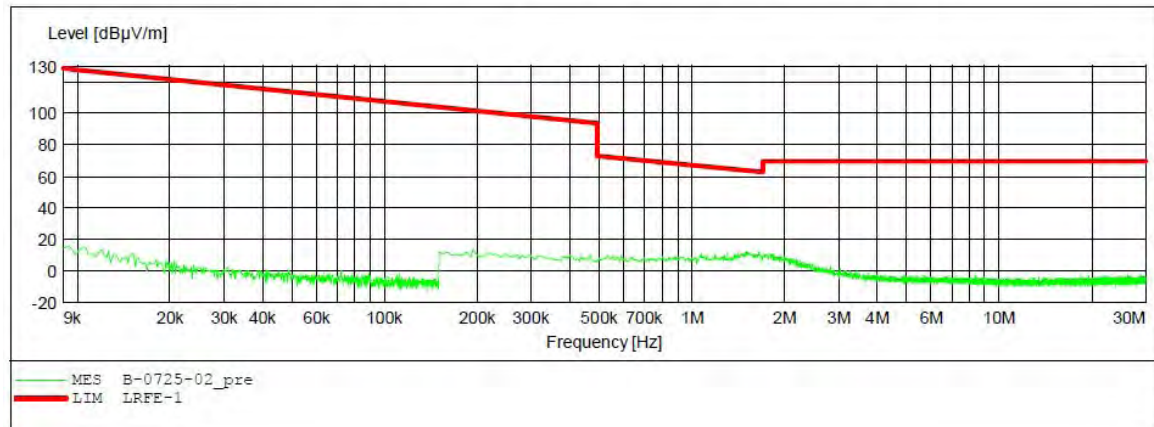
**ACCURATE TECHNOLOGY CO.,LTD**

**FCC PART 15C 3M Radiated**

EUT: 5.8GHz Digital Wireless Headphone M/N:NS-HAWHP2  
 Manufacturer: Country Mate Technology Ltd  
 Operating Condition: TX 5729MHz  
 Test Site: 2# Chamber  
 Operator: WADE  
 Test Specification: AC 120V/60Hz  
 Comment: Y  
 Start of Test: 2018-7-25 /

**SCAN TABLE: "LFRE Fin"**

Short Description:			SUB STD VTERM2 1.70			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



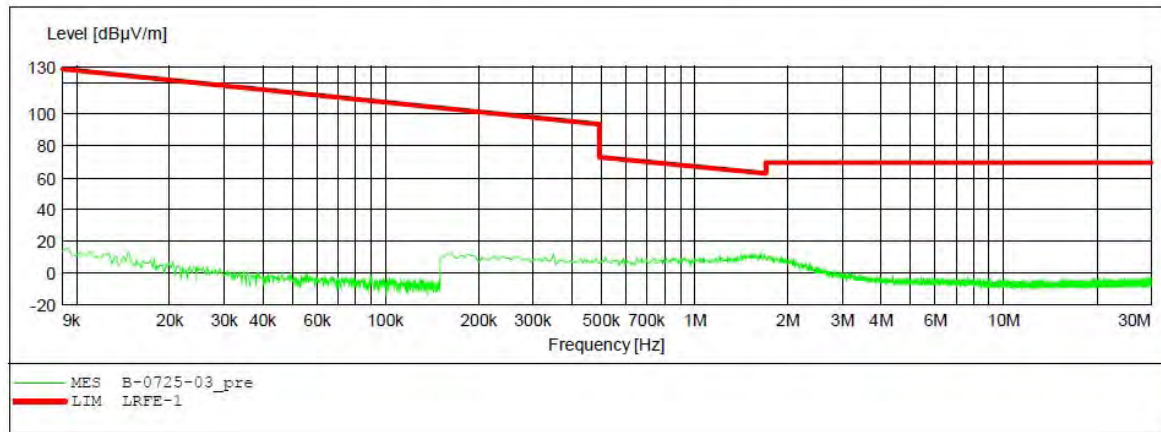
**ACCURATE TECHNOLOGY CO., LTD**

**FCC PART 15C 3M Radiated**

EUT: 5.8GHz Digital Wireless Headphone M/N:NS-HAWHP2  
 Manufacturer: Country Mate Technology Ltd  
 Operating Condition: TX 5729MHz  
 Test Site: 2# Chamber  
 Operator: WADE  
 Test Specification: AC 120V/60Hz  
 Comment: Z  
 Start of Test: 2018-7-25 /

**SCAN TABLE: "LFRE Fin"**

Short Description:			SUB STD VTERM2 1.70			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



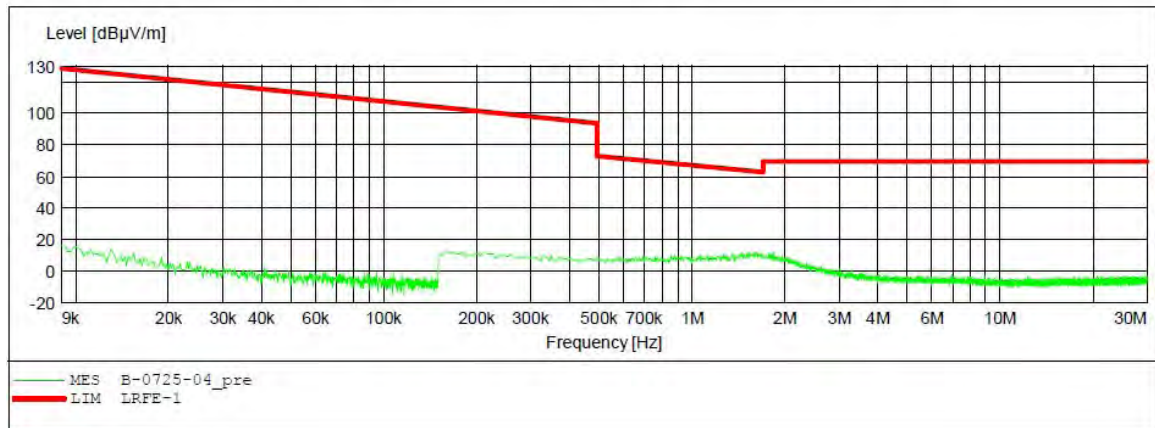
**ACCURATE TECHNOLOGY CO., LTD**

**FCC PART 15C 3M Radiated**

EUT: 5.8GHz Digital Wireless Headphone M/N:NS-HAWHP2  
 Manufacturer: Country Mate Technology Ltd  
 Operating Condition: TX 5775MHz  
 Test Site: 2# Chamber  
 Operator: WADE  
 Test Specification: AC 120V/60Hz  
 Comment: X  
 Start of Test: 2018-7-25 /

**SCAN TABLE: "LFRE Fin"**

Short Description:			SUB STD VTERM2 1.70			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



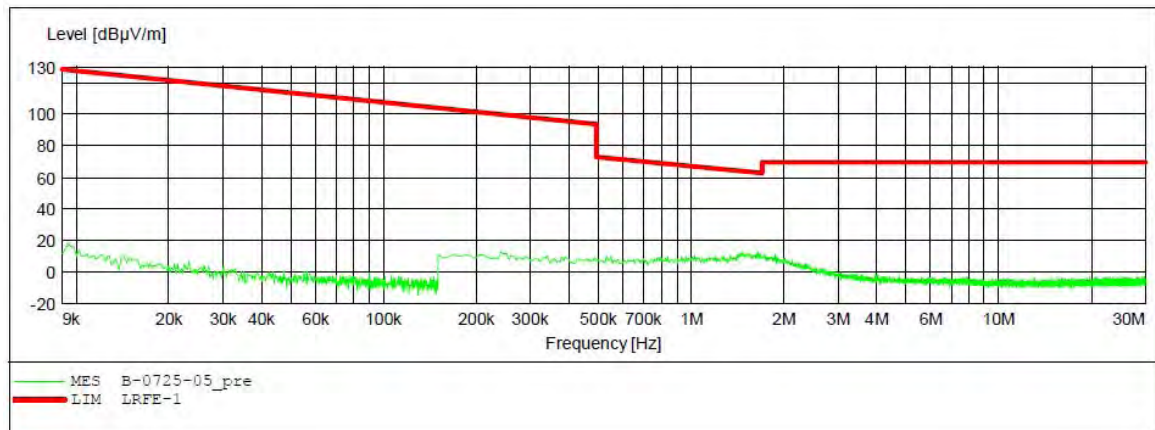
**ACCURATE TECHNOLOGY CO., LTD**

**FCC PART 15C 3M Radiated**

EUT: 5.8GHz Digital Wireless Headphone M/N:NS-HAWHP2  
 Manufacturer: Country Mate Technology Ltd  
 Operating Condition: TX 5775MHz  
 Test Site: 2# Chamber  
 Operator: WADE  
 Test Specification: AC 120V/60Hz  
 Comment: Y  
 Start of Test: 2018-7-25 /

**SCAN TABLE: "LFRE Fin"**

Short Description:			SUB STD VTERM2 1.70			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



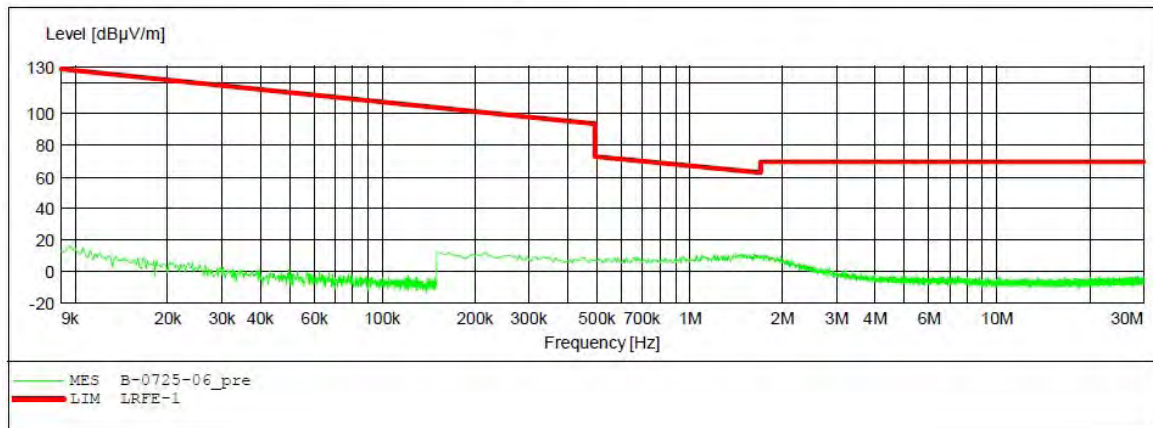
**ACCURATE TECHNOLOGY CO., LTD**

**FCC PART 15C 3M Radiated**

EUT: 5.8GHz Digital Wireless Headphone M/N:NS-HAWHP2  
 Manufacturer: Country Mate Technology Ltd  
 Operating Condition: TX 5775MHz  
 Test Site: 2# Chamber  
 Operator: WADE  
 Test Specification: AC 120V/60Hz  
 Comment: Z  
 Start of Test: 2018-7-25 /

**SCAN TABLE: "LFRE Fin"**

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



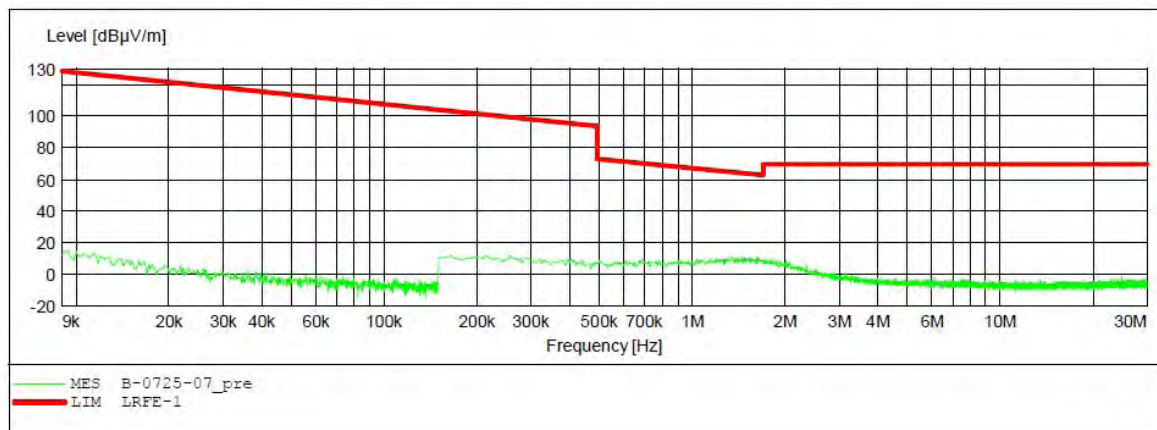
**ACCURATE TECHNOLOGY CO., LTD**

**FCC PART 15C 3M Radiated**

EUT: 5.8GHz Digital Wireless Headphone M/N:NS-HAWHP2  
 Manufacturer: Country Mate Technology Ltd  
 Operating Condition: TX 5820MHz  
 Test Site: 2# Chamber  
 Operator: WADE  
 Test Specification: AC 120V/60Hz  
 Comment: X  
 Start of Test: 2018-7-25 /

**SCAN TABLE: "LFRE Fin"**

Short Description:			SUB STD VTERM2 1.70			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



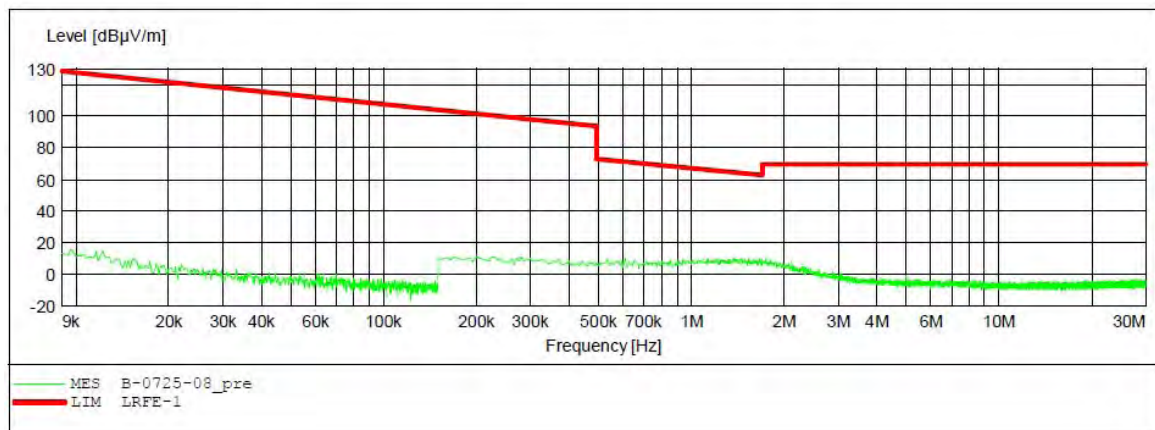
**ACCURATE TECHNOLOGY CO., LTD**

**FCC PART 15C 3M Radiated**

EUT: 5.8GHz Digital Wireless Headphone M/N:NS-HAWHP2  
 Manufacturer: Country Mate Technology Ltd  
 Operating Condition: TX 5820MHz  
 Test Site: 2# Chamber  
 Operator: WADE  
 Test Specification: AC 120V/60Hz  
 Comment: Y  
 Start of Test: 2018-7-25 /

**SCAN TABLE: "LFRE Fin"**

Short Description:			SUB STD VTERM2 1.70			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



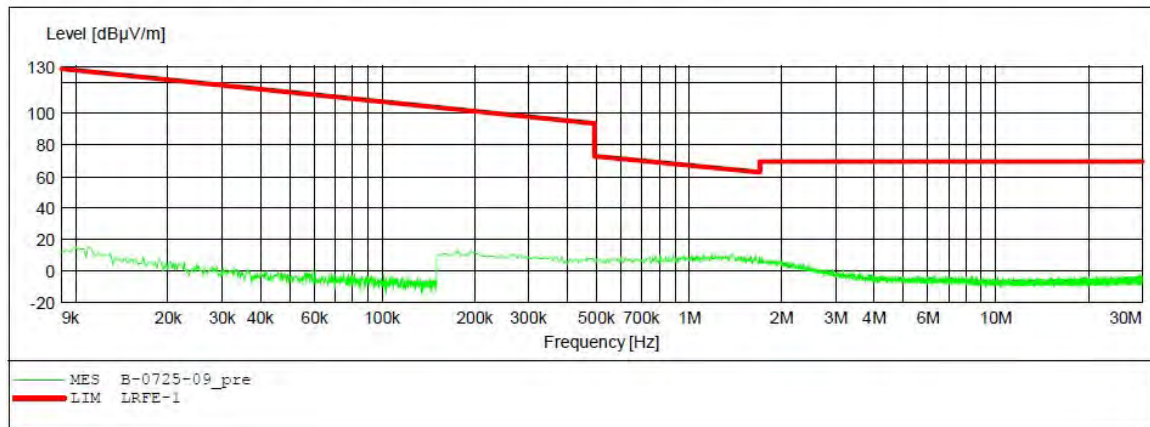
**ACCURATE TECHNOLOGY CO.,LTD**

**FCC PART 15C 3M Radiated**

EUT: 5.8GHz Digital Wireless Headphone M/N:NS-HAWHP2  
 Manufacturer: Country Mate Technology Ltd  
 Operating Condition: TX 5820MHz  
 Test Site: 2# Chamber  
 Operator: WADE  
 Test Specification: AC 120V/60Hz  
 Comment: Z  
 Start of Test: 2018-7-25 /

**SCAN TABLE: "LFRE Fin"**

Short Description:			SUB STD VTERM2 1.70			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M





From 30MHz to 1GHz:


**ACCURATE TECHNOLOGY CO., LTD.**

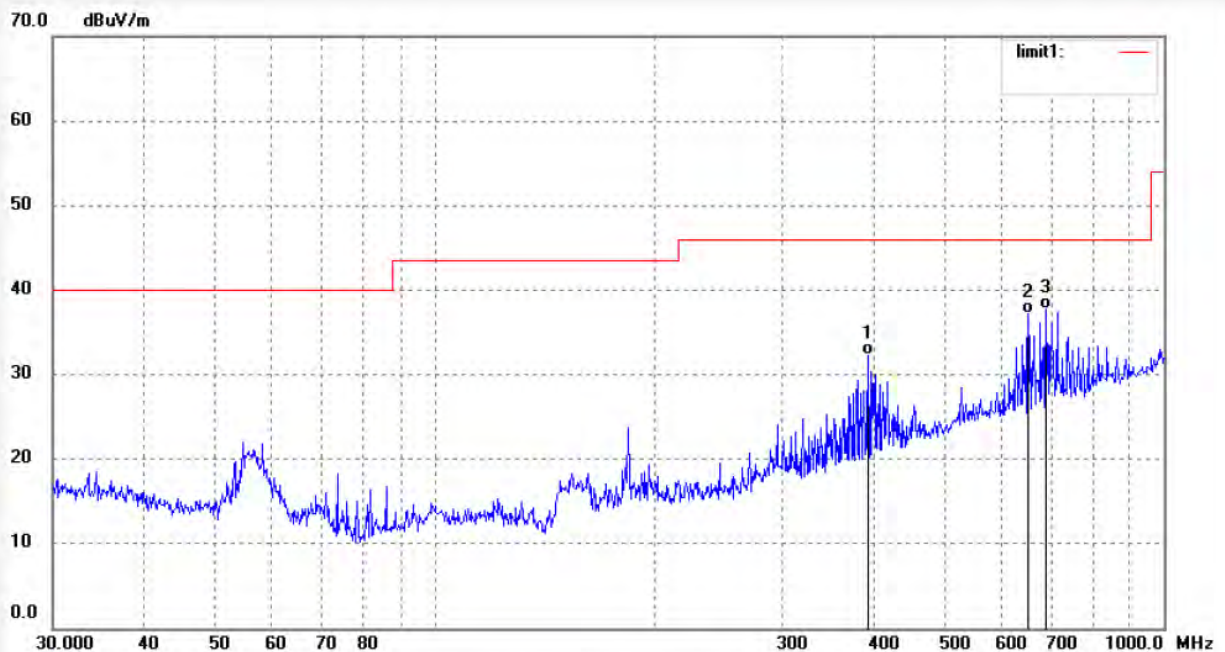
 F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
 Science & Industry Park,Nanshan Shenzhen,P.R.China

 Site: 2# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

 Job No.: TUV2018 #645  
 Standard: FCC PART 15C 3M Radiated  
 Test item: Radiation Test  
 Temp.( C)/Hum.(%) 23 C / 48 %  
 EUT: 5.8GHz Digital Wireless Headphone  
 Mode: TX 5729MHz  
 Model: NS-HAWHP2  
 Manufacturer: Country Mate Technology Ltd

 Polarization: Horizontal  
 Power Source: AC 120V/60Hz  
 Date: 2018/07/23  
 Time:  
 Engineer Signature: WADE  
 Distance: 3m

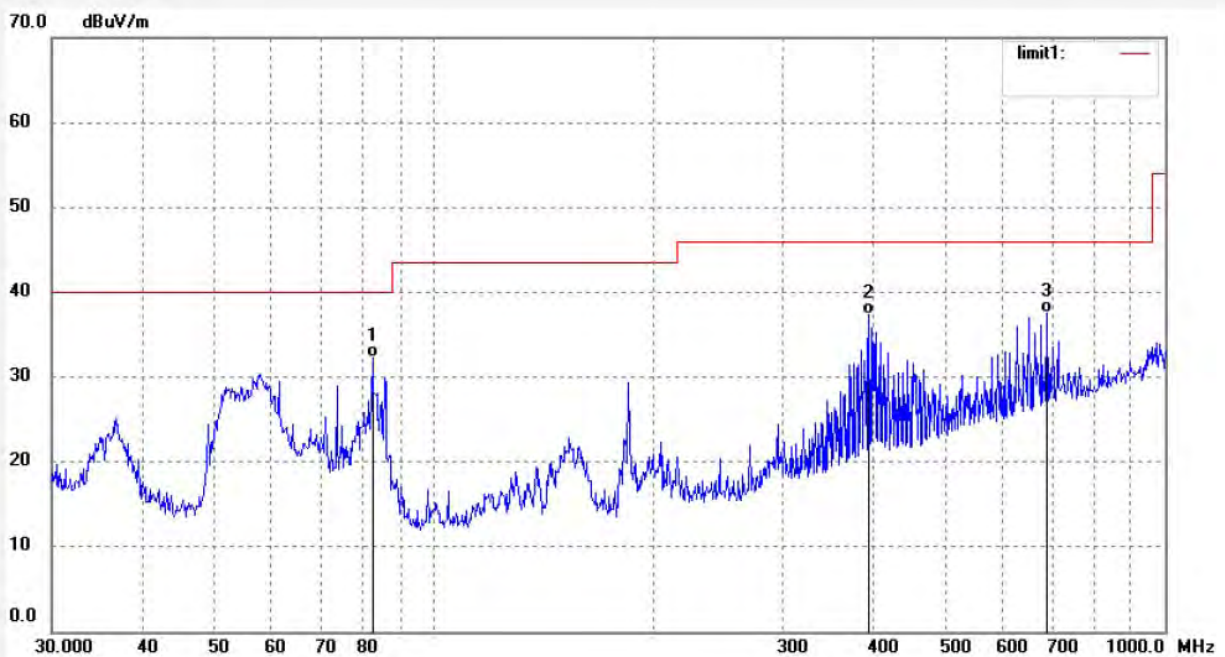
Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	393.4723	39.05	-6.71	32.34	46.00	-13.66	QP			
2	651.9416	38.91	-1.76	37.15	46.00	-8.85	QP			
3	689.5643	38.97	-1.24	37.73	46.00	-8.27	QP			

Job No.: TUV2018 #646	Polarization: Vertical
Standard: FCC PART 15C 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2018/07/23
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 5.8GHz Digital Wireless Headphone	Engineer Signature: WADE
Mode: TX 5729MHz	Distance: 3m
Model: NS-HAWHP2	
Manufacturer: Country Mate Technology Ltd	

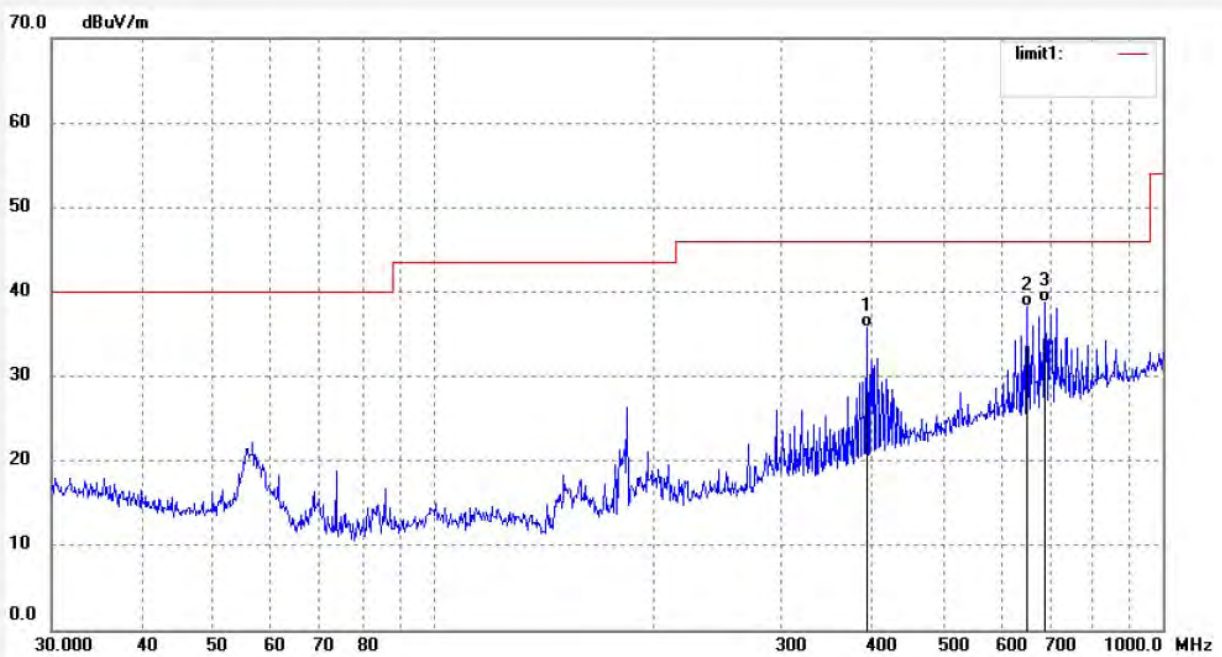
Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	82.3588	48.26	-15.93	32.33	40.00	-7.67	QP			
2	393.4723	44.06	-6.71	37.35	46.00	-8.65	QP			
3	689.5643	38.73	-1.24	37.49	46.00	-8.51	QP			

Job No.: TUV2018 #648	Polarization: Horizontal
Standard: FCC PART 15C 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2018/07/23
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 5.8GHz Digital Wireless Headphone	Engineer Signature: WADE
Mode: TX 5775MHz	Distance: 3m
Model: NS-HAWHP2	
Manufacturer: Country Mate Technology Ltd	

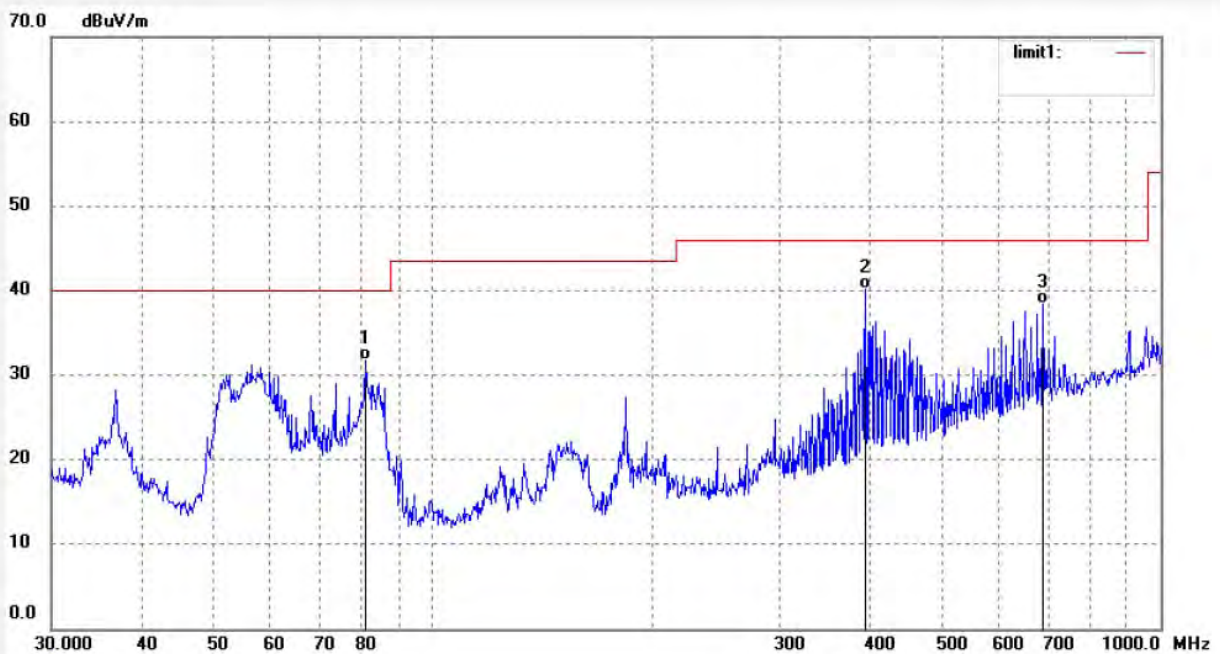
Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	393.4723	42.44	-6.71	35.73	46.00	-10.27	QP			
2	651.9416	39.97	-1.76	38.21	46.00	-7.79	QP			
3	689.5643	40.02	-1.24	38.78	46.00	-7.22	QP			

Job No.: TUV2018 #647	Polarization: Vertical
Standard: FCC PART 15C 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2018/07/23
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 5.8GHz Digital Wireless Headphone	Engineer Signature: WADE
Mode: TX 5775MHz	Distance: 3m
Model: NS-HAWHP2	
Manufacturer: Country Mate Technology Ltd	

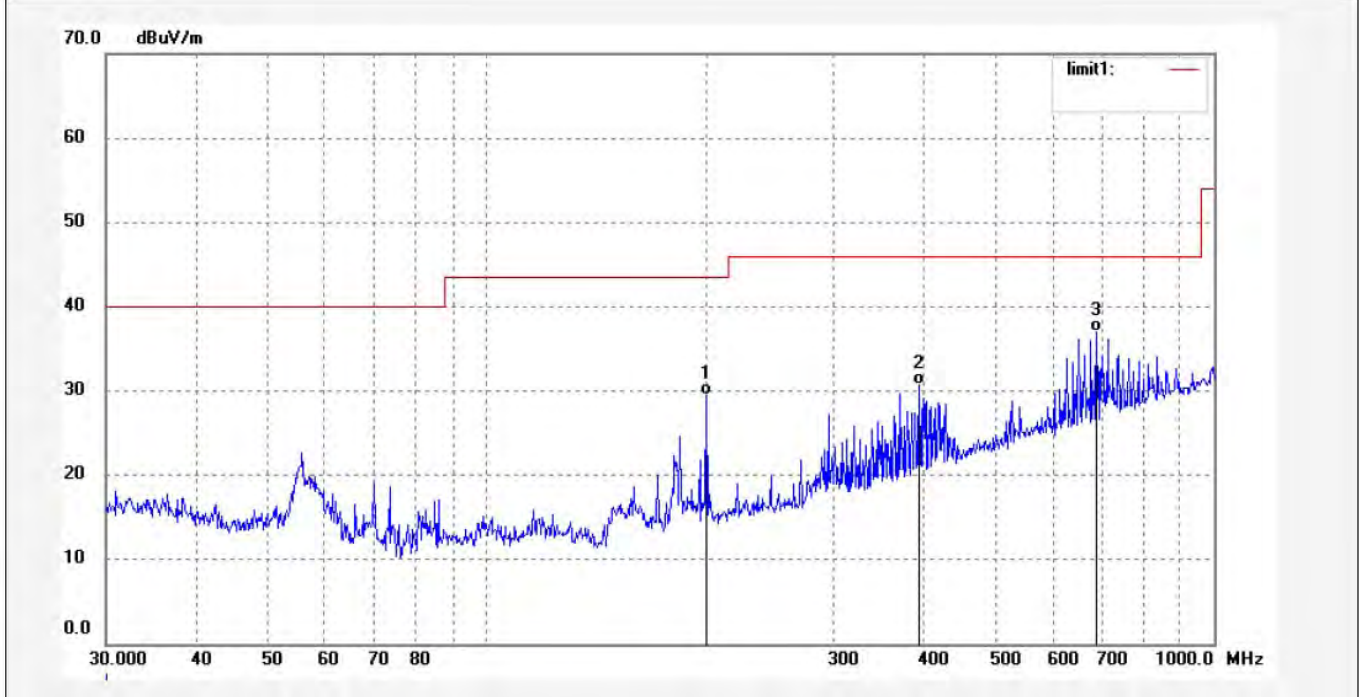
Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	80.9274	48.10	-16.26	31.84	40.00	-8.16	QP			
2	393.4723	46.89	-6.71	40.18	46.00	-5.82	QP			
3	689.5643	39.67	-1.24	38.43	46.00	-7.57	QP			

Job No.: TUV2018 #649	Polarization: Horizontal
Standard: FCC PART 15C 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2018/07/23
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 5.8GHz Digital Wireless Headphone	Engineer Signature: WADE
Mode: TX 5820MHz	Distance: 3m
Model: NS-HAWHP2	
Manufacturer: Country Mate Technology Ltd	

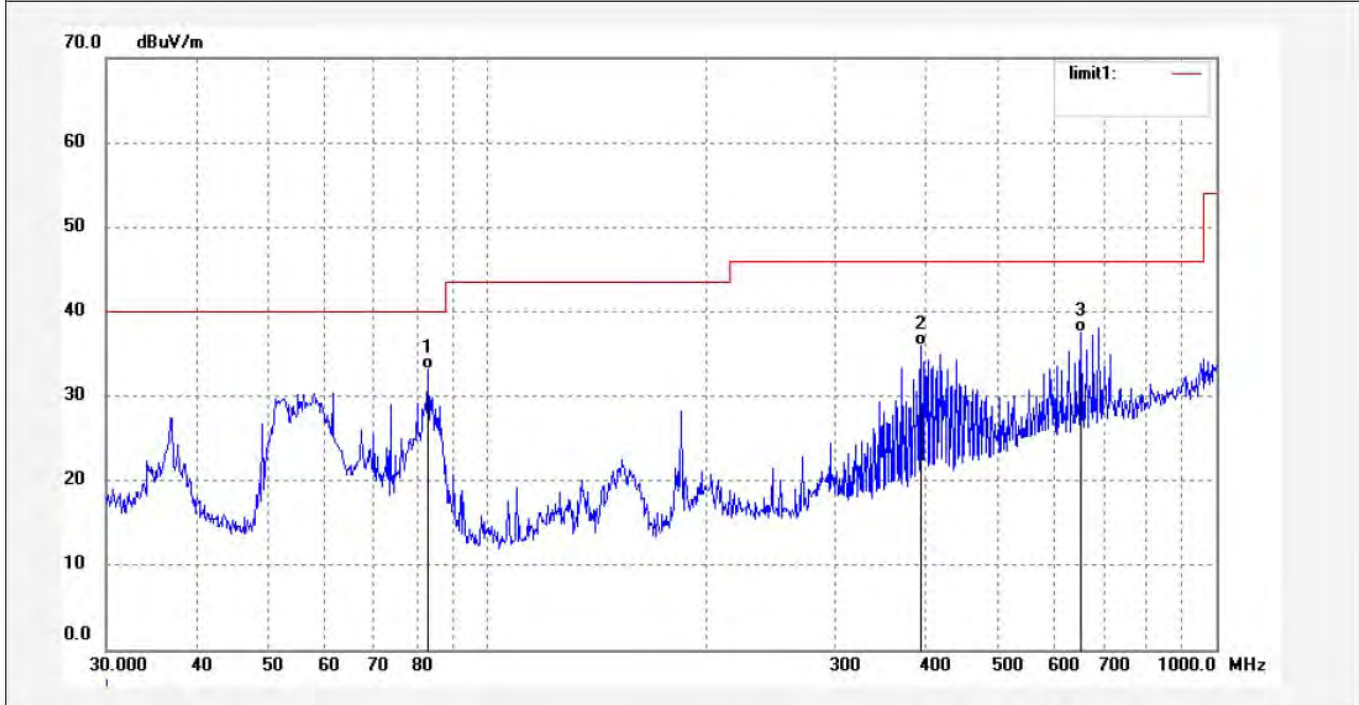
Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	200.6880	41.69	-12.25	29.44	43.50	-14.06	QP			
2	393.4723	37.41	-6.71	30.70	46.00	-15.30	QP			
3	689.5643	38.23	-1.24	36.99	46.00	-9.01	QP			

Job No.: TUV2018 #650	Polarization: Vertical
Standard: FCC PART 15C 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2018/07/23
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 5.8GHz Digital Wireless Headphone	Engineer Signature: WADE
Mode: TX 5820MHz	Distance: 3m
Model: NS-HAWHP2	
Manufacturer: Country Mate Technology Ltd	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	82.9385	49.00	-15.79	33.21	40.00	-6.79	QP			
2	393.4723	42.60	-6.71	35.89	46.00	-10.11	QP			
3	651.9416	39.23	-1.76	37.47	46.00	-8.53	QP			

From 1GHz to 18GHz:


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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber

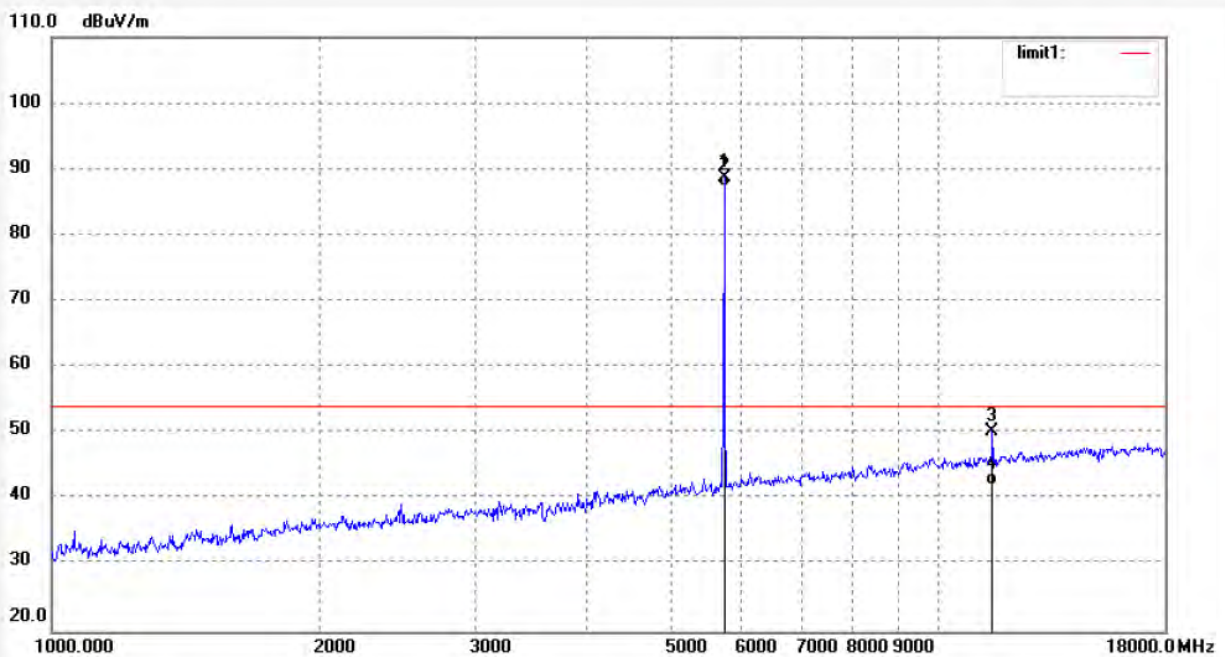
Tel:+86-0755-26503290

Fax:+86-0755-26503396

 Job No.: LGW2018 #1800  
 Standard: FCC PART 15C 3M Radiated  
 Test item: Radiation Test  
 Temp.( C)/Hum.(%) 23 C / 48 %  
 EUT: 5.8GHz Digital Wireless Headphone  
 Mode: TX 5729MHz  
 Model: NS-HAWHP2  
 Manufacturer: Country Mate Technology Ltd

 Polarization: Horizontal  
 Power Source: AC 120V/60Hz  
 Date: 18/07/18/  
 Time:  
 Engineer Signature: WADE  
 Distance: 3m

Note:

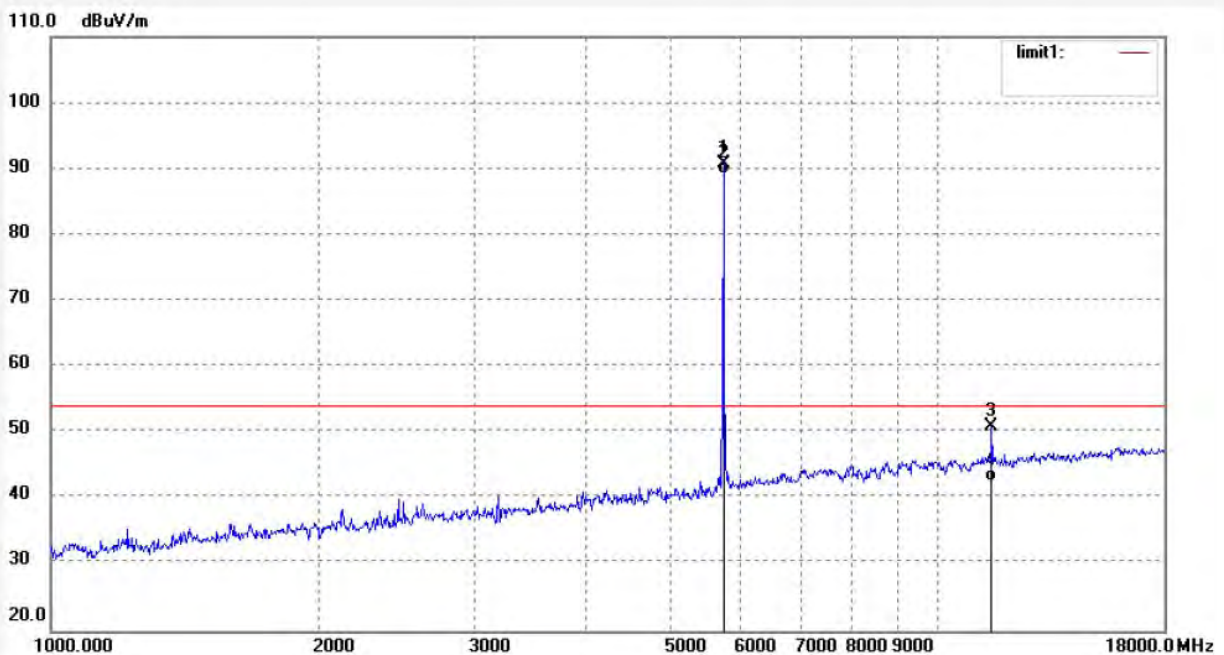


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5729.000	78.63	10.18	88.81	114.00	-25.19	peak			
2	5729.000	77.13	10.18	87.31	94.00	-6.69	AVG			
3	11458.000	30.49	19.85	50.34	74.00	-23.66	peak			
4	11458.000	22.40	19.85	42.25	54.00	-11.75	AVG			

Job No.: LGW2018 #1801  
Standard: FCC PART 15C 3M Radiated  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 23 C / 48 %  
EUT: 5.8GHz Digital Wireless Headphone  
Mode: TX 5729MHz  
Model: NS-HAWHP2  
Manufacturer: Country Mate Technology Ltd

Polarization: Vertical  
Power Source: AC 120V/60Hz  
Date: 18/07/18/  
Time:  
Engineer Signature: WADE  
Distance: 3m

Note:

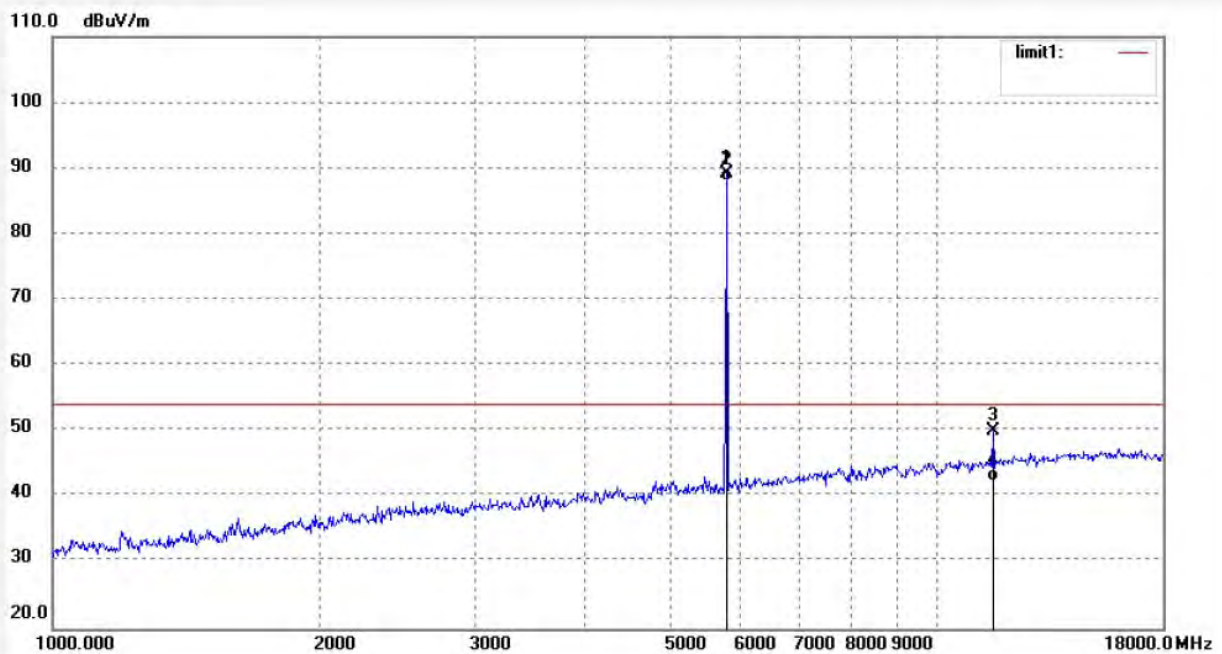


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5729.000	80.52	10.18	90.70	114.00	-23.30	peak			
2	5729.000	79.02	10.18	89.20	94.00	-4.80	AVG			
3	11458.000	30.99	19.85	50.84	74.00	-23.16	peak			
4	11458.000	22.83	19.85	42.68	54.00	-11.32	AVG			



Job No.: LGW2018 #1804	Polarization: Horizontal
Standard: FCC PART 15C 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/07/18/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 5.8GHz Digital Wireless Headphone	Engineer Signature: WADE
Mode: TX 5775MHz	Distance: 3m
Model: NS-HAWHP2	
Manufacturer: Country Mate Technology Ltd	

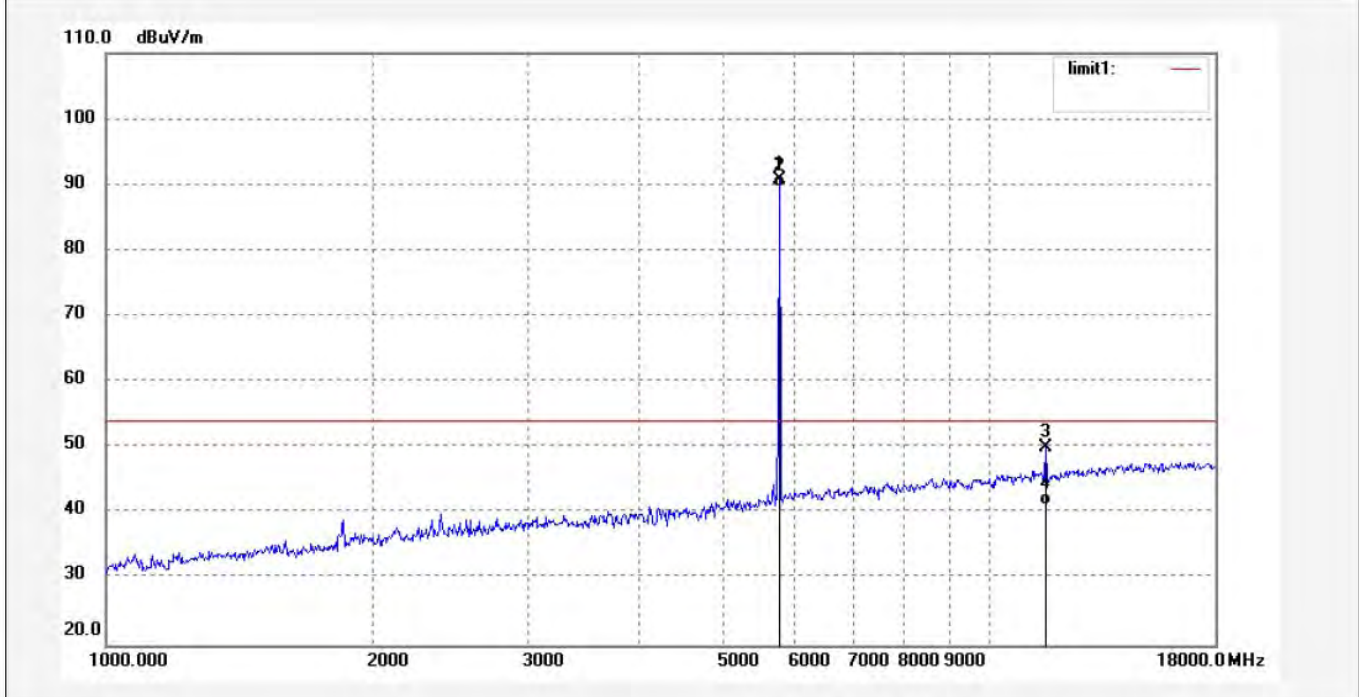
Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5775.000	78.66	10.45	89.11	114.00	-24.89	peak			
2	5775.000	77.56	10.45	88.01	94.00	-5.99	AVG			
3	11550.000	29.88	20.18	50.06	74.00	-23.94	peak			
4	11550.000	22.18	20.18	42.36	54.00	-11.64	AVG			

Job No.: LGW2018 #1805	Polarization: Vertical
Standard: FCC PART 15C 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/07/18/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 5.8GHz Digital Wireless Headphone	Engineer Signature: WADE
Mode: TX 5775MHz	Distance: 3m
Model: NS-HAWHP2	
Manufacturer: Country Mate Technology Ltd	

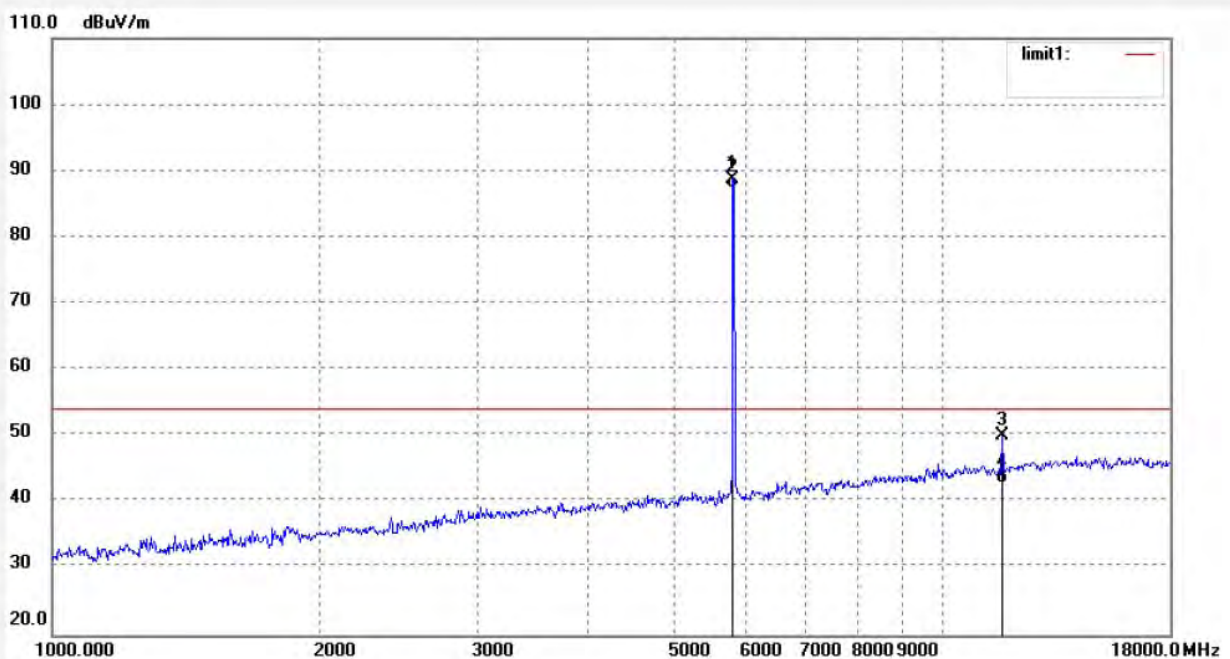
Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5775.000	80.30	10.45	90.75	114.00	-23.25	peak			
2	5775.000	79.20	10.45	89.65	94.00	-4.35	AVG			
3	11550.000	29.91	20.18	50.09	74.00	-23.91	peak			
4	11550.000	21.07	20.18	41.25	54.00	-12.75	AVG			

Job No.: LGW2018 #1807	Polarization: Horizontal
Standard: FCC PART 15C 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/07/18/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 5.8GHz Digital Wireless Headphone	Engineer Signature: WADE
Mode: TX 5820MHz	Distance: 3m
Model: NS-HAWHP2	
Manufacturer: Country Mate Technology Ltd	

Note:

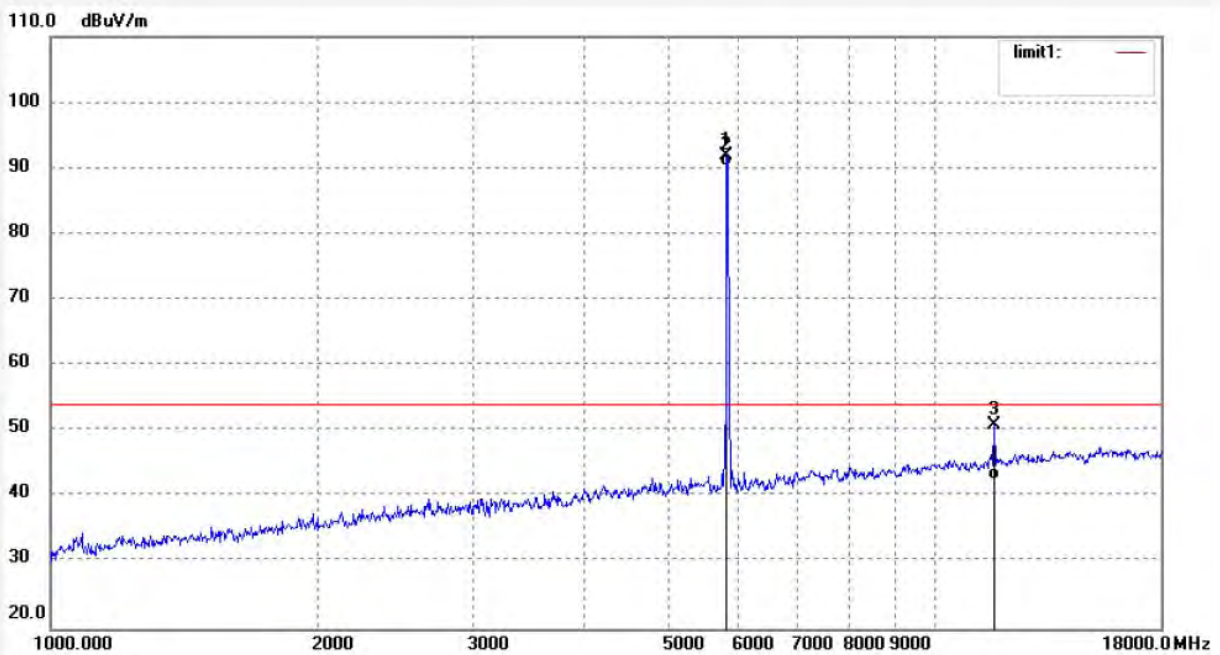


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5820.000	78.14	10.66	88.80	114.00	-25.20	peak			
2	5820.000	76.74	10.66	87.40	94.00	-6.60	AVG			
3	11640.000	29.32	20.71	50.03	74.00	-23.97	peak			
4	11640.000	22.03	20.71	42.74	54.00	-11.26	AVG			

Job No.: LGW2018 #1806  
Standard: FCC PART 15C 3M Radiated  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 23 C / 48 %  
EUT: 5.8GHz Digital Wireless Headphone  
Mode: TX 5820MHz  
Model: NS-HAWHP2  
Manufacturer: Country Mate Technology Ltd

Polarization: Vertical  
Power Source: AC 120V/60Hz  
Date: 18/07/18/  
Time:  
Engineer Signature: WADE  
Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	5820.000	81.16	10.66	91.82	114.00	-22.18	peak			
2	5820.000	79.76	10.66	90.42	94.00	-3.58	AVG			
3	11640.000	30.12	20.71	50.83	74.00	-23.17	peak			
4	11640.000	21.86	20.71	42.57	54.00	-11.43	AVG			

From 18GHz to 26.5GHz:



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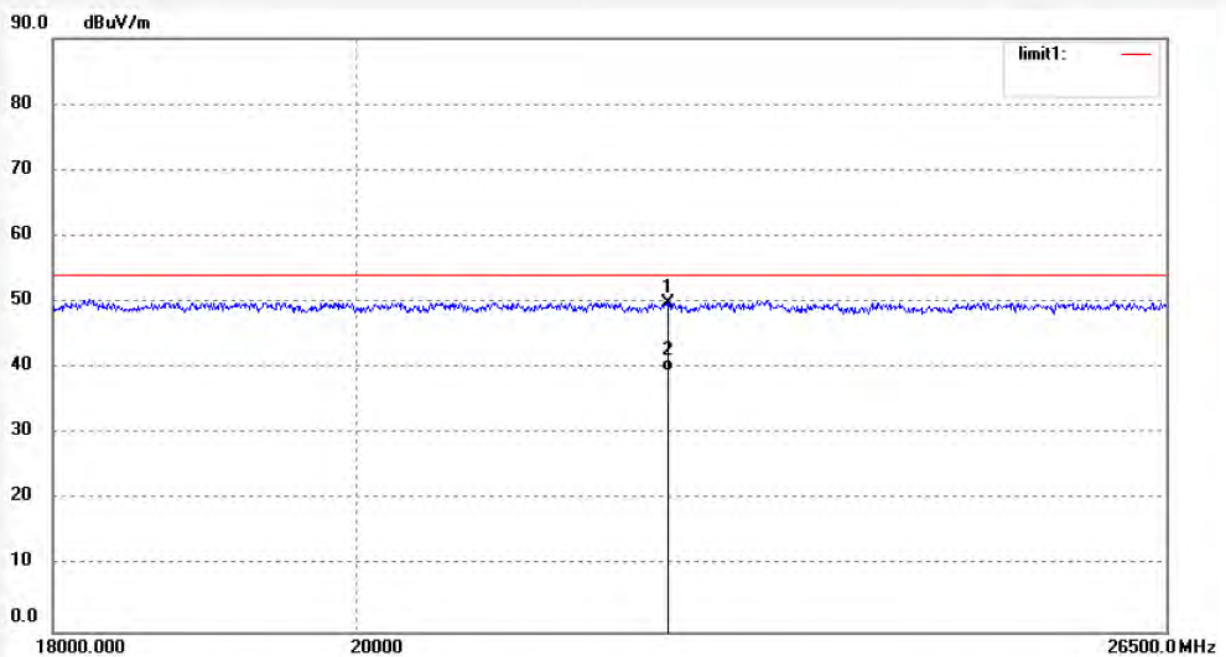
Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: LGW2018 #1811	Polarization: Horizontal
Standard: FCC PART 15C 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/07/18/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 5.8GHz Digital Wireless Headphone	Engineer Signature: WADE
Mode: TX 5729MHz	Distance: 3m
Model: NS-HAWHP2	
Manufacturer: Country Mate Technology Ltd	

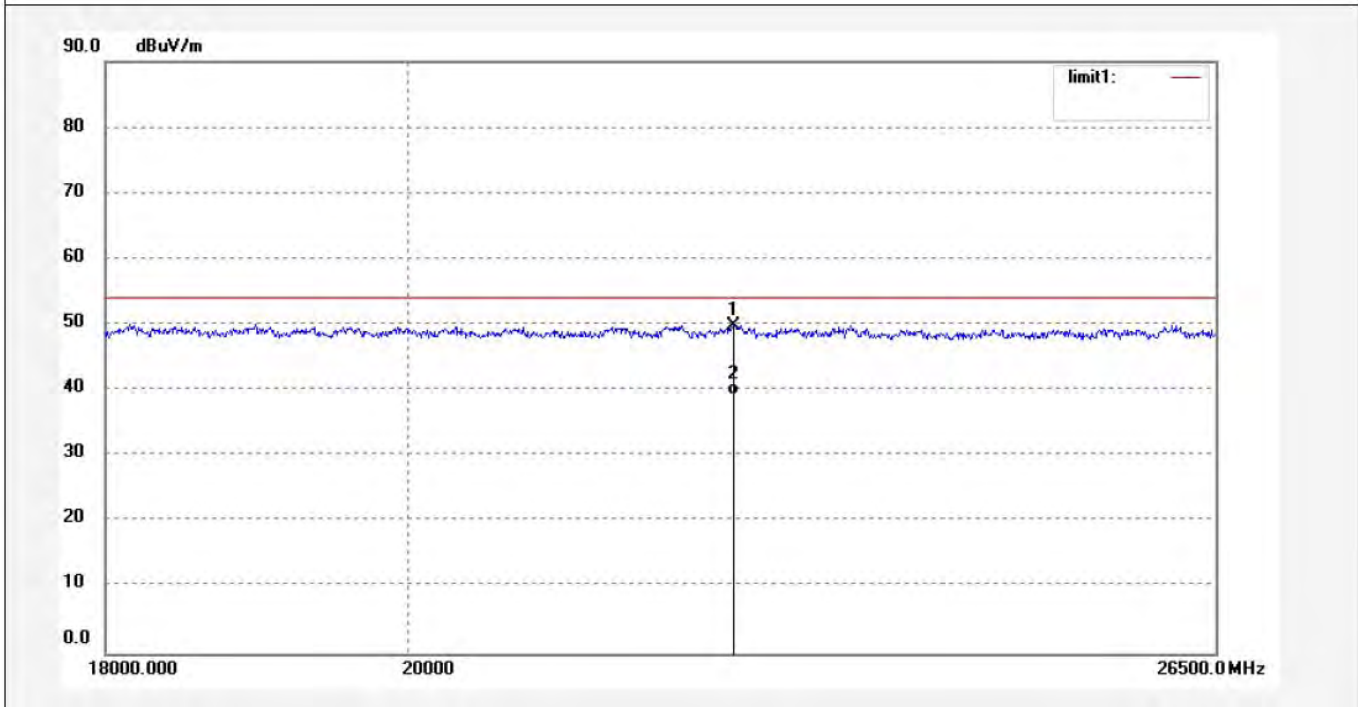
Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	22292.654	10.26	39.66	49.92	74.00	-24.08	peak			
2	22292.654	-0.09	39.66	39.57	54.00	-14.43	AVG			

Job No.: LGW2018 #1810	Polarization: Vertical
Standard: FCC PART 15C 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/07/18/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 5.8GHz Digital Wireless Headphone	Engineer Signature: WADE
Mode: TX 5729MHz	Distance: 3m
Model: NS-HAWHP2	
Manufacturer: Country Mate Technology Ltd	

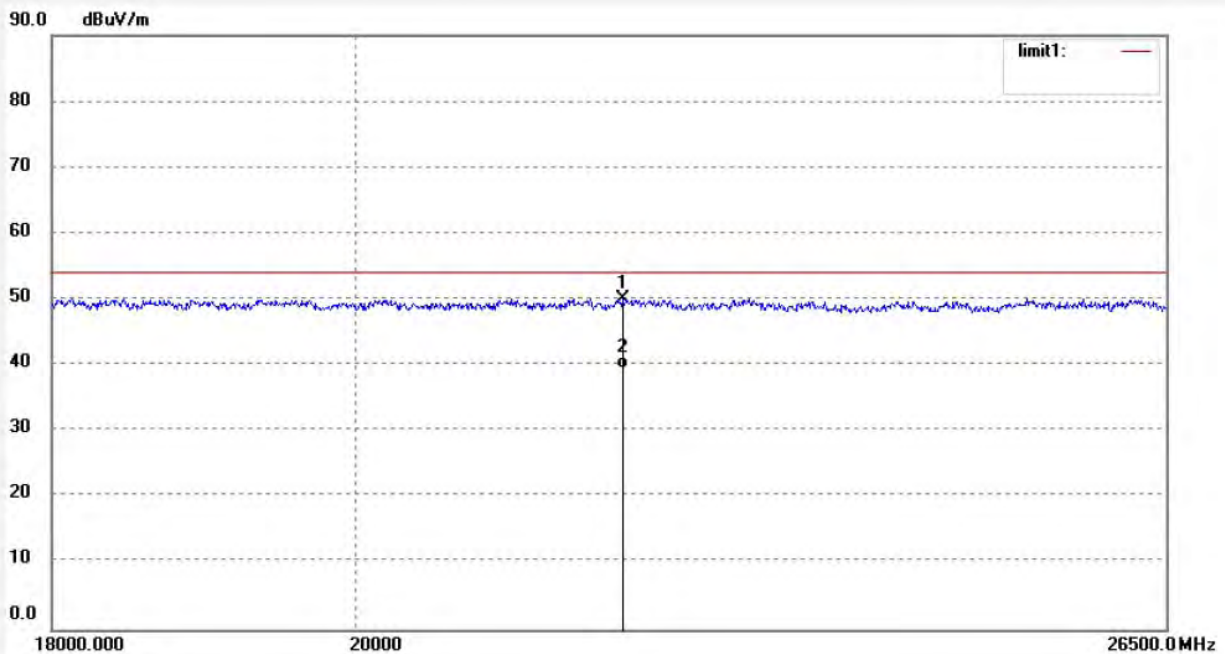
Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	22405.025	10.54	39.35	49.89	74.00	-24.11	peak			
2	22405.025	0.02	39.35	39.37	54.00	-14.63	AVG			

Job No.: LGW2018 #1812	Polarization: Horizontal
Standard: FCC PART 15C 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/07/18/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 5.8GHz Digital Wireless Headphone	Engineer Signature: WADE
Mode: TX 5775MHz	Distance: 3m
Model: NS-HAWHP2	
Manufacturer: Country Mate Technology Ltd	

Note:

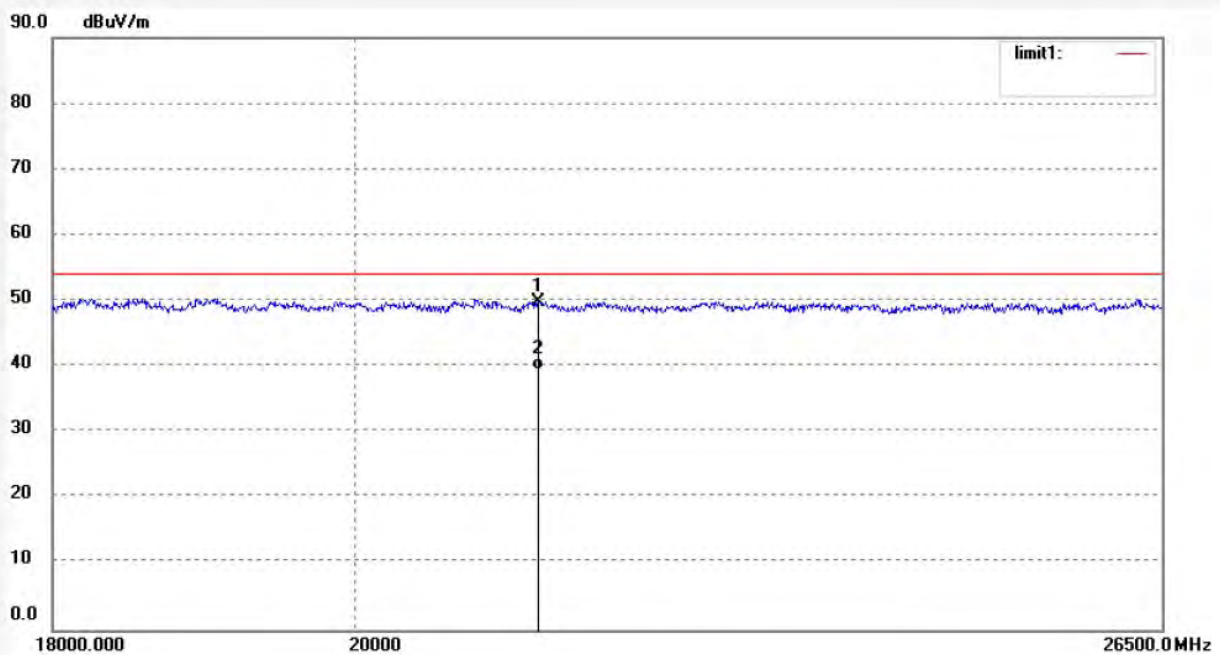


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	21941.932	10.66	39.30	49.96	74.00	-24.04	peak			
2	21941.932	0.21	39.30	39.51	54.00	-14.49	AVG			

Job No.: LGW2018 #1813  
Standard: FCC PART 15C 3M Radiated  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 23 C / 48 %  
EUT: 5.8GHz Digital Wireless Headphone  
Mode: TX 5775MHz  
Model: NS-HAWHP2  
Manufacturer: Country Mate Technology Ltd

Polarization: Vertical  
Power Source: AC 120V/60Hz  
Date: 18/07/18/  
Time:  
Engineer Signature: WADE  
Distance: 3m

Note:

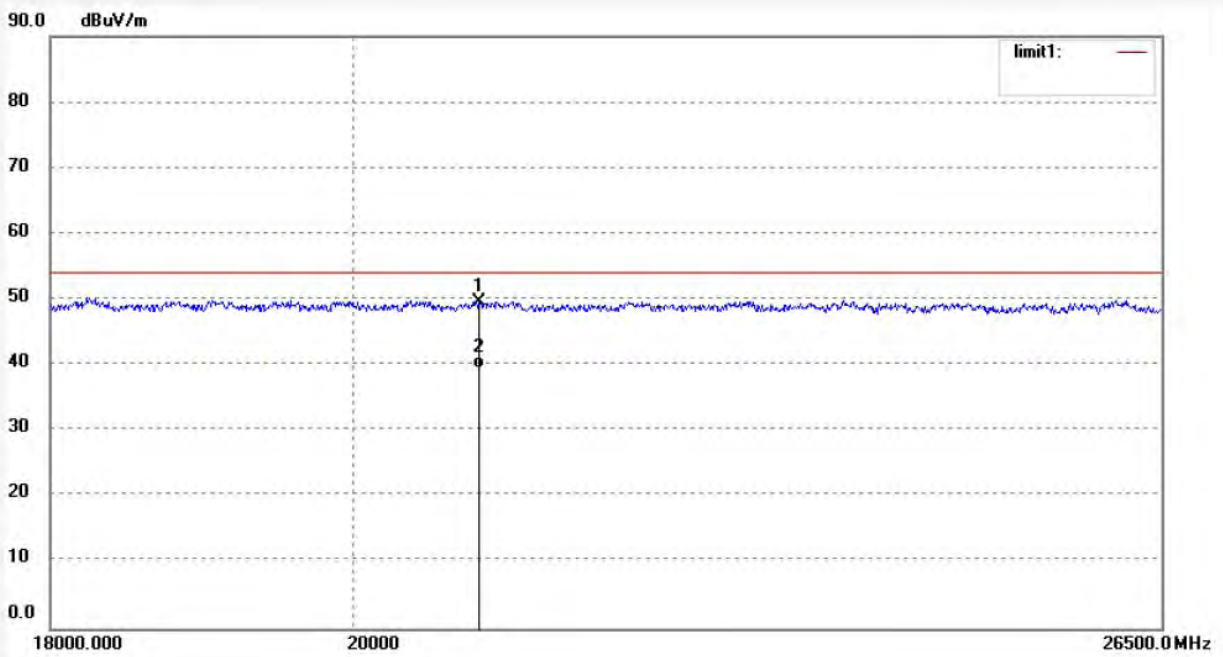


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	21322.830	10.48	39.32	49.80	74.00	-24.20	peak			
2	21322.830	0.22	39.32	39.54	54.00	-14.46	AVG			



Job No.: LGW2018 #1815	Polarization: Horizontal
Standard: FCC PART 15C 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/07/18/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 5.8GHz Digital Wireless Headphone	Engineer Signature: WADE
Mode: TX 5820MHz	Distance: 3m
Model: NS-HAWHP2	
Manufacturer: Country Mate Technology Ltd	

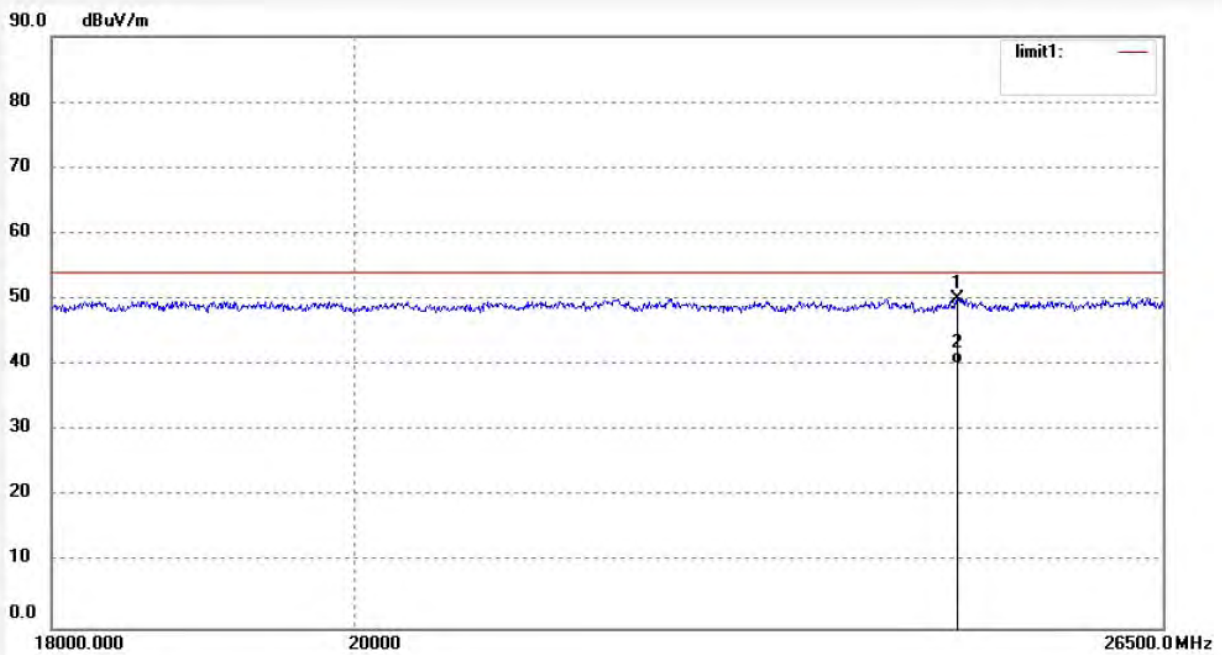
Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	20898.265	11.30	38.38	49.68	74.00	-24.32	peak			
2	20898.265	1.16	38.38	39.54	54.00	-14.46	AVG			

Job No.: LGW2018 #1814	Polarization: Vertical
Standard: FCC PART 15C 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/07/18/
Temp.( C)/Hum.(%) 23 C / 48 %	Time:
EUT: 5.8GHz Digital Wireless Headphone	Engineer Signature: WADE
Mode: TX 5820MHz	Distance: 3m
Model: NS-HAWHP2	
Manufacturer: Country Mate Technology Ltd	

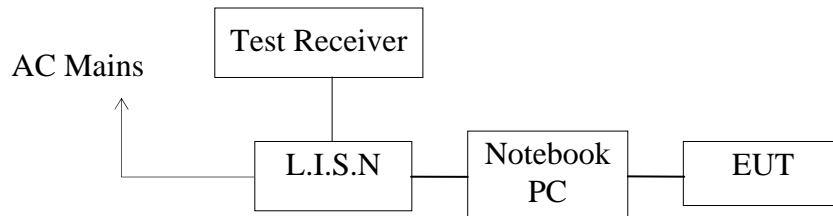
Note:



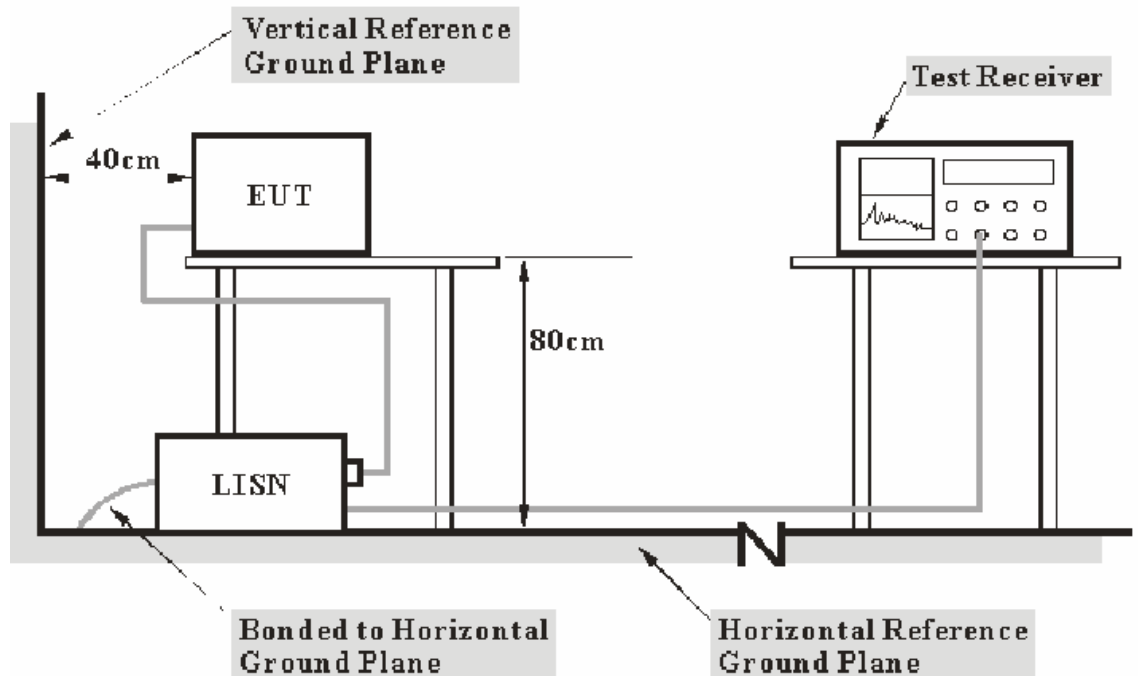
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	24670.094	9.58	40.51	50.09	74.00	-23.91	peak			
2	24670.094	-0.27	40.51	40.24	54.00	-13.76	AVG			

## 9. AC POWER LINE CONDUCTED EMISSION

### 9.1. Block Diagram of Test Setup



### 9.2. Test System Setup



- Note: 1. Support units were connected to second LISN.  
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

### 9.3. Power Line Conducted Emission Measurement Limits

Frequency (MHz)	Limit dB( $\mu$ V)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

NOTE1: The lower limit shall apply at the transition frequencies.  
 NOTE2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

### 9.4. Configuration of EUT on Measurement

The equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

### 9.5. Operating Condition of EUT

9.5.1. Setup the EUT and simulator as shown as Section 9.1.

9.5.2. Turn on the power of all equipment.

9.5.3. Let the EUT work in test mode and measure it.

### 9.6. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2014 on Conducted Emission Measurement. The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

### 9.7.Data Sample

Frequency (MHz)	Transducer value (dB)	QuasiPeak Level (dBμV)	Average Level (dBμV)	QuasiPeak Limit (dBμV)	Average Limit (dBμV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)
X.XX	10.5	51.1	34.2	56.0	46.0	4.9	11.8	Pass

Frequency(MHz) = Emission frequency in MHz

Transducer value(dB) = Insertion loss of LISN + Cable Loss

Level(dBμV) = Quasi-peak Reading/Average Reading + Transducer value

Limit (dBμV) = Limit stated in standard

Calculation Formula:

Margin = Limit (dBμV) - Level (dBμV)

### 9.8.Power Line Conducted Emission Measurement Results

**Pass.**

The frequency range from 150kHz to 30MHz is checked.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

Emissions attenuated more than 20 dB below the permissible value are not reported.

All data was recorded in the Quasi-peak and average detection mode.

The spectral diagrams are attached as below.

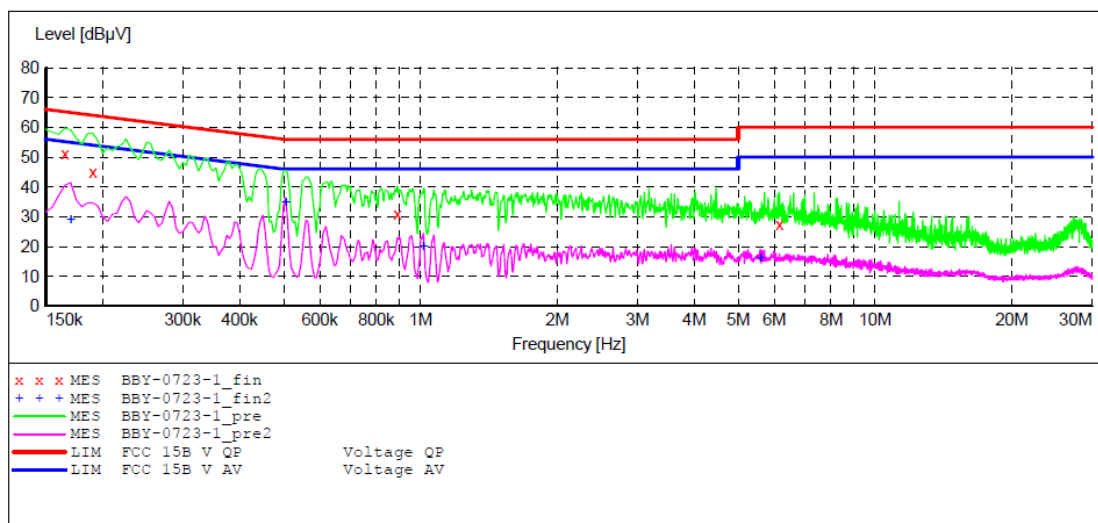
**ACCURATE TECHNOLOGY CO.,LTD**

**CONDUCTED EMISSION STANDARD FCC PART 15 C**

EUT: 5.8GHz Digital Wireless Headphone M/N:NS-HAWHP2  
 Manufacturer: Country Mate Technology Ltd  
 Operating Condition: Wireless communication  
 Test Site: 1#Shielding Room  
 Operator: WADE  
 Test Specification: N 120V/60Hz  
 Comment: Mains port  
 Start of Test: 7/23/2018 /

**SCAN TABLE: "V 9K-30MHz fin"**

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak Average	1.0 s	200 Hz	NSLK8126 2008
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak Average	1.0 s	9 kHz	NSLK8126 2008



**MEASUREMENT RESULT: "BBY-0723-1\_fin"**

7/23/2018

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.165000	51.00	10.5	65	14.2	QP	N	GND
0.190000	45.10	10.5	64	18.9	QP	N	GND
0.890000	30.80	10.8	56	25.2	QP	N	GND
6.160000	27.30	11.2	60	32.7	QP	N	GND

**MEASUREMENT RESULT: "BBY-0723-1\_fin2"**

7/23/2018

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.170000	29.00	10.5	55	26.0	AV	N	GND
0.505000	34.90	10.7	46	11.1	AV	N	GND
1.015000	19.80	10.8	46	26.2	AV	N	GND
5.590000	16.10	11.2	50	33.9	AV	N	GND

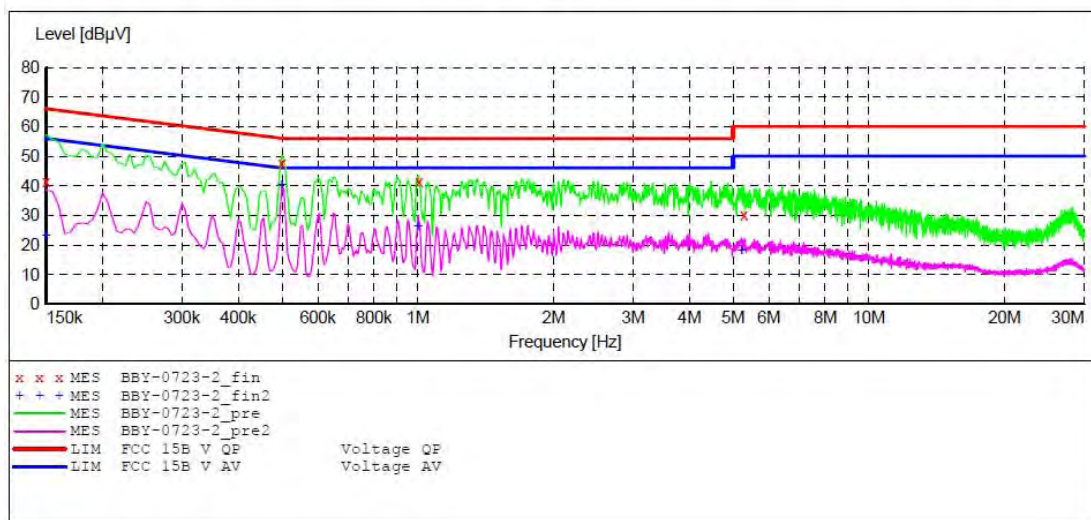
**ACCURATE TECHNOLOGY CO.,LTD**

**CONDUCTED EMISSION STANDARD FCC PART 15 C**

EUT: 5.8GHz Digital Wireless Headphone M/N:NS-HAWHP2  
 Manufacturer: Country Mate Technology Ltd  
 Operating Condition: Wireless communication  
 Test Site: 1#Shielding Room  
 Operator: WADE  
 Test Specification: L 120V/60Hz  
 Comment: Mains port  
 Start of Test: 7/23/2018 /

**SCAN TABLE: "V 9K-30MHz fin"**

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	NSLK8126 2008
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	NSLK8126 2008



**MEASUREMENT RESULT: "BBY-0723-2\_fin"**

7/23/2018

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.150000	41.40	10.5	66	24.6	QP	L1	GND
0.500000	47.70	10.7	56	8.3	QP	L1	GND
1.005000	41.40	10.8	56	14.6	QP	L1	GND
5.280000	30.20	11.2	60	29.8	QP	L1	GND

**MEASUREMENT RESULT: "BBY-0723-2\_fin2"**

7/23/2018

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.150000	22.90	10.5	56	33.1	AV	L1	GND
0.500000	40.10	10.7	46	5.9	AV	L1	GND
1.000000	26.40	10.8	46	19.6	AV	L1	GND
5.220000	18.20	11.2	50	31.8	AV	L1	GND

## **10.ANTENNA REQUIREMENT**

### 10.1.The Requirement

According to Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

### 10.2.Antenna Construction

Device is equipped with unique antenna, which isn't displaced by other antenna. Therefore, the equipment complies with the antenna requirement of Section 15.203.

----- THE END OF TEST REPORT -----