

# TEST REPORT

## CERTIFICATE OF CONFORMITY

**Standard:** 47 CFR FCC Part 15, Subpart C (Section 15.247)

**Report No.:** RFBAYG-WTW-P24020046

**FCC ID:** A94318

**Product:** Wireless Headphones

**Brand:** BOSE

**Model No.:** 318R,318L

**Received Date:** 2024/3/21

**Test Date:** 2024/3/28 ~ 2024/4/2

**Issued Date:** 2024/5/31

**Applicant:** Bose Corporation

**Address:** 100 The Mountain Road Framingham Massachusetts 01701-9168 United States

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Lin Kou Laboratories

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

**Test Location:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

**FCC Registration /** 198487 / TW2021

**Designation Number:**

**Approved by:**



, **Date:**

2024/5/31

Jeremy Lin / Project Engineer

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Prepared by : Jessica Cheng / Senior Specialist



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## Release Control Record

Issue No.	Description	Date Issued
RFBAYG-WTW-P24020046	Original release.	2024/5/31



## 1 Certificate

**Product:** Wireless Headphones

**Brand:** BOSE

**Test Model:** 318R,318L

**Sample Status:** Engineering sample

**Applicant:** Bose Corporation

**Test Date:** 2024/3/28 ~ 2024/4/2

**Standard:** 47 CFR FCC Part 15, Subpart C (Section 15.247)

**Measurement**

**procedure:** ANSI C63.10-2013

KDB 558074 D01 15.247 Meas Guidance v05r02

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

## 2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
Standard / Clause	Test Item	Result	Remark
15.247 (a)(1)	RF Output Power	Pass	Meet the requirement of limit.
15.247(a)(1) (iii)	Number of Hopping Frequency Used	Pass	Meet the requirement of limit.
15.247(a)(1) (iii)	Dwell Time on Each Channel	Pass	Meet the requirement of limit.
15.247(a)(1)	Hopping Channel Separation	Pass	Meet the requirement of limit.
15.247(a)(1)	20 dB Bandwidth	-	Refer to Note 1
15.247(d)	Conducted Out of Band Emissions	Pass	Meet the requirement of limit.
15.207	AC Power Conducted Emissions	Pass	Minimum passing margin is -12.08 dB at 0.54234 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -13.8 dB at 42.90 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -13.4 dB at 2390.00 MHz
15.203	Antenna Requirement	Pass	No antenna connector is used.

Notes:

1. If the Frequency Hopping System operating in 2400-2483.5 MHz band and the output power less than 125 mW. The hopping channel carrier frequencies separated by a minimum of 25 kHz or two-thirds of the 20 dB bandwidth of hopping channel whichever is greater.
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

### 2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Specification	Expanded Uncertainty (k=2) ( $\pm$ )
RF Output Power	-	1.1 dB
Dwell Time on Each Channel	-	2.18 %
Hopping Channel Separation	-	390 Hz
20 dB Bandwidth	-	960 Hz
Conducted Out of Band Emissions	9 kHz ~ 40 GHz	2.7 dB
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.88 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	2.85 dB
	30 MHz ~ 1 GHz	2.85 dB
	1 GHz ~ 6 GHz	3.06 dB
Unwanted Emissions above 1 GHz	6 GHz ~ 18 GHz	3.06 dB
	18 GHz ~ 40 GHz	3.29 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

### 2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

### 3 General Information

#### 3.1 General Description

Product	Wireless Headphones
Brand	BOSE
Test Model	318R,318L
Status of EUT	Engineering sample
Power Supply Rating	3.85Vdc from Battery or 5Vdc from Charging case
Modulation Type	GFSK, π/4-DQPSK, 8DPSK
Modulation Technology	FHSS
Transfer Rate	Up to 3 Mbps
Operating Frequency	2.402 GHz ~ 2.48 GHz
Number of Channel	79
Output Power	33.189 mW (15.21 dBm)

Note:

1. The EUT uses following accessories.

<b>Charging case</b>		
Brand	Model	Specification
BOSE	442318	
<b>USB Type-C to USB-A cable</b>		
Signal Line : shielded without core,0.3m		
<b>Battery</b>		
Brand	Model	Specification
VDL	1254PF4F	Rating : 3.85Vdc 70mAh
<b>Battery</b>		
Brand	Model	Specification
Mic-power	M1254A6	Rating : 3.85Vdc 70mAh

2. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

### 3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna No.	Gain (dBi)	Antenna Type	Connector Type
318L	-0.29	PIFA	NA
318R	-1.65	PIFA	NA

\* Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

### 3.3 Channel List

79 channels are provided for BT-EDR:

Channel	Frequency (MHz)						
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461		

### 3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	<p>1. EUT has Battery(1254PF4F)/ Battery(M1254A6). Pre-scan these modes and find the worst case as a representative test condition.</p> <p>2. EUT can be used in the following ways: XYZ 3-axis. Pre-scan in these ways and find the worst case as a representative test condition.</p> <p>3. For Unwanted Emission below/above 1G has A~E mode. Pre-scan these modes and find the worst case as a representative test condition.</p> <p>Pre-Scan Mode:</p> <p>Mode A(Left/Right Earphone): EUT with Charing Case(Powered from Notebook and USB Cable)</p> <p>Mode B(Left/Right Earphone): EUT with Charing Case(Powered from Adapter and USB Cable)</p> <p>Mode C(Left/Right Earphone): EUT with Charing Case(Powered from Charging Pad via Qi function)</p> <p>Mode D(Left/Right Earphone): EUT with Charing Case(Powered from internal Battery)</p> <p>Mode E(Left/Right Earphone): EUT with internal Battery</p>
Worst Case:	<p>1. Battery worse condition : Battery(1254PF4F).</p> <p>2. X/ Y/ Z Worst Condition: X Axis for Unwanted Emission above 1GHz and Unwanted Emission below 1GHz.</p> <p>3. For Unwanted Emission below/above 1G: Mode A(Left/Right Earphone) is the worst test configuration.</p>

Following channel(s) was (were) selected for the final test as listed below:

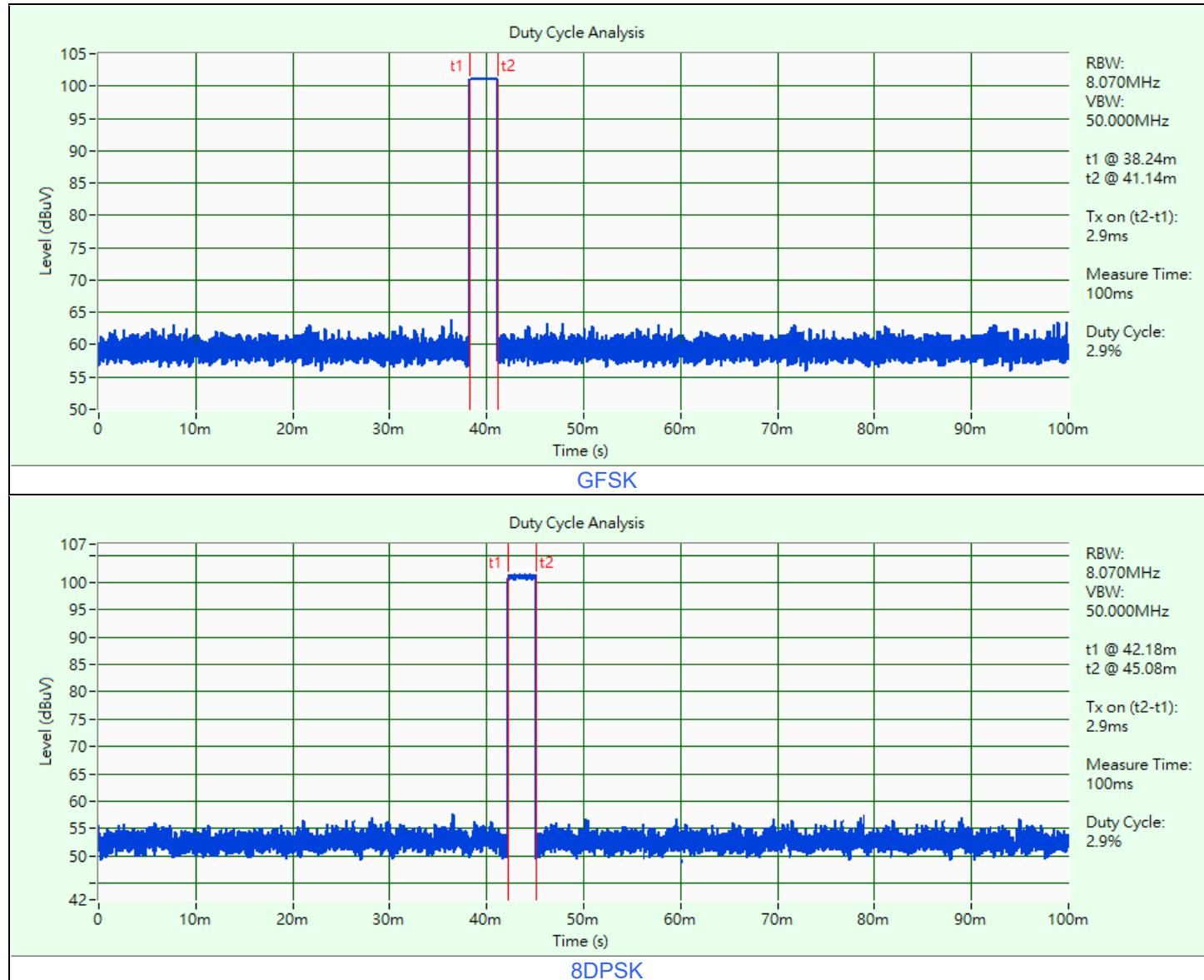
Test Item	EUT Configure Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	A(Left/Right Earphone)	0, 39, 78	GFSK	DH5
			8DPSK	3DH5
Number of Hopping Frequency Used	A(Left/Right Earphone)	Hopping	GFSK	DH5
			8DPSK	3DH5
Dwell Time on Each Channel	A(Left/Right Earphone)	Hopping	GFSK	DH1/DH3/DH5
			8DPSK	3DH1/3DH3/3DH5
Hopping Channel Separation / 20 dB Bandwidth	A(Left/Right Earphone)	0, 39, 78	GFSK	DH5
			8DPSK	3DH5
Conducted Out of Band Emissions	A(Left/Right Earphone)	Hopping 0, 78	GFSK	DH5
			8DPSK	3DH5
AC Power Conducted Emissions	A(Left Earphone)	78	GFSK	DH5
	B(Left Earphone)	78	GFSK	DH5
	C(Left Earphone)	78	GFSK	DH5
	A(Right Earphone)	39	GFSK	DH5
	B(Right Earphone)	39	GFSK	DH5
	C(Right Earphone)	39	GFSK	DH5
Unwanted Emissions below 1 GHz	A(Left Earphone)	78	GFSK	DH5
	A(Right Earphone)	39	GFSK	DH5
Unwanted Emissions above 1 GHz	A(Left Earphone)	0, 39, 78	GFSK	DH5
			8DPSK	3DH5
	A(Right Earphone)		GFSK	DH5
			8DPSK	3DH5
EUT Configure Mode:	A(Left/Right Earphone)	EUT with Charing Case(Powered from Notebook and USB Cable)		
	B(Left/Right Earphone)	EUT with Charing Case(Powered from Adapte and USB Cable)		
	C(Left/Right Earphone)	EUT with Charing Case(Powered from Charging Pad via Qi function)		

### 3.5 Duty Cycle of Test Signal

#### A(Left Earphone)

**GFSK:** Duty cycle = 2.9 ms / 100 ms x 100% = 2.9%

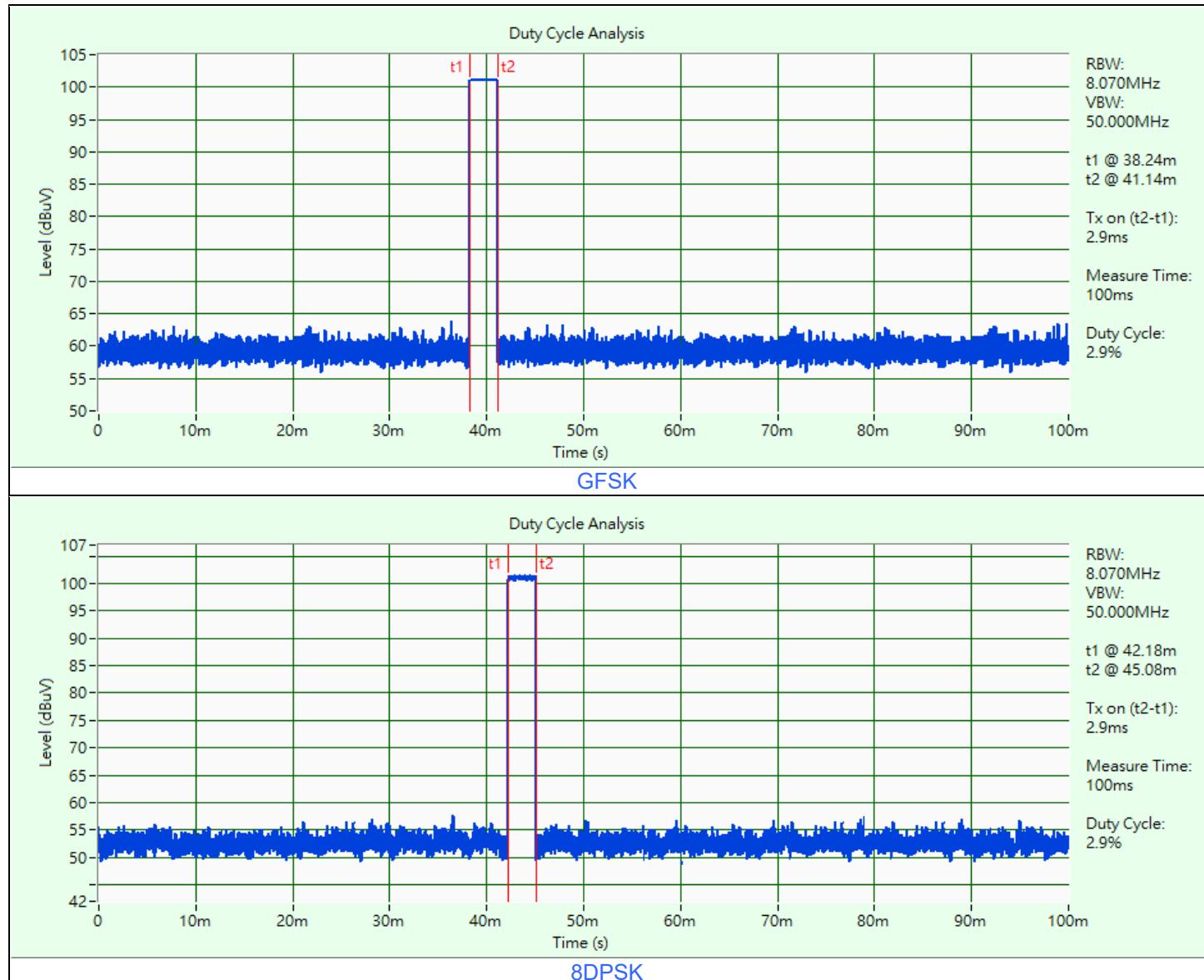
**8DPSK:** Duty cycle = 2.9 ms / 100 ms x 100% = 2.9%



### A(Right Earphone)

**GFSK:** Duty cycle = 2.9 ms / 100 ms x 100% = 2.9%

**8DPSK:** Duty cycle = 2.9 ms / 100 ms x 100% = 2.9%

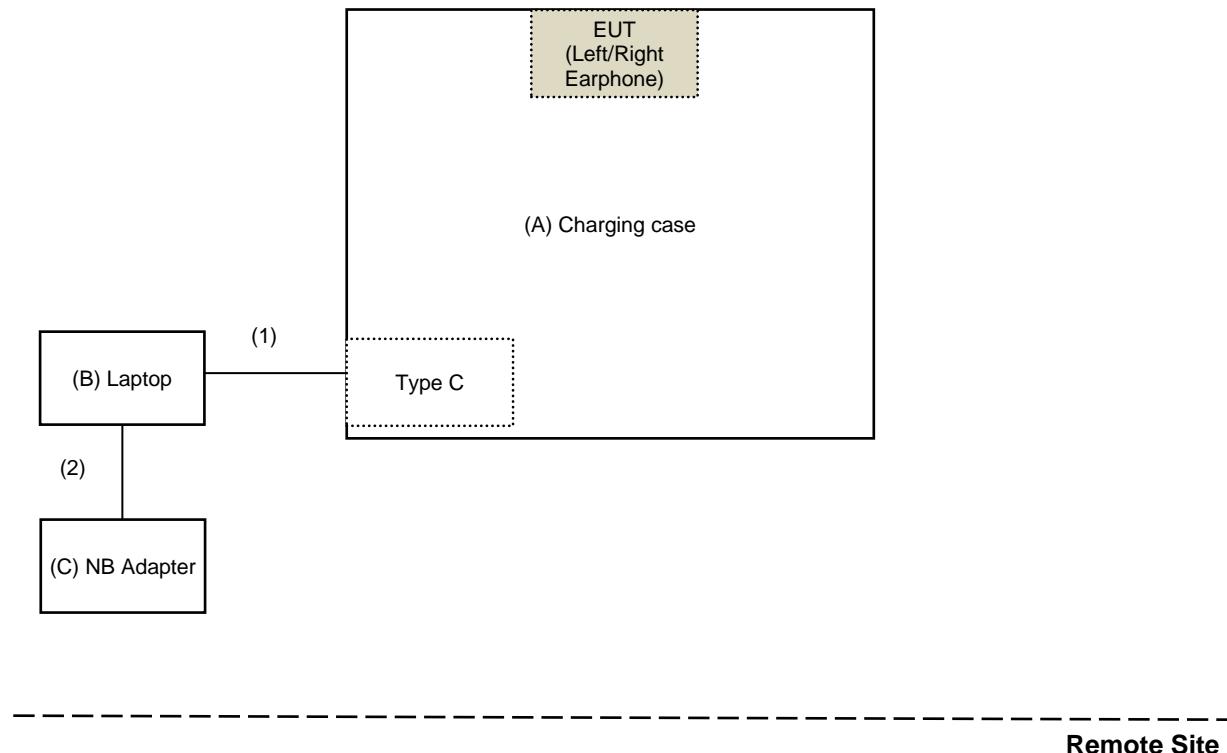


### 3.6 Test Program Used and Operation Descriptions

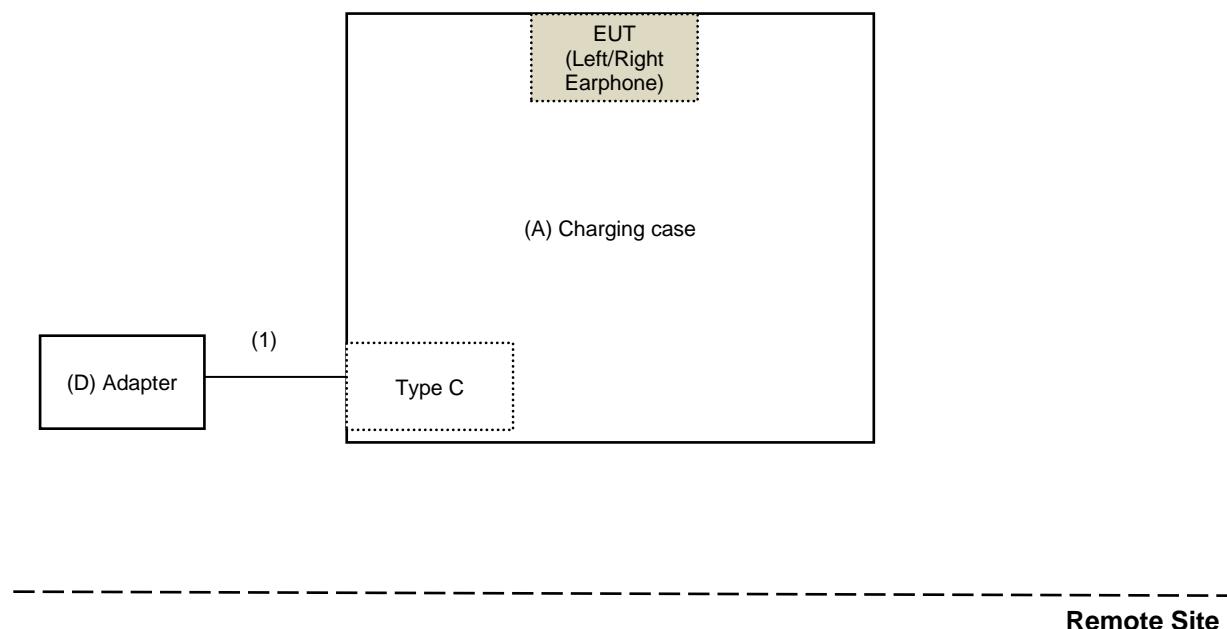
Controlling software (AB158x\_Airoha\_Tool\_Kit(ATK)\_v3.4.4) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

### 3.7 Connection Diagram of EUT and Peripheral Devices

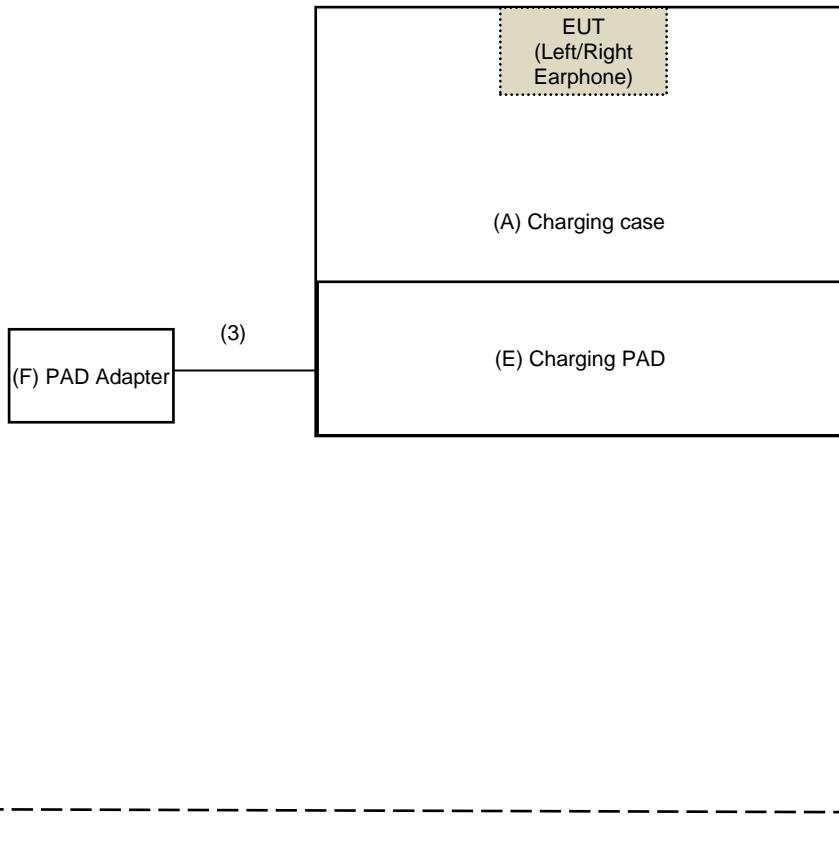
A(Left/Right Earphone)



B(Left/Right Earphone)



C(Left/Right Earphone)



### 3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Charging Case	BOSE	442318	N/A	A94442318	Supplied by applicant
B	Laptop	Lenovo	81A4	YD02TWDP	N/A	Provided by Lab
C	NB Adapter	Lenovo	ADLX65CLGU2A	N/A	N/A	Provided by Lab
D	Adapter	BOSE	F5V-1.6C-1U-US	N/A	N/A	Supplied by applicant
E	Charging PAD	belkin	F7U027	N/A	N/A	Provided by Lab
F	PAD Adapter	belkin	ADS-26FSG-12 150223EPCU	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	Type-C Cable	1	0.3	Y	0	Supplied by applicant
2	NB Adapter DC cable	1	1.9	N	0	Provided by Lab
3	PAD Adapter DC cable	1	1.5	N	0	Provided by Lab

## 4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

### 4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Pulse Power Sensor Anritsu	MA2411B	0738404	2023/5/5	2024/5/4
RF Power Meter Anritsu	ML2495A	0842014	2023/5/5	2024/5/4
USB Wideband Power Sensor Keysight	U2021XA	U2021XA_001	2023/6/6	2024/6/5

Notes:

1. The test was performed in LK - Oven
2. Tested Date: 2024/4/2

### 4.2 Number of Hopping Frequency Used

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
PXA Signal Analyzer Keysight	N9030A	MY54490260	2023/7/13	2024/7/12
Signal Analyzer R&S	FSV40	101042	2023/9/5	2024/9/4
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in LK - Oven
2. Tested Date: 2024/4/2

### 4.3 Dwell Time on Each Channel

Refer to section 4.2 to get information of the instruments.

### 4.4 Hopping Channel Separation

Refer to section 4.2 to get information of the instruments.

### 4.5 20 dB Bandwidth

Refer to section 4.2 to get information of the instruments.

### 4.6 Conducted Out of Band Emissions

Refer to section 4.2 to get information of the instruments.

#### 4.7 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance LYNICS	0900510	E1-01-305	2024/2/6	2025/2/5
		E1-011285	2023/9/21	2024/9/20
		E1-011286	2023/9/21	2024/9/20
EMI Test Receiver R&S	ESCS 30	100276	2023/4/20	2024/4/19
	ESR3	102412	2023/12/25	2024/12/24
Fixed Attenuator STI	STI02-2200-10	NO.4	2023/9/1	2024/8/31
High Voltage Probe Schwarzbeck	TK9420	00982	2023/12/11	2024/12/10
LISN R&S	ENV216	101197	2023/7/12	2024/7/11
LISN Schwarzbeck	NNLK 8121	8121-731	2023/6/9	2024/6/8
		8121-808	2023/5/2	2024/5/1
	NNLK 8129	8129229	2023/6/27	2024/6/26
	NSLK 8128	8128-244	2023/11/10	2024/11/9
RF Coaxial Cable PEWC	5D-FB	Cable-CO5-01	2024/1/18	2025/1/17
Software BVADT	Cond_V7.4.1.0	N/A	N/A	N/A

Notes:

1. The test was performed in Linkou Conduction 5.
2. Tested Date: 2024/4/2

#### 4.8 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Bi_Log Antenna Schwarzbeck	VULB 9168	137	2023/10/13	2024/10/12
Coupling / Decoupling Network Schwarzbeck	CDNE-M2	00097	2023/5/25	2024/5/24
	CDNE-M3	00091	2023/5/25	2024/5/24
Loop Antenna EMCI	LPA600	270	2023/9/4	2024/9/3
MXE EMI Receiver Agilent	N9038A	MY51210129	2024/3/22	2025/3/21
		MY51210137	2023/6/5	2024/6/4
Preamplifier Agilent	8447D	2944A11064	2024/2/15	2025/2/14
Preamplifier EMCI	EMC001340	980269	2023/6/27	2024/6/26
RF Coaxial Cable Pacific	8D-FB	Cable-CH6-02	2023/6/27	2024/6/26
Signal Analyzer R&S	FSV40	101544	2023/5/9	2024/5/8
Software BVADT	Radiated_V8.7.08	N/A	N/A	N/A
Tower ADT	AT100	0306	N/A	N/A
Turn Table ADT	TT100	0306	N/A	N/A

Notes:

1. The test was performed in Linkou 966 Chamber 6 (CH 6).
2. Tested Date: 2024/3/28

#### 4.9 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Boresight antenna tower fixture BV	BAF-02	6	N/A	N/A
High Pass Filter Wainwright	WHK 3.1/18G-10SS	SN 8	2023/5/25	2024/5/24
Horn Antenna EMCO	3115	00028257	2023/11/12	2024/11/11
Horn Antenna ETS-Lindgren	3117-PA	00215857	2023/11/12	2024/11/11
Horn Antenna Schwarzbeck	BBHA 9170	212	2023/10/16	2024/10/15
		BBHA9170241	2023/10/16	2024/10/15
MXE EMI Receiver Agilent	N9038A	MY51210129	2024/3/22	2025/3/21
		MY51210137	2023/6/5	2024/6/4
Notch Filter Micro-Tronics	BRC50703-01	010	2023/5/25	2024/5/24
	BRM17690	005	2023/5/25	2024/5/24
Preamplifier EMCI	EMC0126545	980076	2024/2/15	2025/2/14
	EMC184045B	980175	2023/9/2	2024/9/1
		980235	2024/2/15	2025/2/14
Preamplifier HP	8449B	3008A01201	2024/2/15	2025/2/14
RF Coaxial Cable EMCI	EMC102-KM-KM-1000	200310	2024/3/11	2025/3/10
	EMC104	190801	2023/9/13	2024/9/12
		190804	2023/9/13	2024/9/12
RF Coaxial Cable HUBER+SUHNER	SF-104	Cable-CH6-01	2023/9/13	2024/9/12
Signal Analyzer R&S	FSV40	101042	2023/9/5	2024/9/4
		101544	2023/5/9	2024/5/8
Software BVADT	Radiated_V7.7.1.1.1	N/A	N/A	N/A
Tower ADT	AT100	0306	N/A	N/A
Turn Table ADT	TT100	0306	N/A	N/A

Notes:

1. The test was performed in Linkou 966 Chamber 6 (CH 6).
2. Tested Date: 2024/3/28 ~ 2024/4/1

## 5 Limits of Test Items

### 5.1 RF Output Power

The Maximum Output Power Measurement is 125 mW (21 dBm).

### 5.2 Number of Hopping Frequency Used

At least 15 channels frequencies, and should be equally spaced.

### 5.3 Dwell Time on Each Channel

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

### 5.4 Hopping Channel Separation

At least 25 kHz or two-third of 20 dB hopping channel bandwidth (whichever is greater).

### 5.5 20 dB Bandwidth

Maximum bandwidth is not specified.

### 5.6 Conducted Out of Band Emissions

Below 20 dB of the highest emission level of operating band (in 100 kHz Resolution Bandwidth).

### 5.7 AC Power Conducted Emissions

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Notes:

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

## 5.8 Unwanted Emissions below 1 GHz

Radiated emissions up to 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

## 5.9 Unwanted Emissions above 1 GHz

Radiated emissions above 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

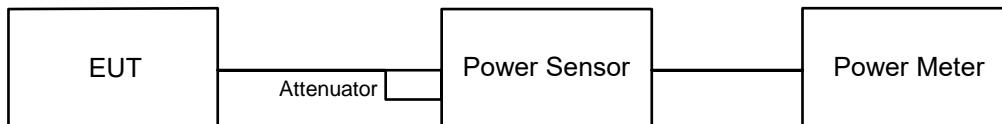
Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

## 6 Test Arrangements

### 6.1 RF Output Power

#### 6.1.1 Test Setup



#### 6.1.2 Test Procedure

**Peak Power:**

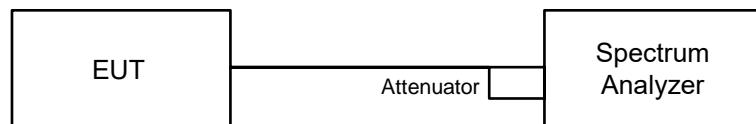
A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

**Average Power:**

Average power sensor was used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

### 6.2 Number of Hopping Frequency Used

#### 6.2.1 Test Setup

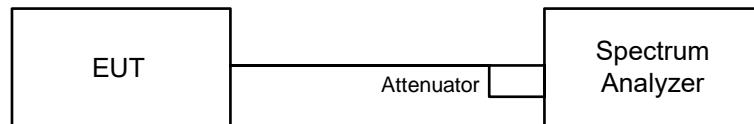


#### 6.2.2 Test Procedure

- Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
- Turn on the EUT and connect its antenna terminal to measurement via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
- Set the SA on MaxHold Mode, and then keep the EUT in hopping mode. Record all the signals from each channel until each one has been recorded.
- Set the SA on View mode and then plot the result on SA screen.
- Repeat above procedures until all frequencies measured were complete.

### 6.3 Dwell Time on Each Channel

#### 6.3.1 Test Setup

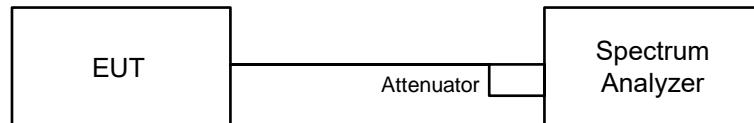


#### 6.3.2 Test Procedure

- Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
- Turn on the EUT and connect its antenna terminal to measurement via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
- Adjust the center frequency of SA on any frequency to be measured and set SA to zero span mode. And then, set RBW and VBW of spectrum analyzer to proper value.
- Measure the time duration of one transmission on the measured frequency. And then plot the result with time difference of this time duration.
- Repeat above procedures until all different time-slot modes have been completed.

### 6.4 Hopping Channel Separation

#### 6.4.1 Test Setup

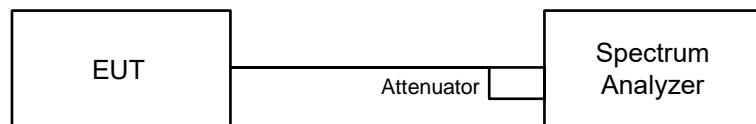


#### 6.4.2 Test Procedure

- Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range.
- By using the MaxHold function record the separation of two adjacent channels.
- Measure the frequency difference of these two adjacent channels by SA MARK function. And then plot the result on SA screen.
- Repeat above procedures until all frequencies measured were complete.

## 6.5 20 dB Bandwidth

### 6.5.1 Test Setup

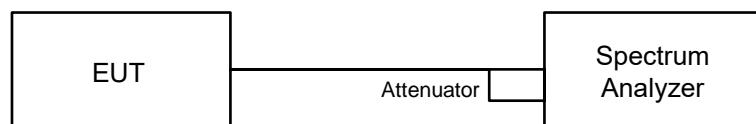


### 6.5.2 Test Procedure

- Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
- Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
- Repeat above procedures until all frequencies measured were complete.

## 6.6 Conducted Out of Band Emissions

### 6.6.1 Test Setup



### 6.6.2 Test Procedure

#### MEASUREMENT PROCEDURE REF

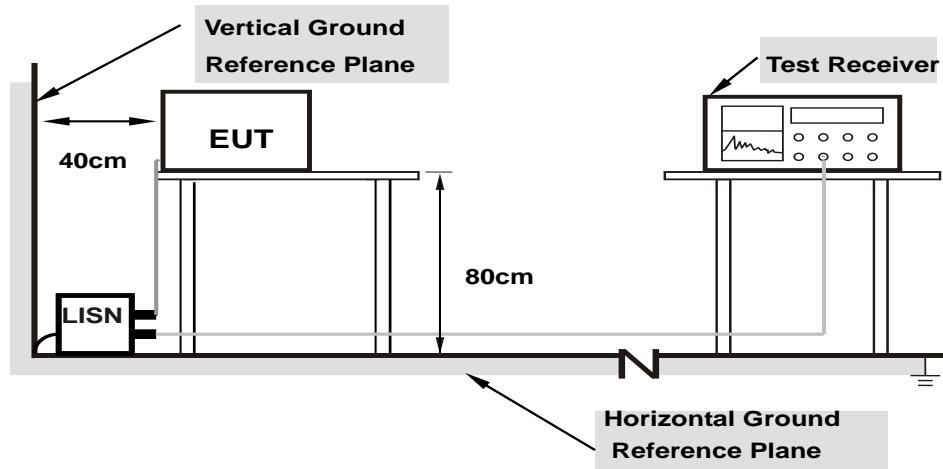
- Set the RBW = 100 kHz.
- Set the VBW  $\geq$  300 kHz.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

#### MEASUREMENT PROCEDURE OOB

- Set RBW = 100 kHz.
- Set VBW  $\geq$  300 kHz.
- Detector = peak.
- Sweep = auto couple.
- Trace Mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level.

## 6.7 AC Power Conducted Emissions

### 6.7.1 Test Setup



**Note: 1. Support units were connected to second LISN.**

For the actual test configuration, please refer to the attached file (Test Setup Photo).

### 6.7.2 Test Procedure

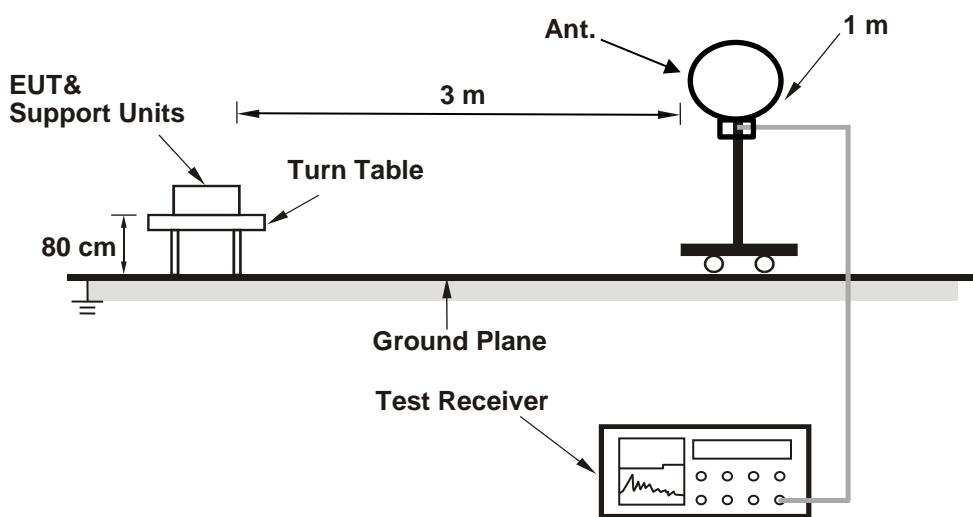
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz-30 MHz.

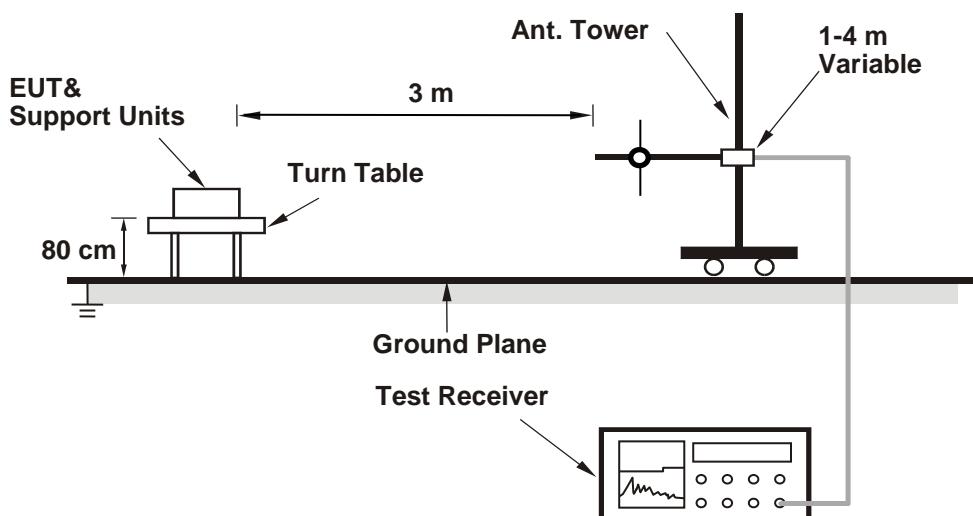
## 6.8 Unwanted Emissions below 1 GHz

### 6.8.1 Test Setup

#### For Radiated emission below 30 MHz



#### For Radiated emission above 30 MHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

## 6.8.2 Test Procedure

### For Radiated emission below 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

### For Radiated emission above 30 MHz

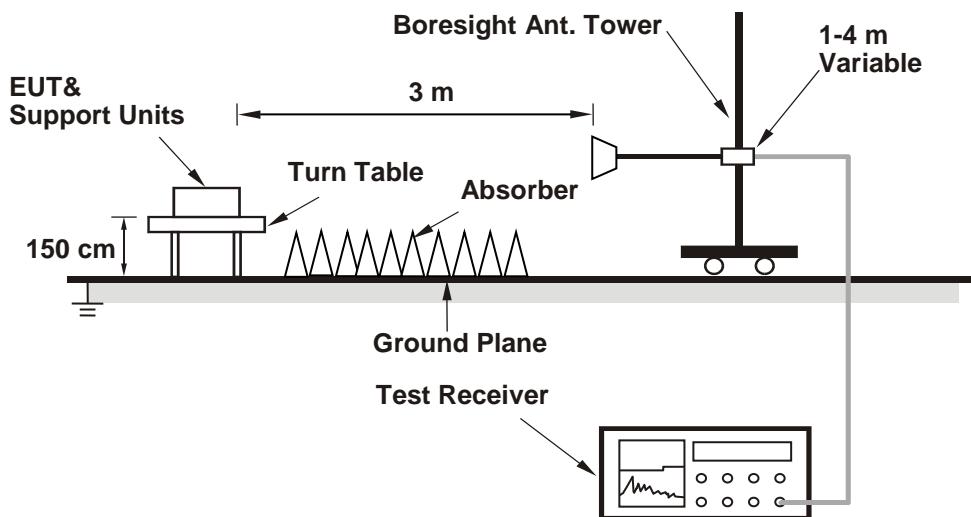
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

## 6.9 Unwanted Emissions above 1 GHz

### 6.9.1 Test Setup



For the actual test configuration, please refer to the attached file (Test Setup Photo).

### 6.9.2 Test Procedure

- a. The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Notes:

1. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) and Average detection (AV) at frequency above 1 GHz.
2. According to ANSI C63.10 section 6.6.4 and 4.1.4.2.2. For fundamental and harmonic signal measurement, according to ANSI C63.10 section 7.5, the average value = peak value + duty cycle correction factor. For duty cycle correction factor values, see the Test Signal Duty Cycle section in this report.
3. All modes of operation were investigated and the worst-case emissions are reported.

## 7 Test Results of Test Item

### 7.1 RF Output Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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#### A(Left Earphone)

##### For Peak Power

##### GFSK

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	31.477	14.98	21	Pass
39	2441	32.359	15.10	21	Pass
78	2480	33.037	15.19	21	Pass

Note: The antenna gain is -0.29 dBi < 6 dBi, so the output power limit shall not be reduced.

##### 8DPSK

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	20.277	13.07	21	Pass
39	2441	20.749	13.17	21	Pass
78	2480	20.989	13.22	21	Pass

Note: The antenna gain is -0.29 dBi < 6 dBi, so the output power limit shall not be reduced.

##### For Average Power

##### GFSK

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	30.761	14.88
39	2441	31.623	15.00
78	2480	32.285	15.09

##### 8DPSK

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	19.815	12.97
39	2441	20.23	13.06
78	2480	20.512	13.12

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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### A(Right Earphone)

#### For Peak Power

##### GFSK

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	32.885	15.17	21	Pass
39	2441	33.189	15.21	21	Pass
78	2480	32.961	15.18	21	Pass

Note: The antenna gain is -1.65 dBi < 6 dBi, so the output power limit shall not be reduced.

### 8DPSK

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	20.559	13.13	21	Pass
39	2441	20.464	13.11	21	Pass
78	2480	19.498	12.90	21	Pass

Note: The antenna gain is -1.65 dBi < 6 dBi, so the output power limit shall not be reduced.

#### For Average Power

##### GFSK

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	31.989	15.05
39	2441	32.434	15.11
78	2480	32.137	15.07

### 8DPSK

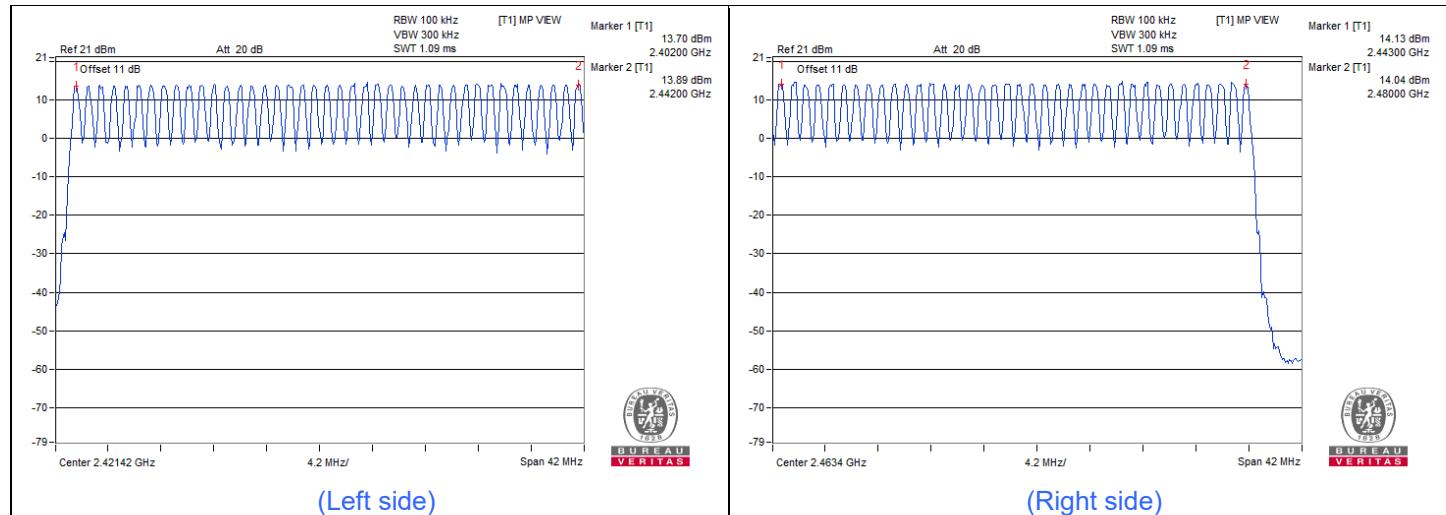
Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	20.091	13.03
39	2441	20.045	13.02
78	2480	19.055	12.80

## 7.2 Number of Hopping Frequency Used

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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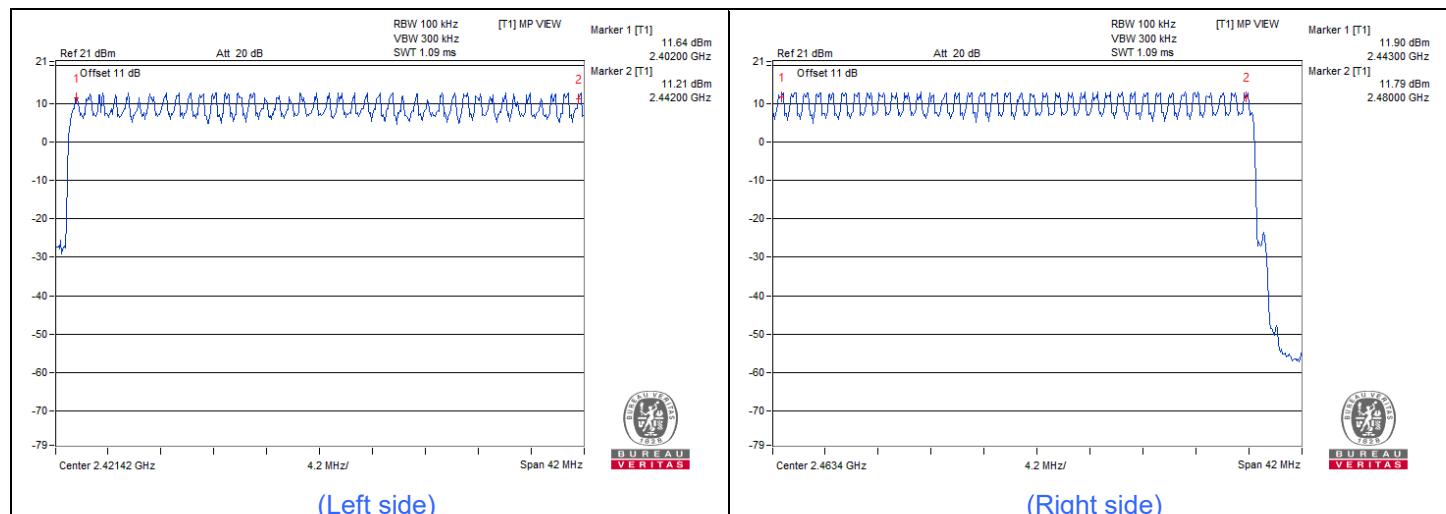
### A(Left Earphone)

#### GFSK



Note: There are 79 hopping frequencies in the hopping mode. On the plots, it shows that the hopping frequencies are equally spaced.

#### 8DPSK



Note: There are 79 hopping frequencies in the hopping mode. On the plots, it shows that the hopping frequencies are equally spaced.

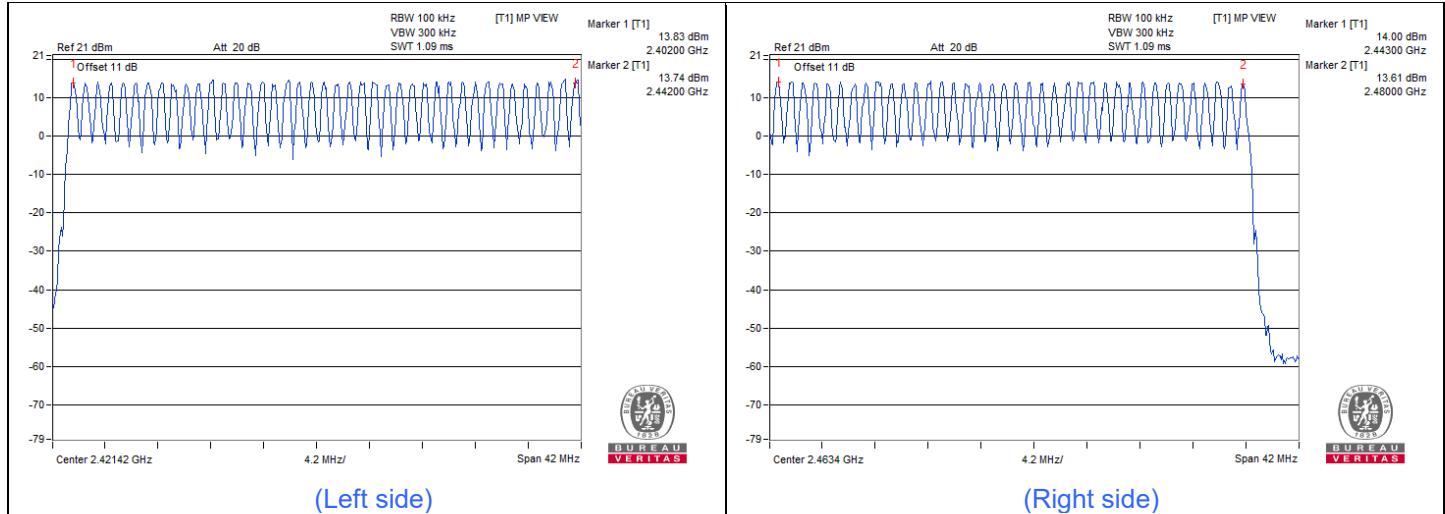


BUREAU  
VERITAS

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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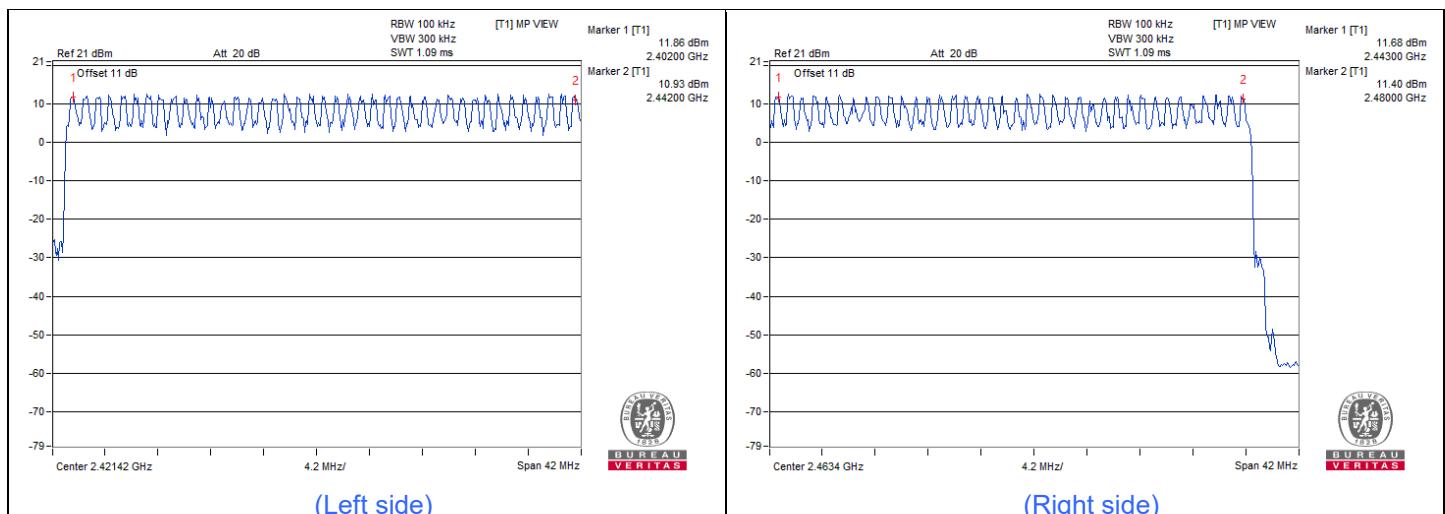
## A(Right Earphone)

# GFSK



Note: There are 79 hopping frequencies in the hopping mode. On the plots, it shows that the hopping frequencies are equally spaced.

8DPSK



Note: There are 79 hopping frequencies in the hopping mode. On the plots, it shows that the hopping frequencies are equally spaced.

### 7.3 Dwell Time on Each Channel

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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#### A(Left Earphone)

##### GFSK

Mode	Number of transmission in 31.6 sec	Length of transmission time (msec)	Dwell Time (msec)	Limit (msec)	Test Result
DH1	50 (times / 5 sec) * 6.32 = 316 times	0.408	128.93	400	Pass
DH3	25 (times / 5 sec) * 6.32 = 158 times	1.71	270.18	400	Pass
DH5	16 (times / 5 sec) * 6.32 = 102 times	3.056	311.71	400	Pass

Spectrum plots of Dwell Time



**8DPSK**

Mode	Number of transmission in 31.6 sec	Length of transmission time (msec)	Dwell Time (msec)	Limit (msec)	Test Result
3DH1	50 (times / 5 sec) * 6.32 = 316 times	0.456	144.1	400	Pass
3DH3	25 (times / 5 sec) * 6.32 = 158 times	1.7	268.6	400	Pass
3DH5	16 (times / 5 sec) * 6.32 = 102 times	2.976	303.55	400	Pass

Spectrum plots of Dwell Time

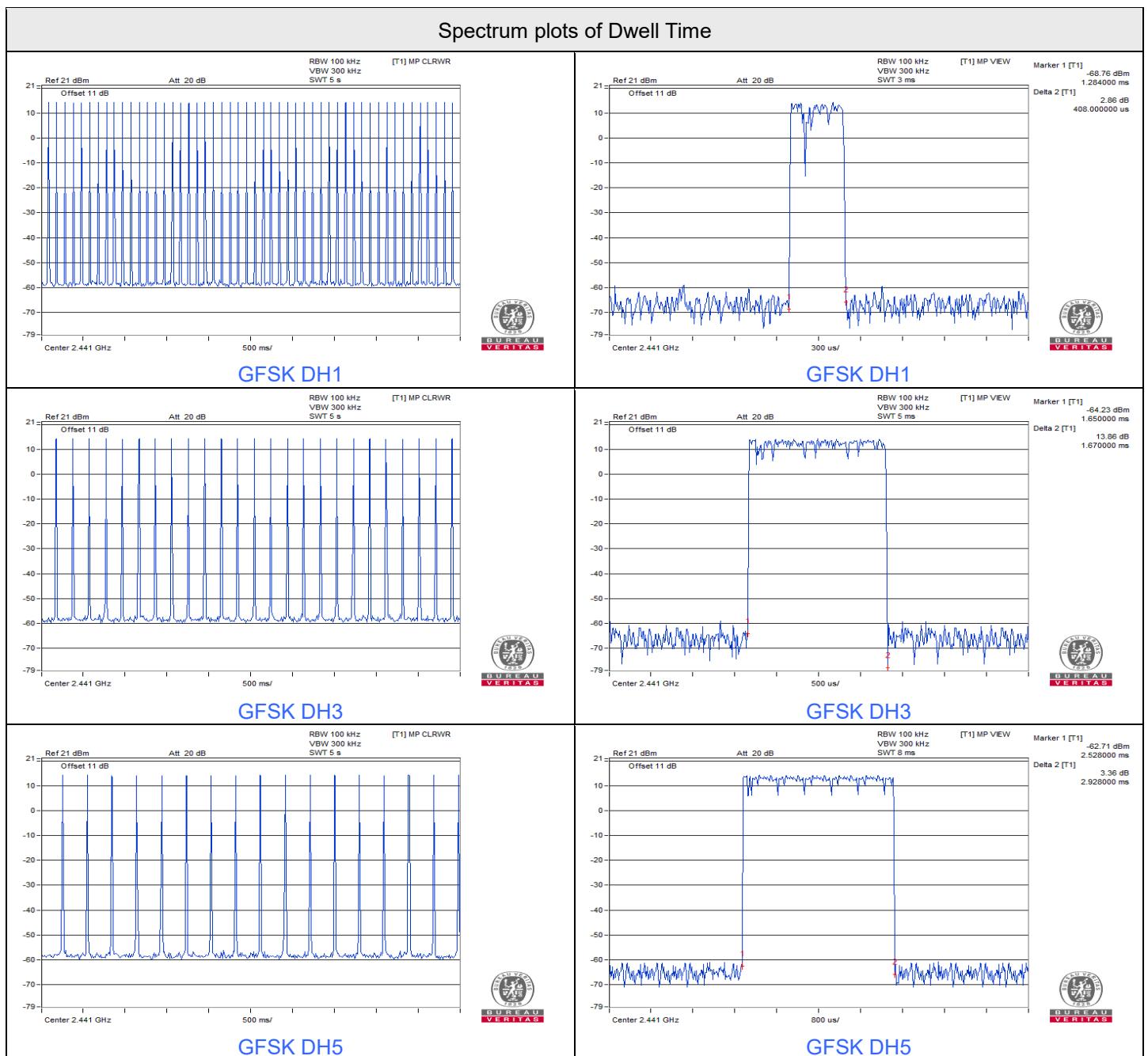


Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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## A(Right Earphone)

### GFSK

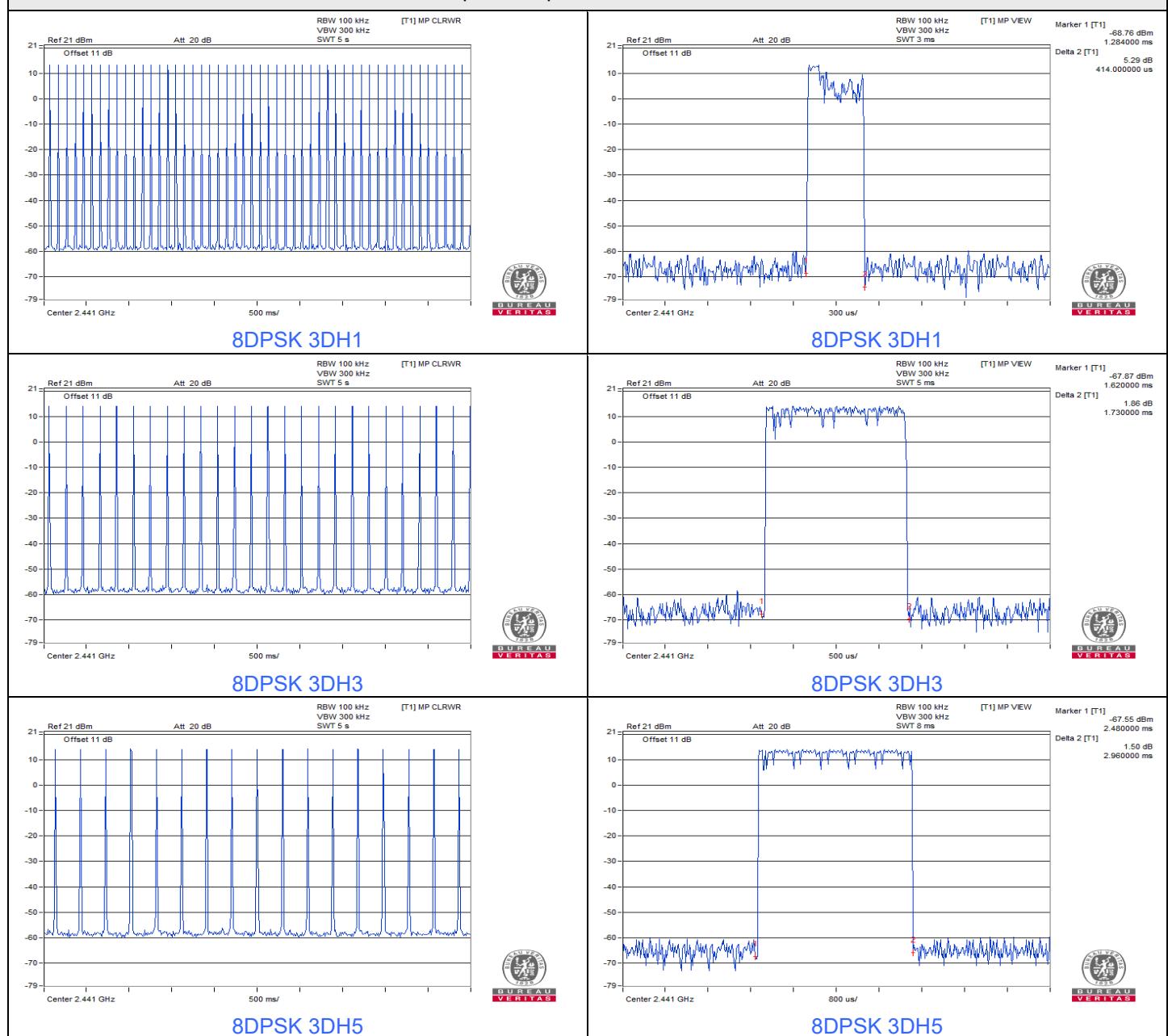
Mode	Number of transmission in 31.6 sec	Length of transmission time (msec)	Dwell Time (msec)	Limit (msec)	Test Result
DH1	50 (times / 5 sec) * 6.32 = 316 times	0.408	128.93	400	Pass
DH3	25 (times / 5 sec) * 6.32 = 158 times	1.67	263.86	400	Pass
DH5	17 (times / 5 sec) * 6.32 = 108 times	2.928	316.22	400	Pass



**8DPSK**

Mode	Number of transmission in 31.6 sec	Length of transmission time (msec)	Dwell Time (msec)	Limit (msec)	Test Result
3DH1	50 (times / 5 sec) * 6.32 = 316 times	0.414	130.82	400	Pass
3DH3	25 (times / 5 sec) * 6.32 = 158 times	1.73	273.34	400	Pass
3DH5	17 (times / 5 sec) * 6.32 = 108 times	2.96	319.68	400	Pass

Spectrum plots of Dwell Time



## 7.4 Hopping Channel Separation

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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### A(Left Earphone)

#### GFSK

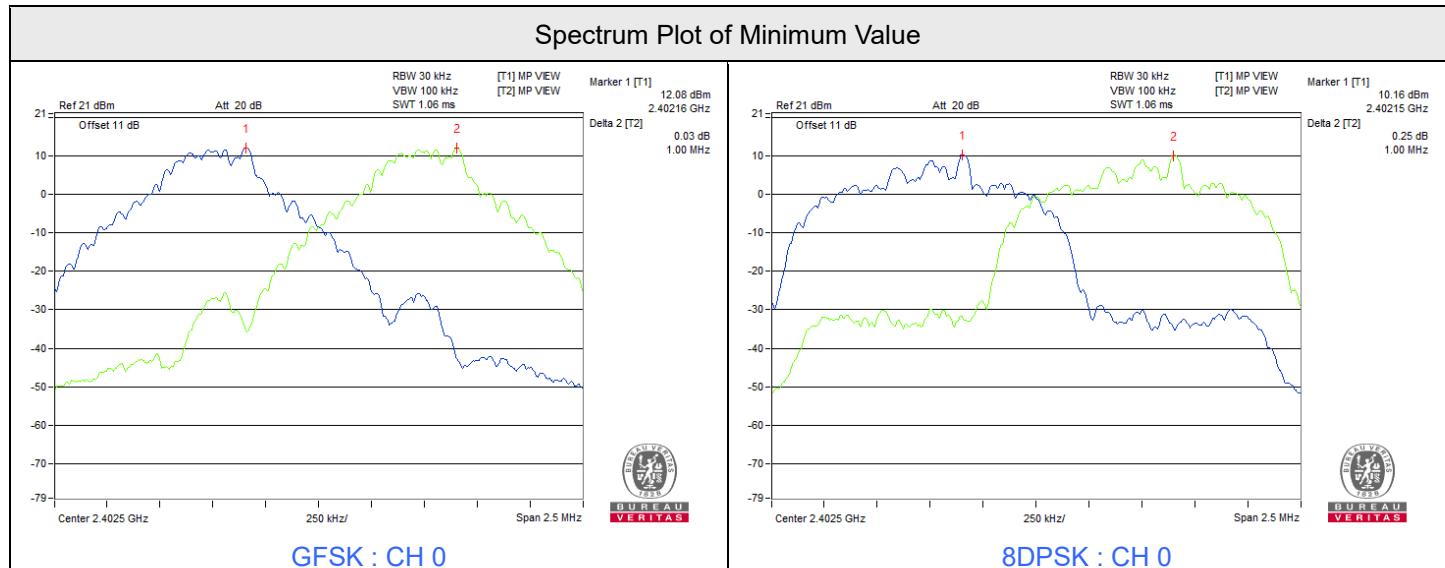
Channel	Frequency (MHz)	Hopping Channel Separation (MHz)	Minimum Limit (MHz)	Test Result
0	2402	1.00	0.64	Pass
39	2441	1.01	0.66	Pass
78	2480	1.00	0.66	Pass

Note: The minimum limit is two-third 20dB bandwidth.

#### 8DPSK

Channel	Frequency (MHz)	Hopping Channel Separation (MHz)	Minimum Limit (MHz)	Test Result
0	2402	1.00	0.86	Pass
39	2441	1.01	0.86	Pass
78	2480	1.01	0.86	Pass

Note: The minimum limit is two-third 20dB bandwidth.



Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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### A(Right Earphone)

#### GFSK

Channel	Frequency (MHz)	Hopping Channel Separation (MHz)	Minimum Limit (MHz)	Test Result
0	2402	1.00	0.65	Pass
39	2441	1.00	0.65	Pass
78	2480	1.00	0.65	Pass

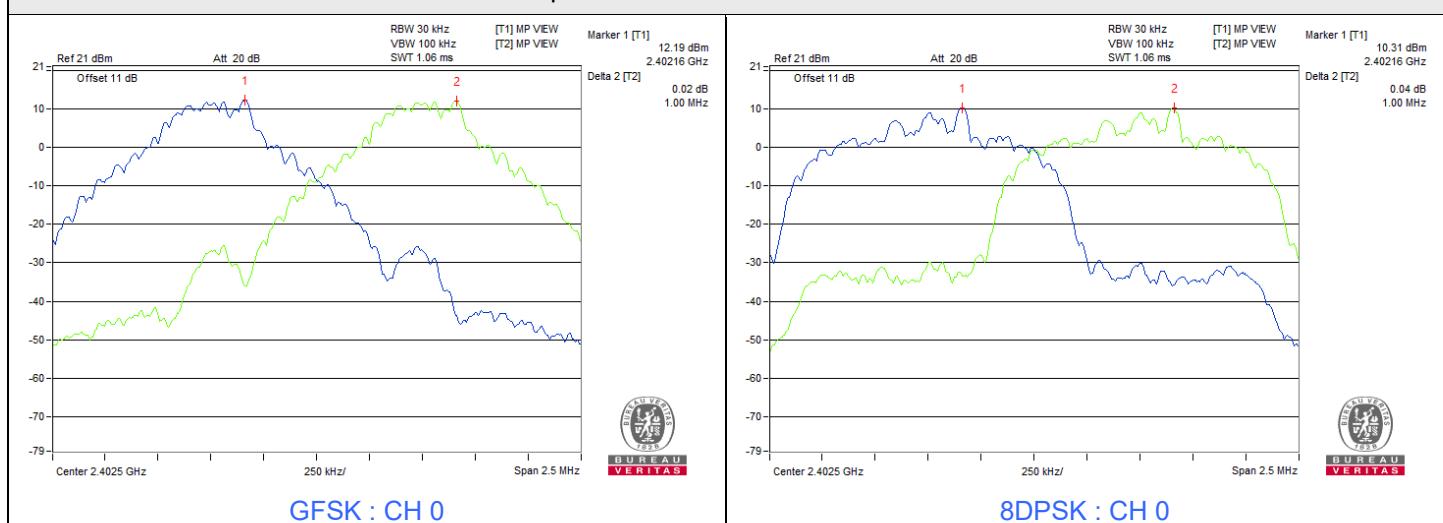
Note: The minimum limit is two-third 20dB bandwidth.

#### 8DPSK

Channel	Frequency (MHz)	Hopping Channel Separation (MHz)	Minimum Limit (MHz)	Test Result
0	2402	1.00	0.86	Pass
39	2441	1.00	0.85	Pass
78	2480	1.00	0.85	Pass

Note: The minimum limit is two-third 20dB bandwidth.

Spectrum Plot of Minimum Value



## 7.5 20 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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### A(Left Earphone)

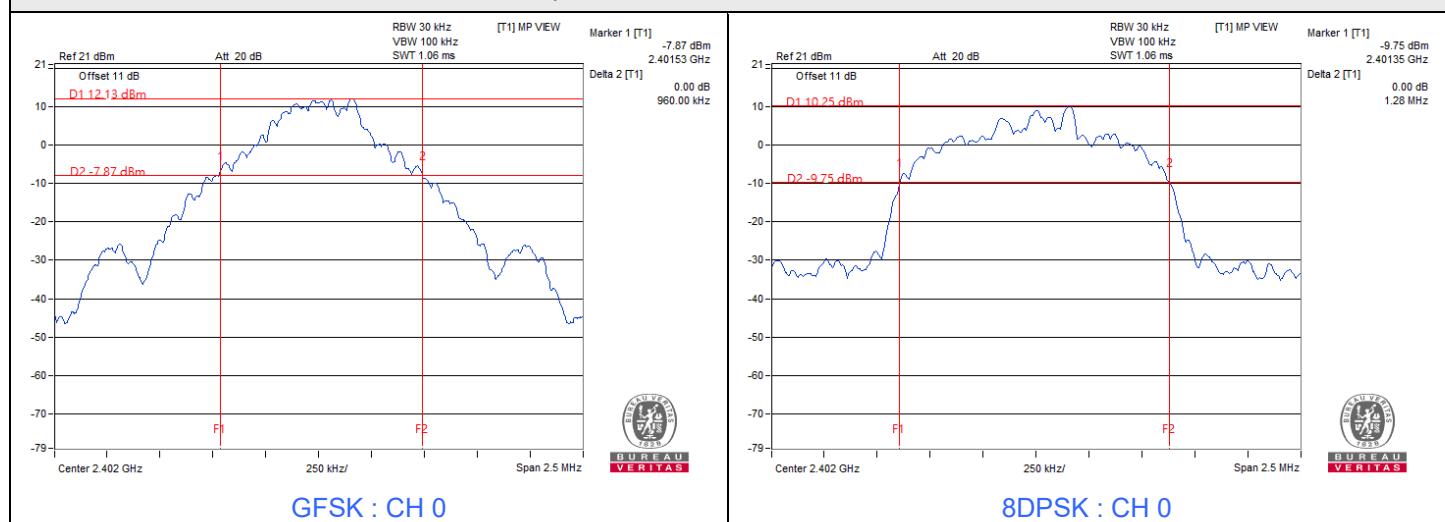
#### GFSK

Channel	Frequency (MHz)	20dB Bandwidth (MHz)
0	2402	0.96
39	2441	0.99
78	2480	0.98

#### 8DPSK

Channel	Frequency (MHz)	20dB Bandwidth (MHz)
0	2402	1.28
39	2441	1.28
78	2480	1.28

Spectrum Plot of Minimum Value



Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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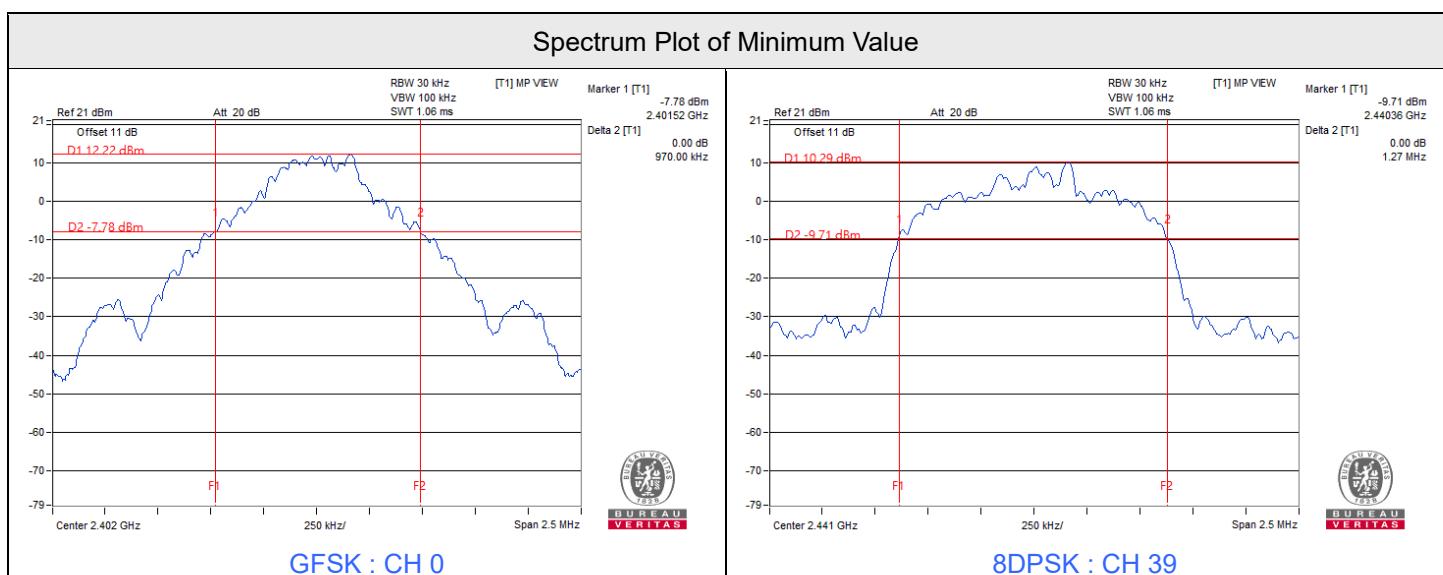
### A(Right Earphone)

#### GFSK

Channel	Frequency (MHz)	20dB Bandwidth (MHz)
0	2402	0.97
39	2441	0.97
78	2480	0.97

#### 8DPSK

Channel	Frequency (MHz)	20dB Bandwidth (MHz)
0	2402	1.28
39	2441	1.27
78	2480	1.27

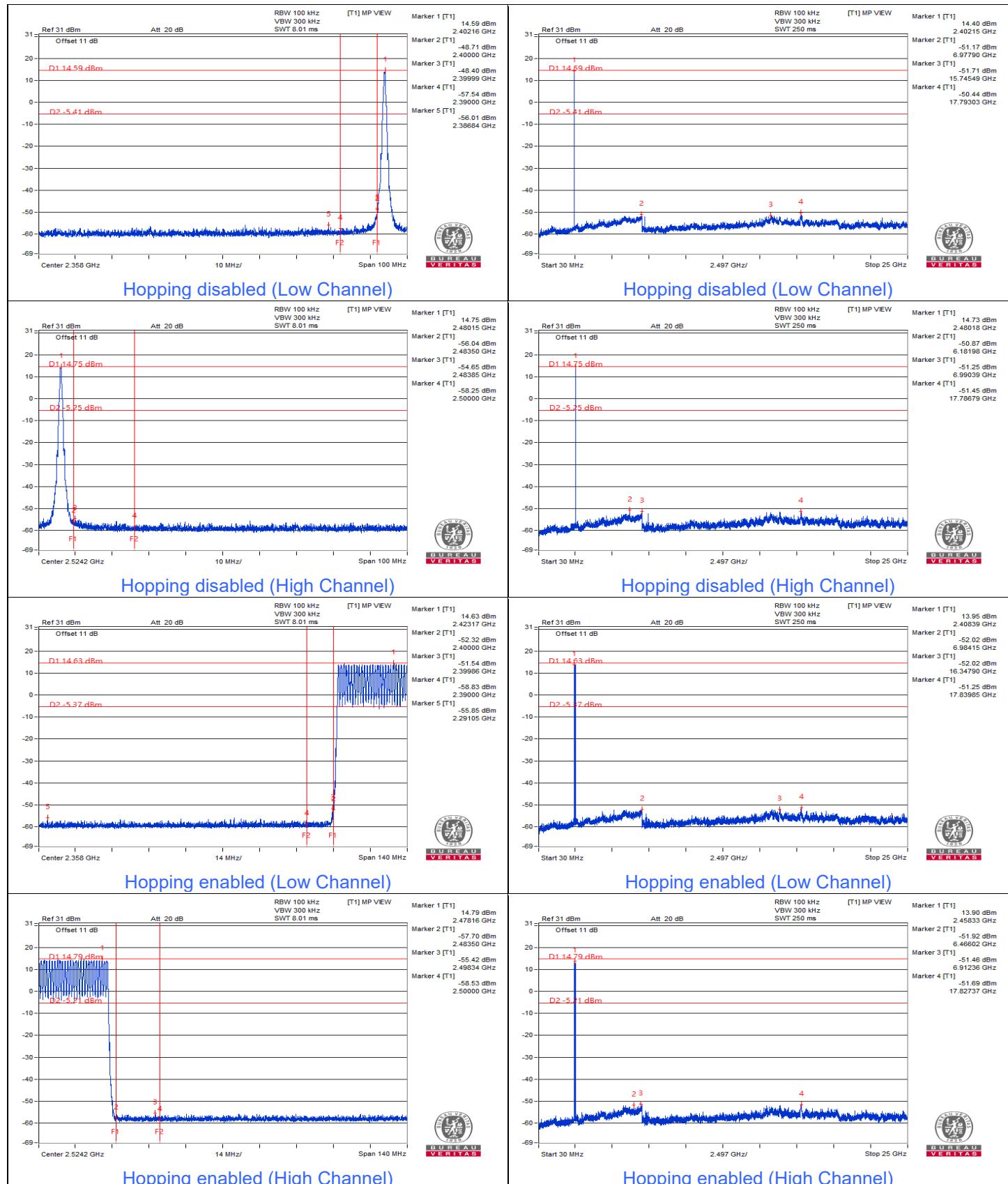


## 7.6 Conducted Out of Band Emissions

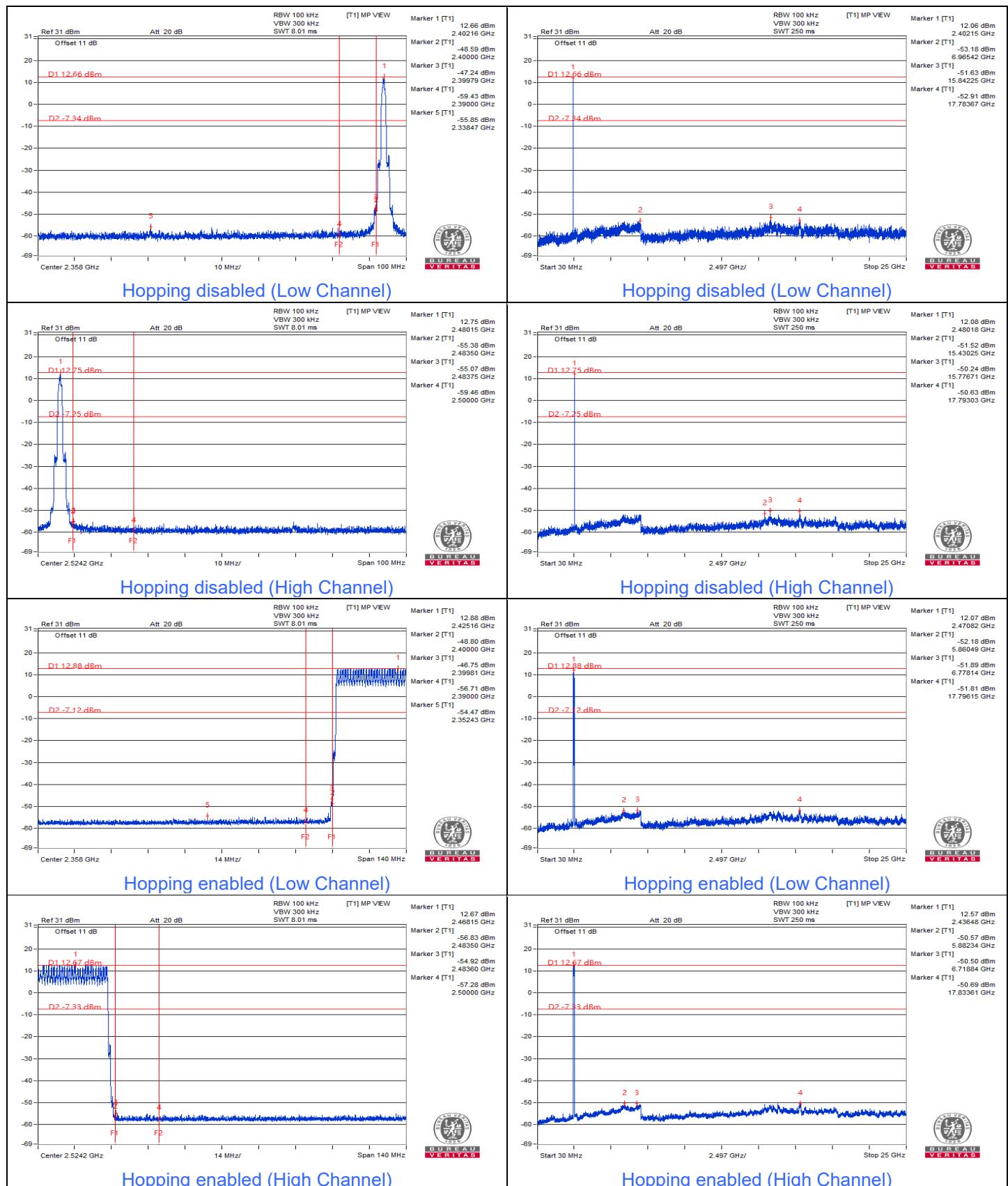
Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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### A(Left Earphone)

#### GFSK



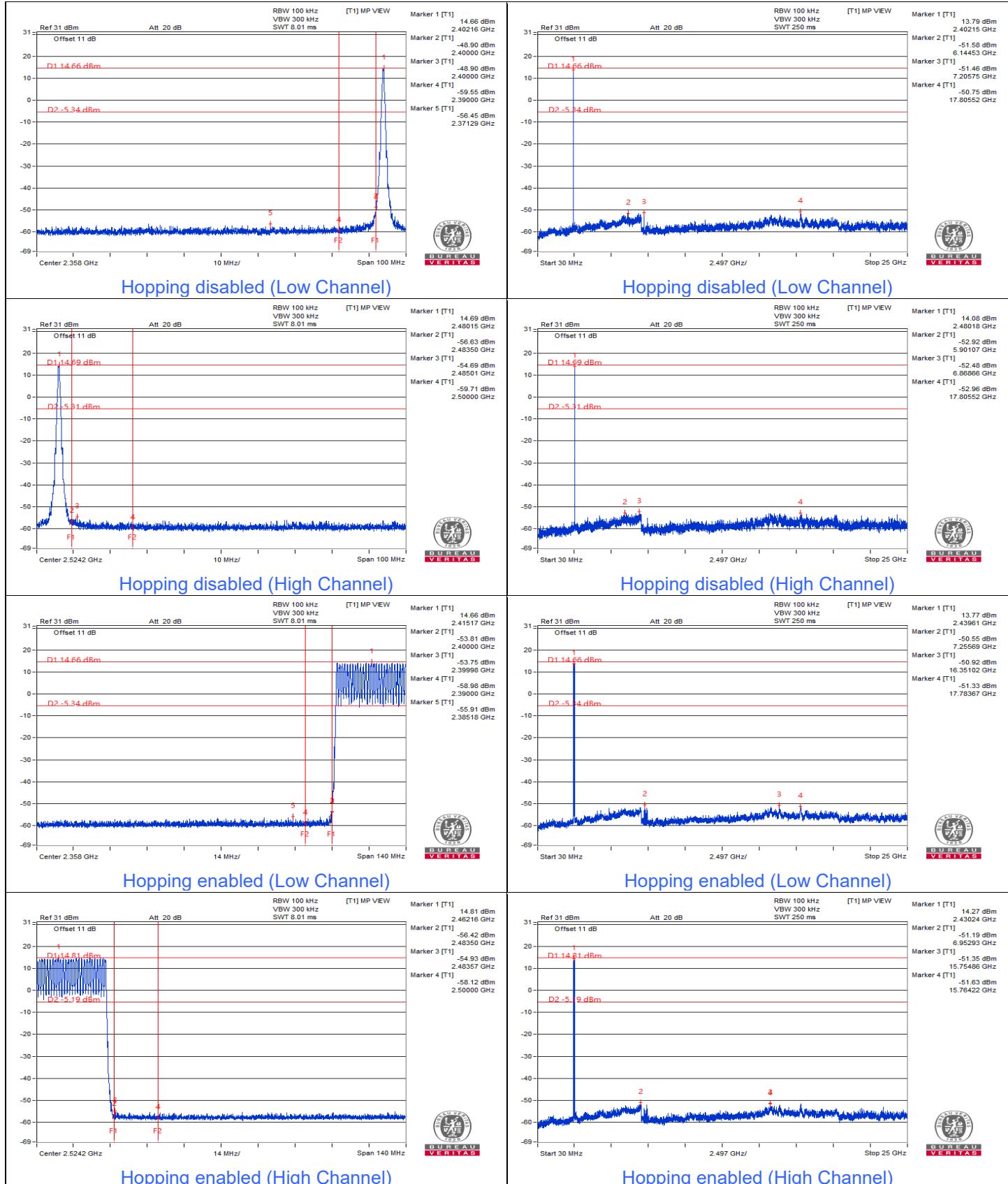
## 8DPSK



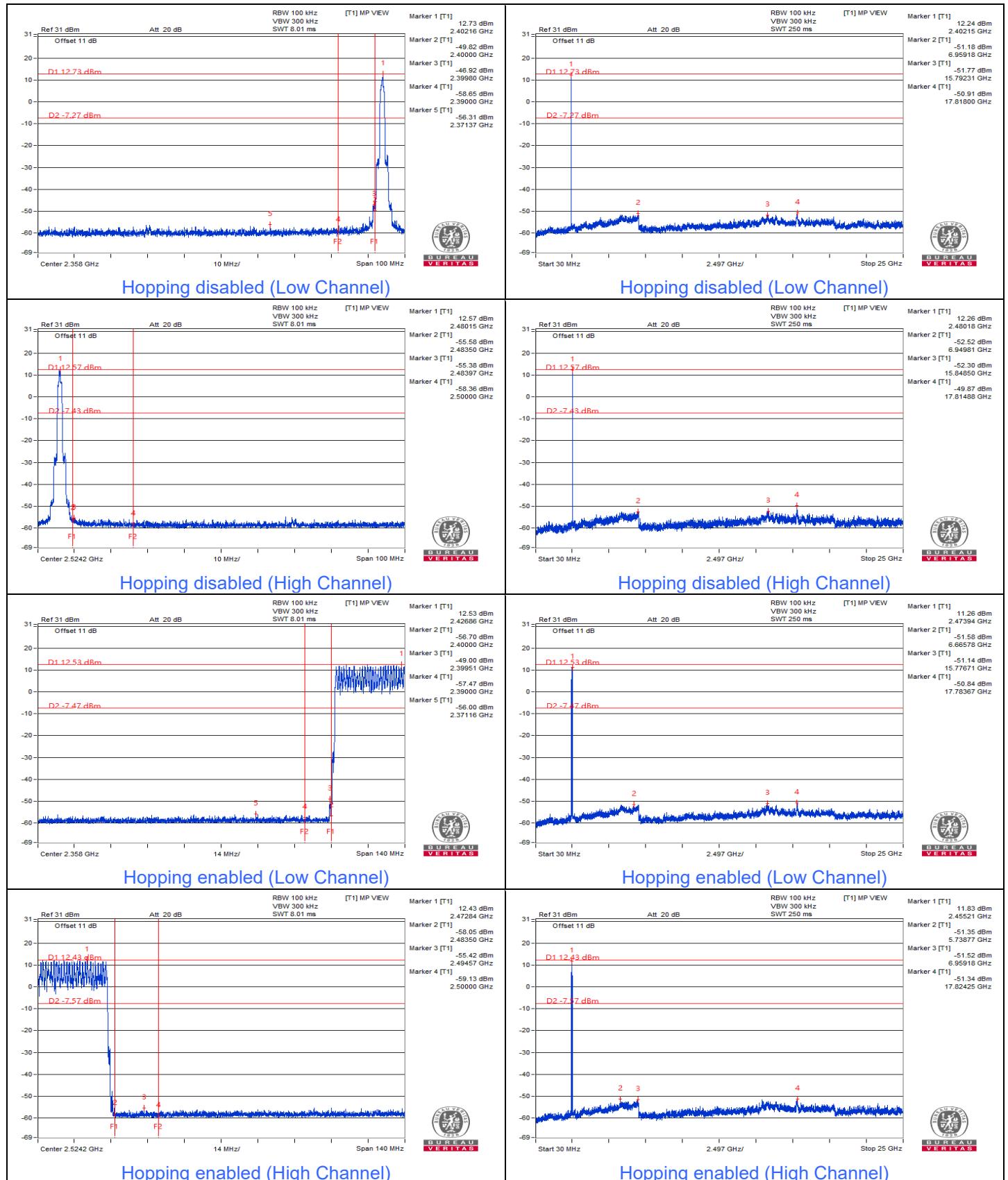
Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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## A(Right Earphone)

### GFSK



## 8DPSK



## 7.7 AC Power Conducted Emissions

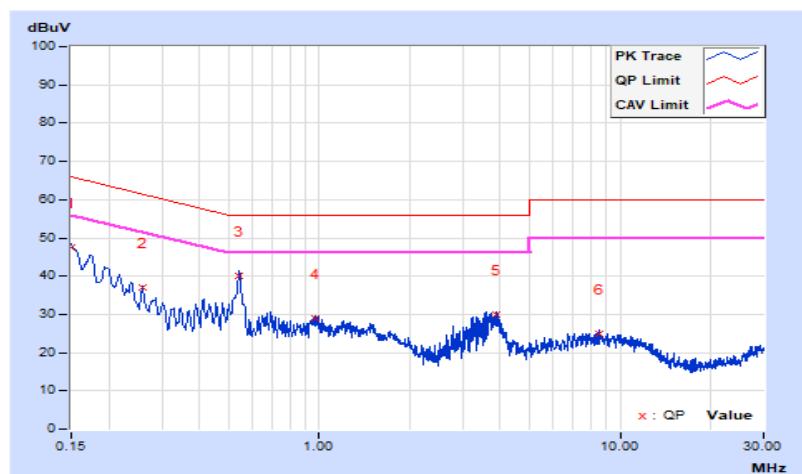
### A(Left Earphone)

<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 78 : 2480 MHz
<b>Frequency Range</b>	150 kHz ~ 30 MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.97	37.42	20.82	47.39	30.79	66.00	56.00	-18.61	-25.21
2	0.25933	10.07	27.02	18.87	37.09	28.94	61.45	51.45	-24.36	-22.51
3	0.54302	10.12	29.85	23.10	39.97	33.22	56.00	46.00	-16.03	-12.78
4	0.97323	10.07	18.93	12.64	29.00	22.71	56.00	46.00	-27.00	-23.29
5	3.86946	10.34	19.48	8.26	29.82	18.60	56.00	46.00	-26.18	-27.40
6	8.52772	10.87	13.96	8.05	24.83	18.92	60.00	50.00	-35.17	-31.08

#### Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



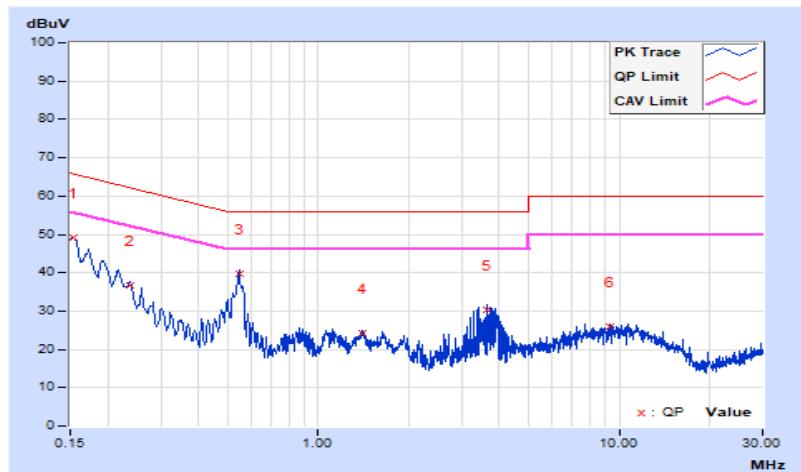
<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 78 : 2480 MHz
<b>Frequency Range</b>	150 kHz ~ 30 MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

#### Phase Of Power : Neutral (N)

<b>No</b>	<b>Frequency (MHz)</b>	<b>Correction Factor (dB)</b>	<b>Reading Value (dBuV)</b>		<b>Emission Level (dBuV)</b>		<b>Limit (dBuV)</b>		<b>Margin (dB)</b>	
			<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>
1	0.15391	10.26	39.00	18.31	49.26	28.57	65.79	55.79	-16.53	-27.22
2	0.23586	10.27	26.40	10.79	36.67	21.06	62.24	52.24	-25.57	-31.18
3	0.54664	10.31	29.51	22.57	39.82	32.88	56.00	46.00	-16.18	-13.12
4	1.40344	10.37	13.84	7.08	24.21	17.45	56.00	46.00	-31.79	-28.55
5	3.65044	10.56	19.58	8.11	30.14	18.67	56.00	46.00	-25.86	-27.33
6	9.26299	11.13	14.73	8.63	25.86	19.76	60.00	50.00	-34.14	-30.24

**Remarks:**

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



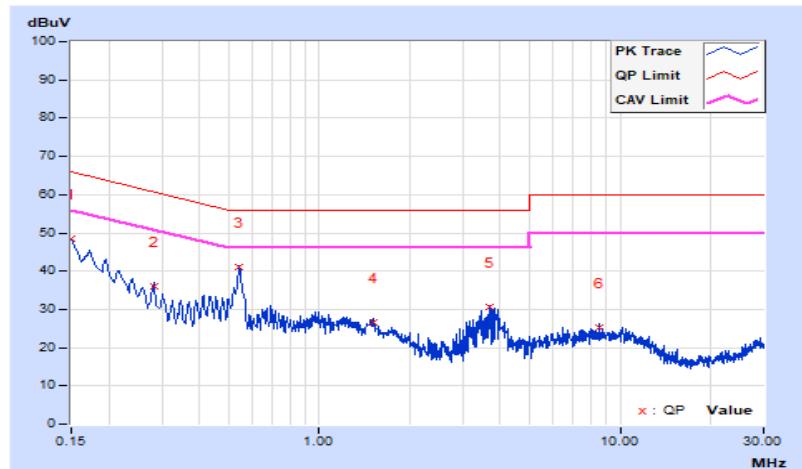
**A(Right Earphone)**

<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 39 : 2441 MHz
<b>Frequency Range</b>	150 kHz ~ 30 MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.97	38.54	21.98	48.51	31.95	66.00	56.00	-17.49	-24.05
2	0.28289	10.08	25.82	18.14	35.90	28.22	60.73	50.73	-24.83	-22.51
<b>3</b>	<b>0.54234</b>	<b>10.12</b>	<b>30.79</b>	<b>23.80</b>	<b>40.91</b>	<b>33.92</b>	<b>56.00</b>	<b>46.00</b>	<b>-15.09</b>	<b>-12.08</b>
4	1.51295	10.12	16.46	9.26	26.58	19.38	56.00	46.00	-29.42	-26.62
5	3.70911	10.32	20.48	9.51	30.80	19.83	56.00	46.00	-25.20	-26.17
6	8.51990	10.87	14.24	7.79	25.11	18.66	60.00	50.00	-34.89	-31.34

**Remarks:**

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



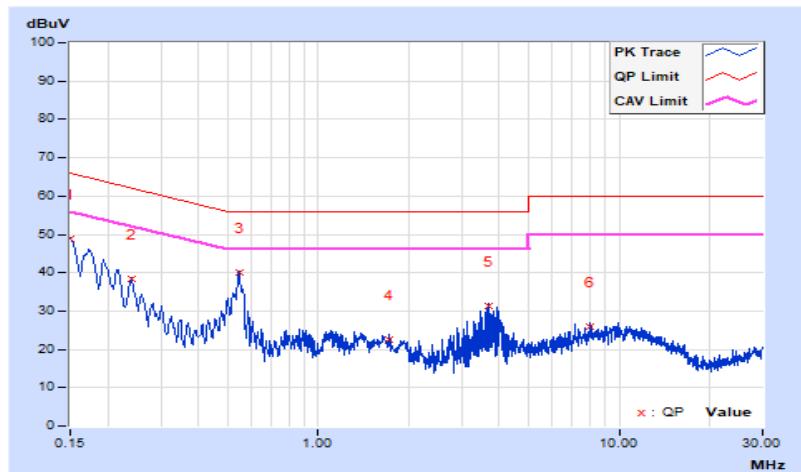
<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 39 : 2441 MHz
<b>Frequency Range</b>	150 kHz ~ 30 MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

#### Phase Of Power : Neutral (N)

<b>No</b>	<b>Frequency (MHz)</b>	<b>Correction Factor (dB)</b>	<b>Reading Value (dBuV)</b>		<b>Emission Level (dBuV)</b>		<b>Limit (dBuV)</b>		<b>Margin (dB)</b>	
			<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>
1	0.15000	10.26	38.61	17.47	48.87	27.73	66.00	56.00	-17.13	-28.27
2	0.23995	10.27	28.18	12.53	38.45	22.80	62.10	52.10	-23.65	-29.30
3	0.54520	10.31	29.74	23.37	40.05	33.68	56.00	46.00	-15.95	-12.32
4	1.72805	10.40	12.30	6.43	22.70	16.83	56.00	46.00	-33.30	-29.17
5	3.70911	10.57	20.89	8.89	31.46	19.46	56.00	46.00	-24.54	-26.54
6	7.97627	11.00	15.03	8.46	26.03	19.46	60.00	50.00	-33.97	-30.54

**Remarks:**

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



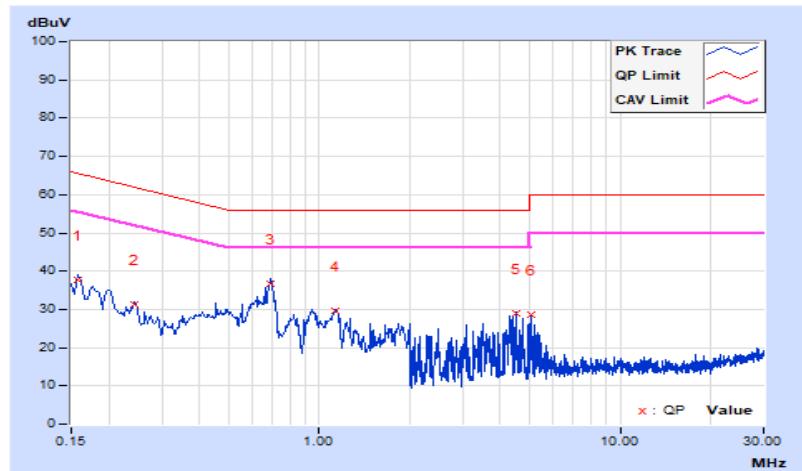
### B(Left Earphone)

<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 78 : 2480 MHz
<b>Frequency Range</b>	150 kHz ~ 30 MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15782	9.98	27.66	11.03	37.64	21.01	65.58	55.58	-27.94	-34.57
2	0.24344	10.06	21.10	9.96	31.16	20.02	61.98	51.98	-30.82	-31.96
3	0.69111	10.10	26.68	9.34	36.78	19.44	56.00	46.00	-19.22	-26.56
4	1.13718	10.08	19.56	4.63	29.64	14.71	56.00	46.00	-26.36	-31.29
5	4.50304	10.41	18.50	4.76	28.91	15.17	56.00	46.00	-27.09	-30.83
6	5.05475	10.47	18.18	5.56	28.65	16.03	60.00	50.00	-31.35	-33.97

#### Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



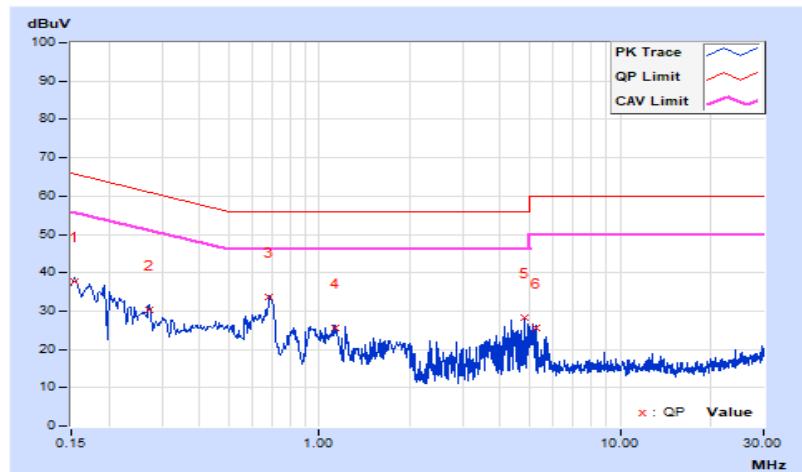
<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 78 : 2480 MHz
<b>Frequency Range</b>	150 kHz ~ 30 MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

**Phase Of Power : Neutral (N)**

<b>No</b>	<b>Frequency (MHz)</b>	<b>Correction Factor (dB)</b>	<b>Reading Value (dBuV)</b>		<b>Emission Level (dBuV)</b>		<b>Limit (dBuV)</b>		<b>Margin (dB)</b>	
			<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>
1	0.15391	10.26	27.44	9.19	37.70	19.45	65.79	55.79	-28.09	-36.34
2	0.27121	10.27	20.02	9.45	30.29	19.72	61.08	51.08	-30.79	-31.36
3	0.67991	10.31	23.45	7.61	33.76	17.92	56.00	46.00	-22.24	-28.08
4	1.12967	10.34	15.33	3.86	25.67	14.20	56.00	46.00	-30.33	-31.80
5	4.80810	10.67	17.74	8.69	28.41	19.36	56.00	46.00	-27.59	-26.64
6	5.24248	10.72	14.90	5.96	25.62	16.68	60.00	50.00	-34.38	-33.32

**Remarks:**

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



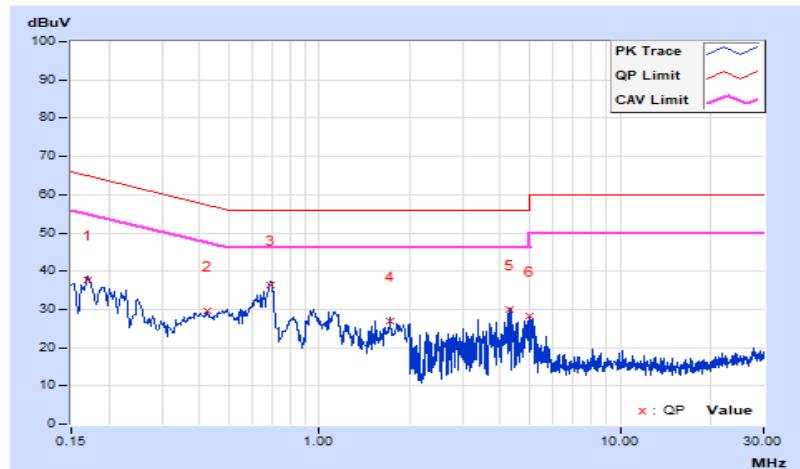
### B(Right Earphone)

<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 39 : 2441 MHz
<b>Frequency Range</b>	150 kHz ~ 30 MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16956	10.00	27.66	11.38	37.66	21.38	64.98	54.98	-27.32	-33.60
2	0.42335	10.13	19.37	6.31	29.50	16.44	57.38	47.38	-27.88	-30.94
3	0.68748	10.10	26.35	6.81	36.45	16.91	56.00	46.00	-19.55	-29.09
4	1.71241	10.13	16.83	5.13	26.96	15.26	56.00	46.00	-29.04	-30.74
5	4.30358	10.38	19.49	5.08	29.87	15.46	56.00	46.00	-26.13	-30.54
6	5.01956	10.47	17.77	5.54	28.24	16.01	60.00	50.00	-31.76	-33.99

#### Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



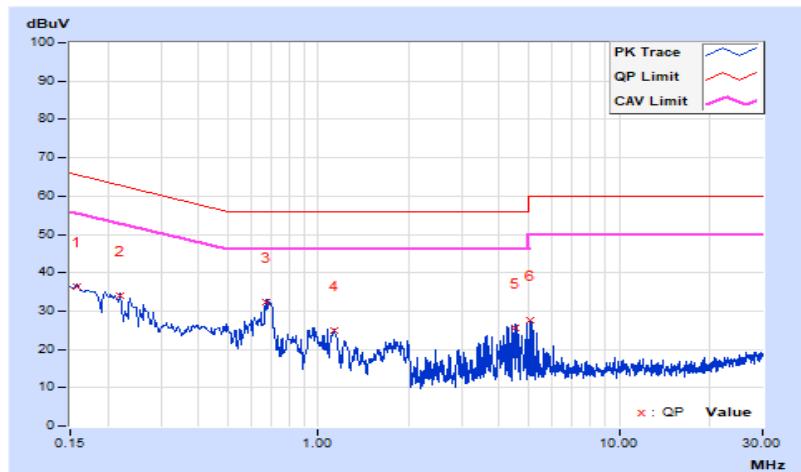
<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 39 : 2441 MHz
<b>Frequency Range</b>	150 kHz ~ 30 MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

**Phase Of Power : Neutral (N)**

<b>No</b>	<b>Frequency (MHz)</b>	<b>Correction Factor (dB)</b>	<b>Reading Value (dBuV)</b>		<b>Emission Level (dBuV)</b>		<b>Limit (dBuV)</b>		<b>Margin (dB)</b>	
			<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>
1	0.15760	10.26	26.26	8.05	36.52	18.31	65.59	55.59	-29.07	-37.28
2	0.22024	10.26	23.78	9.58	34.04	19.84	62.81	52.81	-28.77	-32.97
3	0.66817	10.31	22.01	7.33	32.32	17.64	56.00	46.00	-23.68	-28.36
4	1.13718	10.34	14.48	2.67	24.82	13.01	56.00	46.00	-31.18	-32.99
5	4.52651	10.64	14.87	3.22	25.51	13.86	56.00	46.00	-30.49	-32.14
6	5.07431	10.70	17.00	6.34	27.70	17.04	60.00	50.00	-32.30	-32.96

**Remarks:**

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



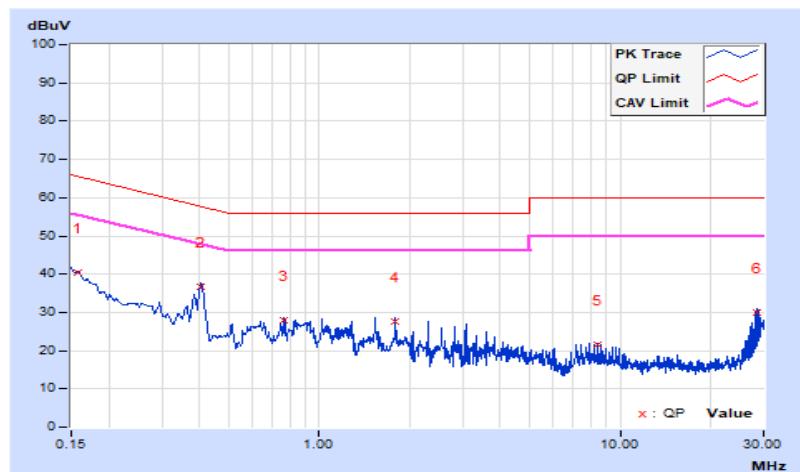
**C(Left Earphone)**

<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 78 : 2480 MHz
<b>Frequency Range</b>	150 kHz ~ 30 MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15719	9.98	30.31	11.61	40.29	21.59	65.61	55.61	-25.32	-34.02
2	0.40421	10.13	26.42	22.14	36.55	32.27	57.77	47.77	-21.22	-15.50
3	0.76591	10.09	17.72	13.20	27.81	23.29	56.00	46.00	-28.19	-22.71
4	1.78919	10.14	17.50	15.47	27.64	25.61	56.00	46.00	-28.36	-20.39
5	8.43386	10.86	10.76	5.26	21.62	16.12	60.00	50.00	-38.38	-33.88
6	28.49338	13.24	16.59	15.03	29.83	28.27	60.00	50.00	-30.17	-21.73

**Remarks:**

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



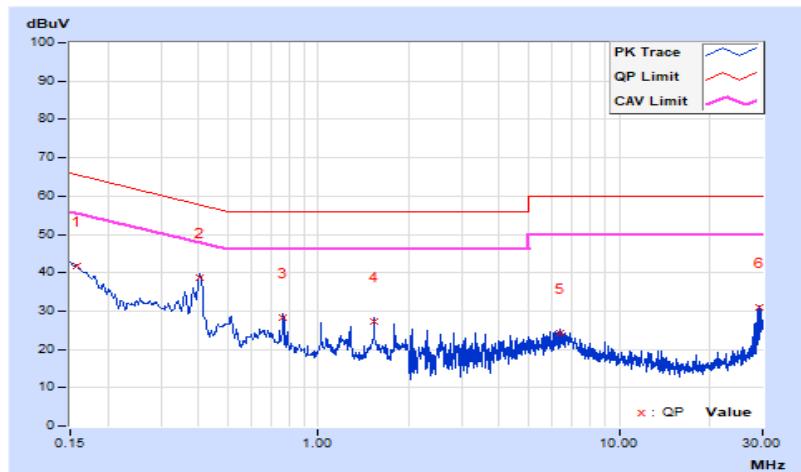
<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 78 : 2480 MHz
<b>Frequency Range</b>	150 kHz ~ 30 MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

**Phase Of Power : Neutral (N)**

<b>No</b>	<b>Frequency (MHz)</b>	<b>Correction Factor (dB)</b>	<b>Reading Value (dBuV)</b>		<b>Emission Level (dBuV)</b>		<b>Limit (dBuV)</b>		<b>Margin (dB)</b>	
			<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>
1	0.15719	10.26	31.62	17.03	41.88	27.29	65.61	55.61	-23.73	-28.32
2	0.40421	10.30	28.29	23.32	38.59	33.62	57.77	47.77	-19.18	-14.15
3	0.76591	10.32	18.03	14.31	28.35	24.63	56.00	46.00	-27.65	-21.37
4	1.53250	10.38	16.94	14.74	27.32	25.12	56.00	46.00	-28.68	-20.88
5	6.38817	10.84	13.27	8.03	24.11	18.87	60.00	50.00	-35.89	-31.13
6	29.25993	13.54	17.54	16.61	31.08	30.15	60.00	50.00	-28.92	-19.85

**Remarks:**

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



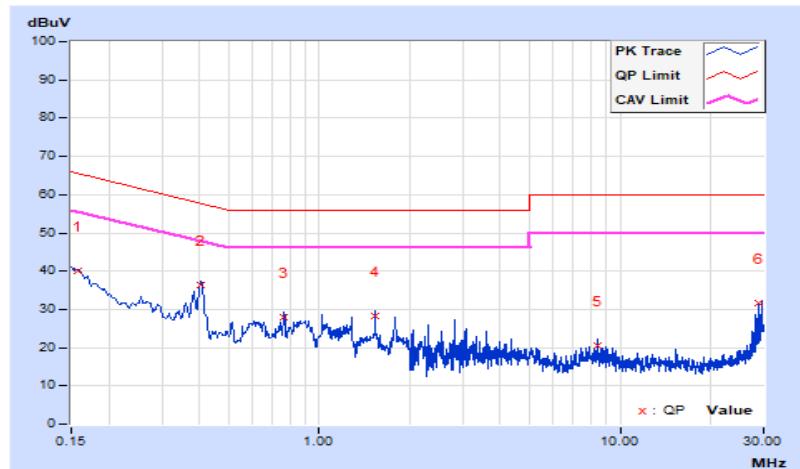
**C(Right Earphone)**

<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 39 : 2441 MHz
<b>Frequency Range</b>	150 kHz ~ 30 MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15719	9.98	29.94	11.22	39.92	21.20	65.61	55.61	-25.69	-34.41
2	0.40421	10.13	26.08	21.41	36.21	31.54	57.77	47.77	-21.56	-16.23
3	0.76591	10.09	17.79	13.41	27.88	23.50	56.00	46.00	-28.12	-22.50
4	1.53250	10.12	18.31	15.11	28.43	25.23	56.00	46.00	-27.57	-20.77
5	8.42995	10.86	9.56	7.68	20.42	18.54	60.00	50.00	-39.58	-31.46
6	29.00572	13.30	18.38	15.68	31.68	28.98	60.00	50.00	-28.32	-21.02

**Remarks:**

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



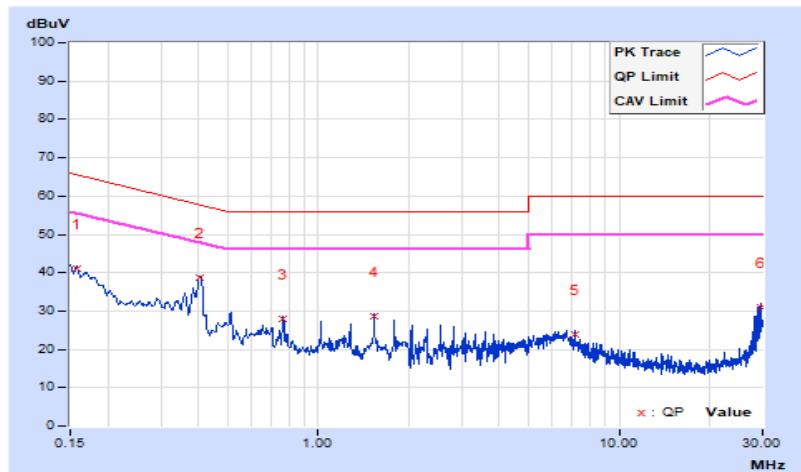
<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 39 : 2441 MHz
<b>Frequency Range</b>	150 kHz ~ 30 MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

**Phase Of Power : Neutral (N)**

<b>No</b>	<b>Frequency (MHz)</b>	<b>Correction Factor (dB)</b>	<b>Reading Value (dBuV)</b>		<b>Emission Level (dBuV)</b>		<b>Limit (dBuV)</b>		<b>Margin (dB)</b>	
			<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>	<b>Q.P.</b>	<b>AV.</b>
1	0.15760	10.26	30.91	16.38	41.17	26.64	65.59	55.59	-24.42	-28.95
2	<b>0.40374</b>	<b>10.30</b>	<b>28.35</b>	<b>23.58</b>	<b>38.65</b>	<b>33.88</b>	<b>57.78</b>	<b>47.78</b>	<b>-19.13</b>	<b>-13.90</b>
3	0.76591	10.32	17.66	13.60	27.98	23.92	56.00	46.00	-28.02	-22.08
4	1.53250	10.38	18.22	15.82	28.60	26.20	56.00	46.00	-27.40	-19.80
5	7.15496	10.92	12.91	9.21	23.83	20.13	60.00	50.00	-36.17	-29.87
6	29.51415	13.58	17.47	15.95	31.05	29.53	60.00	50.00	-28.95	-20.47

**Remarks:**

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



## 7.8 Unwanted Emissions below 1 GHz

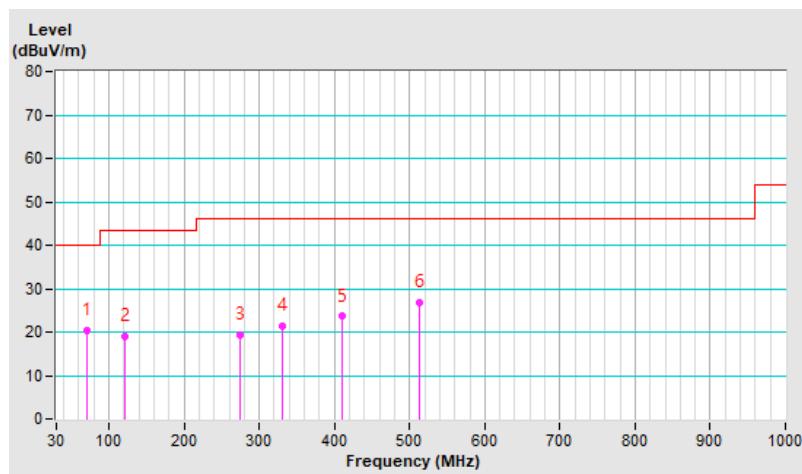
### A(Left Earphone)

<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 78 : 2480 MHz
<b>Frequency Range</b>	30 MHz ~ 1 GHz	<b>Detector Function &amp; Bandwidth</b>	QP: RB=120kHz, DET=Quasi-Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	William Su		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	71.61	20.3 QP	40.0	-19.7	1.34 H	6	31.6	-11.3
2	120.79	19.1 QP	43.5	-24.4	1.76 H	309	30.0	-10.9
3	275.22	19.3 QP	46.0	-26.7	1.29 H	173	26.4	-7.1
4	330.80	21.4 QP	46.0	-24.6	1.94 H	338	26.8	-5.4
5	410.82	23.6 QP	46.0	-22.4	1.65 H	17	27.7	-4.1
6	513.06	26.7 QP	46.0	-19.3	1.00 H	65	28.4	-1.7

#### Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

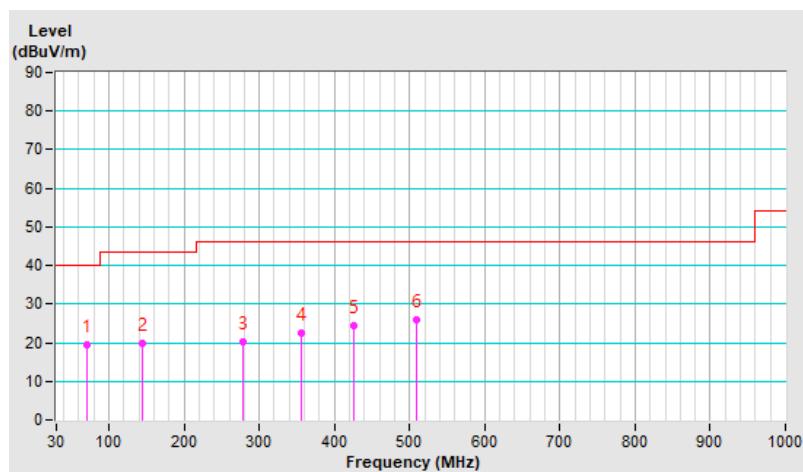


<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 78 : 2480 MHz
<b>Frequency Range</b>	30 MHz ~ 1 GHz	<b>Detector Function &amp; Bandwidth</b>	QP: RB=120kHz, DET=Quasi-Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	William Su		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	71.61	19.5 QP	40.0	-20.5	1.42 V	88	30.8	-11.3
2	143.88	19.7 QP	43.5	-23.8	1.73 V	150	28.5	-8.8
3	277.45	20.1 QP	46.0	-25.9	1.62 V	140	27.1	-7.0
4	356.31	22.6 QP	46.0	-23.4	1.58 V	140	27.9	-5.3
5	425.86	24.5 QP	46.0	-21.5	1.49 V	282	27.8	-3.3
6	509.13	26.0 QP	46.0	-20.0	1.00 V	0	27.7	-1.7

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



**A(Right Earphone)**

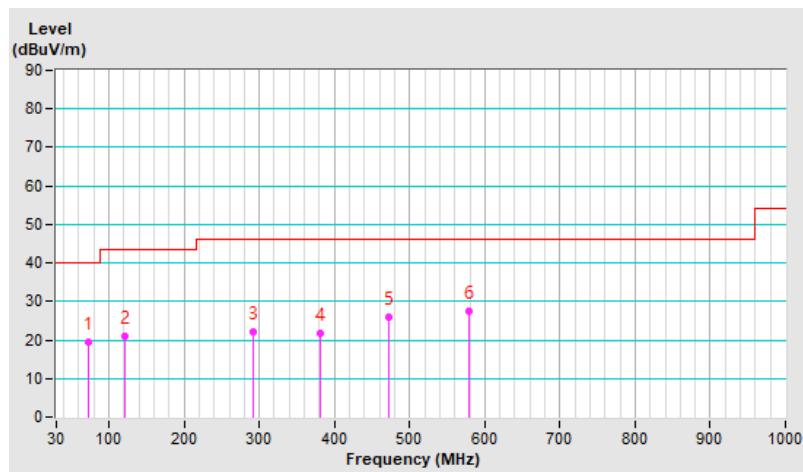
<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 39 : 2441 MHz
<b>Frequency Range</b>	30 MHz ~ 1 GHz	<b>Detector Function &amp; Bandwidth</b>	QP: RB=120kHz, DET=Quasi-Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	William Su		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	71.86	19.4 QP	40.0	-20.6	1.58 H	284	30.8	-11.4
2	120.83	20.8 QP	43.5	-22.7	1.82 H	148	31.7	-10.9
3	292.47	22.2 QP	46.0	-23.8	1.65 H	123	28.8	-6.6
4	380.40	21.8 QP	46.0	-24.2	1.52 H	176	26.4	-4.6
5	471.88	26.0 QP	46.0	-20.0	1.56 H	348	28.5	-2.5
6	579.17	27.5 QP	46.0	-18.5	1.47 H	360	27.4	0.1

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

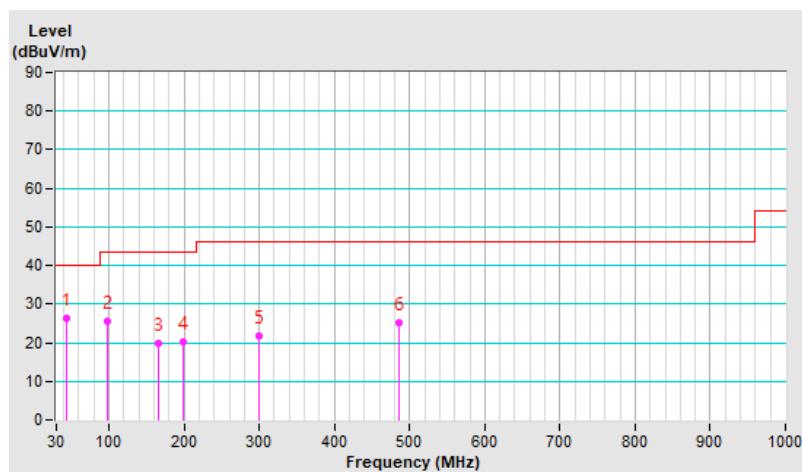


<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 39 : 2441 MHz
<b>Frequency Range</b>	30 MHz ~ 1 GHz	<b>Detector Function &amp; Bandwidth</b>	QP: RB=120kHz, DET=Quasi-Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	William Su		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	42.90	26.2 QP	40.0	-13.8	1.55 V	348	35.2	-9.0
2	97.22	25.4 QP	43.5	-18.1	2.01 V	142	39.0	-13.6
3	166.19	19.9 QP	43.5	-23.6	2.26 V	257	27.8	-7.9
4	199.37	20.3 QP	43.5	-23.2	1.10 V	246	30.8	-10.5
5	299.67	21.6 QP	46.0	-24.4	1.89 V	230	27.5	-5.9
6	486.65	25.0 QP	46.0	-21.0	1.62 V	323	26.8	-1.8

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



## 7.9 Unwanted Emissions above 1 GHz

### A(Left Earphone)

<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 0 : 2402 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	54.1 PK	74.0	-19.9	3.35 H	221	54.6	-0.5
2	2390.00	40.5 AV	54.0	-13.5	3.35 H	221	41.0	-0.5
3	*2402.00	108.9 PK			3.35 H	221	109.4	-0.5
4	*2402.00	78.1 AV			3.35 H	221	78.6	-0.5
5	4804.00	50.0 PK	74.0	-24.0	1.08 H	305	42.2	7.8
6	4804.00	19.2 AV	54.0	-34.8	1.08 H	305	11.4	7.8

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	54.0 PK	74.0	-20.0	3.13 V	270	54.5	-0.5
2	<b>2390.00</b>	<b>40.6 AV</b>	<b>54.0</b>	<b>-13.4</b>	<b>3.13 V</b>	<b>270</b>	<b>41.1</b>	<b>-0.5</b>
3	*2402.00	109.7 PK			3.13 V	270	110.2	-0.5
4	*2402.00	78.9 AV			3.13 V	270	79.4	-0.5
5	4804.00	50.6 PK	74.0	-23.4	1.51 V	287	42.8	7.8
6	4804.00	19.8 AV	54.0	-34.2	1.51 V	287	12.0	7.8

#### Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:  

$$20 \log(\text{Duty cycle}) = 20 \log(2.9 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$



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VERITAS

<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 39 : 2441 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	109.8 PK			3.74 H	220	110.1	-0.3
2	*2441.00	79.0 AV			3.74 H	220	79.3	-0.3
3	4882.00	50.8 PK	74.0	-23.2	1.47 H	304	42.9	7.9
4	4882.00	20.0 AV	54.0	-34.0	1.47 H	304	12.1	7.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	110.6 PK			3.52 V	269	110.9	-0.3
2	*2441.00	79.8 AV			3.52 V	269	80.1	-0.3
3	4882.00	51.4 PK	74.0	-22.6	1.90 V	286	43.5	7.9
4	4882.00	20.6 AV	54.0	-33.4	1.90 V	286	12.7	7.9

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:  

$$20 \log(\text{Duty cycle}) = 20 \log(2.9 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$



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<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 78 : 2480 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	109.5 PK			3.67 H	212	109.7	-0.2
2	*2480.00	78.7 AV			3.67 H	212	78.9	-0.2
3	2483.50	53.9 PK	74.0	-20.1	3.67 H	212	54.1	-0.2
4	2483.50	23.1 AV	54.0	-30.9	3.67 H	212	23.3	-0.2
5	4960.00	50.5 PK	74.0	-23.5	1.40 H	296	42.5	8.0
6	4960.00	19.7 AV	54.0	-34.3	1.40 H	296	11.7	8.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	110.3 PK			3.45 V	261	110.5	-0.2
2	*2480.00	79.5 AV			3.45 V	261	79.7	-0.2
3	2483.50	54.7 PK	74.0	-19.3	3.45 V	261	54.9	-0.2
4	2483.50	23.9 AV	54.0	-30.1	3.45 V	261	24.1	-0.2
5	4960.00	51.1 PK	74.0	-22.9	1.83 V	279	43.1	8.0
6	4960.00	20.3 AV	54.0	-33.7	1.83 V	279	12.3	8.0

#### Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:  

$$20 \log(\text{Duty cycle}) = 20 \log(2.9 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$



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<b>RF Mode</b>	BT 8DPSK	<b>Channel</b>	CH 0 : 2402 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	53.7 PK	74.0	-20.3	3.34 H	222	54.2	-0.5
2	2390.00	40.3 AV	54.0	-13.7	3.34 H	222	40.8	-0.5
3	*2402.00	106.7 PK			3.34 H	222	107.2	-0.5
4	*2402.00	75.9 AV			3.34 H	222	76.4	-0.5
5	4804.00	47.8 PK	74.0	-26.2	1.08 H	305	40.0	7.8
6	4804.00	17.0 AV	54.0	-37.0	1.08 H	305	9.2	7.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	54.0 PK	74.0	-20.0	3.13 V	271	54.5	-0.5
2	2390.00	40.6 AV	54.0	-13.4	3.13 V	271	41.1	-0.5
3	*2402.00	107.5 PK			3.13 V	271	108.0	-0.5
4	*2402.00	76.7 AV			3.13 V	271	77.2	-0.5
5	4804.00	48.4 PK	74.0	-25.6	1.52 V	288	40.6	7.8
6	4804.00	17.6 AV	54.0	-36.4	1.52 V	288	9.8	7.8

#### Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:  

$$20 \log(\text{Duty cycle}) = 20 \log(2.9 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$



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<b>RF Mode</b>	BT 8DPSK	<b>Channel</b>	CH 39 : 2441 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	108.2 PK			2.96 H	220	108.5	-0.3
2	*2441.00	77.4 AV			2.96 H	220	77.7	-0.3
3	4882.00	49.2 PK	74.0	-24.8	1.47 H	306	41.3	7.9
4	4882.00	18.4 AV	54.0	-35.6	1.47 H	306	10.5	7.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	109.0 PK			3.52 V	269	109.3	-0.3
2	*2441.00	78.2 AV			3.52 V	269	78.5	-0.3
3	4882.00	49.8 PK	74.0	-24.2	1.90 V	286	41.9	7.9
4	4882.00	19.0 AV	54.0	-35.0	1.90 V	286	11.1	7.9

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:  

$$20 \log(\text{Duty cycle}) = 20 \log(2.9 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$



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VERITAS

<b>RF Mode</b>	BT 8DPSK	<b>Channel</b>	CH 78 : 2480 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	108.6 PK			2.62 H	221	108.8	-0.2
2	*2480.00	77.8 AV			2.62 H	221	78.0	-0.2
3	2483.50	54.4 PK	74.0	-19.6	2.62 H	221	54.6	-0.2
4	2483.50	23.6 AV	54.0	-30.4	2.62 H	221	23.8	-0.2
5	4960.00	49.7 PK	74.0	-24.3	1.81 H	304	41.7	8.0
6	4960.00	18.9 AV	54.0	-35.1	1.81 H	304	10.9	8.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	109.5 PK			3.86 V	269	109.7	-0.2
2	*2480.00	78.7 AV			3.86 V	269	78.9	-0.2
3	2483.50	55.3 PK	74.0	-18.7	3.86 V	269	55.5	-0.2
4	2483.50	24.5 AV	54.0	-29.5	3.86 V	269	24.7	-0.2
5	4960.00	50.3 PK	74.0	-23.7	2.24 V	287	42.3	8.0
6	4960.00	19.5 AV	54.0	-34.5	2.24 V	287	11.5	8.0

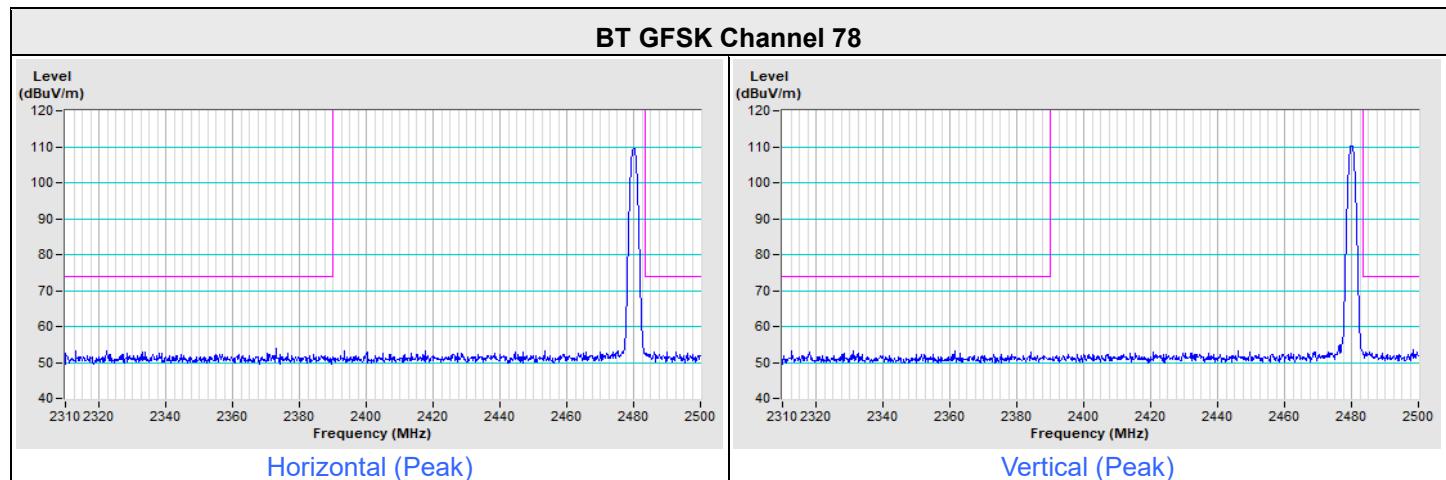
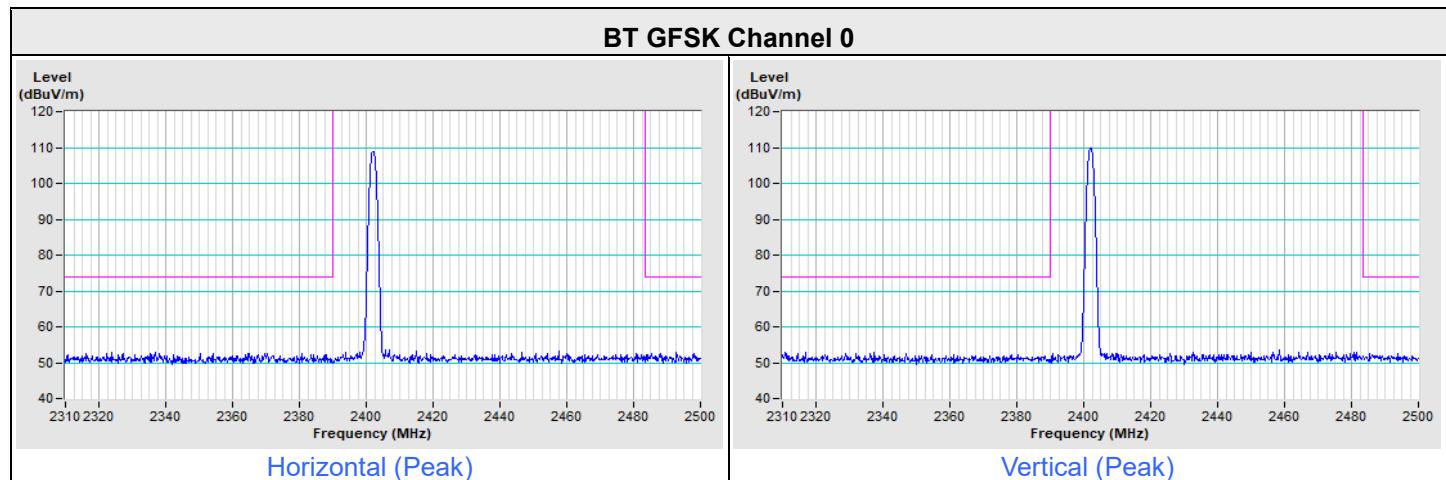
#### Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:  

$$20 \log(\text{Duty cycle}) = 20 \log(2.9 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$

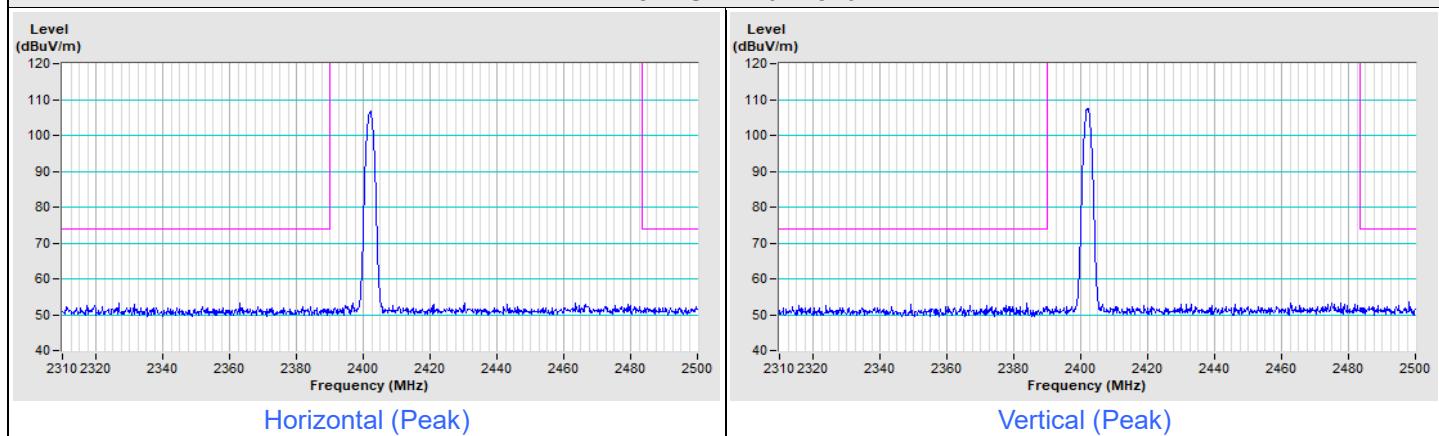
### A(Left Earphone)\_Plot of Band Edge

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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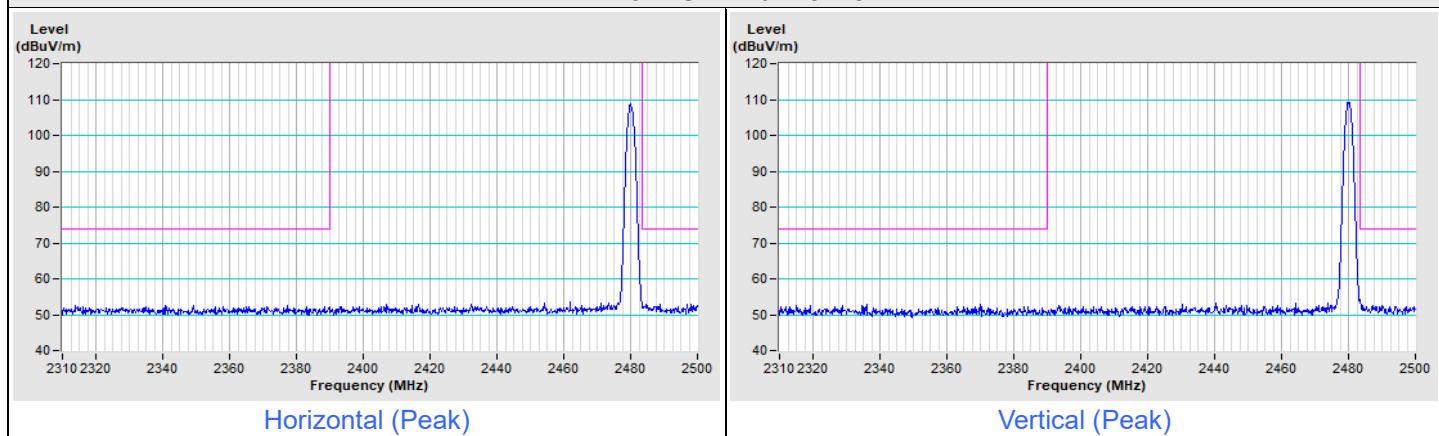


Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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### BT 8DPSK Channel 0



### BT 8DPSK Channel 78



**A(Right Earphone)**

<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 0 : 2402 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

<b>Antenna Polarity &amp; Test Distance : Horizontal at 3 m</b>								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	53.6 PK	74.0	-20.4	3.29 H	151	54.1	-0.5
2	2390.00	39.9 AV	54.0	-14.1	3.29 H	151	40.4	-0.5
3	*2402.00	105.0 PK			3.29 H	151	105.5	-0.5
4	*2402.00	74.2 AV			3.29 H	151	74.7	-0.5
5	4804.00	51.4 PK	74.0	-22.6	3.01 H	134	43.6	7.8
6	4804.00	20.6 AV	54.0	-33.4	3.01 H	134	12.8	7.8
<b>Antenna Polarity &amp; Test Distance : Vertical at 3 m</b>								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	54.4 PK	74.0	-19.6	3.16 V	107	54.9	-0.5
2	<b>2390.00</b>	<b>40.6 AV</b>	<b>54.0</b>	<b>-13.4</b>	<b>3.16 V</b>	<b>107</b>	<b>41.1</b>	<b>-0.5</b>
3	*2402.00	108.2 PK			3.16 V	107	108.7	-0.5
4	*2402.00	77.4 AV			3.16 V	107	77.9	-0.5
5	4804.00	50.5 PK	74.0	-23.5	2.72 V	238	42.7	7.8
6	4804.00	19.7 AV	54.0	-34.3	2.72 V	238	11.9	7.8

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:  

$$20 \log(\text{Duty cycle}) = 20 \log(2.9 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$



BUREAU  
VERITAS

<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 39 : 2441 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	105.3 PK			3.27 H	146	105.6	-0.3
2	*2441.00	74.5 AV			3.27 H	146	74.8	-0.3
3	4882.00	51.6 PK	74.0	-22.4	3.03 H	139	43.7	7.9
4	4882.00	20.8 AV	54.0	-33.2	3.03 H	139	12.9	7.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	108.5 PK			3.14 V	112	108.8	-0.3
2	*2441.00	77.7 AV			3.14 V	112	78.0	-0.3
3	4882.00	50.7 PK	74.0	-23.3	2.70 V	243	42.8	7.9
4	4882.00	19.9 AV	54.0	-34.1	2.70 V	243	12.0	7.9

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:  

$$20 \log(\text{Duty cycle}) = 20 \log(2.9 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$



BUREAU  
VERITAS

<b>RF Mode</b>	BT GFSK	<b>Channel</b>	CH 78 : 2480 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	105.2 PK			3.17 H	147	105.4	-0.2
2	*2480.00	74.4 AV			3.17 H	147	74.6	-0.2
3	2483.50	54.1 PK	74.0	-19.9	3.17 H	147	54.3	-0.2
4	2483.50	23.3 AV	54.0	-30.7	3.17 H	147	23.5	-0.2
5	4960.00	51.5 PK	74.0	-22.5	2.89 H	138	43.5	8.0
6	4960.00	20.7 AV	54.0	-33.3	2.89 H	138	12.7	8.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	108.5 PK			3.04 V	111	108.7	-0.2
2	*2480.00	77.7 AV			3.04 V	111	77.9	-0.2
3	2483.50	54.9 PK	74.0	-19.1	3.04 V	111	55.1	-0.2
4	2483.50	24.1 AV	54.0	-29.9	3.04 V	111	24.3	-0.2
5	4960.00	50.6 PK	74.0	-23.4	2.60 V	234	42.6	8.0
6	4960.00	19.8 AV	54.0	-34.2	2.60 V	234	11.8	8.0

#### Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:  

$$20 \log(\text{Duty cycle}) = 20 \log(2.9 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$



BUREAU  
VERITAS

<b>RF Mode</b>	BT 8DPSK	<b>Channel</b>	CH 0 : 2402 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	53.7 PK	74.0	-20.3	3.32 H	155	54.2	-0.5
2	2390.00	39.9 AV	54.0	-14.1	3.32 H	155	40.4	-0.5
3	*2402.00	103.1 PK			3.32 H	155	103.6	-0.5
4	*2402.00	72.3 AV			3.32 H	155	72.8	-0.5
5	4804.00	51.0 PK	74.0	-23.0	3.04 H	138	43.2	7.8
6	4804.00	20.2 AV	54.0	-33.8	3.04 H	138	12.4	7.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	54.5 PK	74.0	-19.5	3.19 V	111	55.0	-0.5
2	2390.00	40.6 AV	54.0	-13.4	3.19 V	111	41.1	-0.5
3	*2402.00	106.2 PK			3.19 V	111	106.7	-0.5
4	*2402.00	75.4 AV			3.19 V	111	75.9	-0.5
5	4804.00	50.1 PK	74.0	-23.9	2.75 V	242	42.3	7.8
6	4804.00	19.3 AV	54.0	-34.7	2.75 V	242	11.5	7.8

#### Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:  

$$20 \log(\text{Duty cycle}) = 20 \log(2.9 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$



BUREAU  
VERITAS

<b>RF Mode</b>	BT 8DPSK	<b>Channel</b>	CH 39 : 2441 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	103.5 PK			3.28 H	156	103.8	-0.3
2	*2441.00	72.7 AV			3.28 H	156	73.0	-0.3
3	4882.00	51.4 PK	74.0	-22.6	3.00 H	139	43.5	7.9
4	4882.00	20.6 AV	54.0	-33.4	3.00 H	139	12.7	7.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	106.7 PK			3.15 V	112	107.0	-0.3
2	*2441.00	75.9 AV			3.15 V	112	76.2	-0.3
3	4882.00	50.5 PK	74.0	-23.5	2.71 V	241	42.6	7.9
4	4882.00	19.7 AV	54.0	-34.3	2.71 V	241	11.8	7.9

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:  

$$20 \log(\text{Duty cycle}) = 20 \log(2.9 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$



BUREAU  
VERITAS

<b>RF Mode</b>	BT 8DPSK	<b>Channel</b>	CH 78 : 2480 MHz
<b>Frequency Range</b>	1 GHz ~ 25 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	103.8 PK			3.16 H	158	104.0	-0.2
2	*2480.00	73.0 AV			3.16 H	158	73.2	-0.2
3	2483.50	54.3 PK	74.0	-19.7	3.16 H	158	54.5	-0.2
4	2483.50	23.5 AV	54.0	-30.5	3.16 H	158	23.7	-0.2
5	4960.00	52.4 PK	74.0	-21.6	2.88 H	141	44.4	8.0
6	4960.00	21.6 AV	54.0	-32.4	2.88 H	141	13.6	8.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	106.8 PK			3.03 V	114	107.0	-0.2
2	*2480.00	76.0 AV			3.03 V	114	76.2	-0.2
3	2483.50	54.5 PK	74.0	-19.5	3.03 V	114	54.7	-0.2
4	2483.50	23.7 AV	54.0	-30.3	3.03 V	114	23.9	-0.2
5	4960.00	50.5 PK	74.0	-23.5	2.59 V	243	42.5	8.0
6	4960.00	19.7 AV	54.0	-34.3	2.59 V	243	11.7	8.0

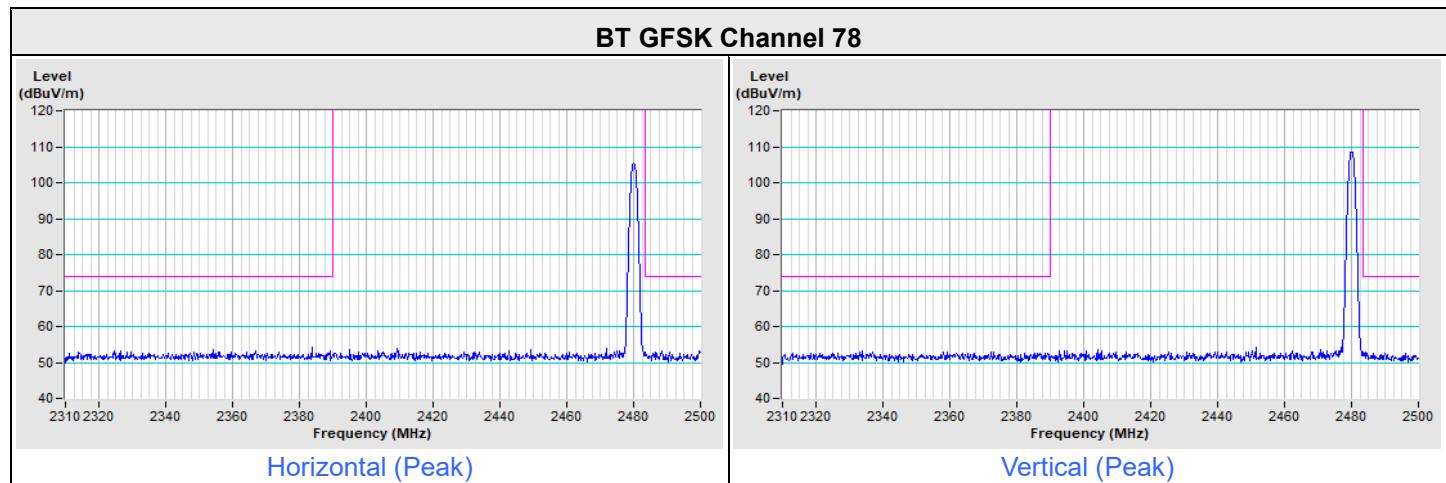
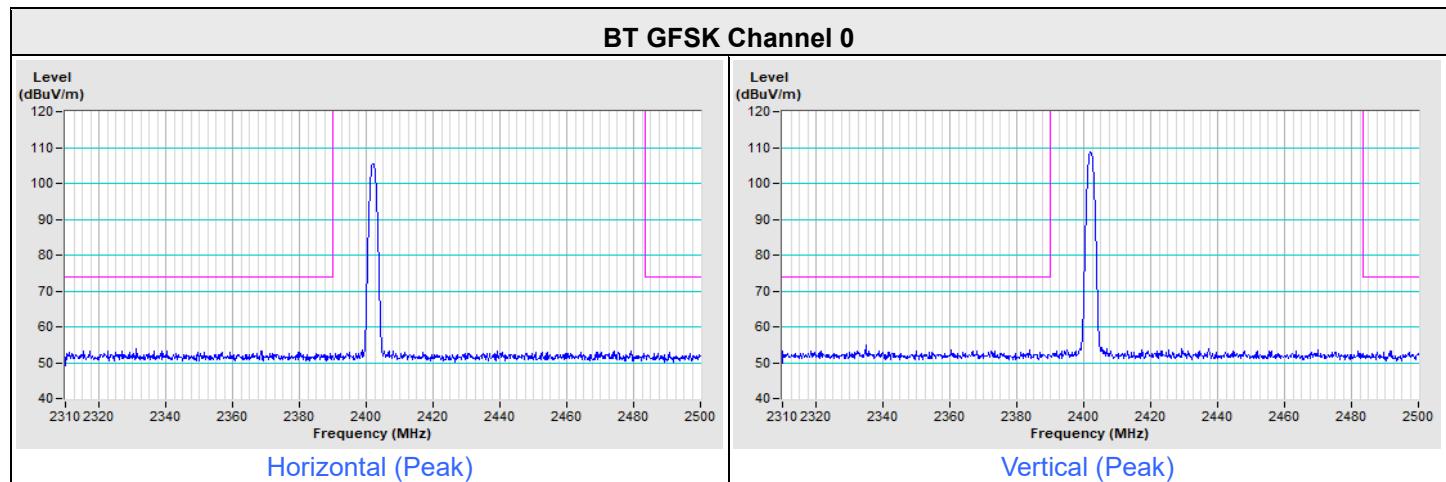
#### Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " \* ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:  

$$20 \log(\text{Duty cycle}) = 20 \log(2.9 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$

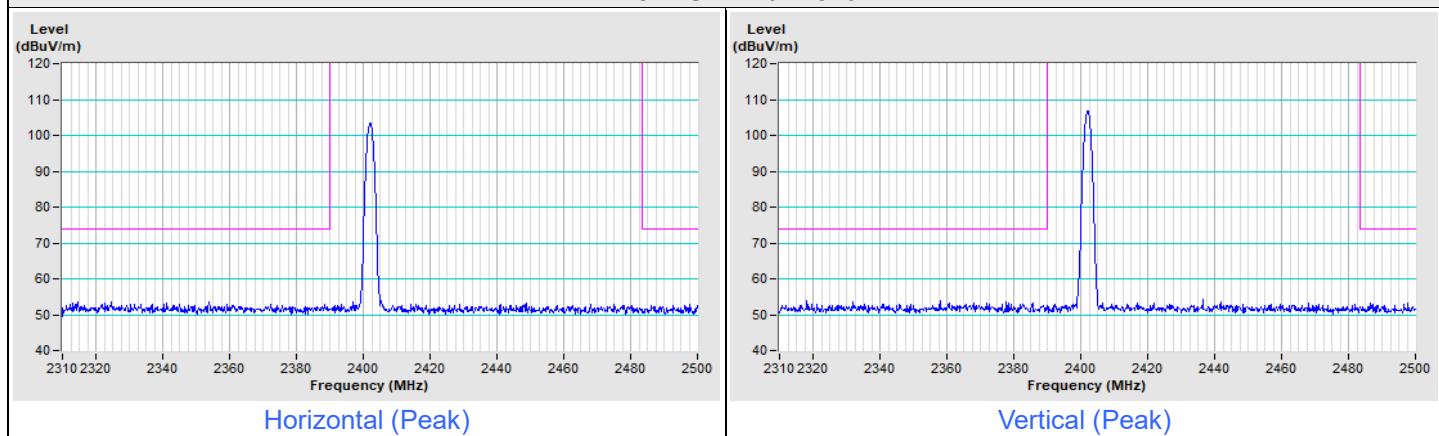
### A(Right Earphone)\_Plot of Band Edge

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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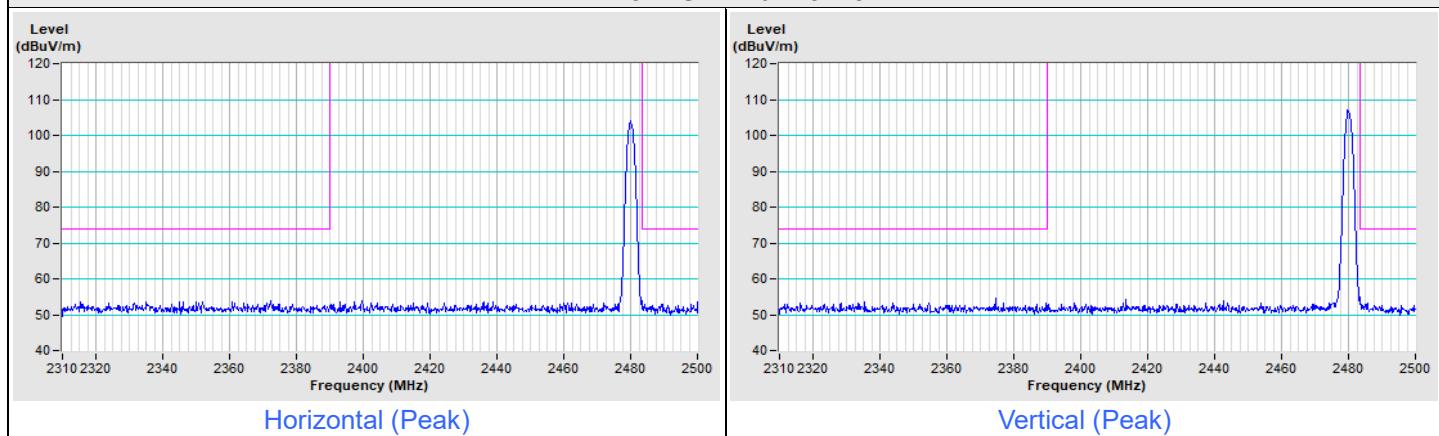


Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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### BT 8DPSK Channel 0



### BT 8DPSK Channel 78



## 8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

## 9 Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

**Lin Kou EMC/RF Lab**

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Web Site: <http://ee.bureauveritas.com.tw>

The address and road map of all our labs can be found in our web site also.

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