



Report No.: TW2104216E File reference No.: 2021-04-28

Applicant: TECHNOFASHION INC.

Product: Bluetooth Headphone

Model No.: NTHP02

Brand Name: Nautica

Test Standards: FCC Part 15.249

Test result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.10 &FCC Part 15 Subpart C, Paragraph 15.249 regulations for the evaluation of

electromagnetic compatibility

Approved By

Jack Chung

Jack Chung

Manager

Dated: April 28, 2021

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

## SHENZHEN TIMEWAY TESTING LABORATORIES

Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le Village, Nanshan District, Shenzhen, China

Tel (755) 83448688, Fax (755) 83442996, E-Mail:info@timeway-lab.com

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## **Special Statement:**

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

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

#### **CNAS-LAB Code: L2292**

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of testing Laboratories.

## FCC-Registration No.: 744189

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 744189.

#### Industry Canada (IC) —Registration No.:5205A

The EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 5205A.

#### A2LA (Certification Number:5013.01)

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (A2LA). Certification Number:5013.01

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# Test Report Conclusion

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The report refers only to the sample tested and does not apply to the bulk.

10.0

11.0

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FCC ID Label....

Photo of Test Setup and EUT View.

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#### 1.0 General Details

#### 1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.

Address: Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le

Village, Nanshan District, Shenzhen, China

Telephone: (755) 83448688 Fax: (755) 83442996

Site on File with the Federal Communications Commission – United Sates

Registration Number: 744189 For 3m Anechoic Chamber

#### 1.2 Applicant Details

Applicant: TECHNOFASHION INC.

Address: 26, Park Street Ste#2340, Montclair, NJ, USA, 07042

Telephone: +1 (347) 510-2340

Fax: --

#### 1.3 Description of EUT

Product: Bluetooth Headphone

Manufacturer: TECHNOFASHION INC.

Address: 26, Park Street Ste#2340, Montclair, NJ, USA, 07042

Brand Name: Nautica
Model Number: NTHP02

Additional Model Name N/A

Hardware Version: PCB:BA-70 V4 2021-1-30

Software Version: BN516 V2(NauticaH400) EQ 20210422

Serial No.: NTHP02202103

Rating: DC5V, 500mA, or Built-in DC3.7V, 500mAh, 1.11Wh Li-ion battery

Modulation Type: GFSK, Pi/4D-QPSK, 8DPSK (Bluetooth)

Operation Frequency: 2402-2480MHz

Channel Separate: 1MHz
Channel Number: 79

Antenna Designation FPC antenna with gain 2.3dBi Max (Get from the antenna specification provided

by the applicant)

#### 1.4 Submitted Sample: 1 Sample

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#### 1.5 Test Duration

2021-04-16 to 2021-04-27

#### 1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB

Radiated Emissions below 1GHz Uncertainty =4.7dB

Radiated Emissions above 1GHz Uncertainty =6.0dB

Conducted Power Uncertainty =6.0dB

Occupied Channel Bandwidth Uncertainty =5%

Conducted Emissions Uncertainty = 3.6dB

Note: The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

1.7 Test Engineer

Terry Tang

The sample tested by

Print Name: Terry Tang

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2.0 Test Equipment					
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date
ESPI Test Receiver	R&S	ESPI 3	100379	2020-06-23	2021-06-22
LISN	R&S	EZH3-Z5	100294	2020-06-23	2021-06-22
LISN	R&S	EZH3-Z5	100253	2020-06-23	2021-06-22
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2020-06-23	2021-06-22
Loop Antenna	EMCO	6507	00078608	2018-06-25	2021-06-24
Spectrum	R&S	FSIQ26	100292	2020-06-23	2021-06-22
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2020-06-23	2021-06-22
Horn Antenna	R&S	BBHA 9120D	9120D-631	2018-07-09	2021-07-08
Power meter	Anritsu	ML2487A	6K00003613	2020-06-23	2021-06-22
Power sensor	Anritsu	MA2491A	32263	2020-06-23	2021-06-22
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2018-07-04	2021-07-03
9*6*6 Anechoic			N/A	2020-07-06	2021-07-05
EMI Test Receiver	RS	ESVB	826156/011	2020-06-23	2021-06-22
EMI Test Receiver	RS	ESH3	860904/006	2020-06-23	2021-06-22
Spectrum	HP/Agilent	ESA-L1500A	US37451154	2020-06-23	2021-06-22
Spectrum	HP/Agilent	E4407B	MY50441392	2020-06-23	2021-06-22
Spectrum	RS	FSP	1164.4391.38	2021-01-16	2022-01-15
RF Cable	Zhengdi	ZT26-NJ-NJ-8 M/FA		2020-06-23	2021-06-22
RF Cable	Zhengdi	7m		2020-06-23	2021-06-22
RF Switch	EM	EMSW18	060391	2020-06-23	2021-06-22
Pre-Amplifier	Schwarebeck	BBV9743	#218	2020-06-23	2021-06-22
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2020-06-23	2021-06-22
LISN	SCHAFFNER	NNB42	00012	2021-01-06	2022-01-05

#### 2.2 Automation Test Software

#### For Conducted Emission Test

Name	Version
EZ-EMC	Ver.EMC-CON 3A1.1

#### For Radiated Emissions

Name	Version
EMI Test Software BL410-EV18.91	V18.905
EMI Test Software BL410-EV18.806 High Frequency	V18.06

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#### **Technical Details** 3.0

#### 3.1 **Summary of test results**

The EUT has been tested according to the following specifications:

Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.207	Conducted Emission Test	PASS	Complies
FCC Part 15 Subpart C Paragraph 15.249(a) & 15.249(b) Limit	Field Strength of Fundamental	PASS	Complies
FCC Part 15, Paragraph 15.209	Radiated Emission Test	PASS	Complies
FCC Part 15 Subpart C Paragraph 15.249(d) Limit	Band Edge Test	PASS	Complies

#### 3.2 **Test Standards**

FCC Part 15 Subpart C, Paragraph 15.249, ANSI C63.4:2014 and ANSI C63.10:2013

#### 4.0 **EUT Modification**

No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

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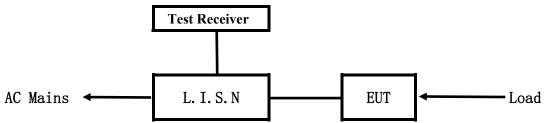
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#### 5. Power Line Conducted Emission Test

#### 5.1 Schematics of the test

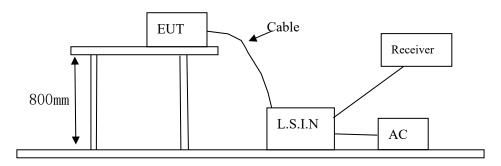


**EUT: Equipment Under Test** 

#### 5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.10-2013. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.10-2013.

#### Block diagram of Test setup



#### 5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.10-2013. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

One channels are provided to the EUT

#### A. EUT

Device	Manufacturer	Model	FCC ID
Bluetooth Headphone	TECHNOFASHION INC.	NTHP02	2AZBO-N00009

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#### B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

#### C. Peripherals

Device	Manufacturer	Model	Rating
Power Supply	KEYU	KA23-0502000DEU	Input: 100-240V~, 50/60Hz, 0.35A;
			Output: DC5V, 2A

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.10-2013

- A Setup the EUT and simulators as shown on follow
- B Enable AF signal and confirm EUT active to normal condition

5.5 Power line conducted Emission Limit according to Paragraph 15.207

Frequency	Limits (dB μ V)			
(MHz)	Quasi-peak Level	Average Level		
$0.15 \sim 0.50$	66.0~56.0*	56.0~46.0*		
$0.50 \sim 5.00$	56.0	46.0		
5.00 ~ 30.00	60.0	50.0		

Notes:

- 1. \*Decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

#### 5.6 Test Results:

Pass

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## A: Conducted Emission on Live Terminal (150kHz to 30MHz)

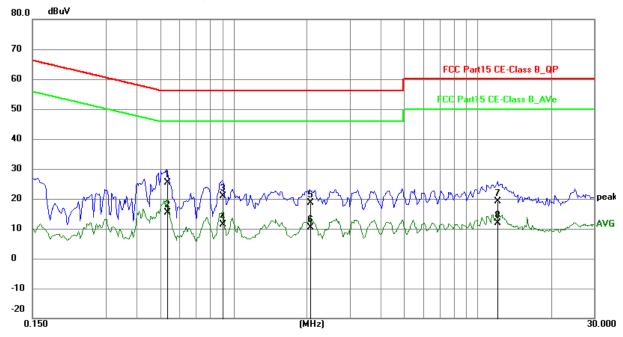
**EUT Operating Environment** 

Temperature: 25°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

**EUT set Condition: Charging and Communication by BT** 

Model: NTHP02 Results: PASS

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.5322	15.58	9.77	25.35	56.00	-30.65	QP	Р
2	0.5322	5.56	9.77	15.33	46.00	-30.67	AVG	Р
3	0.9027	11.20	9.79	20.99	56.00	-35.01	QP	Р
4	0.9027	1.57	9.79	11.36	46.00	-34.64	AVG	Р
5	2.0649	8.80	9.80	18.60	56.00	-37.40	QP	Р
6	2.0649	0.49	9.80	10.29	46.00	-35.71	AVG	Р
7	12.1104	8.99	10.25	19.24	60.00	-40.76	QP	Р
8	12.1104	1.53	10.25	11.78	50.00	-38.22	AVG	Р

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## B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

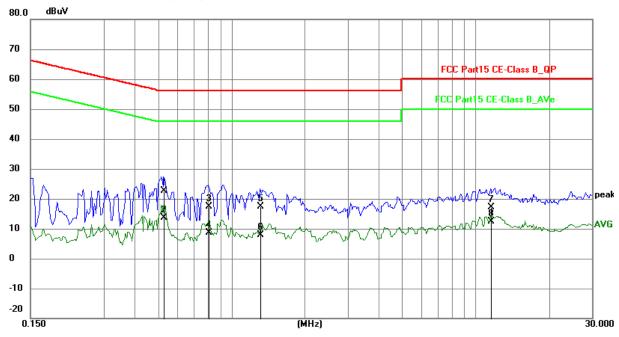
**EUT Operating Environment** 

Temperature: 25°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

**EUT set Condition: Charging and Communication by BT** 

Model: NTHP02 Results: Pass

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.5283	12.88	9.77	22.65	56.00	-33.35	QP	Р
2	0.5283	3.80	9.77	13.57	46.00	-32.43	AVG	Р
3	0.8052	7.68	9.78	17.46	56.00	-38.54	QP	Р
4	0.8052	-1.24	9.78	8.54	46.00	-37.46	AVG	Р
5	1.3122	7.68	9.79	17.47	56.00	-38.53	QP	Р
6	1.3122	-1.82	9.79	7.97	46.00	-38.03	AVG	Р
7	11.5410	6.92	10.23	17.15	60.00	-42.85	QP	Р
8	11.5410	2.20	10.23	12.43	50.00	-37.57	AVG	Р

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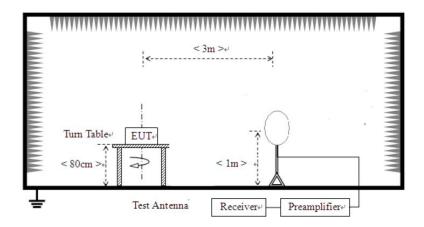


#### **6** Radiated Emission Test

- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.10-2013.
- (3) The frequency spectrum from 30 MHz to 25 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 kHz. All readings are above 1 GHz, peak values with a resolution bandwidth of 1 MHz (Note: for Fundamental frequency radiated emission measurement, RBW=3MHz, VBW=10MHz). Measurements were made at 3 meters.
- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) The antenna polarization: Vertical polarization and Horizontal polarization.

#### **Block diagram of Test setup**

For radiated emissions from 9kHz to 30MHz

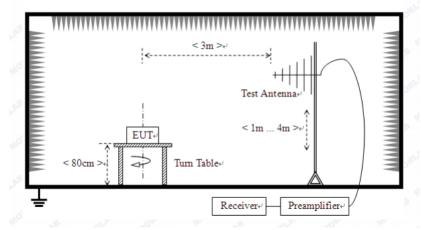


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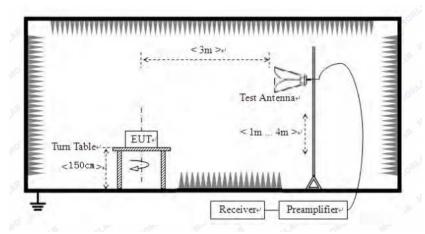
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For radiated emissions from 30MHz to1GHz



For radiated emissions above 1GHz



- 6.2 Configuration of The EUT

  Same as section 5.3 of this report
- 6.3 EUT Operating Condition
  Same as section 5.4 of this report.

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#### 6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

#### A FCC Part 15 Subpart C Paragraph 15.249(a) Limit

Fundamental Frequency	Field Stre	Field Strength of Fundamental (3m)			trength of Harmo	onics (3m)
(MHz)	mV/m	dBuV/m		uV/m	dBu	V/m
2400-2483.5	50	94 (Average)	114 (Peak)	500	54 (Average)	74 (Peak)

Note:

- 1. RF Field Strength (dBuV) = 20 log RF Voltage (uV)
- 2.Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
- 3. The emission limit in this paragraph is based on measurement instrumentation employing an average detector.

## B. Frequencies in restricted band are complied to limit on Paragraph 15.209.

Frequency Range (MHz)	Distance (m)	Field strength (dB $\mu$ V/m)
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage  $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 2. In the Above Table, the tighter limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT
- 4. This is a handhold device. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), After pre-test. It was found that the worse radiated emission was get at the lying position.
- 5. All scanning using PK detector. And the final emission level was get using QP detector for frequency range from 30-1000MHz.As to 1G-25G, the final emission level got using PK. For fundamental measurement, PK detector used.
- 6. Battery full charged during tests.
- 7. The three modulation modes of GFSK, Pi/4D-QPSK, and 8DPSK were tested. And only the worst case was recorded in the test report. GFSK was the worst case.

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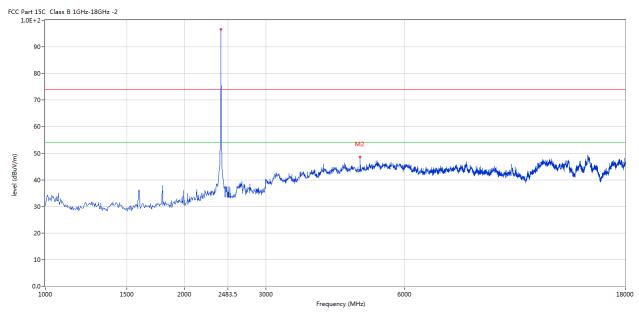


#### 6.5 Test result

## A Fundamental & Harmonics Radiated Emission Data

Please refer to the following test plots for details: Low Channel-2402MHz

#### Horizontal



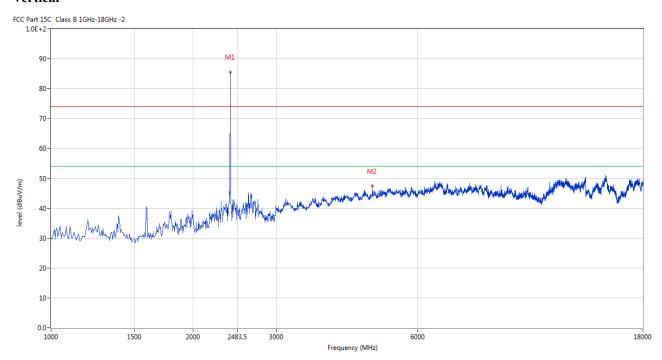
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2402.500	96.58	-3.57	114.0	-17.42	Peak	276.00	100	Horizontal	Pass
1*	2402.500	86.17	-3.57	94.0	-7.83	AV	276.00	100	Horizontal	Pass
2	4803.750	48.57	3.13	74.0	-25.43	Peak	266.00	100	Horizontal	Pass

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#### Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2402.500	85.57	-3.57	114.0	-28.43	Peak	19.00	100	Vertical	Pass
2	4803.750	47.40	3.13	74.0	-26.60	Peak	12.00	100	Vertical	Pass

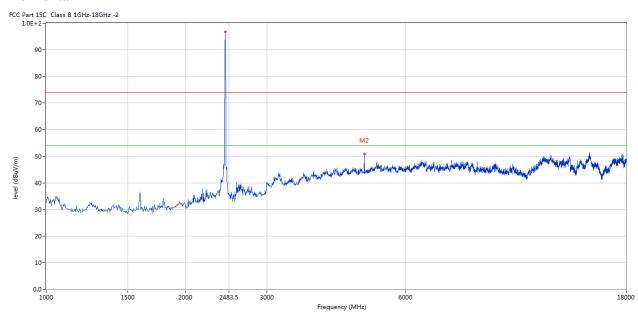
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Please refer to the following test plots for details: High Channel-2441MHz

#### Horizontal



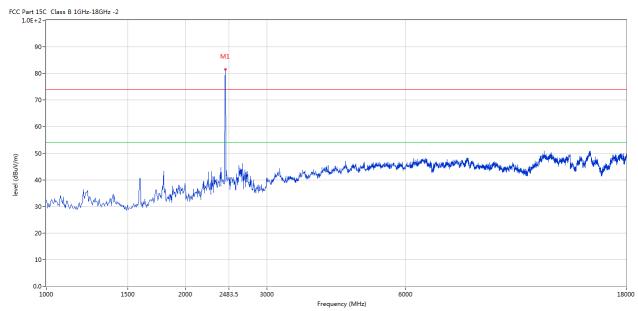
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2440.750	96.73	-3.57	114.0	-17.27	Peak	133.00	100	Horizontal	Pass
1*	2440.750	85.62	-3.57	94.0	-8.38	AV	133.00	100	Horizontal	Pass
2	4880.250	50.81	3.20	74.0	-23.19	Peak	144.00	100	Horizontal	Pass

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#### Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2440.750	81.51	-3.57	114.0	-32.49	Peak	52.00	100	Vertical	Pass

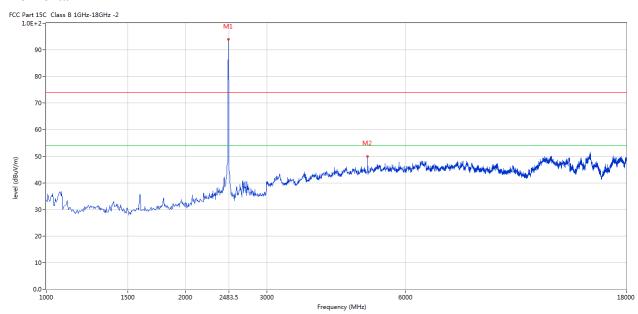
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Please refer to the following test plots for details: High Channel-2480MHz

#### Horizontal



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2479.750	93.96	-3.57	114.0	-20.04	Peak	122.00	100	Horizontal	Pass
1*	2479.750	83.51	-3.57	94.0	-10.49	AV	122.00	100	Horizontal	Pass
2	4961.000	50.98	3.36	74.0	-23.02	Peak	122.00	100	Horizontal	Pass

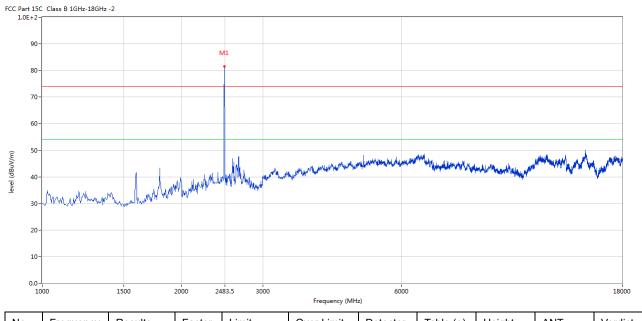
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#### Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2479.750	81.55	-3.57	114.0	-32.45	Peak	126.00	100	Vertical	Pass

Note: (2) Emission Level = Reading Level + Antenna Factor + Cable Loss-Amplifier

- (3) Margin=Emission-Limits
- (4) According to section 15.35(b), the peak limit is 20dB higher than the average limit
- (5) For test purpose, keep EUT continuous transmitting
- (5) For emission above 18GHz and Below 30MHz, It is only the floor noise. No necessary to take down.
- (6) the measured PK value less than the AV limit.

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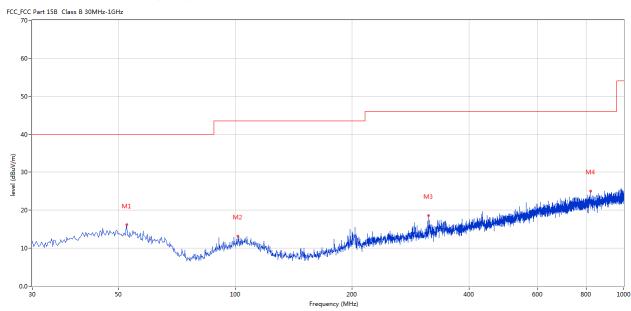


# B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results:** Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	52.547	16.15	-11.46	40.0	-23.85	Peak	359.00	100	Horizontal	Pass
2	101.520	13.18	-13.44	43.5	-30.32	Peak	329.00	100	Horizontal	Pass
3	314.139	18.53	-10.84	46.0	-27.47	Peak	300.00	100	Horizontal	Pass
4	822.292	25.02	-2.84	46.0	-20.98	Peak	324.00	100	Horizontal	Pass

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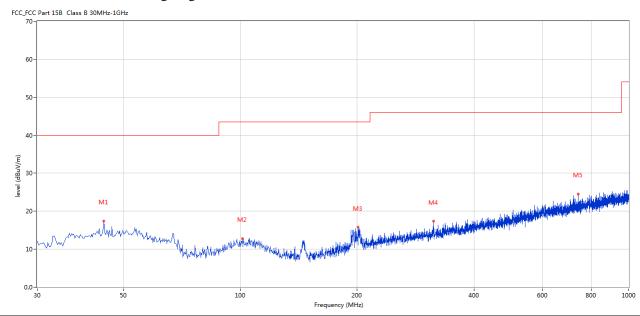


## Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	44.546	17.34	-11.44	40.0	-22.66	Peak	115.00	100	Vertical	Pass
2	101.277	12.75	-13.45	43.5	-30.75	Peak	69.00	100	Vertical	Pass
3	201.162	15.86	-13.43	43.5	-27.64	Peak	125.00	100	Vertical	Pass
4	314.139	17.34	-10.84	46.0	-28.66	Peak	44.00	100	Vertical	Pass
5	740.590	24.54	-3.46	46.0	-21.46	Peak	27.00	100	Vertical	Pass

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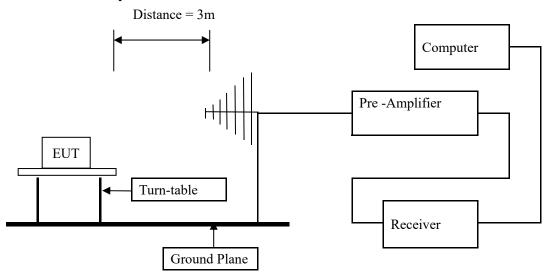


#### 7. Band Edge

#### 7.1 Test Method and test Procedure:

- (1) The EUT was tested according to ANSI C63.10–2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) Set Spectrum as RBW=1MHz, VBW=3MHz and Peak detector used for PK value. RBW=1MHz, VBW=10Hz and Peak detector used for AV value.
- (3) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (4) The antenna polarization: Vertical polarization and Horizontal polarization.

#### 7. 2 Radiated Test Setup



For the actual test configuration, please refer to the related items – Photos of Testing

#### 7.3 Configuration of The EUT

Same as section 5.3 of this report

#### 7.4 EUT Operating Condition

Same as section 5.4 of this report.

#### 7.5 Band Edge Limit

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

The report refers only to the sample tested and does not apply to the bulk.

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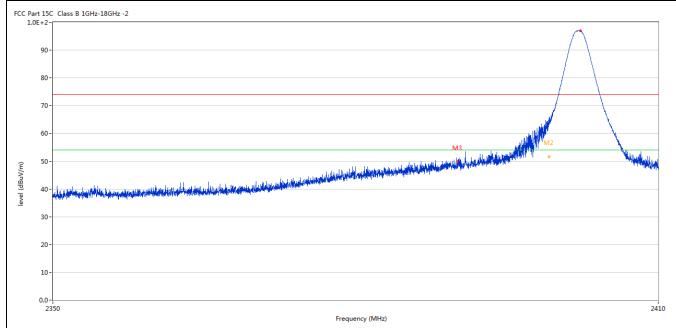
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#### 7.6 Test Result

Product:	Bluetooth Headphone	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	DC3.7V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
2	2399.620	63.89	-3.57	74.0	-10.11	Peak	275.00	100	Horizontal	Pass
2**	2399.620	51.55	-3.57	54.0	-2.45	AV	275.00	100	Horizontal	Pass
3	2389.960	50.00	-3.53	74.0	-24.00	Peak	281.00	100	Horizontal	Pass

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P	Product:		Bluetoo	oth Headpho	ne	Detect	tor		Vertical	
	Mode		Keeping	g Transmitti	ing	Test Vol	tage	]	DC3.7V	
Ter	mperature		24	4 deg. C,		Humid	lity	5	56% RH	
	st Result:			Pass						
C Part 15 1.0E+2	5C Class B 1GHz-18GHz	z -2								
90	)-								M1	
80	)-								$\triangle$	
70	)-									
									/ \	
60	)-									
								46	42	
50	)-						M3		<del>v12</del>	\
50	muldir. Assal kanalistian lla	ng dayah dilinda sadda ya dibada siya			rhaggight dippoply poply of the solid	hala kala kala kala kala kala kala kala		VIIII III III III	•	A CHARLES OF THE PARTY OF THE P
50 40 30		nija qaybandi, addin oʻli adavili		A CONTRACTOR OF THE PARTY OF TH	the state of the s	hickey banker black bridge		ALLIAN JAHANA	•	A SHAPPING
40		nd and built adding the design		and the transfer of which	okazorakidi Porpopulas jeksalidi, l	history de la company de la co		ALL HOLLING	•	A SHAPPING
30 20		ng dipungkan pelaban p	A POLICE OF THE PROPERTY OF TH	ing the second real property of the second s	it-aaniedikulleteje puhtus jässädid	his digas dan dari da nor da sagla		ALLOHOLD LANGE	•	Market Market
40 30		nd and build adding to the constraint of the con		the tenter the property of the	od <sub>e</sub> nageria <sup>dika</sup> dipiteriya pideka jiha sadiri d	hickory de			•	
30 20		ng dagan		all the land and the land of t					<b>₩2</b>	2
30 20 10 0.0 2				The second second second	Frequency (f	MHz)			•	1
30 20	Frequency	Results	Factor	Limit	Frequency (F		Table (o)	Height	ANT	1
30 20 10 0.0 2		Results (dBuV/m)	Factor (dB)	(dBuV/m)	Frequency (I Over Limit (dB)	MHz)  Detector	Table (o)	Height (cm)		Verdic
30 20 10 0.0 2	Frequency				Frequency (F	MHz)		_	ANT	verdic Pass
30 20 10 0.0 2	Frequency (MHz)	(dBuV/m)	(dB)	(dBuV/m)	Frequency (I Over Limit (dB)	MHz)  Detector	Table (o)	(cm)		Verdic

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P	roduct:		Bluetoo	th Headpho	ne	Polari	ty		Horizontal	
]	Mode		Keeping	g Transmitti	ng	Test Vol	tage		DC3.7V	
Ten	nperature		24	4 deg. C,		Humid	ity		56% RH	
Tes	st Result:			Pass						
2 Part 150 1.0E+2-	C Class B 1GHz-18GHz	: -2								
90 - 80 - 70 -										
60-		100000000000000000000000000000000000000			M2					
		A BOOK OF THE PARTY OF THE PART				al de Marie de la companya de la com		ف ، در آوام از ان خو افغان اللَّا مد	Bakranjana - lete arriet j	dal d
	which is the second	ALPHA MARKATAN				al distribution and place	the state of the s		Marketin deligible och address address deligible	d Albania diagnasia
	which and affective interest	ALAN AND AND AND AND AND AND AND AND AND A				ald be shall be a secured by	and the grade description	<del>- pality ji habada da lapad</del>	Americal states of the state of	d glory drawn
50 - 40 -	was productive to the second	Harris Hall Comment of the Comment o				old Beater describing	the state of the s	maddyniaith three de de gage	harrisiating you had parket before	A Bloom de Line
50 - 40 - 30 -	Washington and the second seco	Harding to the state of the sta				ald the state of t	land to be greated and an article facility	المرابعة الم	destructive for the destructive of	A Bloom Announce
50- 40- 30- 20-		Harding Williams				ald feetal degree and the	land and greated and an article land	madiliniside dendi den l <sub>etan</sub> d	Andrewskie die gebruik de kalende	d Blook deposition
50- 40- 30- 20- 10-		Harry Harry Harry					haret hard greedle de nobel philipse	ngapagagagagagagagagagagagagagagagagagag	d mereninden for standing for the standi	2500
50- 40- 30- 20- 10- 0.0- 24		Results	Factor	Limit	2483.5		Table (o)	Height	ANT	1
50- 40- 30- 20- 10- 0.0- 24	470		Factor (dB)	Limit (dBuV/m)	2483.5 Frequency (MH:	z)				1
50- 40- 30- 20- 10-	Frequency	Results			2483.5 Frequency (MH:	z)		Height		2500 Verdict

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	Product:		Bluetoo	th Headpho	ne	Detecto	or	,	Vertical		
	Mode		Keeping	g Transmitti	ng	Test Volt	tage	I	DC3.7V		
Т	emperature		24	deg. C,		Humidity			56% RH		
7	Test Result:			Pass							
	t 15C Class B 1GHz-18GHz E+2-	-2									
	90-										
	80-										
	70-										
	60-										
(m/	50-							1 .			
evel (dBuV/m)					NAME OF THE PERSON OF THE PERS	depression of the best of the second	Halan bela bela bela bela bela bela bela bela	the the state of the	athylah yangid bash ahari bahish	Migdy hap before	
level (dBuV/m)		digital de describe de la constantidad de la consta			Wildling .	deposition place by alcohol	iliyan ing dirak kati olerahiya	dia delego de de la constanta d		deligated have been been been been been been been be	
level (dBuV/m)	50- 40	Maria Maria di Salatin			N. P. Salarina	dependent blev blev der	istoriot di naturali di na	dia del gossila, al Lad	ettyrik general keneral dari dari dari dari dari dari dari dari	interpretation	
level (dBuV/m)	50- 40-	Marie Marie And Marie Andrews			NA PARAMETER STATE OF THE PARAMETER STATE OF	dependential phonological	liderilaidenteltooleapid	Maraba production	att gight, dagad ga ag mara, dagad gig	id adal harips had	
	50- 40- 30- 20-	ki piki ilika ki di di ki piki di ki				dispersional physical behavior	listerindistrates (Patrophi	Marada produced desper		Mahali kani perbe	
	40 - 30 - 20 -	Migriff the state of the state			2483.5 Frequency (MHz		iliforiidid oo ka	Marada produced dispersion	athydd yddiglaeth de dddiglaeth y ddiglaeth y ddiglaeth y ddiglaeth y ddiglaeth y ddiglaeth y ddiglaeth y ddig	2500	
	50- 40- 30- 20- 10- 0.0- 2470	Results	Factor	Limit		a) Detector	Table (o)	Height	ANT	2500 Verdict	
	40- 40- 30- 20- 10- 0.0- 2470	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Frequency (MHz		Table (o)	Height (cm)	ANT	T	

Note: 1. The PK emission level less than the AV limit. No necessary to record the AV emission level.

- 2. This is a handhold device. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), After pre-test. It was found that the worse radiated emission was get at the lying position.
- 3. The three modulation modes of GFSK, Pi/4D-QPSK, and 8DPSK were tested. And only the worst case was recorded in the test report. GFSK was the worst case.

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#### 8.0 Antenna Requirement

## **Applicable Standard**

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

This product has a FPC antenna. The antenna gain is 2.3dBi Max. It fulfills the requirement of this section. Test Result: Pass

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SK Modulation				1			1			
Product:		ooth Head			Te	st Mode:		Keep tran		
Mode	Keepi	ng Transm	nitting		Tes	st Voltage	DC3.7V			
Temperature		24 deg. C,			Humidity			56%	RH	
Test Result:		Pass			Г	etector		Pl	K	
dB Bandwidth	817.64kHz								-	
Ref Lvl	Marker 1 [T1 ndB] ndB 20.00 dB				ВW	30 ki	Hz	F Att	20 dB	
10 dBm	BW 81	7.635270	J54 KHZ	SV	A.T.	8.5 m	s Ui	nit	dBn	n T
			1			<b>v</b> <sub>1</sub>	[T1]	-1 2.40199	.28 dBm 699 GHz	
			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	m		ndB BW <b>▽</b> Ţ1	81 . [ <b>T1</b> ]	20 7.63527 -21	.00 dB 054 kHz .58 dBm	i n
10		Ψ1√	$\sqrt{}$		hy	<b>7</b> 2 ▼ <sub>T2</sub>	[T1]	2.40158	818 GHz	1
20 <b>1MAX</b>						7		2.40240	581 GHz	1
30		,					\_			
40	/ / /						4	my		
50	V						V	7	whenone	- -
60										
70										
90 Center 2.40	)2 CH2		300	ьи» /				gn:	ın 3 MHz	_

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Mode   Keeping Transmitting   Test Voltage   DC3.7V     Temperature   24 deg. C,	Product:	Bluetoo	oth Headphone	-	Test Mode:	Keep to	ransmitting	
Temperature 24 deg. C, Humidity 56% RH  Test Result: Pass Detector PK  20dB Bandwidth 817.64kHz  Marker 1 [T1 ndB] RBW 30 kHz RF Att 20 dB  10 dBm BW 817.63527054 kHz SWT 8.5 ms Unit dB  20.00 dB VBW 100 kHz  10 dBm BW 817.63527054 kHz SWT 8.5 ms Unit dB  2.4409\$098 GH:  -10 BW 8 7.63527054 kH  -20 Old BW 8 7.63527054 kH  -21 Old BW 8 7.63527054 kH  -22 Old dB  -20 BW 8 7.63527054 kH  -21 Old BW 8 7.63527054 kH  -22 Old dB  -24 A4058818 GH  -25 Old dB  -26 A4058818 GH  -30 -40 -50 -60 -60 -60 -60 -60 -60 -60 -60 -60 -6	Mode			Т	Test Voltage	De	C3.7V	
### Marker 1 [T1 ndB]	emperature				Humidity	56	5% RH	
Marker 1 [T1 ndB] RBW 30 kHz RF Att 20 dB 20.00 dB VBW 100 kHz 10 dB 20.00 dB VBW 100 kHz 10 dB 20.00 dB VBW 100 kHz 10 dB 20.4409 098 GH 20.4409 098 GH 20.4409 098 GH 20.4409 098 GH 20.440 dB 20.440 SB 86 GH 20.440 SB 86	est Result:		Pass		Detector		PK	
Ref Lvl ndB 20.00 dB VBW 100 kHz 10 dBm BW 817.63527054 kHz SWT 8.5 ms Unit dB  V1 [T1]91 dB 2.4409 098 GH  ndb 2.4409 098 GH  Ndb 8 7.63527054 kH  VT [T1]21.01 dB 2.44058 818 GH  -20 IMAX  -30  IMAX  -40  -50	B Bandwidth	81	7.64kHz					_
10 dBm BW 817.63527054 kHz SWT 8.5 ms Unit dB  V1 [T1]91 dB 2.44099 598 GH 3.7.63527554 kH  VT [T1] -2.01 dB 8.7.63527554 kH  VT [T1] -2.35 dB 3.5 ms Unit dB 2.44098 598 GH 3.5 ms Unit dB 3.6 ms Unit dB 3.6 ms Unit dB 3.7 ms Un		Marker	1 [T1 ndB]	RBW	30 kHz	RF Att	20 dB	
10 0 11 [T1]								
V1 [T1]		BW 817	'.63527054 kH2	SWT	8.5 ms	Unit	dBm	
ndf 20.00 dB BW 817.63527054 kH: VT [T1] -25.01 dB 2.44058818 GB: -20 1MAX -30 -40 -50 -60					<b>v</b> <sub>1</sub> [	r1] -	1.91 dBm	A
-10 -10 -10 -10 -10 -10 -10 -10 -10 -10				1		2.4409		
-10 -20 -20 -40 -50 -60 -60 -77 -77 -77 -77 -77 -77 -77 -77 -77 -7			. ~	<b>1</b>		2 817 6352		
2.44058 318 GH: -20 1MAX -30 -40 -60	-10		V		_			
-20 1MAX -30 -40 -60			$\mathcal{L}$	7		2.4405	8818 GHz	
-30 -40 -50 -60	-30		T-1~	V	$\bigwedge_{\mathbb{T}^2} \nabla_{\mathbb{T}^2}$	[T1] -2	1.35 dBm	
-40 -50 -60	1MAX					2.4414	0581 GHz	1MA
-50 what -60		\_\			4	1.		
-60 What white		M				The state of the s		
	huh har	V					Mann	
-70	- / 0							
-80	-80							
-90 Center 2.441 GHz 300 kHz/ Span 3 MH:		441 GHz	300	kHz/		Sp	an 3 MHz	ł

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Product:		Bluetoo	oth Headpl	hone		T	est Mode:		Keep tra	ansmitting	
Mode		Keepin	g Transmi	tting		To	est Voltage		DC	3.7V	
Temperature		2	4 deg. C,			]	Humidity		56%	% RH	
Test Result:	Pass						Detector		I	PK	
dB Bandwidth	817.64kHz										
	Marker 1 [T1 ndB]					BW	30 kH	z R	F Att	20 dB	
Ref Lvl		ndB	20.	00 dB	V	BW	100 kH	Z			
10 dBm		BW 817	.635270	54 kHz	S	WΤ	8.5 ms	U	nit	dBm	l
10							<b>v</b> <sub>1</sub>	[T1]	-2	.47 dBm	A
									2.47999	699 GHz	
0				7	1		ndB		20	.00 dB	
				\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	My		BW ▼ <sub>T1</sub>	81 [T1]	7.63527	054 kHz	
-10				V	<del>                                     </del>	١	TI	<u> </u>	2.47958	.78 dBm 818 GHz	
			/	$\checkmark$		7	$ abla_{\mathrm{T2}}$	[T1]	-22	.03 dBm	
-20			77				T2		2.48040	581 GHz	
1MAX											1M
-30			j				V	L <sub>y</sub>			
-40	M							4	~		
-50	7	V						$\overline{}$	My	Mumm	
-60										a www	
-70											
-80											
-90											
Center 2	.48 GHz	Z		300	kHz/				Spa	ın 3 MHz	

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DC3.7V 56% RH			
56% RH			
PK			
tt 20 dB			
dBm			
-1.22 dBm			
40199699 GHz			
20.00 dB 25651303 MHz			
-21.14 dBm			
40137 <mark>174 GHz</mark>			
-21.14 dBm			
40262826 GHz			
\			
Span 3 MHz			

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Pi/4D-QPSK M	<b>Todulatio</b>	n								
Product:		Bluetoo	oth Headpl	hone		Test Mode:		Keep tra	ansmitting	
Mode		Keepin	g Transmi	tting		Test Voltage	;	DC	23.7V	
Temperature		2	4 deg. C,			Humidity		569	% RH	
Test Result:			Pass			Detector		]	PK	
20dB Bandwidth		1.	257MHz							
Ŕ <b></b>		Marker	1 [T1 n	ndB]	RBW	30 k	Hz R	F Att	20 dB	
Ref Lvl		ndB		00 dB	VBW					
10 dBm		BW 1	.256513	303 MHz	SWI	8.5 m	s U	nit	dBm	
10						<b>v</b> <sub>1</sub>	[T1]	-1	.65 dBm	A
				1				2.44099	699 GHz	
0				_ /		ndE		20	0.00 dB	
					$\backslash \cap$	BW VT1	[T1]	1.25651	.303 MHz	
-10			$\sim$	$\mathcal{N}$	1 V	~ hom		2.44037	174 GHz	
		m 1	$\int$			\\_\_\\\\\\\\\\\\\\\\\\\\\\\\\\\\	[T1]	-21	.61 dBm	
-20		7	-			\	7	2.44162	826 GHz	1MA
IMAX							\			IMA
-30										
-40	~/	$\sim$					$\bigvee$	^		
-50	<u> </u>							Two Two	hand the second	
-60										
-70										
-80										
-90 Center 2	.441 GI	Hz		300	kHz/			Spa	an 3 MHz	
Date: 26	6.APR.2	021 21	:36:57							

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Product:		Blueto	oth Headpl	hone		Т	est Mode:		Keep tra	ansmitting	
Mode		Keepin	g Transmi	tting		To	est Voltage		DC3.7V		
Temperature		2	4 deg. C,				Humidity	56% RH			
Test Result:			Pass			Detector			]	PK	
20dB Bandwidth	1.257MHz										
	Marker 1 [T1 ndB]					BW	30 kl	Hz RI	7 Att	20 dB	
Ref Lvl		ndB		00 dB		BW	100 ki				
10 dBm		BW 1	1.256513	303 MHz	S	TW	8.5 ms	5 Ur	nit	dBm	! •
							<b>v</b> <sub>1</sub>	[T1]	-2	.46 dBm	A
0				1			11		2.47999	699 GHz	
				_ /			ndB BW		1.25651	.00 dB .303 MHz	
-10					$\Lambda$		$\nabla_{\mathrm{T1}}$	[T1]	-22	.39 dBm	
			_~~\	$\mathcal{N}$	V 1	<i>\</i> ~	, prof		2.47937	174 GHz	
-20		<u></u>	$\checkmark$				\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	[T1]	-22	.34 dBm	
1MAX									2.48062	826 GHz	1M2
-30											
-40									<i>ب</i> س		
-50	A STATE OF THE STA							,	<b>*</b>	Mull	
-60											
-70											
-80											
-90										-	
Center 2	.48 GHz	Z		300	kHz/				Spa	ın 3 MHz	

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8QPSK Modul	lation										
Product:		Bluetoo	oth Headpl	hone		Test Mod	le:		Keep tra	ansmitting	
Mode		Keepin	g Transmi	tting		Test Volta	age		DC	C3.7V	
Temperature		2	4 deg. C,			Humidi	ty		569	% RH	
Test Result:			Pass			Detecto	r		]	PK	
20dB Bandwidth		1.	257MHz								
(R)		Marker	1 [T1 n	ndB]	RB	W 30	kHz	RI	F Att	20 dB	
Ref Lvl		ndB		00 dB	VB		kHz				
10 dBm		BW 1	.256513	803 MHz	SW	T 8.5	ms	Uı	nit 	dBm	r
						•	1 [T	1]	-3	1.22 dBm	Α
0				_1					2.40199	699 GHz	
				_ /			dB W		20 1.25651	0.00 dB L303 MHz	
-10			~					T1]	-21	1.15 dBm	
-10			~~\ \	Λ,	~ ~	~~~~			2.40137	7174 GHz	
		т	$\sqrt{}$			▽	72[	T1]	-23	1.24 dBm	
-20 1MAX									2.40262	2826 GHz	1MA
-30											
-50		~~							<i>M</i>		
Who										The same of the sa	
-60											
-70											
-80											
-90 Center 2	402 G	H 7		300	kHz/				Sn:	an 3 MHz	
	.402 GI 5.APR.2		:43:28	300	/				576		

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Product:		Blueto	oth Headpl	hone		Γ	Test Mode:		Keep tra	ansmitting	
Mode			g Transmi			T	est Voltage		DC	3.7V	
Temperature			4 deg. C,				Humidity		56%	% RH	
Test Result:			Pass				Detector		]	PK	
0dB Bandwidth		1.	.257MHz								
Ŕ	Marker 1 [T1 ndB]					BW	30 kl	Hz Rl	F Att	20 dB	
Ref Lvl		ndB		00 dB		BW	100 ki				
10 dBm		BW 1	1.256513	303 MHz	S	TW	8.5 ms	s Uı	nit	dBm	1
							<b>v</b> <sub>1</sub>	[T1]	-1	.71 dBm	A
0				1					2.44099	699 GHz	
							ndB BW		20 1.25651	.00 dB 303 MHz	
-10					$\backslash \cap$		$\nabla_{\mathrm{T1}}$	[T1]	-21	.59 dBm	
10			~~~	$\mathcal{N}$	•	w	m		2.44037	174 GHz	
-20		T]	$\checkmark$				$\nabla \sqrt{2}$	[T1]	-21	.68 dBm	l
1MAX									2.44162	826 GHz	1M2
-30											
-40	المامر	m)						$\bigvee$	Μ.		
-50	₩~							,	\ <sub>\\\</sub>	ha had	
-60											
-70											
-80											
-90 Center 2	2.441 G	Hz		300	kHz/				Spa	ın 3 MHz	
Date: 2	6.APR.2		:35:11						-		

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8QPSK Modula Product:		Bluetoo	oth Headpl	none		Test Mode:		Keen tra	nsmitting	
Mode			g Transmi			Test Voltage			3.7V	
Temperature			4 deg. C,			Humidity	, <u> </u>		6 RH	
Test Result:			Pass			Detector			PK	
0dB Bandwidth		1.	1.257MHz							
	Marker 1 [T1 ndB]					30 k	Hz RI	F Att	20 dB	
Ref Lvl	ndB 20.00 dB			RBW VBW		Hz	1100	20 02		
10 dBm		BW 1	1.256513	303 MHz	SWT	8.5 m	s Ur	nit	dBm	
10						<b>v</b> <sub>1</sub>	[T1]	-2	.42 dBm	
								2.47999	699 GHz	A
0				1		ndE	3	20	.00 dB	
						BW		1.25651	303 MHz	
-10			<i>_</i> ^^			V <sub>T1</sub>	[T1]	-22	.40 dBm	
			~~~ \	<b>7</b> 0 •	~		2 [T1]	2.47937	174 GHz .41 dBm	
-20		T	<del>/</del>				. [II] <u>[2</u>	2.48062	826 GHz	
1MAX								2:10002	OZ O GIIZ	1MA
-30										
-40	Λ./	$\sim$						Λ		
-50	~J√ <b>\</b> ₩							, , <sub>(1</sub> , <sub>(1</sub> , <sub>(1</sub> , <sub>1</sub> , <sub></sub>	Www.	
-60										
-70										
-80										
-90										
Center 2	.48 GH:	Z		300	kHz/			Spa	n 3 MHz	

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#### 10.0 FCC ID Label

#### **FCC ID: 2AZBO-N00009**

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

#### **Mark Location:**



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#### 11.0 Photo of testing

#### 11.1 Conducted test View



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#### Radiated emission test view



The report refers only to the sample tested and does not apply to the bulk.

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#### 11.2 Photographs – EUT

Outside View



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#### Photographs - EUT

#### Outside View



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Inside view



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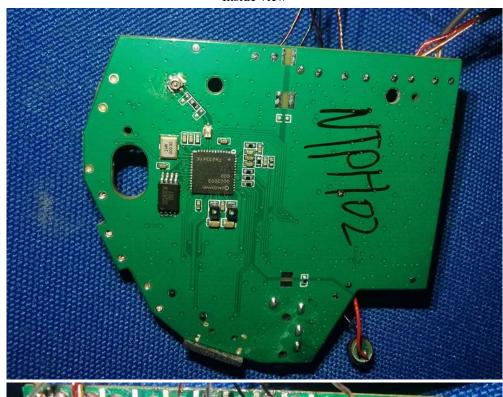
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Inside view





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Inside view



-- End of the report--

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