APPLICATION CERTIFICATION FCC Part 15C
On Behalf of

Zylux Acoustic Corporation

Bluetooth Headphone
Model No.: BeActiv S100

FCC ID: XN6-BUS100

Prepared for	:	Zylux Acoustic Corporation
Address	:	3F, 22, Lane 35, Jihu Road, Taipei Neihu Technology Park, Taipei 114, Taiwan
Prepared by	:	Shenzhen Accurate Technology Co., Ltd.
Address	:	1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China
		Tel: (0755) 26503290 Fax: (0755) 26503396

Report No.	:	ATE20172077
Date of Test	:	Dec. 20-Dec. 26, 2017
Date of Report	:	Dec. 27, 2017

TABLE OF CONTENTS

Description Page

Test Report Certification
1. GENERAL INFORMATION 5
1.1. Description of Device (EUT) 5
1.2. Carrier Frequency of Channels 5
1.3. Special Accessory and Auxiliary Equipment 6
1.4. Description of Test Facility 6
1.5. Measurement Uncertainty 6
2. MEASURING DEVICE AND TEST EQUIPMENT 7
3. OPERATION OF EUT DURING TESTING 8
3.1. Operating Mode 8
3.2. Configuration and peripherals 8
4. TEST PROCEDURES AND RESULTS 9
5. POWER LINE CONDUCTED MEASUREMENT 10
5.1. Block Diagram of Test Setup 10
5.2. Power Line Conducted Emission Measurement Limits 11
5.3. Configuration of EUT on Measurement 11
5.4. Operating Condition of EUT 11
5.5. Test Procedure 11
5.6. Data Sample 12
5.7. Power Line Conducted Emission Measurement Results 12
6. 6DB BANDWIDTH MEASUREMENT 17
6.1. Block Diagram of Test Setup 17
6.2. The Requirement For Section 15.247(a)(2) 17
6.3. EUT Configuration on Measurement 17
6.4. Operating Condition of EUT 17
6.5. Test Procedure 17
6.6. Test Result 18
7. MAXIMUM PEAK OUTPUT POWER 20
7.1. Block Diagram of Test Setup 20
7.2. The Requirement For Section 15.247(b)(3) 20
7.3. EUT Configuration on Measurement 20
7.4. Operating Condition of EUT 20
7.5. Test Procedure 20
7.6. Test Result 21
8. POWER SPECTRAL DENSITY MEASUREMENT 23
8.1. Block Diagram of Test Setup 23
8.2. The Requirement For Section 15.247(e) 23
8.3. EUT Configuration on Measurement 23
8.4. Operating Condition of EUT 23
8.5. Test Procedure 24
8.6. Test Result 25
9. BAND EDGE COMPLIANCE TEST 27
9.1. Block Diagram of Test Setup 27
9.2. The Requirement For Section 15.247(d) 27
9.3. EUT Configuration on Measurement 27

9.4. Operating Condition of EUT 27
9.5. Test Procedure 28
9.6. Test Result 28
10. RADIATED SPURIOUS EMISSION TEST 34
10.1. Block Diagram of Test Setup 34
10.2. The Limit For Section 15.247(d) 35
10.3. Restricted bands of operation 36
10.4. Configuration of EUT on Measurement 36
10.5. Operating Condition of EUT 37
10.6. Test Procedure 37
10.7. Data Sample 38
10.8. The Field Strength of Radiation Emission Measurement Results 38
11. ANTENNA REQUIREMENT 51
11.1. The Requirement 51
11.2. Antenna Construction 51

Test Report Certification

Applicant	:	Zylux Acoustic Corporation
Manufacturer	:	Zylux Acoustic Corporation
Factory	:	Zhao Yang Electronic（Shenzhen）Co., Ltd
EUT Description	:	Bluetooth Headphone
Model No.	:	BeActiv S100
Trade Name	:	beemunited

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247: 2017
ANSI C63.10: 2013

The EUT was tested according to DTS test procedure of Apr 05, 2017 KDB558074 D01 DTS Meas Guidance v04 for compliance to FCC 47CFR 15.247 requirements

The device described above is tested by Shenzhen Accurate Technology Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.247 limits. The measurement results are contained in this test report and Shenzhen Accurate Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Accurate Technology Co., Ltd.

Date of Test :	Dec. 20-Dec. 26, 2017
Date of Report :	Dec. 27, 2017
Prepared by :	(Staff Engineer)
Approved & Authorized Signer :	(Sean Liu, Manager)

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT	:	Bluetooth Headphone
Model Number	:	BeActiv S100
Bluetooth version	:	BT 4.1 LE
Frequency Range	:	2402MHz-2480MHz
Number of Channels	:	40
Antenna Gain	:	0dBi
Antenna type	:	Integral Antenna
Power Supply	:	DC 3.7V (Powered by battery) or DC 5V (Powered by USB port)
Modulation mode	:	GFSK
Applicant	:	Zylux Acoustic Corporation
Address	:	3F, 22, Lane 35, Jihu Road, Taipei Neihu Technology Park, Taipei 114, Taiwan
Manufacturer	:	Zylux Acoustic Corporation
Address	:	3F, 22, Lane 35, Jihu Road, Taipei Neihu Technology Park, Taipei 114, Taiwan
Factory	:	Zhao Yang Electronic（Shenzhen）Co., Ltd
Address	:	Building 2, De Yong Jia Industrial Park, Guang Qiao Road, Yu Lv Community, Gong Ming Street, Guang Ming New District, Shenzhen, 518132, P.R. China

1.2.Carrier Frequency of Channels

Channel	Frequceny (MHz)	Channel	Frequceny (MHz)	Channel	Frequceny (MHz)	Channel	Frequceny (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

1.3.Special Accessory and Auxiliary Equipment

AC/DC Power Adapter: (provided by laboratory)	:	Model:TEKA006-0501000UKU
		Input: 100-240V~50/60Hz 0.3A
		Output: DC 5V/1A

1.4.Description of Test Facility

EMC Lab : Recognition of accreditation by Federal Communications Commission (FCC)
The Designation Number is CN1189
The Registration Number is 708358

Listed by Innovation, Science and Economic Development Canada (ISEDC)
The Registration Number is 5077A-2

Accredited by China National Accreditation Service for Conformity Assessment (CNAS)
The Registration Number is CNAS L3193

Accredited by American Association for Laboratory Accreditation (A2LA)
The Certificate Number is 4297.01

Name of Firm : Shenzhen Accurate Technology Co., Ltd.

Site Location : 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

1.5.Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.23dB, k=2

Radiated emission expanded uncertainty (9kHz-30MHz) = 3.08dB, k=2

Radiated emission expanded uncertainty (30MHz-1000MHz) = 4.42dB, k=2

Radiated emission expanded uncertainty (Above 1GHz) = 4.06dB, k=2

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 07, 2017	1 Year
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 07, 2017	1 Year
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 07, 2017	1 Year
Pre-Amplifier	Rohde&Schwarz	CBLU1183540-01	3791	Jan. 07, 2017	1 Year
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 13, 2017	1 Year
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 13, 2017	1 Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 13, 2017	1 Year
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 13, 2017	1 Year
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 07, 2017	1 Year
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 07, 2017	1 Year
Highpass Filter	Wainwright Instruments	WHKX3.6/18G-10SS	N/A	Jan. 07, 2017	1 Year
Band Reject Filter	Wainwright Instruments	WRCG2400/2485-2375/2510-60/11SS	N/A	Jan. 07, 2017	1 Year
RF COAXIAL CABLE	SUHNER	N-5m(Frequency range:9KHz-26.5GHz)	NO.3	Jan. 07, 2017	1 Year
RF COAXIAL CABLE	SUHNER	N-5m(Frequency range:9KHz-26.5GHz)	NO.4	Jan. 07, 2017	1 Year
RF COAXIAL CABLE	SUHNER	N-1m(Frequency range:9KHz-26.5GHz)	NO.5	Jan. 07, 2017	1 Year
RF COAXIAL CABLE	SUHNER	N-1m(Frequency range:9KHz-26.5GHz)	NO.6	Jan. 07, 2017	1 Year
Temporary antenna connector	NTGS	14AE	N/A	Dec. 20, 2017	N/A

Note: The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.

3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

The mode is used: **BLE Transmitting mode**

Low Channel: 2402MHz
Middle Channel: 2440MHz
High Channel: 2480MHz

Note: The equipment under test (EUT) was tested under fully-charged battery. The Bluetooth has been tested under continuous transmission mode.

3.2.Configuration and peripherals

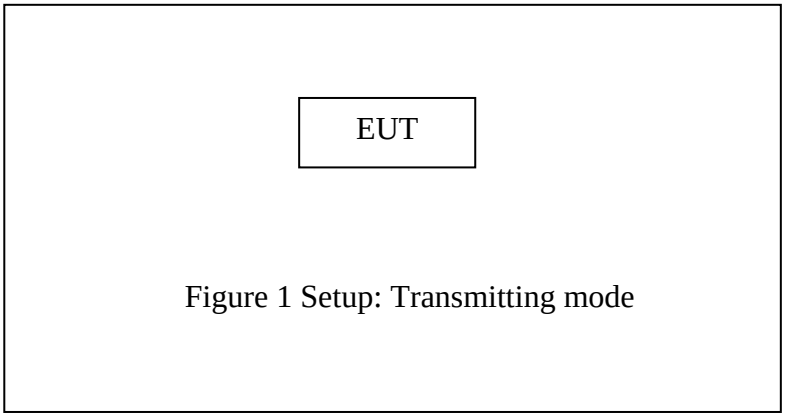


Figure 1 Setup: Transmitting mode

4. TEST PROCEDURES AND RESULTS

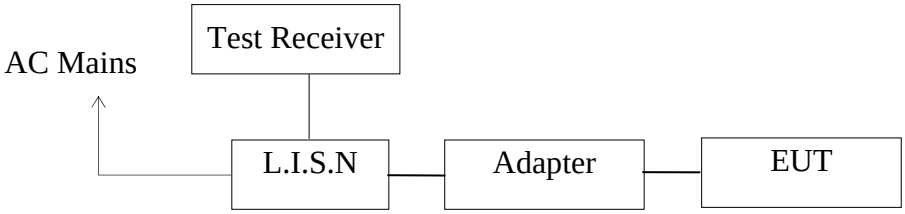
FCC Rules	Description of Test	Result
Section 15.247(a)(2)	6dB Bandwidth Test	Compliant
Section 15.247(e)	Power Spectral Density Test	Compliant
Section 15.247(b)(3)	Maximum Peak Output Power Test	Compliant
Section 15.247(d)	Band Edge Compliance Test	Compliant
Section 15.247(d) Section 15.209	Radiated Spurious Emission Test	Compliant
Section 15.207	AC Power Line Conducted Emission Test	Compliant
Section 15.203	Antenna Requirement	Compliant

Remark: “N/A” means “Not applicable”.

5. POWER LINE CONDUCTED MEASUREMENT

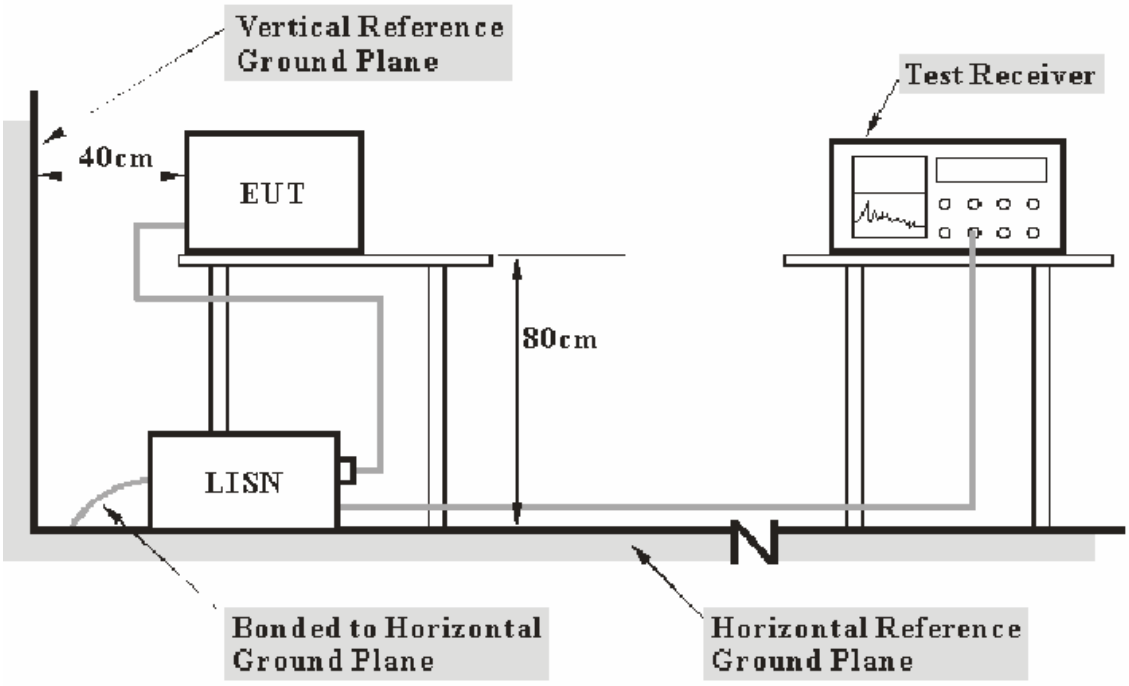
5.1.Block Diagram of Test Setup

5.1.1.Block diagram of connection between the EUT and simulators



(EUT: Bluetooth Headphone)

5.1.2. Test System Setup



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

5.2.Power Line Conducted Emission Measurement Limits

Frequency (MHz)	Limit dB(μV)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0
NOTE1: The lower limit shall apply at the transition frequencies. NOTE2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.		

5.3.Configuration of EUT on Measurement

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

5.4.Operating Condition of EUT

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

5.4.2. Turn on the power of all equipment.

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

5.5.Test Procedure

The EUT is put on the plane 0.8 m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2013 on Conducted Emission Measurement.
The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

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

5.6.Data Sample

Frequency (MHz)	Transducer value (dB)	QuasiPeak Level (dBμV)	Average Level (dBμV)	QuasiPeak Limit (dBμV)	Average Limit (dBμV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)
X.XX	10.6	25.3	17.0	59.0	49.0	33.4	31.7	Pass

Frequency(MHz) = Emission frequency in MHz
Transducer value(dB) = Insertion loss of LISN + Cable Loss
Level(dBμV) = Quasi-peak Reading/Average Reading + Transducer value
Limit (dBμV) = Limit stated in standard
Margin = Limit (dBμV) - Level (dBμV)

Calculation Formula:
Margin = Limit (dBμV) - Level (dBμV)

5.7.Power Line Conducted Emission Measurement Results

PASS.

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

Maximizing procedure was performed on the six (6) highest emissions of the EUT.
Emissions attenuated more than 20 dB below the permissible value are not reported.

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

The spectral diagrams are attached as below.

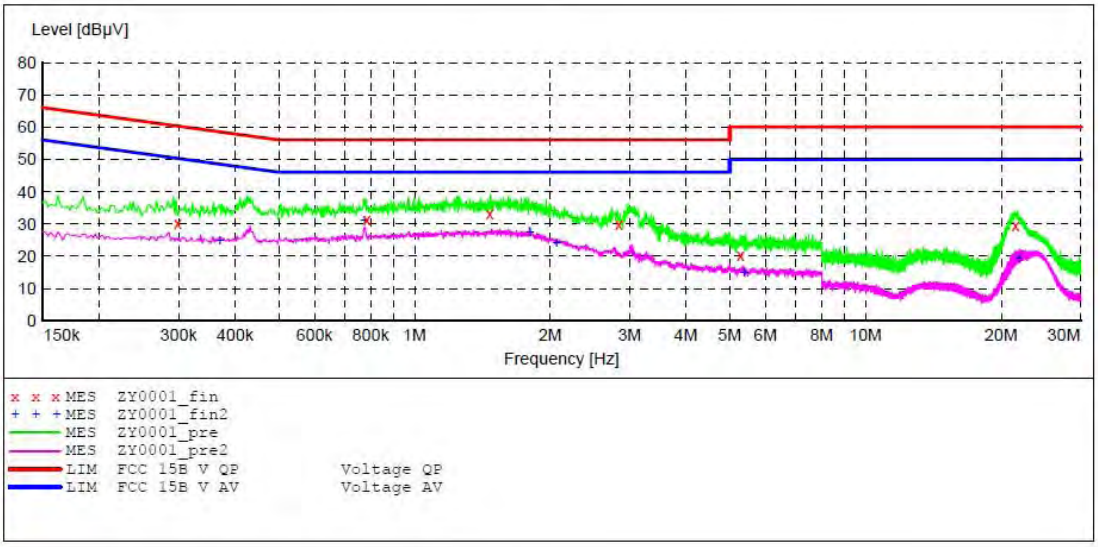
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

```
EUT:                  Bluetooth Headphone    M/N:BeActiv S100
Manufacturer:         Zylux
Operating Condition:  Charging
Test Site:            2#Shielding Room
Operator:             Star
Test Specification:   N    120V/60Hz
Comment:              Report NO.:ATE20172077
Start of Test:        2017-12-26 / 10:32:27
```

SCAN TABLE: "V 150K-30MHz fin"

```
  Short Description:                _SUB_STD_VTERM2 1.70
  Start      Stop       Step       Detector  Meas.     IF       Transducer
  Frequency  Frequency  Width                Time      Bandw.
  150.0 kHz  30.0 MHz   4.5 kHz    QuasiPeak 1.0 s     9 kHz    NSLK8126 2008
                                   Average
```



MEASUREMENT RESULT: "ZY0001_fin"

2017-12-26 10:38

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.298500	30.30	10.9	60	30.0	QP	N	GND
0.784500	31.20	11.1	56	24.8	QP	N	GND
1.468500	33.10	11.2	56	22.9	QP	N	GND
2.841000	29.80	11.3	56	26.2	QP	N	GND
5.289000	20.40	11.4	60	39.6	QP	N	GND
21.534000	29.40	11.7	60	30.6	QP	N	GND

MEASUREMENT RESULT: "ZY0001_fin2"

2017-12-26 10:38

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.370500	25.20	10.9	49	23.3	AV	N	GND
0.775500	31.40	11.1	46	14.6	AV	N	GND
1.801500	27.60	11.2	46	18.4	AV	N	GND
2.067000	24.30	11.3	46	21.7	AV	N	GND
5.383500	15.00	11.5	50	35.0	AV	N	GND
21.844500	19.50	11.7	50	30.5	AV	N	GND

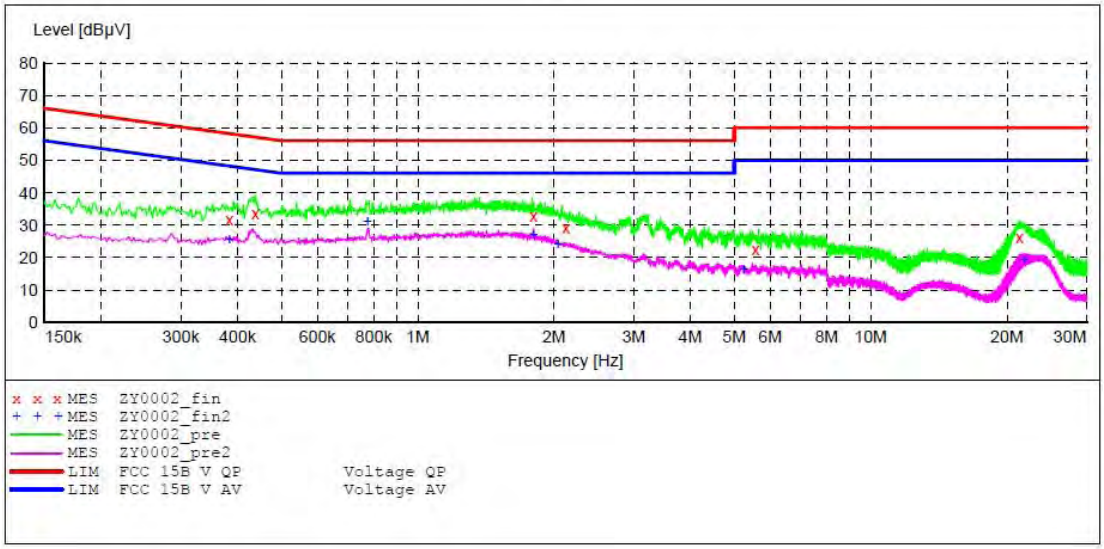
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

```
EUT:                  Bluetooth Headphone    M/N:BeActiv S100
Manufacturer:         Zylux
Operating Condition:  Charging
Test Site:            2#Shielding Room
Operator:             Star
Test Specification:   L    120V/60Hz
Comment:              Report NO.:ATE20172077
Start of Test:        2017-12-26 / 10:39:08
```

SCAN TABLE: "V 150K-30MHz fin"

```
  Short Description:              _SUB_STD_VTERM2 1.70
  Start      Stop       Step      Detector  Meas.     IF       Transducer
  Frequency  Frequency  Width               Time      Bandw.
  150.0 kHz  30.0 MHz   4.5 kHz   QuasiPeak 1.0 s     9 kHz    NSLK8126 2008
                                  Average
```



MEASUREMENT RESULT: "ZY0002_fin"

2017-12-26 10:41

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.384000	31.70	10.9	58	26.5	QP	L1	GND
0.438000	33.70	11.0	57	23.4	QP	L1	GND
1.801500	32.90	11.2	56	23.1	QP	L1	GND
2.125500	29.30	11.3	56	26.7	QP	L1	GND
5.568000	22.70	11.5	60	37.3	QP	L1	GND
21.286500	26.20	11.7	60	33.8	QP	L1	GND

MEASUREMENT RESULT: "ZY0002_fin2"

2017-12-26 10:41

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.384000	25.70	10.9	48	22.5	AV	L1	GND
0.775500	31.40	11.1	46	14.6	AV	L1	GND
1.801500	27.50	11.2	46	18.5	AV	L1	GND
2.040000	24.40	11.3	46	21.6	AV	L1	GND
5.248500	16.60	11.4	50	33.4	AV	L1	GND
21.853500	19.40	11.7	50	30.6	AV	L1	GND

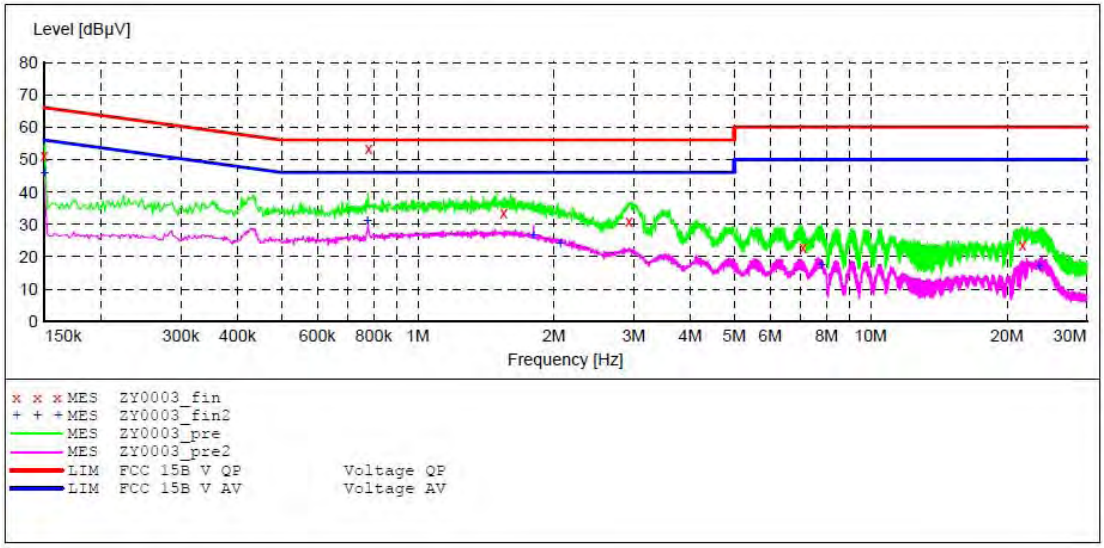
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

```
EUT:                    Bluetooth Headphone    M/N:BeActiv S100
Manufacturer:           Zylux
Operating Condition:    Charging
Test Site:              2#Shielding Room
Operator:               Star
Test Specification:     L    240V/60Hz
Comment:                Report NO.:ATE20172077
Start of Test:          2017-12-26 / 10:42:30
```

SCAN TABLE: "V 150K-30MHz fin"

```
  Short Description:              _SUB_STD_VTERM2 1.70
  Start      Stop       Step      Detector  Meas.     IF       Transducer
  Frequency  Frequency  Width               Time      Bandw.
  150.0 kHz  30.0 MHz   4.5 kHz   QuasiPeak 1.0 s     9 kHz    NSLK8126 2008
                                  Average
```



MEASUREMENT RESULT: "ZY0003_fin"

2017-12-26 10:45

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	51.20	10.8	66	14.8	QP	L1	GND
0.780000	53.50	11.1	56	2.5	QP	L1	GND
1.549500	33.40	11.2	56	22.6	QP	L1	GND
2.926500	31.00	11.3	56	25.0	QP	L1	GND
7.098000	23.00	11.5	60	37.0	QP	L1	GND
21.637500	23.60	11.7	60	36.4	QP	L1	GND

MEASUREMENT RESULT: "ZY0003_fin2"

2017-12-26 10:45

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	46.20	10.8	56	9.8	AV	L1	GND
0.775500	31.50	11.1	46	14.5	AV	L1	GND
1.801500	27.00	11.2	46	19.0	AV	L1	GND
2.067000	24.40	11.3	46	21.6	AV	L1	GND
7.786500	17.80	11.5	50	32.2	AV	L1	GND
23.581500	17.50	11.7	50	32.5	AV	L1	GND

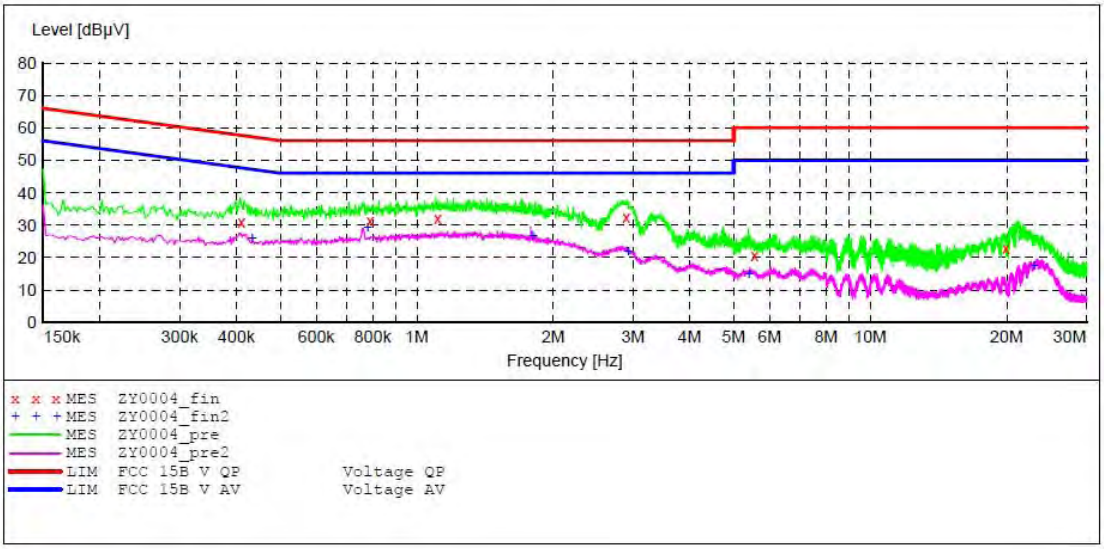
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

```
EUT:                  Bluetooth Headphone    M/N:BeActiv S100
Manufacturer:         Zylux
Operating Condition:  Charging
Test Site:            2#Shielding Room
Operator:             Star
Test Specification:   N    240V/60Hz
Comment:              Report NO.:ATE20172077
Start of Test:        2017-12-26 / 10:46:28
```

SCAN TABLE: "V 150K-30MHz fin"

```
  Short Description:          _SUB_STD_VTERM2 1.70
  Start      Stop       Step      Detector  Meas.     IF       Transducer
  Frequency  Frequency  Width               Time      Bandw.
  150.0 kHz  30.0 MHz   4.5 kHz   QuasiPeak 1.0 s     9 kHz    NSLK8126 2008
                                  Average
```



MEASUREMENT RESULT: "ZY0004_fin"

2017-12-26 10:52

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.411000	31.00	11.0	58	26.6	QP	N	GND
0.789000	31.30	11.1	56	24.7	QP	N	GND
1.113000	32.20	11.2	56	23.8	QP	N	GND
2.899500	32.60	11.3	56	23.4	QP	N	GND
5.563500	20.70	11.5	60	39.3	QP	N	GND
19.932000	22.90	11.7	60	37.1	QP	N	GND

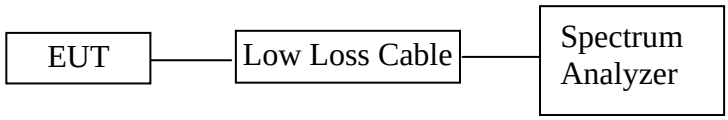
MEASUREMENT RESULT: "ZY0004_fin2"

2017-12-26 10:52

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.433500	26.20	11.0	47	21.0	AV	N	GND
0.780000	29.50	11.1	46	16.5	AV	N	GND
1.801500	26.80	11.2	46	19.2	AV	N	GND
2.931000	22.10	11.3	46	23.9	AV	N	GND
5.410500	15.30	11.5	50	34.7	AV	N	GND
22.983000	17.80	11.7	50	32.2	AV	N	GND

6. 6DB BANDWIDTH MEASUREMENT

6.1.Block Diagram of Test Setup



(EUT: Bluetooth Headphone)

6.2.The Requirement For Section 15.247(a)(2)

Section 15.247(a)(2): Systems using digital modulation techniques may operate in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

6.3.EUT Configuration on Measurement

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

6.4.Operating Condition of EUT

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

6.4.2.Turn on the power of all equipment.

6.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

6.5.Test Procedure

6.5.1.The transmitter output was connected to the spectrum analyzer through a low loss cable.

6.5.2.Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz.

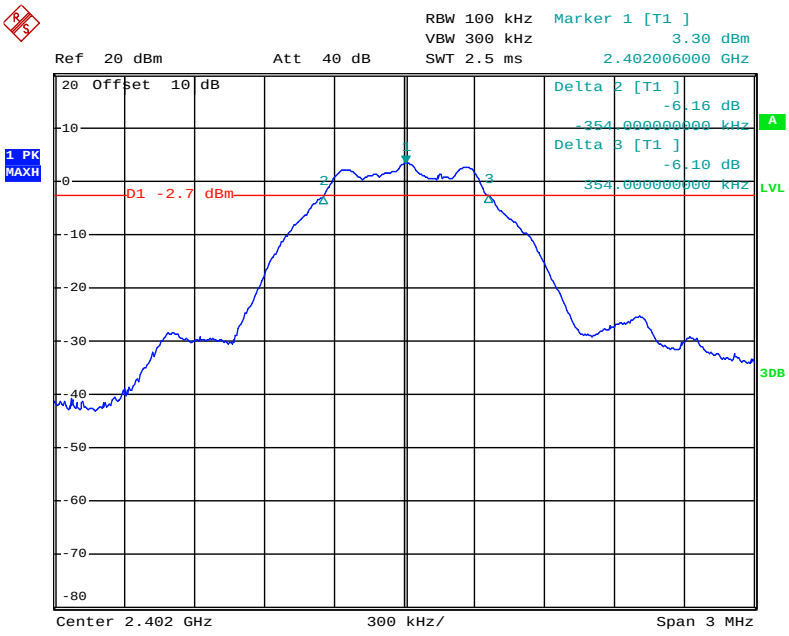
6.5.3.The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

6.6.Test Result

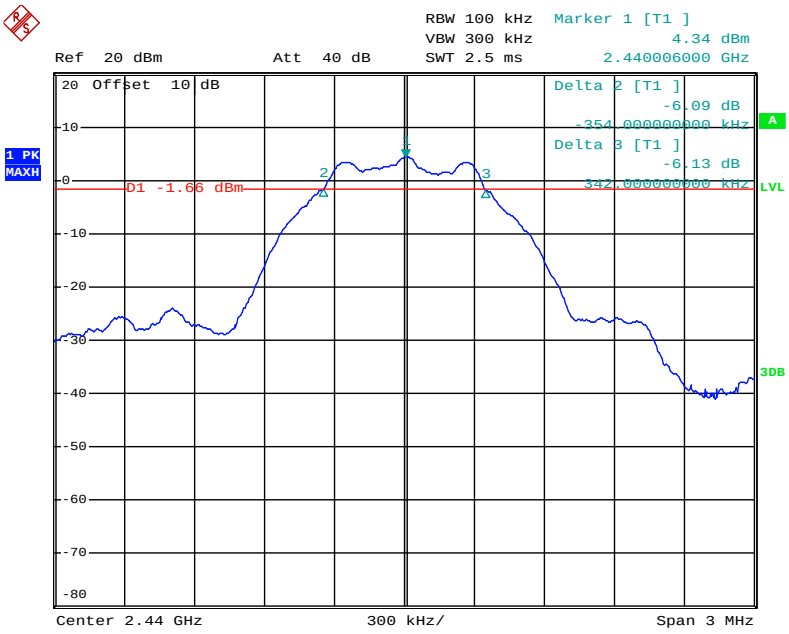
Channel	Frequency (MHz)	6 dB Bandwith (MHz)	Minimum Limit(MHz)	PASS/FAIL
0	2402	0.708	0.5	PASS
19	2440	0.696	0.5	PASS
39	2480	0.690	0.5	PASS

The spectrum analyzer plots are attached as below.

channel 0

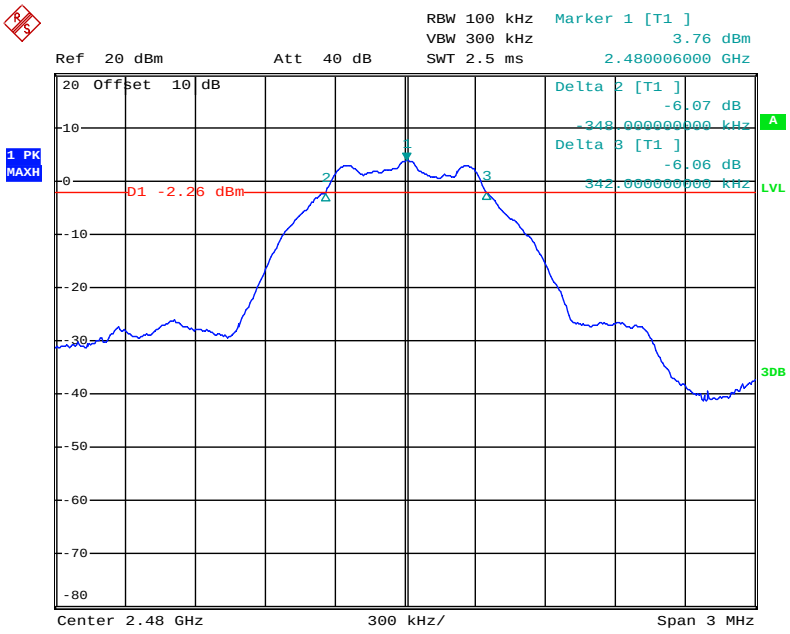


channel 19



Date: 26.DEC.2017 10:08:48

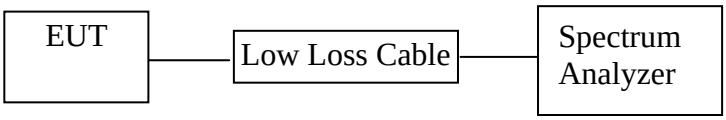
channel 39



Date: 26.DEC.2017 10:10:51

7. MAXIMUM PEAK OUTPUT POWER

7.1.Block Diagram of Test Setup



(EUT: Bluetooth Headphone)

7.2.The Requirement For Section 15.247(b)(3)

Section 15.247(b)(3): For systems using digital modulation in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands: 1 Watt.

7.3.EUT Configuration on Measurement

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

7.4.Operating Condition of EUT

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

7.4.2.Turn on the power of all equipment.

7.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

7.5.Test Procedure

7.5.1.The transmitter output was connected to the spectrum analyzer through a low loss cable.

7.5.2.Set RBW of spectrum analyzer to 1 MHz and VBW to 3MHz.

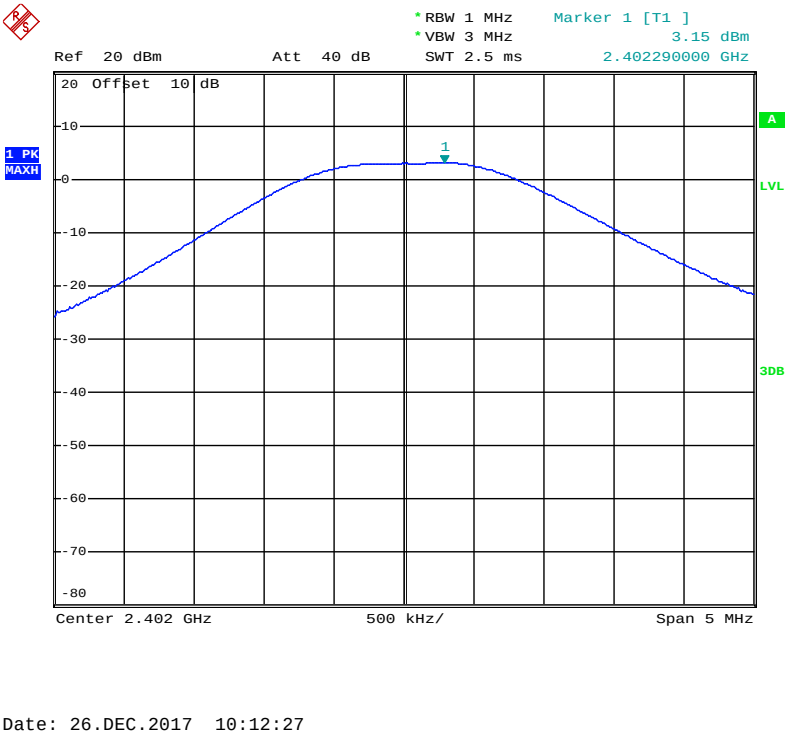
7.5.3.Measurement the maximum peak output power.

7.6.Test Result

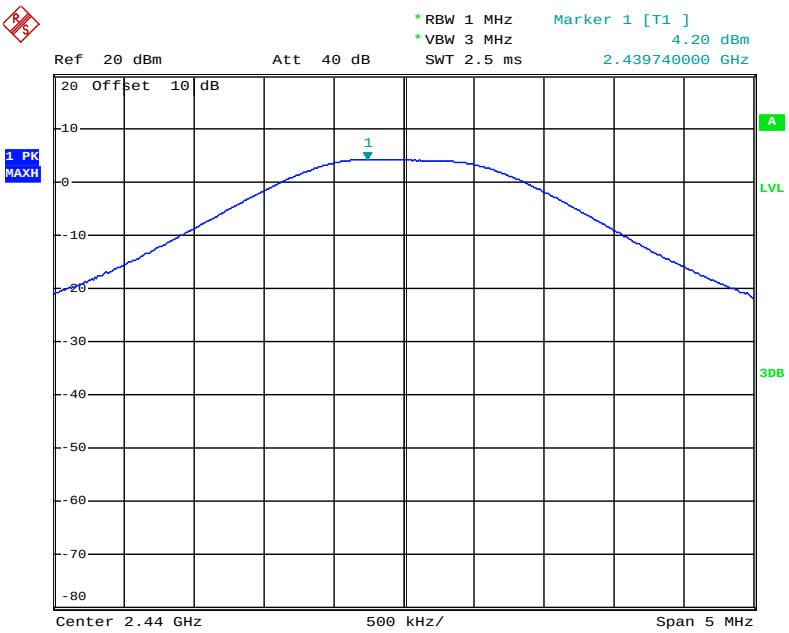
Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
0	2402	3.15	30	PASS
19	2440	4.20	30	PASS
39	2480	3.60	30	PASS

The spectrum analyzer plots are attached as below.

channel 0

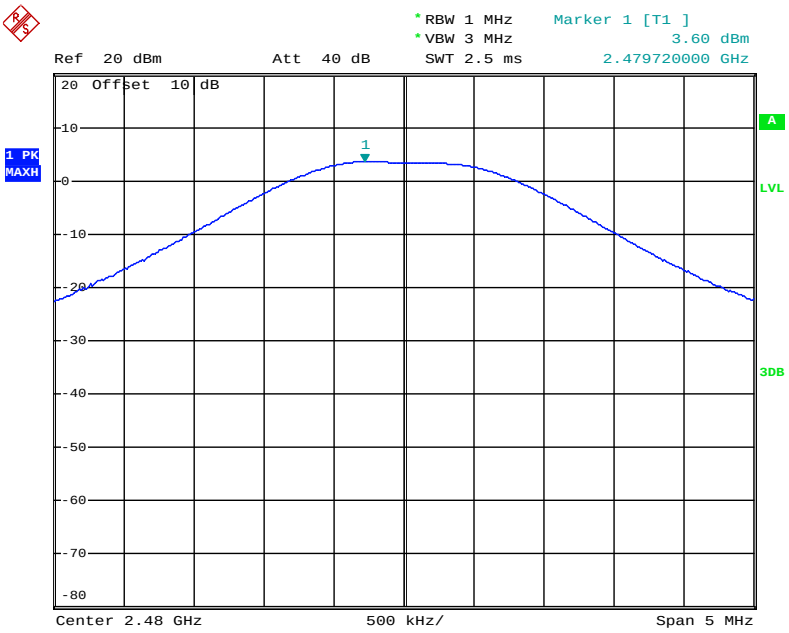


channel 19



Date: 26.DEC.2017 10:14:51

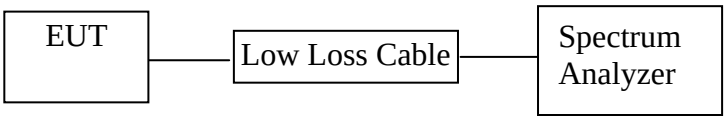
channel 39



Date: 26.DEC.2017 10:15:20

8. POWER SPECTRAL DENSITY MEASUREMENT

8.1.Block Diagram of Test Setup



(EUT: Bluetooth Headphone)

8.2.The Requirement For Section 15.247(e)

Section 15.247(e): For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

8.3.EUT Configuration on Measurement

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

8.4.Operating Condition of EUT

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

8.4.2.Turn on the power of all equipment.

8.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

8.5.Test Procedure

8.5.1.The transmitter output was connected to the spectrum analyzer through a low loss cable.

8.5.2.Measurement Procedure PKPSD:

8.5.3.This procedure must be used if maximum peak conducted output power was used to demonstrate compliance to the fundamental output power limit, and is optional if the maximum (average) conducted output power was used to demonstrate compliance.

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the RBW to: 3 kHz $\leqslant$ RBW $\leqslant$ 100 kHz.
4. Set the VBW $\geqslant$ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3kHz) and repeat.

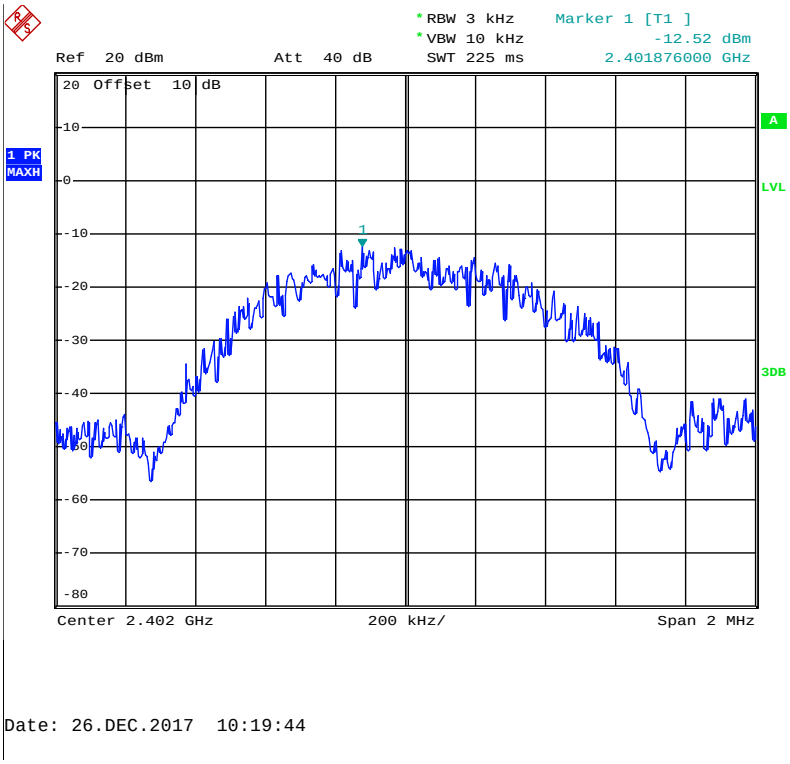
8.5.4.Measurement the maximum power spectral density.

8.6.Test Result

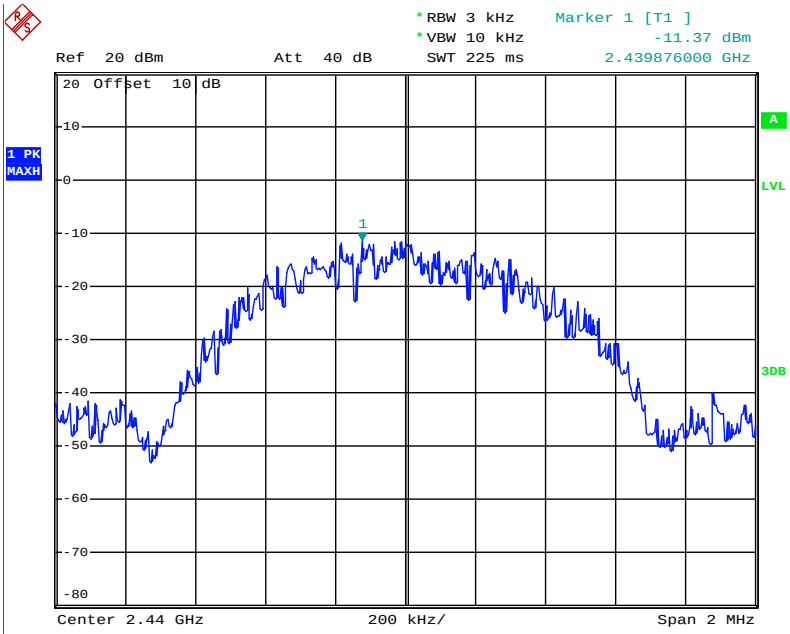
CHANNEL NUMBER	FREQUENCY (MHz)	PSD (dBm/3KHz)	LIMIT (dBm/3KHz)	PASS/FAIL
0	2402	-12.52	8	PASS
19	2440	-11.37	8	PASS
39	2480	-11.86	8	PASS

The spectrum analyzer plots are attached as below.

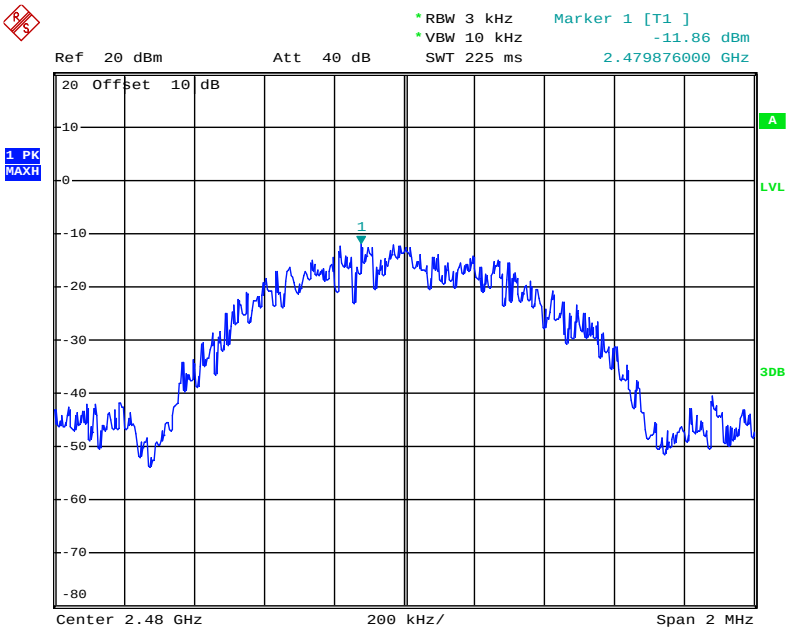
channel 0



channel 19

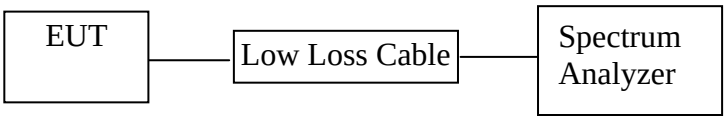


channel 39



9. BAND EDGE COMPLIANCE TEST

9.1.Block Diagram of Test Setup



(EUT: Bluetooth Headphone)

9.2.The Requirement For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

9.3.EUT Configuration on Measurement

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

9.4.Operating Condition of EUT

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

9.4.2.Turn on the power of all equipment.

9.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2480MHz TX frequency to transmit.

9.5.Test Procedure

Conducted Band Edge:

9.5.1.The transmitter output was connected to the spectrum analyzer via a low loss cable.

9.5.2.Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz.

9.5.3. Radiate Band Edge:

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

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

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

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

9.5.8.RBW=1MHz, VBW=1MHz

9.5.9.The band edges was measured and recorded.

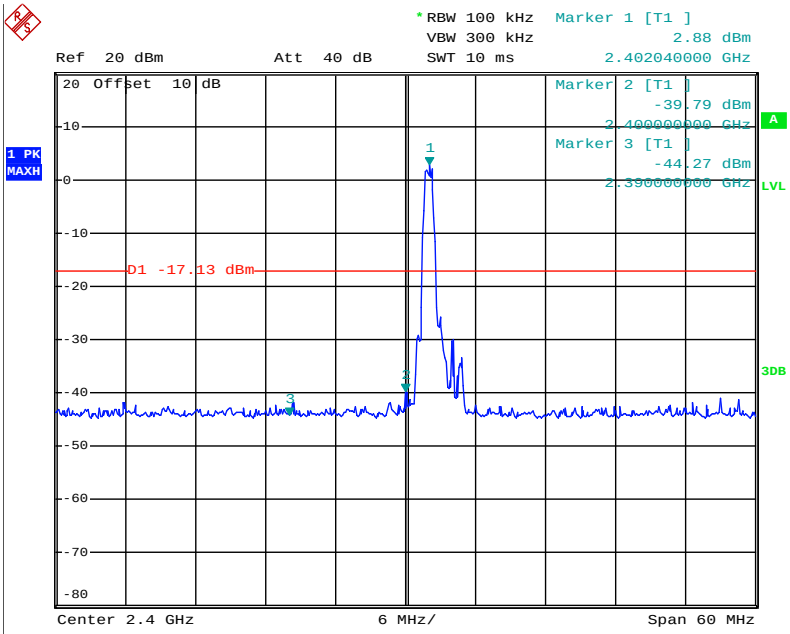
9.6.Test Result

Pass.

Conducted Band Edge Result

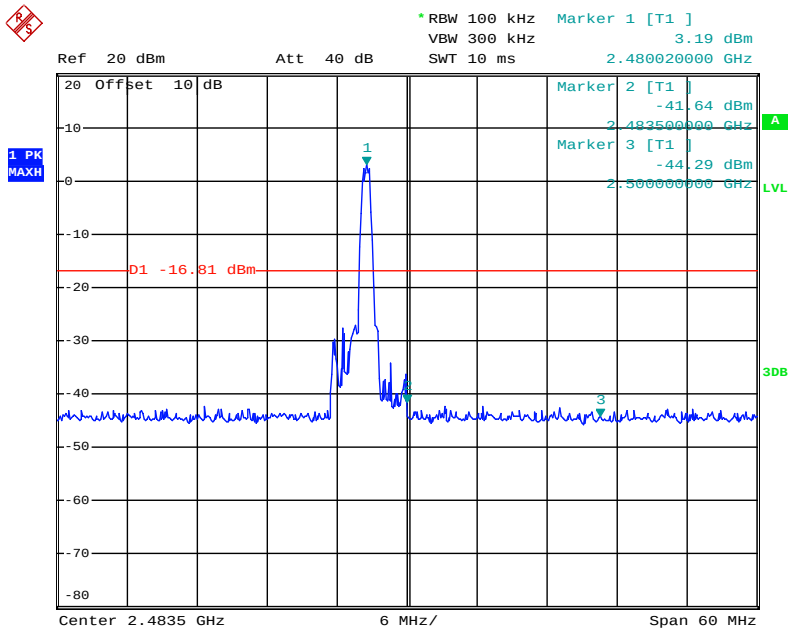
Channel	Frequency	Delta peak to band emission	Limit(dBc)
0	2.402GHz	42.67	20
39	2.480GHz	44.83	20

channel 0



Date: 26.DEC.2017 12:09:37

channel 39



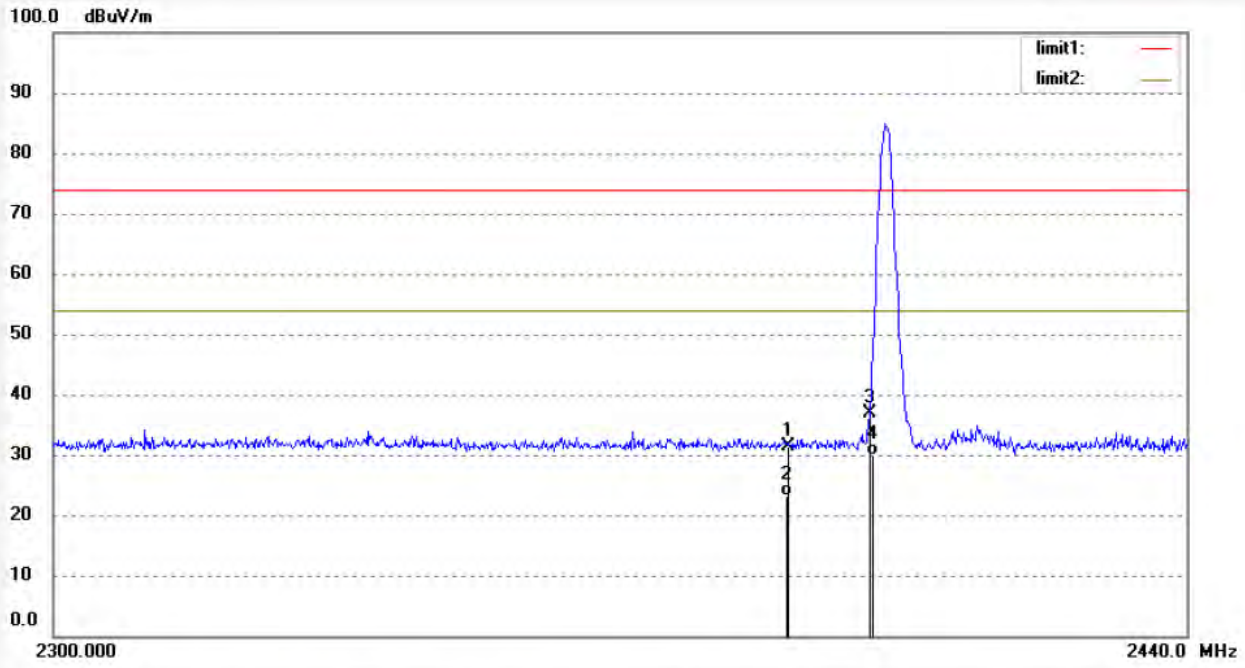
Date: 26.DEC.2017 12:10:43

Radiated Band Edge Result

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: STAR2017 #1372	Polarization: Horizontal
Standard: FCC PK	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2017/12/26
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 18:12:16
EUT: Bluetooth Headphone	Engineer Signature: star
Mode: TX 2402MHz	Distance: 3m
Model: BeActiv S100	
Manufacturer: Zylux	

Note: Report No.:ATE20172077



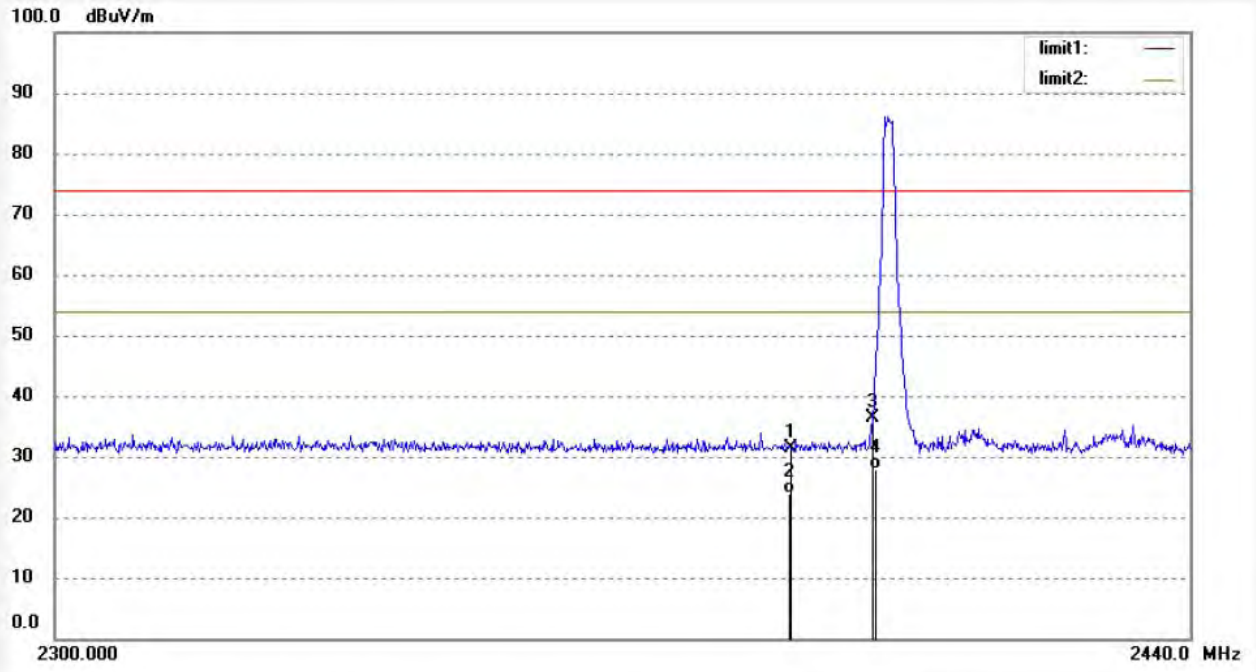
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	37.70	-6.32	31.38	74.00	-42.62	peak	200	42	
2	2390.000	29.55	-6.32	23.23	54.00	-30.77	AVG	200	106	
3	2400.000	43.19	-6.27	36.92	74.00	-37.08	peak	200	239	
4	2400.000	36.27	-6.27	30.00	54.00	-24.00	AVG	200	112	

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: STAR2017 #1371
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth Headphone
Mode: TX 2402MHz
Model: BeActiv S100
Manufacturer: Zylux

Polarization: Vertical
Power Source: DC 3.7V
Date: 2017/12/26
Time: 18:11:03
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172077



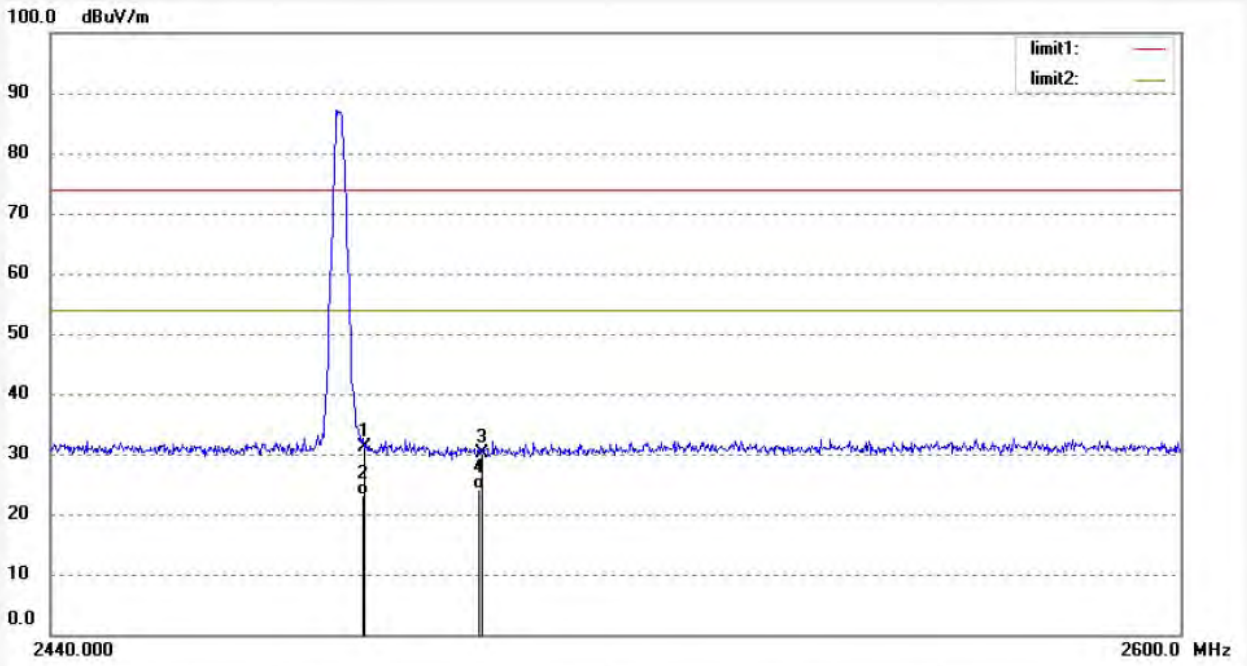
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	37.62	-6.32	31.30	74.00	-42.70	peak	150	114	
2	2390.000	30.25	-6.32	23.93	54.00	-30.07	AVG	150	94	
3	2400.000	42.65	-6.27	36.38	74.00	-37.62	peak	150	154	
4	2400.000	34.24	-6.27	27.97	54.00	-26.03	AVG	150	241	

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: STAR2017 #1373
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth Headphone
Mode: TX 2480MHz
Model: BeActiv S100
Manufacturer: Zylux

Polarization: Horizontal
Power Source: DC 3.7V
Date: 2017/12/26
Time: 18:14:18
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172077



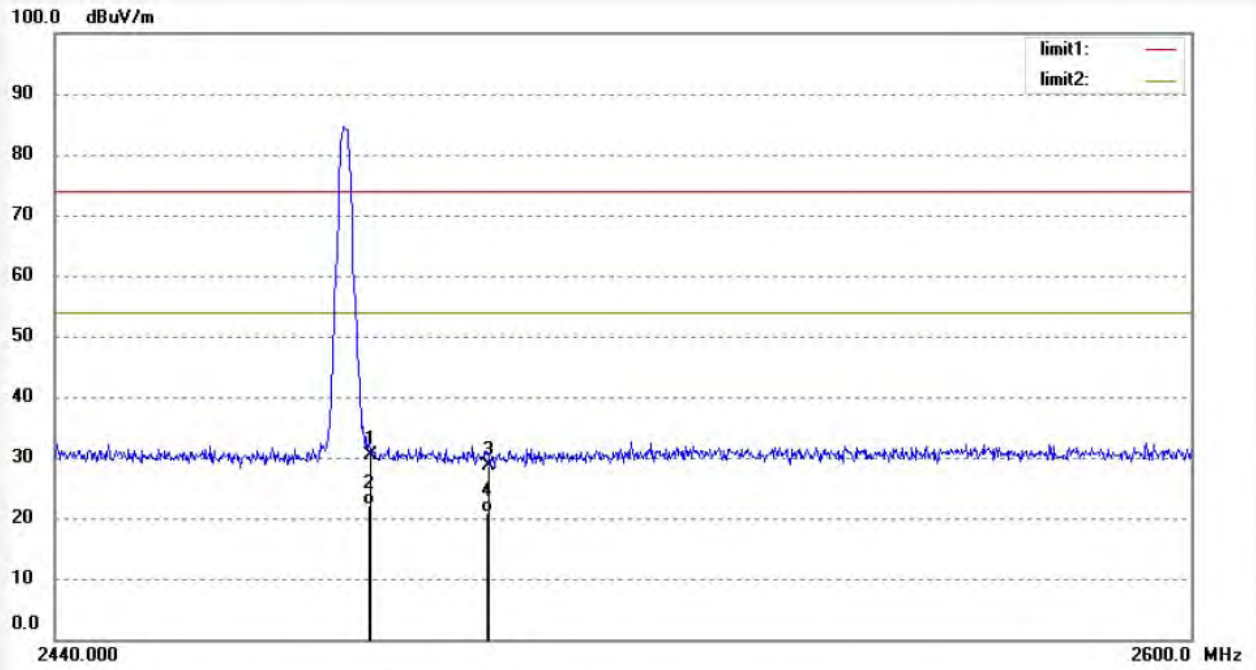
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	37.05	-5.89	31.16	74.00	-42.84	peak	200	304	
2	2483.500	29.14	-5.89	23.25	54.00	-30.75	AVG	200	247	
3	2500.000	35.84	-5.81	30.03	74.00	-43.97	peak	200	226	
4	2500.000	30.00	-5.81	24.19	54.00	-29.81	AVG	200	178	

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: STAR2017 #1374
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth Headphone
Mode: TX 2480MHz
Model: BeActiv S100
Manufacturer: Zylux

Polarization: Vertical
Power Source: DC 3.7V
Date: 2017/12/26
Time: 18:17:02
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172077



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	36.28	-5.89	30.39	74.00	-43.61	peak	150	52	
2	2483.500	28.14	-5.89	22.25	54.00	-31.75	AVG	150	146	
3	2500.000	34.40	-5.81	28.59	74.00	-45.41	peak	150	139	
4	2500.000	26.69	-5.81	20.88	54.00	-33.12	AVG	150	245	

Note:

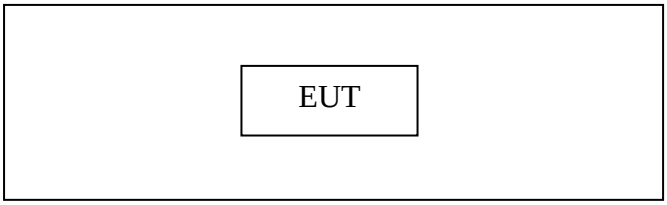
1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

   Result = Reading + Corrected Factor

10.RADIATED SPURIOUS EMISSION TEST

10.1.Block Diagram of Test Setup

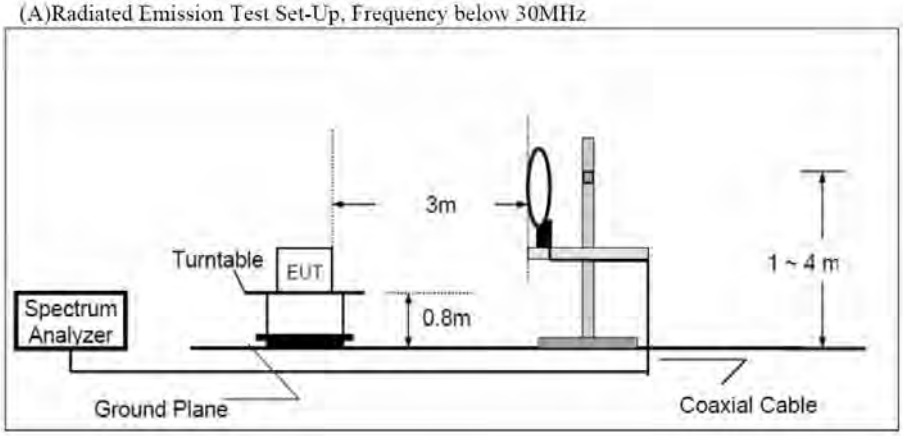
10.1.1.Block diagram of connection between the EUT and peripherals



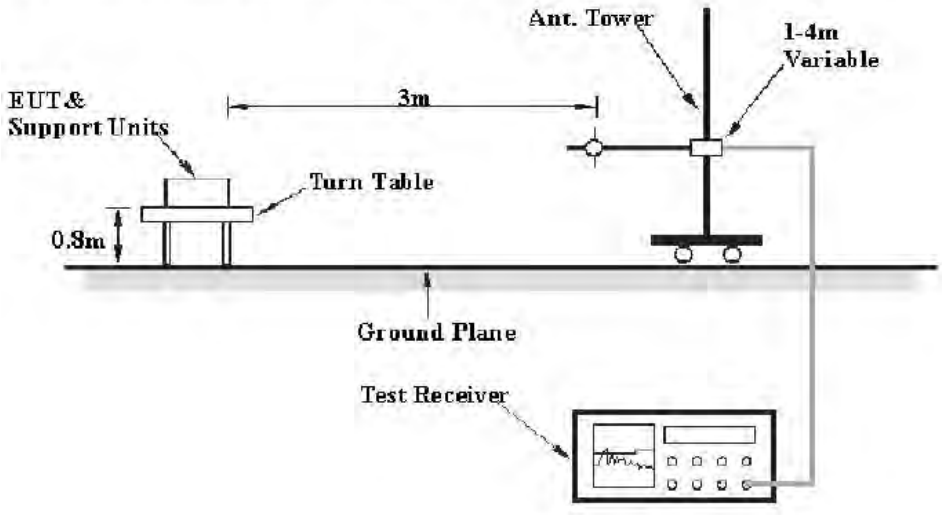
Setup: Transmitting mode

10.1.2.Semi-Anechoic Chamber Test Setup Diagram

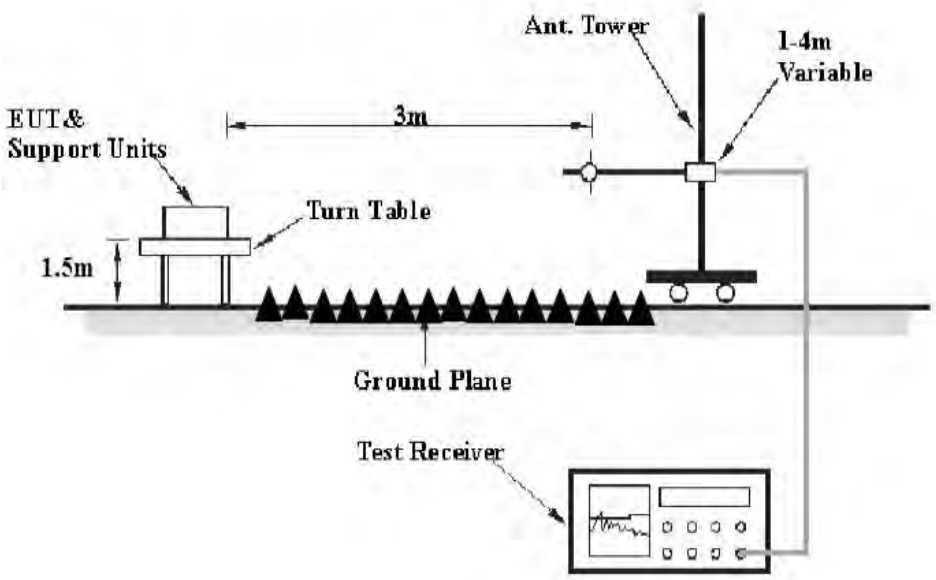
(A)Radiated Emission Test Set-Up, Frequency below 30MHz



(B)Radiated Emission Test Set-Up, Frequency 30MHz-1GHz



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



10.2.The Limit For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

10.3. Restricted bands of operation

10.3.1. FCC Part 15.205 Restricted bands of operation

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

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

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510
[2]Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

10.4. Configuration of EUT on Measurement

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

10.5. Operating Condition of EUT

10.5.1. Setup the EUT and simulator as shown as Section 10.1.

10.5.2. Turn on the power of all equipment.

10.5.3. Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

10.6. Test Procedure

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

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

The frequency range from 9 kHz to 26.5GHz is checked.
The final measurement in band 9-90 kHz, 110-490 kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.
The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading.

10.7.Data Sample

Frequency (MHz)	Reading (dBμv)	Factor (dB/m)	Result (dBμv/m)	Limit (dBμv/m)	Margin (dB)	Remark
X.XX	43.85	-22.22	21.63	43.5	-21.87	QP

Frequency(MHz) = Emission frequency in MHz
Reading(dBμv) = Uncorrected Analyzer/Receiver reading
Factor (dB/m) = Antenna factor + Cable Loss – Amplifier gain
Result(dBμv/m) = Reading(dBμv) + Factor(dB/m)
Limit (dBμv/m) = Limit stated in standard
Margin (dB) = Result(dBμv/m) - Limit (dBμv/m)
QP = Quasi-peak Reading

Calculation Formula:
Margin(dB) = Result (dBμV/m)–Limit(dBμV/m)
Result(dBμV/m)= Reading(dBμV)+ Factor(dB/m)

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

10.8.The Field Strength of Radiation Emission Measurement Results

PASS.

The frequency range from 9kHz to 26.5GHz is checked.

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. *: Denotes restricted band of operation.
3. The radiation emissions from 9kHz-30MHz and 18-26.5GHz are not reported, because the test values lower than the limits of 20dB.

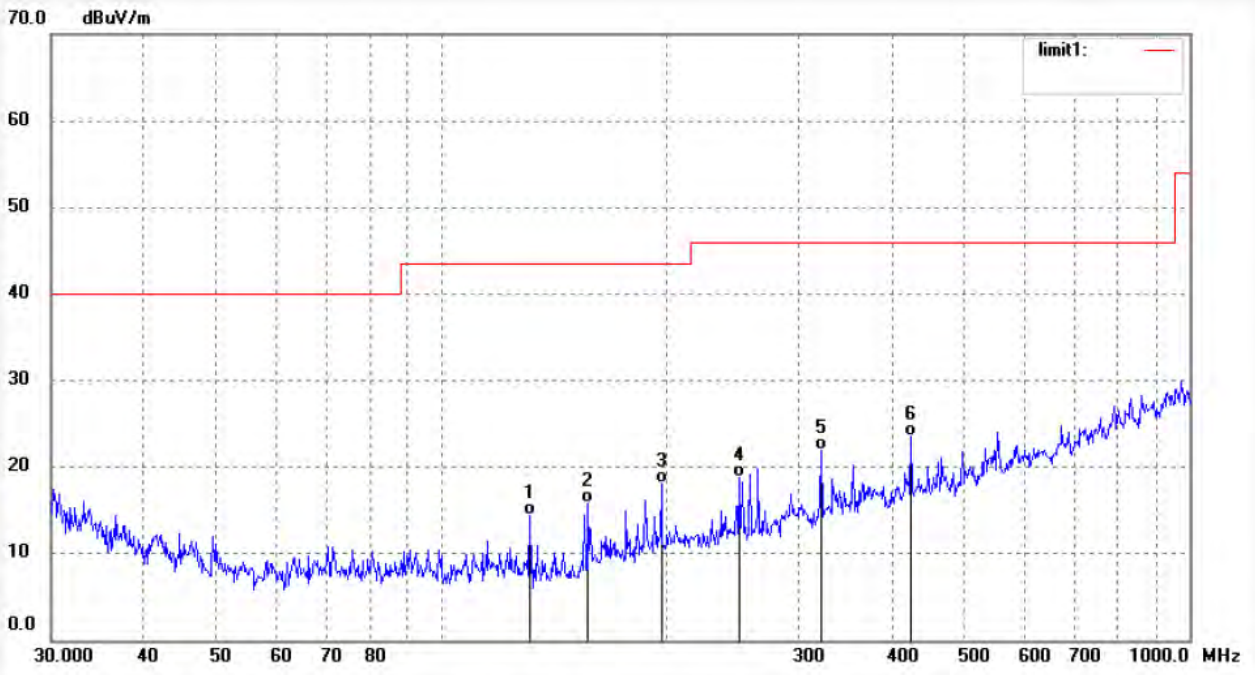
The spectrum analyzer plots are attached as below.

Below 1GHz

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: STAR2017 #1358	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2017/12/26
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 17:37:15
EUT: Bluetooth Headphone	Engineer Signature: star
Mode: TX 2402MHz	Distance: 3m
Model: BeActiv S100	
Manufacturer: Zylux	

Note: Report No.:ATE20172077



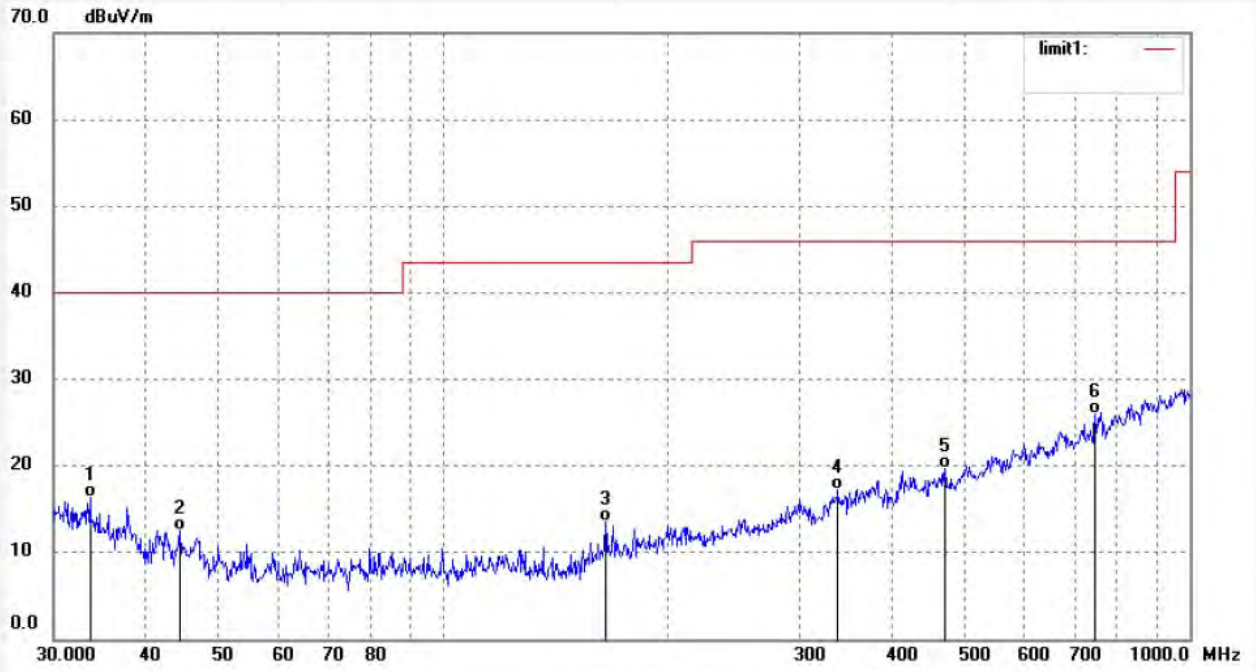
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	131.2235	42.26	-27.74	14.52	43.50	-28.98	QP	150	304	
2	156.9765	43.19	-27.41	15.78	43.50	-27.72	QP	150	223	
3	196.5595	42.75	-24.56	18.19	43.50	-25.31	QP	150	101	
4	249.6074	42.52	-23.63	18.89	46.00	-27.11	QP	150	87	
5	321.4581	42.54	-20.56	21.98	46.00	-24.02	QP	150	236	
6	424.2999	41.56	-17.94	23.62	46.00	-22.38	QP	150	158	

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: STAR2017 #1359
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth Headphone
Mode: TX 2402MHz
Model: BeActiv S100
Manufacturer: Zylux

Polarization: Horizontal
Power Source: DC 3.7V
Date: 2017/12/26
Time: 17:37:59
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172077



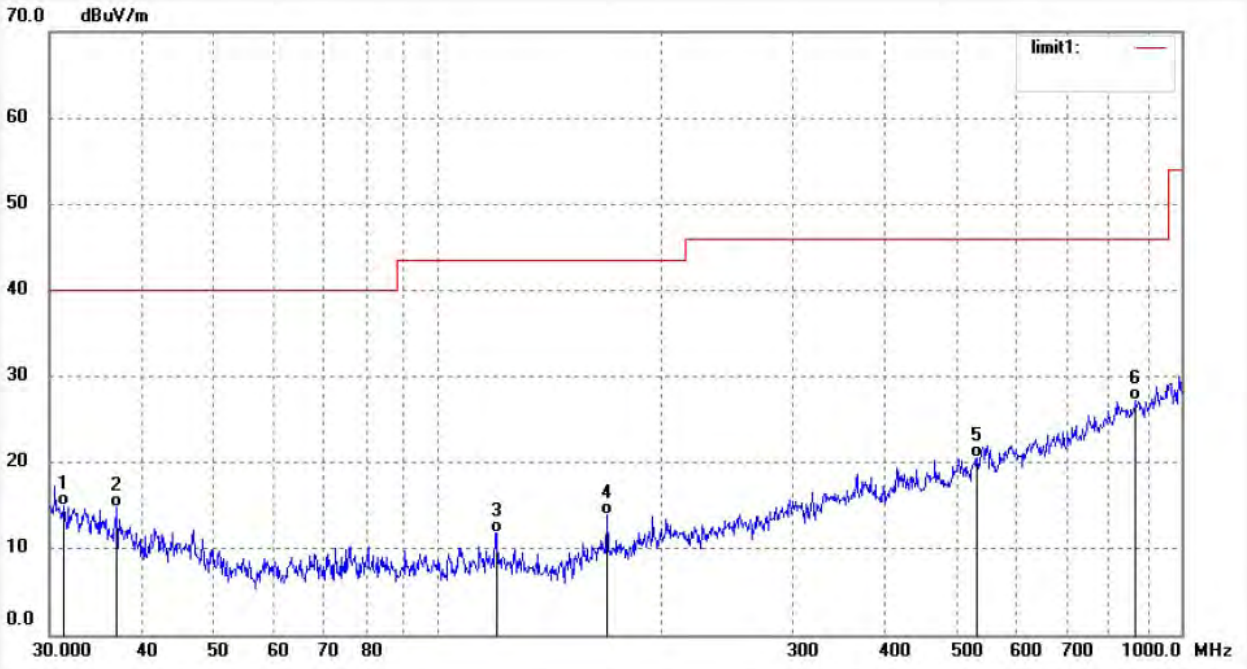
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	33.5700	37.37	-21.09	16.28	40.00	-23.72	QP	200	244	
2	44.3098	36.85	-24.31	12.54	40.00	-27.46	QP	200	139	
3	164.8911	40.11	-26.55	13.56	43.50	-29.94	QP	200	112	
4	337.6660	37.11	-19.81	17.30	46.00	-28.70	QP	200	69	
5	469.8129	36.43	-16.77	19.66	46.00	-26.34	QP	200	225	
6	747.0465	36.39	-10.40	25.99	46.00	-20.01	QP	200	132	

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: STAR2017 #1360
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth Headphone
Mode: TX 2440MHz
Model: BeActiv S100
Manufacturer: Zylux

Polarization: Horizontal
Power Source: DC 3.7V
Date: 2017/12/26
Time: 17:38:29
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172077



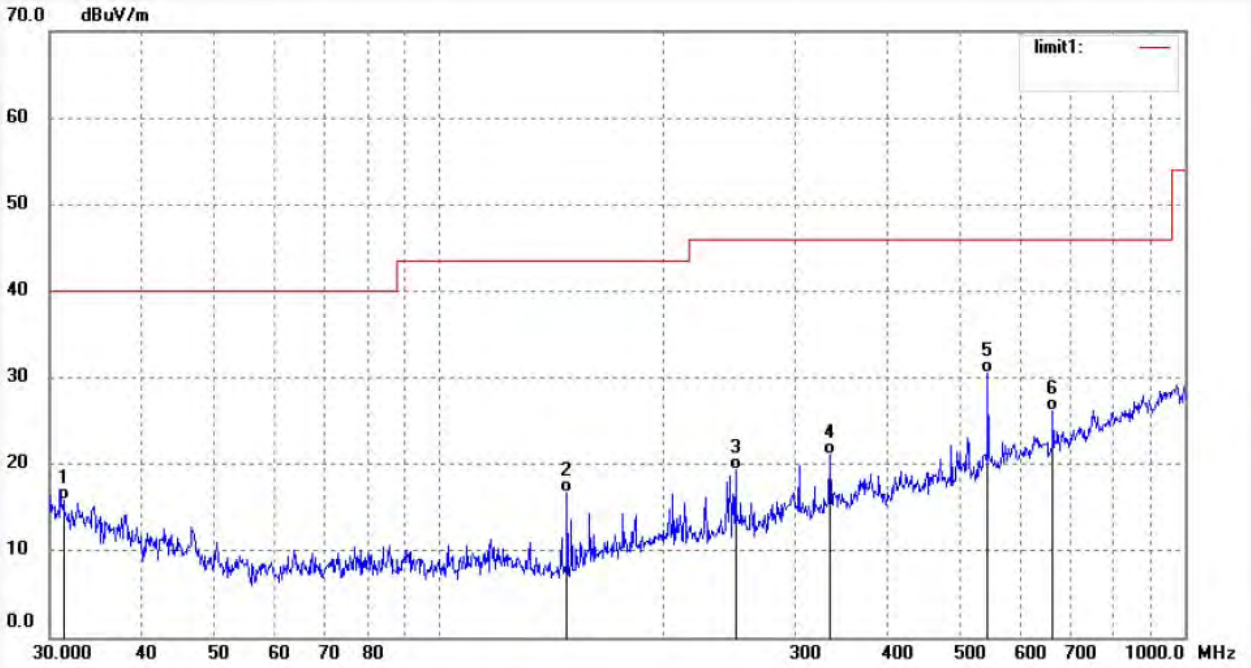
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.2918	35.55	-20.53	15.02	40.00	-24.98	QP	200	258	
2	36.9106	37.01	-22.27	14.74	40.00	-25.26	QP	200	147	
3	119.7672	39.29	-27.43	11.86	43.50	-31.64	QP	200	369	
4	168.9970	40.01	-26.11	13.90	43.50	-29.60	QP	200	200	
5	531.2910	35.85	-15.37	20.48	46.00	-25.52	QP	200	125	
6	868.8859	34.97	-7.72	27.25	46.00	-18.75	QP	200	136	

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: STAR2017 #1362
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth Headphone
Mode: TX 2440MHz
Model: BeActiv S100
Manufacturer: Zylux

Polarization: Vertical
Power Source: DC 3.7V
Date: 2017/12/26
Time: 17:39:24
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172077



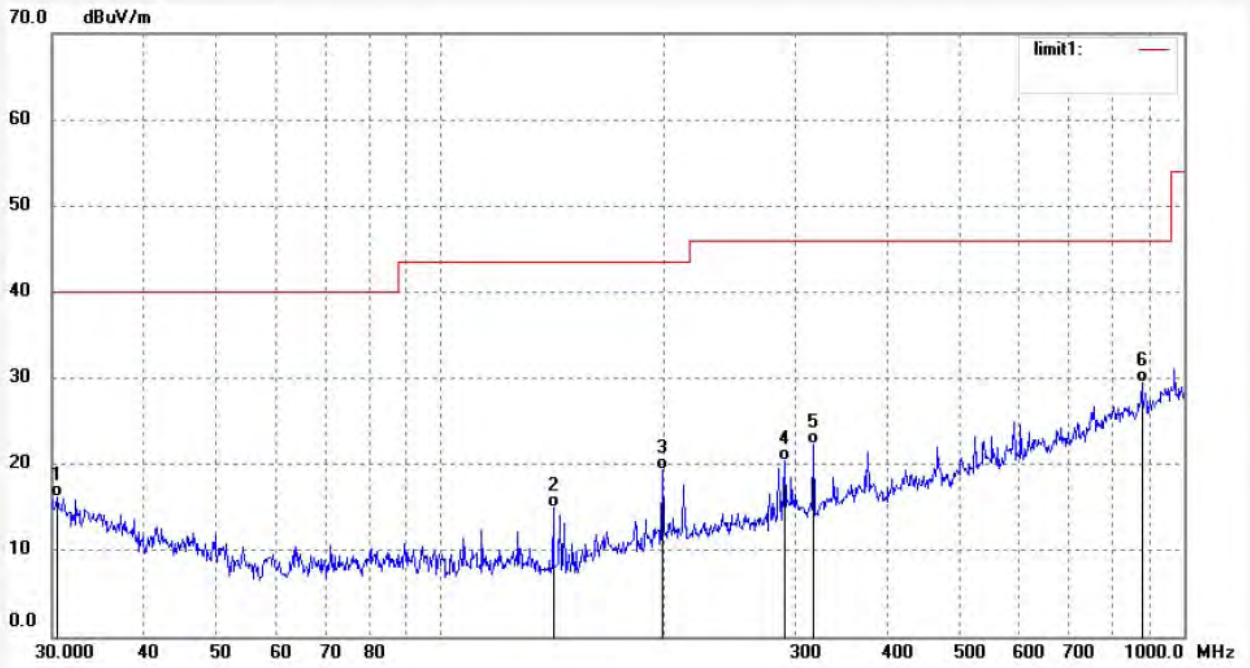
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.2918	36.37	-20.53	15.84	40.00	-24.16	QP	150	147	
2	148.3951	44.81	-28.05	16.76	43.50	-26.74	QP	150	28	
3	249.6074	42.95	-23.63	19.32	46.00	-26.68	QP	150	300	
4	334.1254	40.99	-19.94	21.05	46.00	-24.95	QP	150	254	
5	544.5202	45.59	-14.97	30.62	46.00	-15.38	QP	150	135	
6	665.2609	38.44	-12.27	26.17	46.00	-19.83	QP	150	244	

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: STAR2017 #1363
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth Headphone
Mode: TX 2480MHz
Model: BeActiv S100
Manufacturer: Zylux

Polarization: Vertical
Power Source: DC 3.7V
Date: 2017/12/26
Time: 17:40:38
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172077



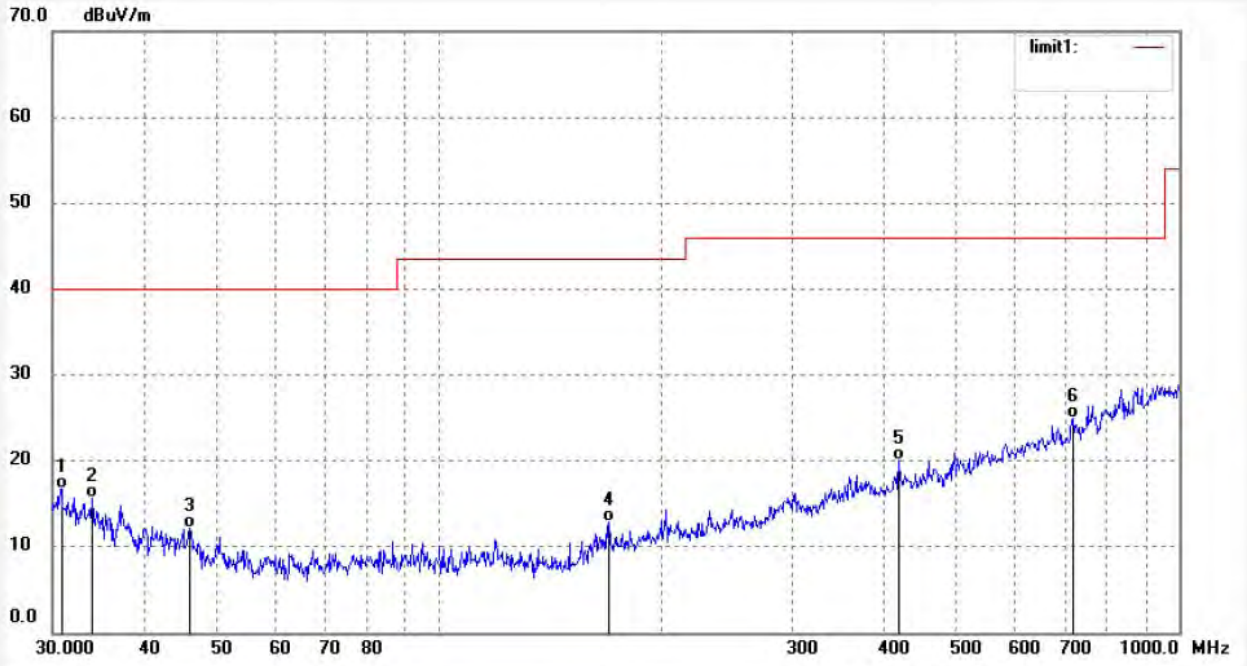
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.4246	36.51	-20.31	16.20	40.00	-23.80	QP	150	47	
2	141.7693	42.95	-27.99	14.96	43.50	-28.54	QP	150	110	
3	198.6424	43.84	-24.44	19.40	43.50	-24.10	QP	150	242	
4	290.3170	41.97	-21.65	20.32	46.00	-25.68	QP	150	245	
5	316.9717	43.04	-20.74	22.30	46.00	-23.70	QP	150	200	
6	878.0931	37.12	-7.56	29.56	46.00	-16.44	QP	150	241	

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: STAR2017 #1364
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth Headphone
Mode: TX 2480MHz
Model: BeActiv S100
Manufacturer: Zylux

Polarization: Horizontal
Power Source: DC 3.7V
Date: 2017/12/26
Time: 17:41:24
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172077



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.8551	37.13	-20.41	16.72	40.00	-23.28	QP	200	124	
2	33.9256	36.87	-21.18	15.69	40.00	-24.31	QP	200	77	
3	46.0557	36.98	-24.80	12.18	40.00	-27.82	QP	200	257	
4	169.5919	38.98	-26.04	12.94	43.50	-30.56	QP	200	110	
5	418.3783	38.07	-18.03	20.04	46.00	-25.96	QP	200	244	
6	718.7246	36.00	-11.05	24.95	46.00	-21.05	QP	200	147	

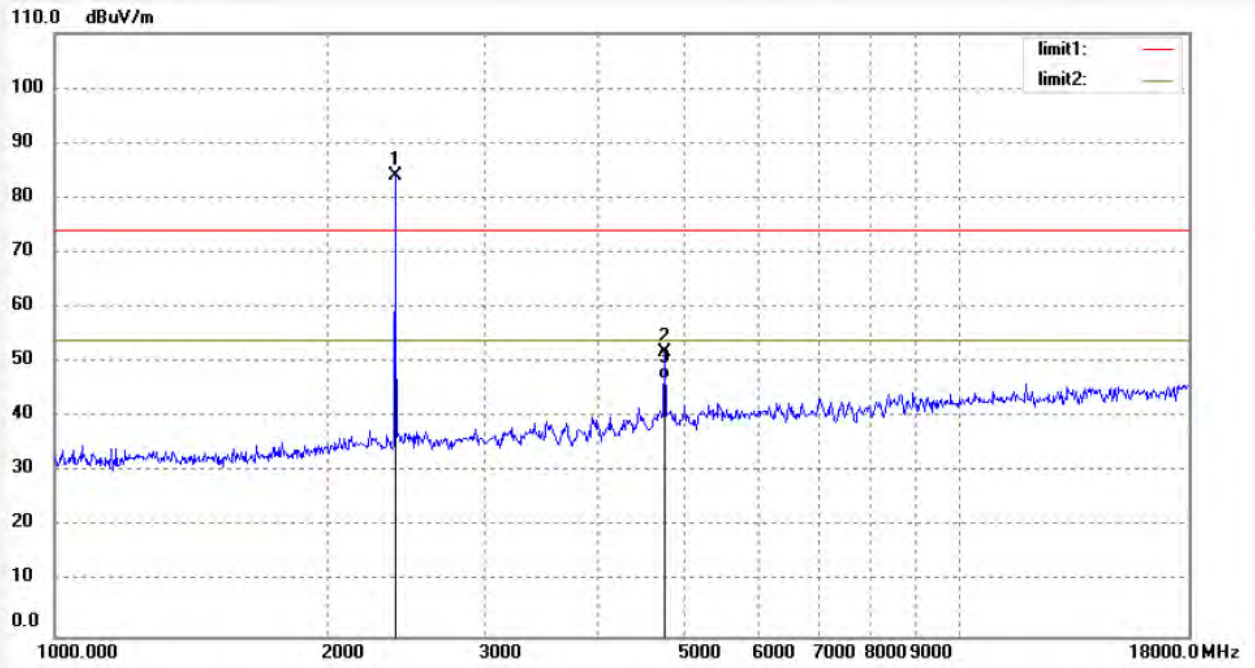
Above 1GHz

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star2017 #1353
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth Headphone
Mode: TX 2402MHz
Model: BeActiv S100
Manufacturer: Zylux

Polarization: Horizontal
Power Source: DC 3.7V
Date: 17/12/26/
Time: 9/54/16
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172077



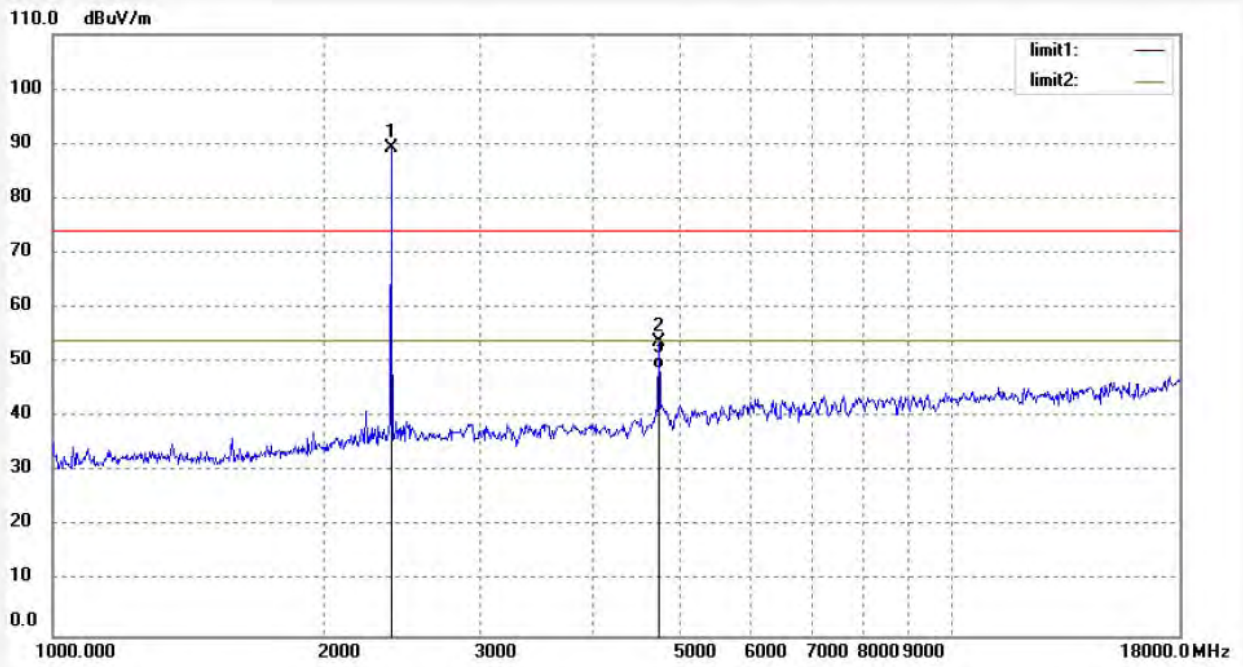
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.019	90.29	-6.37	83.92			peak	200	100	
2	4804.057	51.24	0.70	51.94	74.00	-22.06	peak	200	142	
3	4804.057	46.25	0.70	46.95	54.00	-7.05	AVG	200	235	

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star2017 #1352
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth Headphone
Mode: TX 2402MHz
Model: BeActiv S100
Manufacturer: Zylux

Polarization: Vertical
Power Source: DC 3.7V
Date: 17/12/26/
Time: 9/51/00
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172077



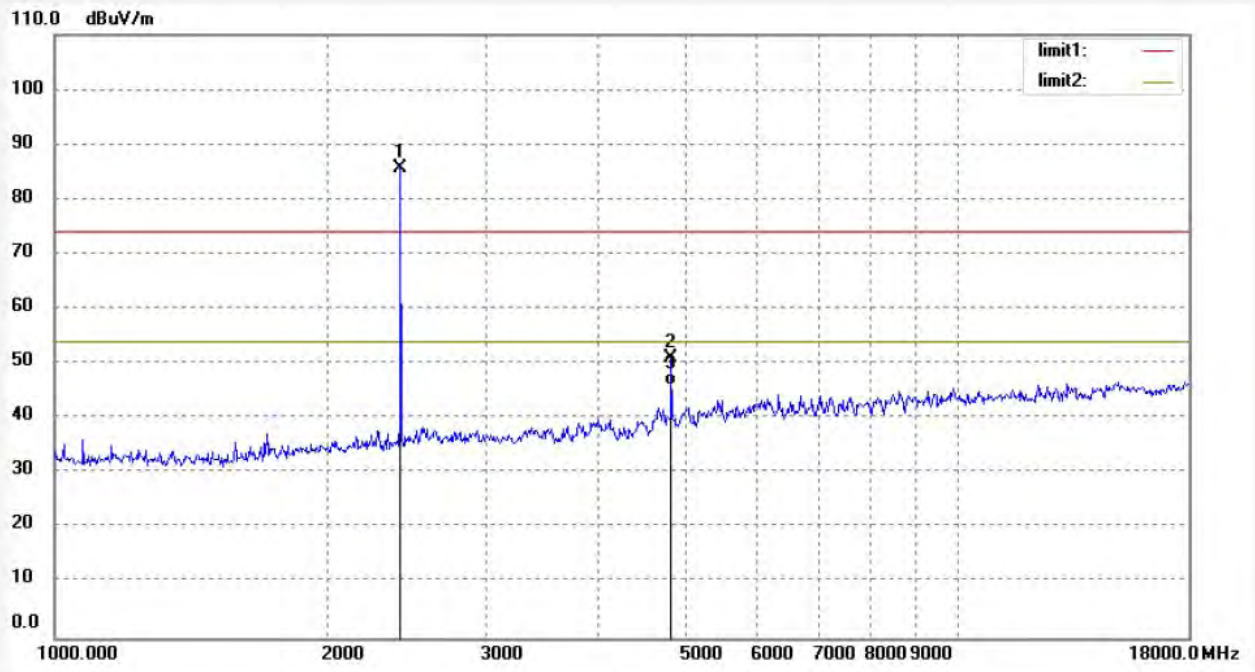
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.019	95.59	-6.37	89.22			peak	150	112	
2	4804.057	53.08	0.70	53.78	74.00	-20.22	peak	150	172	
3	4804.057	48.21	0.70	48.91	54.00	-5.09	AVG	150	233	

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star2017 #1354
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth Headphone
Mode: TX 2440MHz
Model: BeActiv S100
Manufacturer: Zylux

Polarization: Horizontal
Power Source: DC 3.7V
Date: 17/12/26/
Time: 9/56/11
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172077



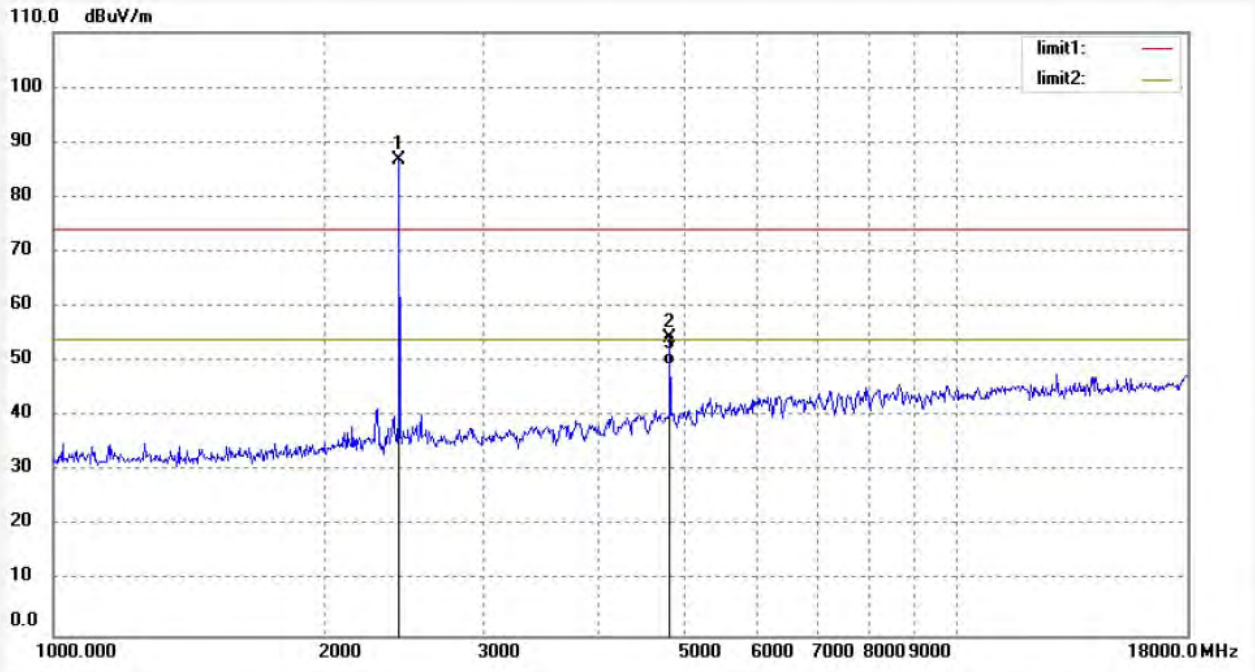
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.021	91.79	-6.20	85.59			peak	200	141	
2	4880.324	50.00	1.07	51.07	74.00	-22.93	peak	200	82	
3	4880.324	45.10	1.07	46.17	54.00	-7.83	AVG	200	321	

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star2017 #1355
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth Headphone
Mode: TX 2440MHz
Model: BeActiv S100
Manufacturer: Zylux

Polarization: Vertical
Power Source: DC 3.7V
Date: 17/12/26/
Time: 9/57/16
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172077



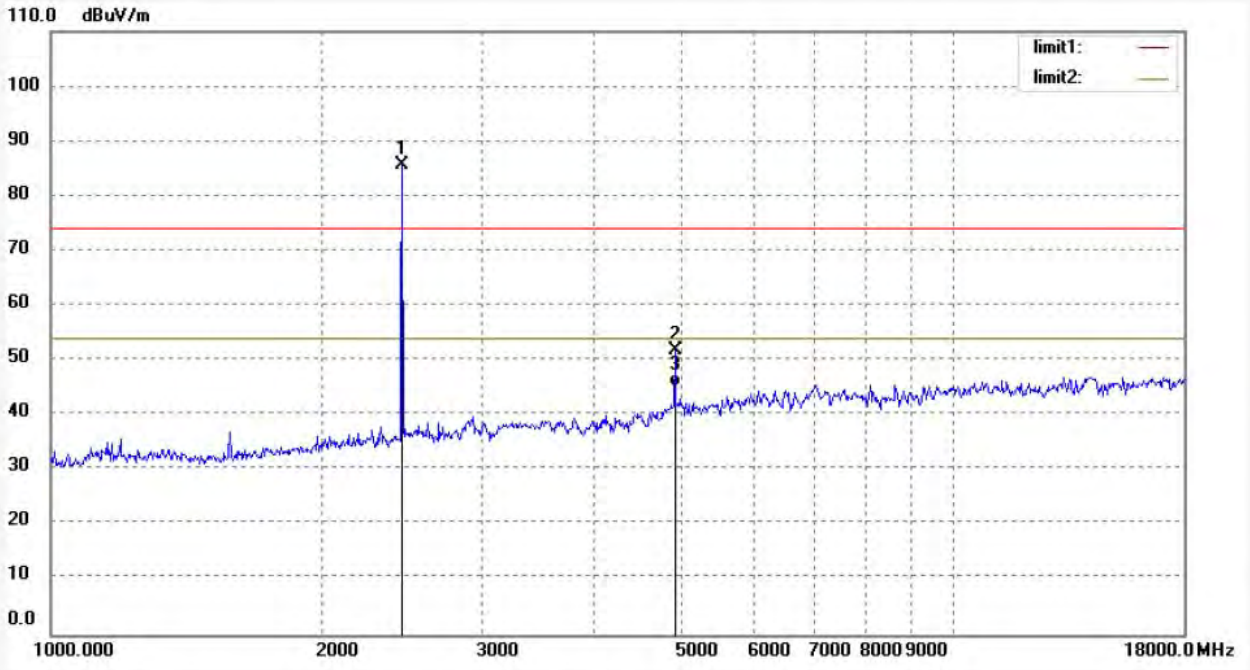
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.021	92.90	-6.20	86.70			peak	150	47	
2	4880.324	53.16	1.07	54.23	74.00	-19.77	peak	150	104	
3	4880.324	48.25	1.07	49.32	54.00	-4.68	AVG	150	199	

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star2017 #1357
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth Headphone
Mode: TX 2480MHz
Model: BeActiv S100
Manufacturer: Zylux

Polarization: Horizontal
Power Source: DC 3.7V
Date: 17/12/26/
Time: 10/00/35
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172077



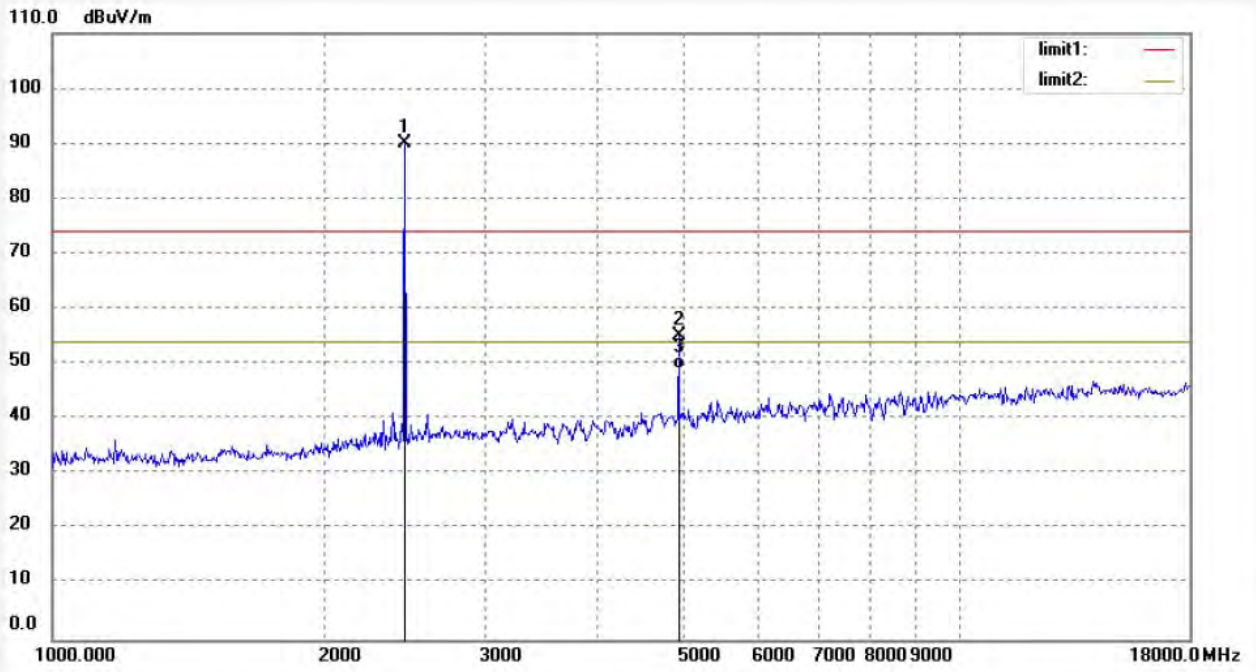
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.034	91.63	-6.04	85.59			peak	200	162	
2	4960.174	50.39	1.50	51.89	74.00	-22.11	peak	200	302	
3	4960.122	43.69	1.50	45.19	54.00	-8.81	AVG	200	199	

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star2017 #1356
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth Headphone
Mode: TX 2480MHz
Model: BeActiv S100
Manufacturer: Zylux

Polarization: Vertical
Power Source: DC 3.7V
Date: 17/12/26/
Time: 9/58/46
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172077



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.034	96.13	-6.04	90.09			peak	150	248	
2	4960.134	53.73	1.50	55.23	74.00	-18.77	peak	150	211	
3	4960.122	47.58	1.50	49.08	54.00	-4.92	AVG	150	171	

11. ANTENNA REQUIREMENT

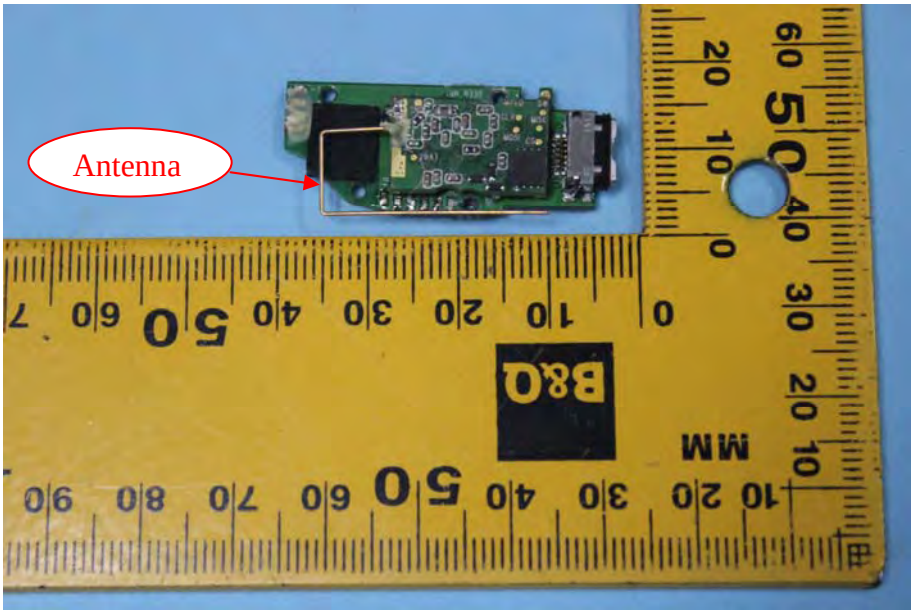
11.1. The Requirement

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

11.2. Antenna Construction

Device is equipped with permanent attached antenna, which isn't displaced by other antenna. The Antenna gain of EUT is 0 dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.

.



******* End of Test Report *******