APPLICATION CERTIFICATION FCC Part 15C
On Behalf of
Shenzhen Junde Technology Co., Ltd.

Bluetooth earphone

Model No.: J06

FCC ID: 2ASCF-J06

Prepared for	:	Shenzhen Junde Technology Co.,Ltd.
Address	:	2nd Floor, No.2, 4th Road, Pioneer Park, Qibei Avenue, Longgang District, Shenzhen, China.
Prepared by	:	Shenzhen Accurate Technology Co., Ltd.
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Report No.	:	ATE20190030
Date of Test	:	Jan. 20, 2019-Jan. 23, 2019
Date of Report	:	Jan. 24, 2019

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Test Report Certification

Applicant	:	Shenzhen Junde Technology Co., Ltd.
Address	:	2nd Floor, No.2, 4th Road, Pioneer Park, Qibei Avenue, Longgang District, Shenzhen, China.
Manufacturer	:	Shenzhen Junde Technology Co., Ltd.
Address	:	2nd Floor, No.2, 4th Road, Pioneer Park, Qibei Avenue, Longgang District, Shenzhen, China.
Product	:	Bluetooth earphone
Model No.	:	J06
Trade name	:	N/A

Measurement Procedure Used:

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

The EUT was tested according to DTS test procedure of Aug. 24, 2018 KDB558074 D01 DTS Meas Guidance v05 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 :	Jan. 20, 2019-Jan. 23, 2019
Date of Report:	Jan. 24, 2019
Prepared by :	(Tim Zhang, Engineer)
Approved & Authorized Signer :	(Sean Liu, Manager)

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT	:	Bluetooth earphone
Model Number	:	J06
Bluetooth version	:	BT V4.0 LE Mode
Frequency Range	:	2402MHz-2480MHz
Number of Channels	:	40
Antenna Gain	:	1.72dBi
Antenna type	:	Chip Antenna
Power Supply	:	DC 3.7V
Modulation mode	:	GFSK
Applicant	:	Shenzhen Junde Technology Co., Ltd.
Address	:	2nd Floor, No.2, 4th Road, Pioneer Park, Qibei Avenue, Longgang District, Shenzhen, China
Manufacturer	:	Shenzhen Junde Technology Co., Ltd.
Address	:	2nd Floor, No.2, 4th Road, Pioneer Park, Qibei Avenue, Longgang District, Shenzhen, China
Date of sample received	:	Jan. 10, 2019
Date of Test	:	Jan. 20, 2019-Jan. 23, 2019

1.2.Carrier Frequency of Channels

Channel	Frequceny (MHz)	Channel	Frequceny (MHz)	Channel	Frequceny (MHz)	Channe l	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

PC	Manufacturer: LENOVO M/N: 4290-RT8 S/N: R9-FW93G 11/08
Adapter	Manufacturer: N/A INPUT: 100-240V 50/60Hz OUTPUT: DC 12V 5A

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. 05, 2019	1 Year
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 05, 2019	1 Year
Spectrum Analyzer	Rohde&Schwarz	FSV-40	101495	Jan. 05, 2019	1 Year
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 05, 2019	1 Year
Pre-Amplifier	Rohde&Schwarz	CBLU1183540-01	3791	Jan. 05, 2019	1 Year
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 05, 2019	1 Year
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 05, 2019	1 Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 05, 2019	1 Year
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 05, 2019	1 Year
Open Switch and Control Unit	Rohde&Schwarz	OSP120 + OSP-B157	101244 + 100866	Jan. 05, 2019	1 Year
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 05, 2019	1 Year
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 05, 2019	1 Year
Highpass Filter	Wainwright Instruments	WHKX3.6/18G-10SS	N/A	Jan. 05, 2019	1 Year
Band Reject Filter	Wainwright Instruments	WRCG2400/2485-2375/2510-60/11SS	N/A	Jan. 05, 2019	1 Year
RF Coaxial Cable (Conducted Emission)	SUHNER	N-2m	No.2	Jan. 05, 2019	1 Year
RF Coaxial Cable (Radiated Emission)	SUHNER	N-5m	NO.3	Jan. 05, 2019	1 Year
RF Coaxial Cable (Radiated Emission)	SUHNER	N-5m	NO.4	Jan. 05, 2019	1 Year
RF Coaxial Cable (Radiated Emission)	SUHNER	N-1m	NO.5	Jan. 05, 2019	1 Year
RF Coaxial Cable (Radiated Emission)	SUHNER	N-1m	NO.6	Jan. 05, 2019	1 Year
Conducted Emission Measurement Software: ES-K1 V1.71					
Radiated Emission Measurement Software: EZ_EMC V1.1.4.2					

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

3.2.Configuration and peripherals

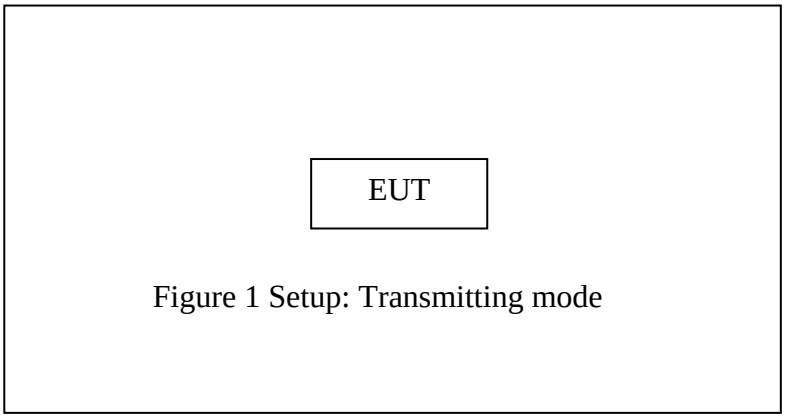


Figure 1 Setup: Transmitting mode

(EUT: Bluetooth earphone)

Note: The power was switched from 85% to 115%, and the worse case data was recorded.

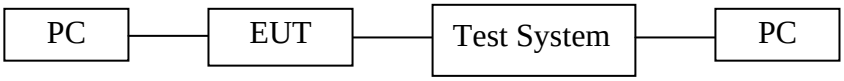
4. TEST PROCEDURES AND RESULTS

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 15.205 Section 15.209	Radiated Spurious Emission Test	Compliant
Section 15.247(d)	Conducted Spurious Emission Test	Compliant
Section 15.207	AC Power Line Conducted Emission Test	Compliant
Section 15.203	Antenna Requirement	Compliant

Note:
1. The product is a pair of Bluetooth headphones. They have the same Bluetooth module and antenna, so we only tested one of them.

5. 6DB BANDWIDTH MEASUREMENT

5.1.Block Diagram of Test Setup



(EUT: Bluetooth earphone)

5.2.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.

5.3.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.

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 TX modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

5.5.Test Procedure

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

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

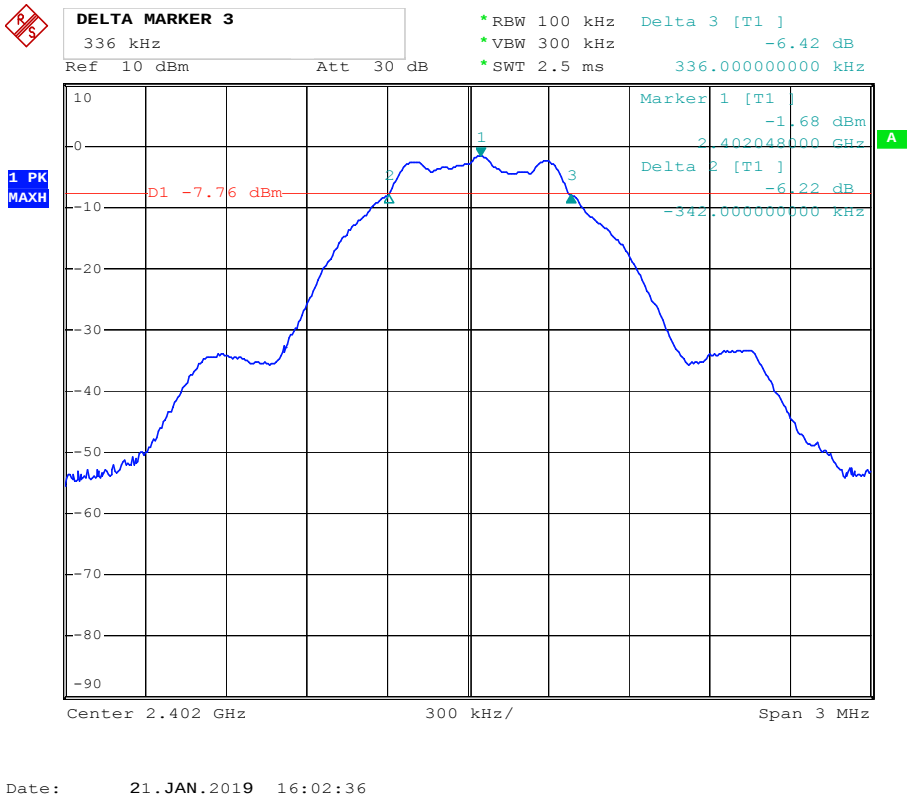
5.5.3.The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

5.6.Test Result

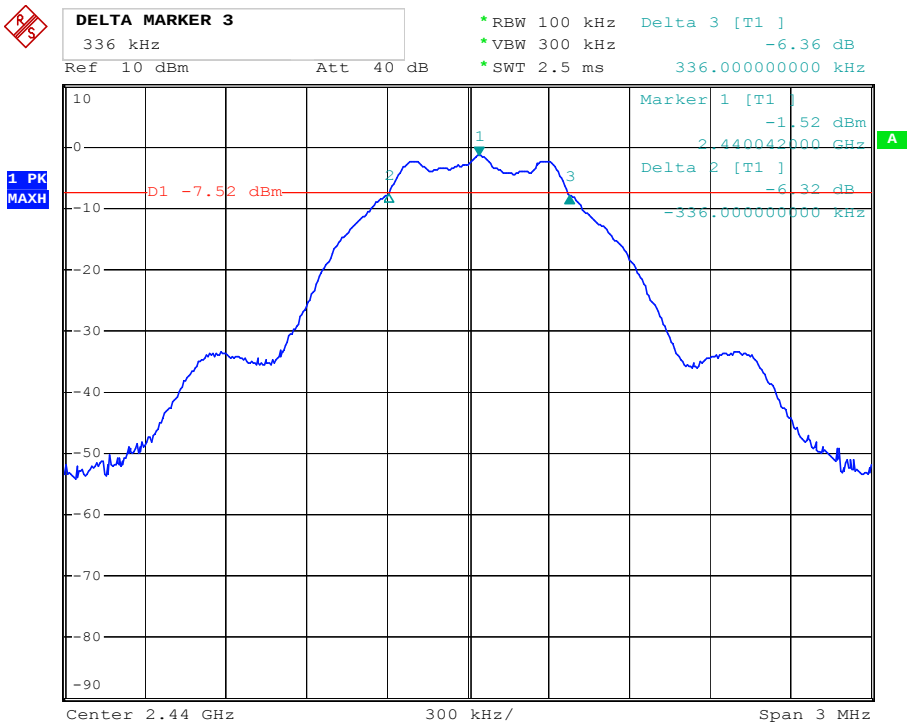
Channel	Frequency (MHz)	6 dB Bandwith (MHz)	Minimum Limit(MHz)	PASS/FAIL
0	2402	0.678	0.5	PASS
19	2440	0.672	0.5	PASS
39	2480	0.660	0.5	PASS

The spectrum analyzer plots are attached as below.

channel 0



channel 19



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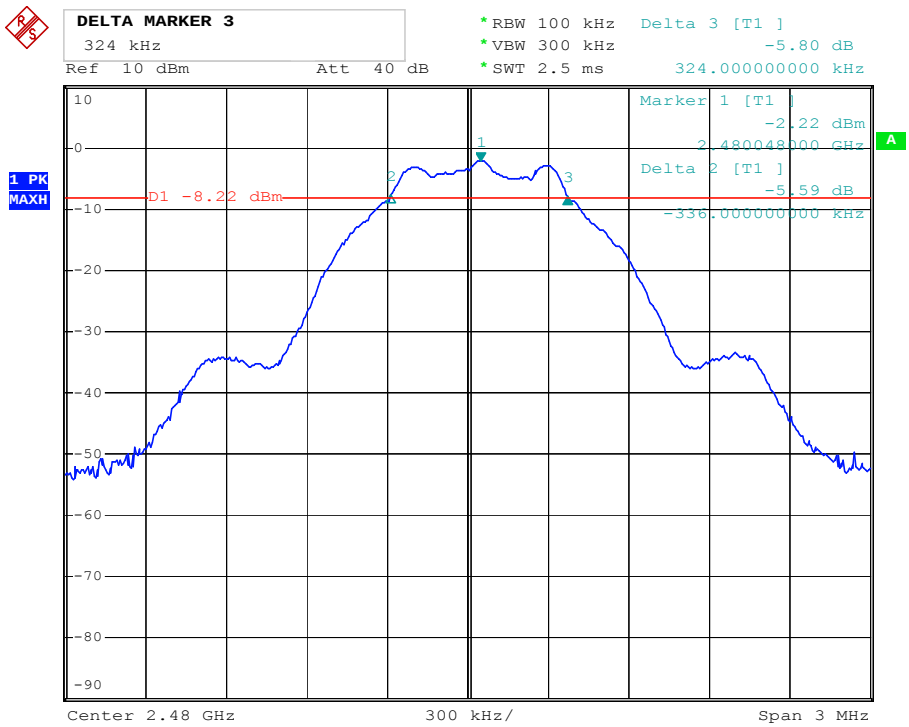
channel 39



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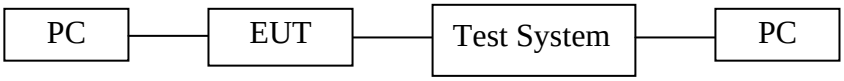
6. MAXIMUM PEAK OUTPUT POWER

6.1.Block Diagram of Test Setup



(EUT: Bluetooth earphone)

6.2.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.

6.3.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.

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 1 MHz and VBW to 3 MHz.

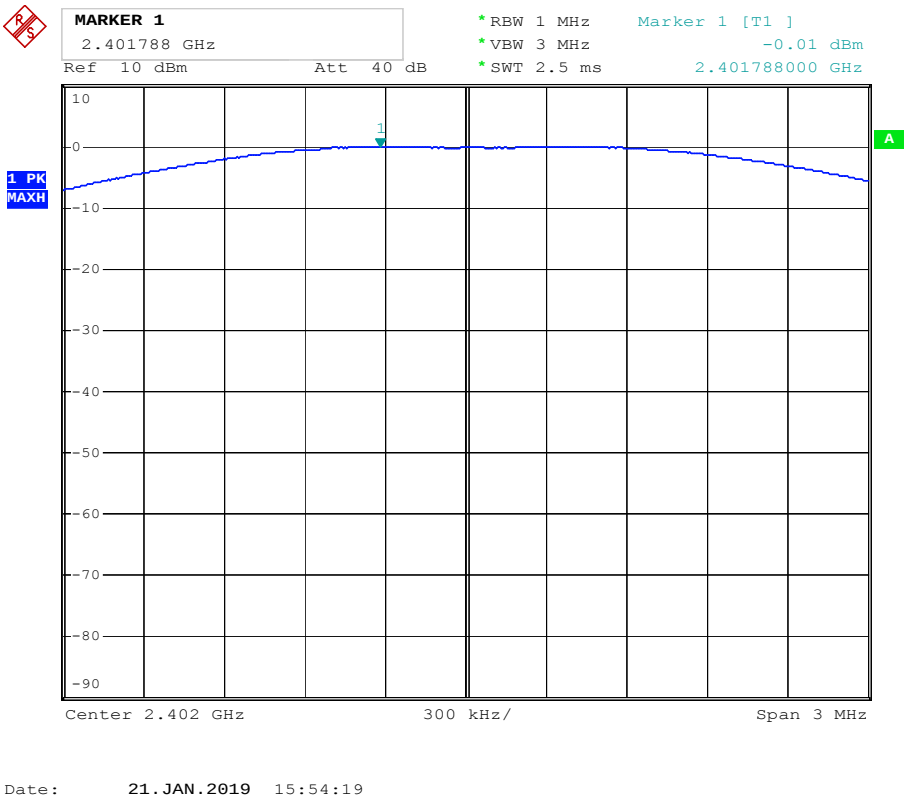
6.5.3.Measurement the maximum peak output power.

6.6.Test Result

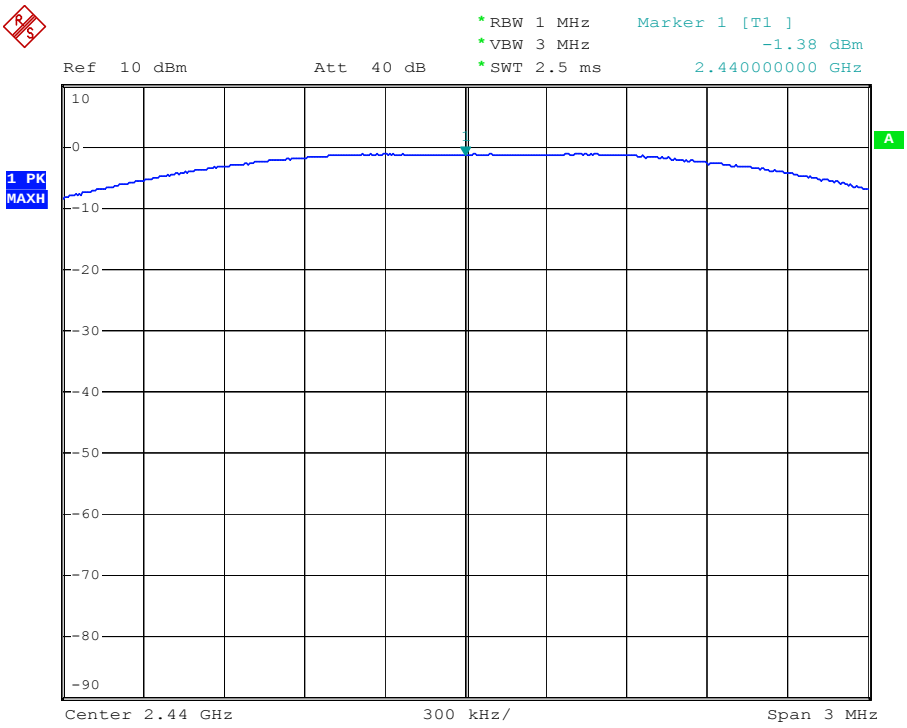
Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
0	2402	-0.01	30	PASS
19	2440	-1.38	30	PASS
39	2480	-2.01	30	PASS

The spectrum analyzer plots are attached as below.

channel 0

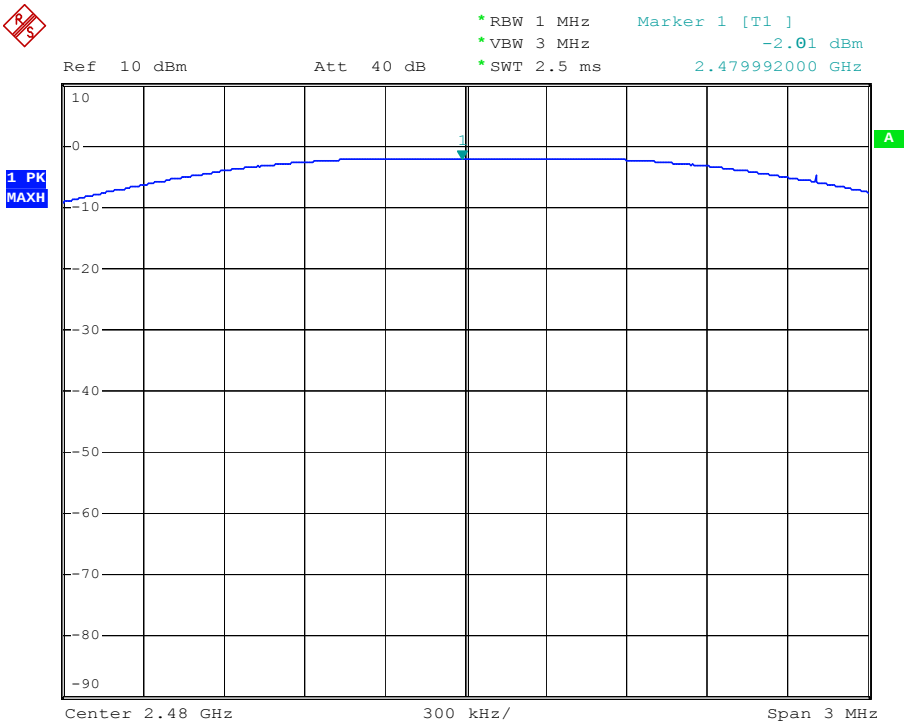


channel 19



Date: 21.JAN.2019 15:57:05

channel 39



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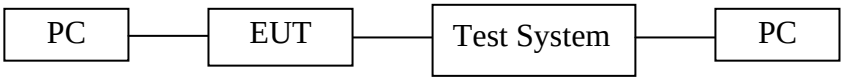
7. POWER SPECTRAL DENSITY MEASUREMENT

7.1.Block Diagram of Test Setup



(EUT: Bluetooth earphone)

7.2.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.

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. Measurement Procedure PKPSD:

7.5.3. 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 ≤ RBW ≤ 100 kHz.
4. Set the VBW ≥ 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.

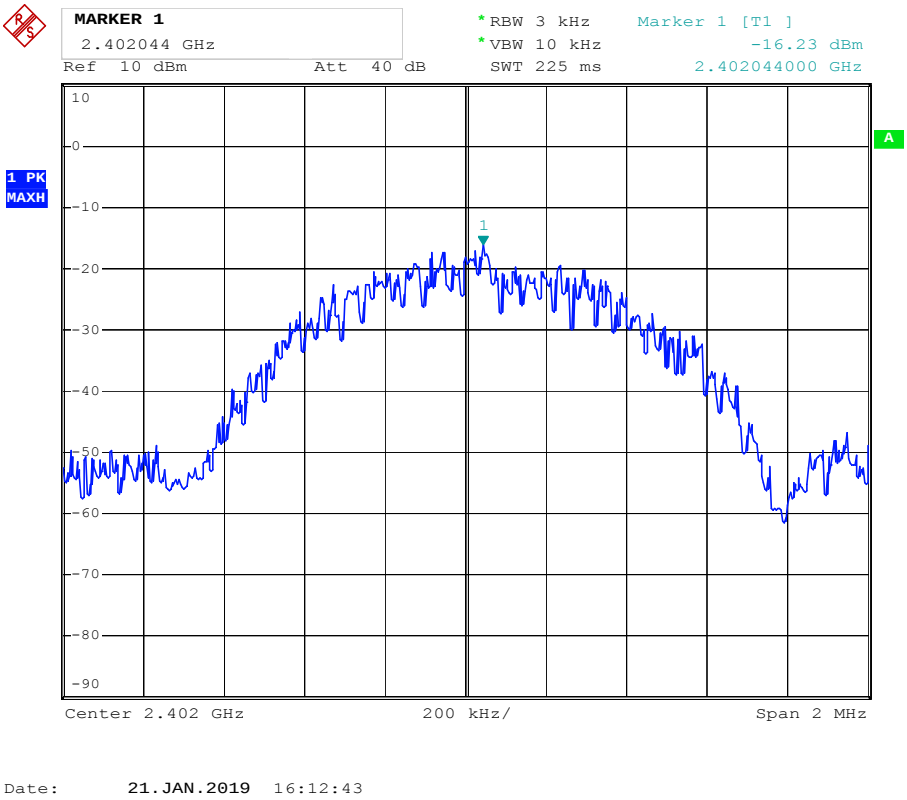
7.5.4. Measurement the maximum power spectral density.

7.6.Test Result

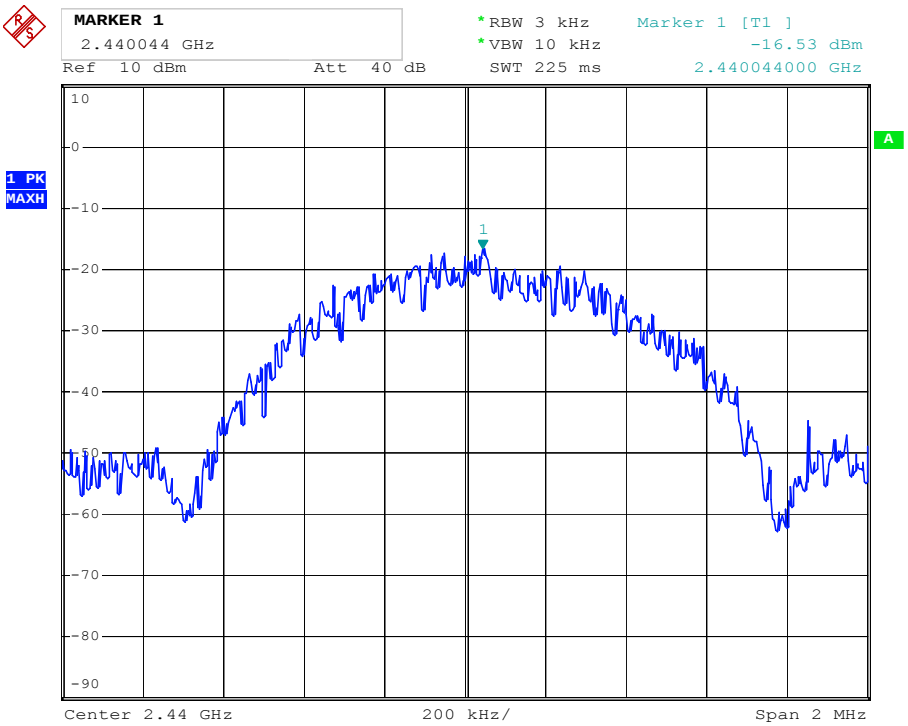
CHANNEL NUMBER	FREQUENCY (MHz)	PSD (dBm/3KHz)	LIMIT (dBm/3KHz)	PASS/FAIL
0	2402	-16.23	8	PASS
19	2440	-16.53	8	PASS
39	2480	-17.04	8	PASS

The spectrum analyzer plots are attached as below.

channel 0



channel 19



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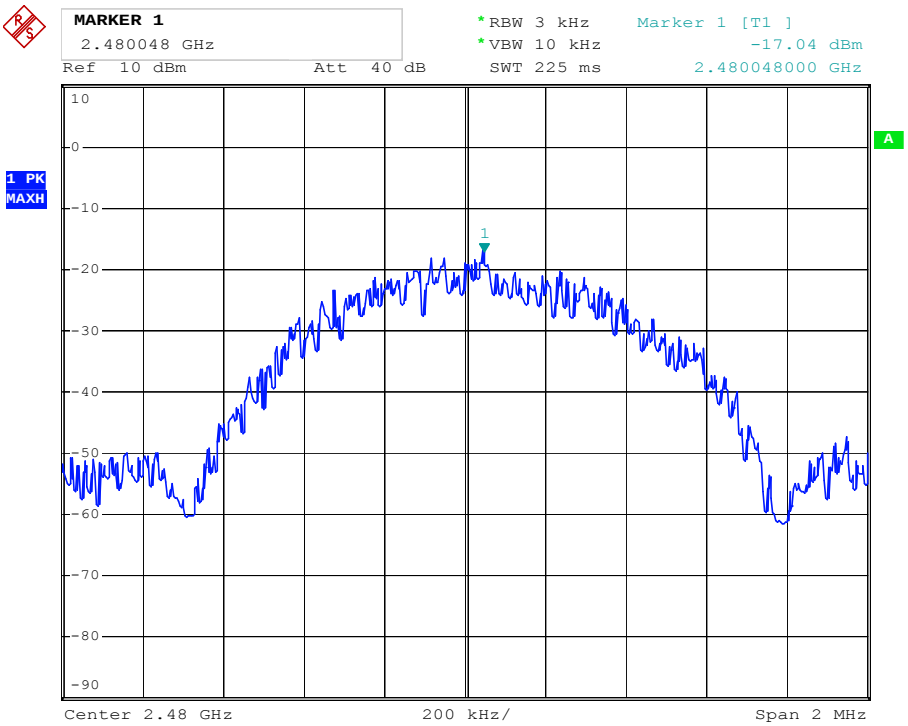
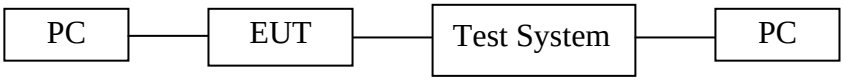
channel 39



Date: 21.JAN.2019 16:10:31

8. BAND EDGE COMPLIANCE TEST

8.1.Block Diagram of Test Setup



(EUT: Bluetooth earphone)

8.2.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).

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, 2480MHz TX frequency to transmit.

8.5.Test Procedure

Conducted Band Edge:

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

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

8.5.3. Radiate Band Edge:

8.5.4.The EUT is placed on a turntable, which is 0.1m above the ground plane and worked at highest radiated power.

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

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

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

8.5.8.RBW=1MHz, VBW=1MHz

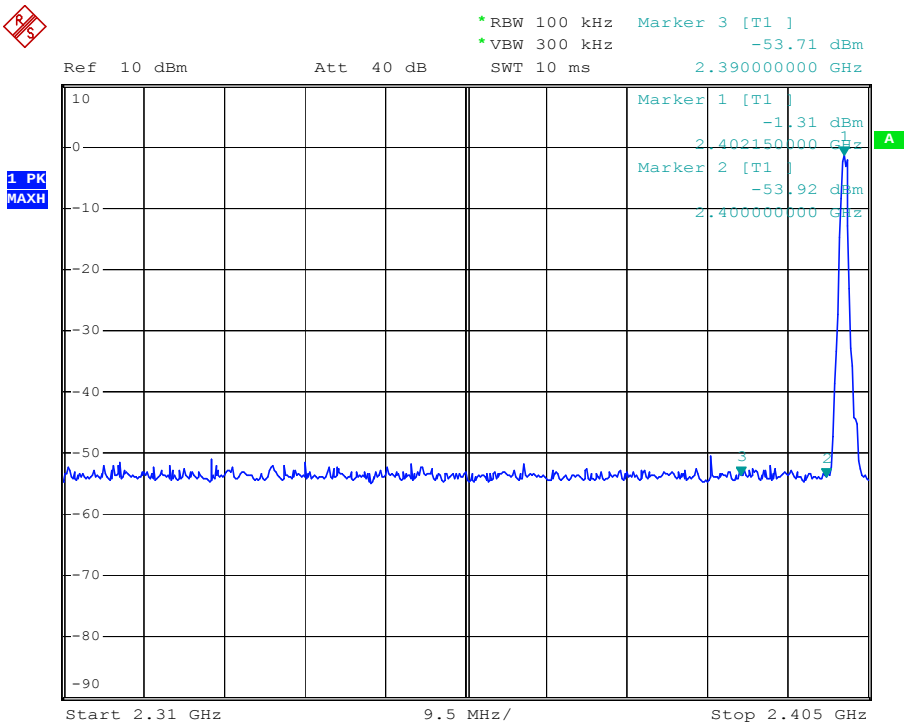
8.5.9.The band edges was measured and recorded.

8.6.Test Result

Pass

Channel	Frequency	Delta peak to band emission	Limit(dBc)
0	2.4GHz	52.61	20
39	2.4835GHz	53.31	20

channel 0



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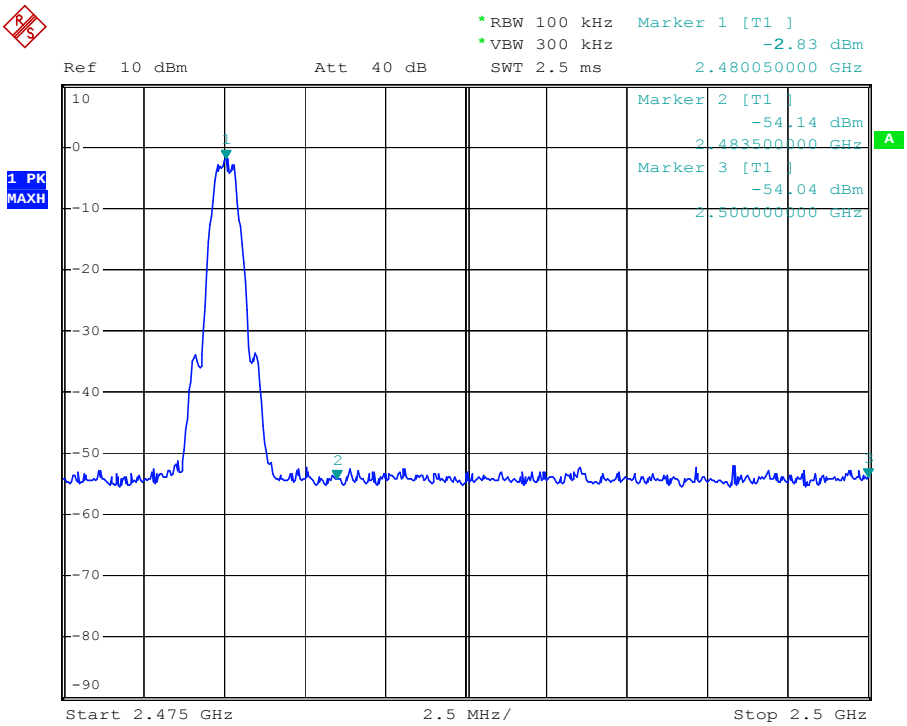
channel 39



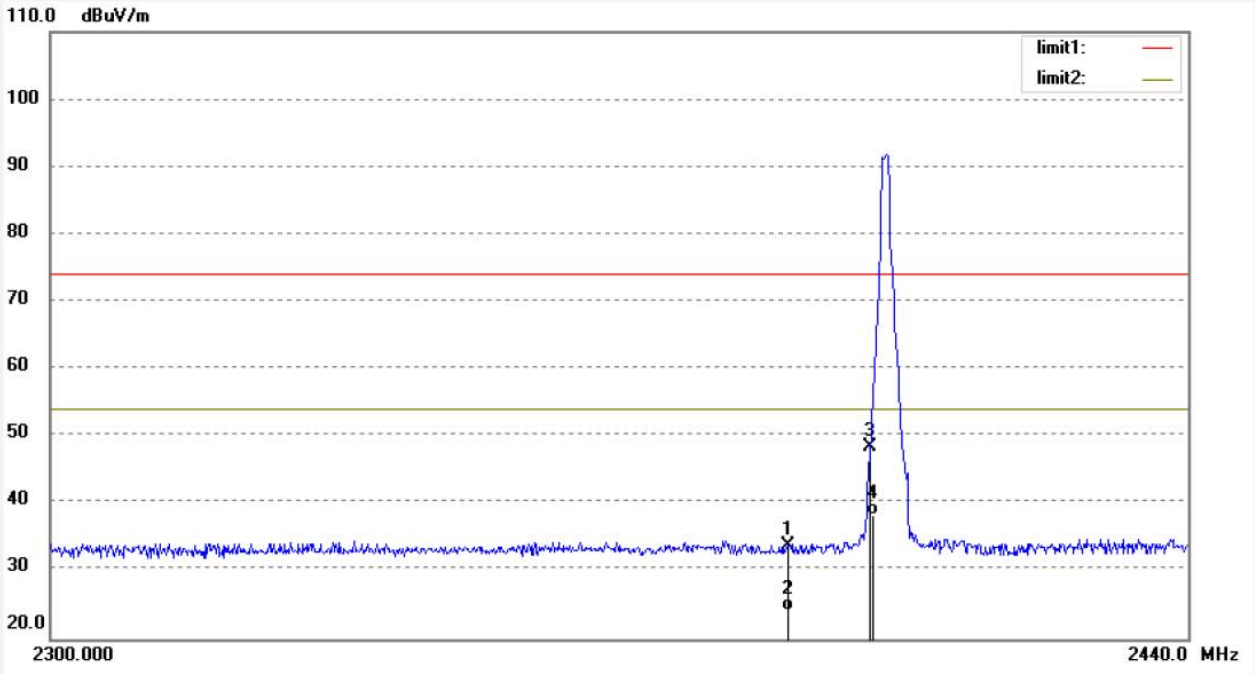
Date: 21.JAN.2019 16:19:59

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.: FRANK2019 #184	Polarization: Horizontal
Standard: FCC PK	Power Source: DC 3.7V
Test item: Radiation Test	Date: 19/01/23/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 09/10/21
EUT: Bluetooth earphone	Engineer Signature:
Mode: TX 2402MHz	Distance: 3m
Model: J06	
Manufacturer: Shenzhen Junde Technology Co., Ltd.	

Note: Report NO.:ATE20190030



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	40.20	-6.32	33.88	74.00	-40.12	peak	200	115	
2	2390.000	30.41	-6.32	24.09	54.00	-29.91	AVG	200	92	
3	2400.000	54.80	-6.27	48.53	74.00	-25.47	peak	200	41	
4	2400.000	44.65	-6.27	38.38	54.00	-15.62	AVG	200	302	

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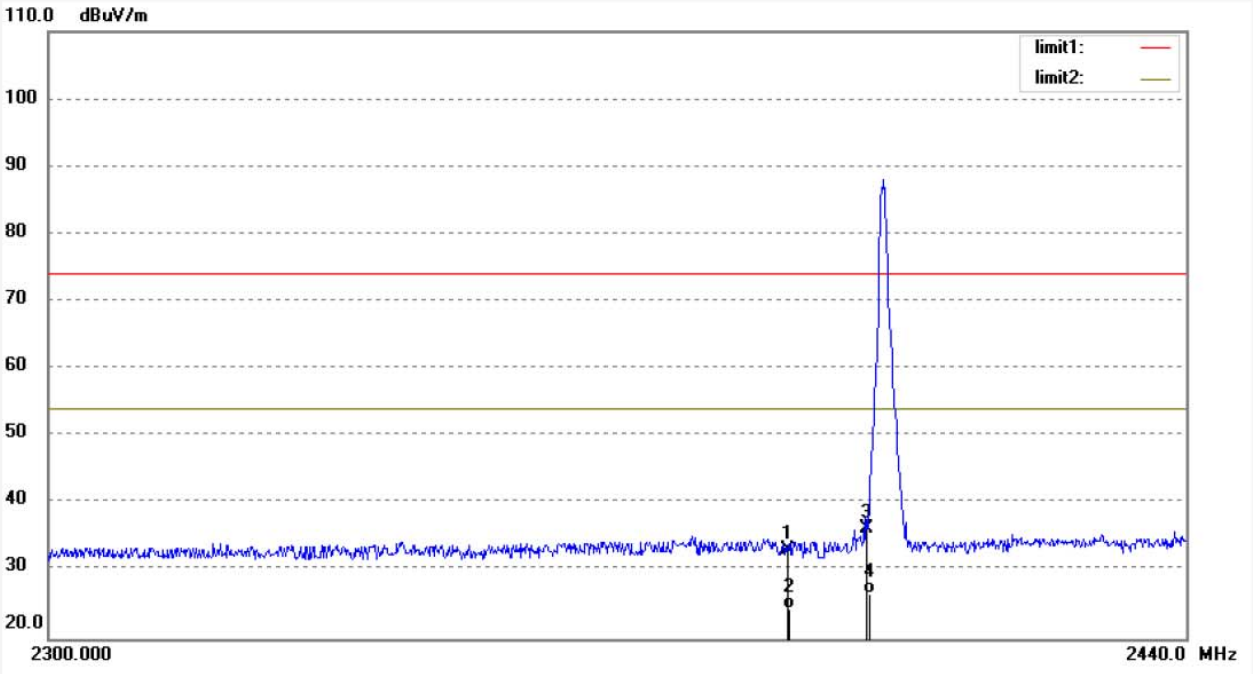
Job No.: FRANK2019 #185
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth earphone
Mode: TX 2402MHz
Model: J06
Manufacturer: Shenzhen Junde Technology Co., Ltd.

Polarization: Vertical
Power Source: DC 3.7V
Date: 19/01/23/
Time: 09/13/13
Engineer Signature:
Distance: 3m

Note: Report NO.:ATE20190030



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	39.51	-6.32	33.19	74.00	-40.81	peak	150	156	
2	2390.000	30.78	-6.32	24.46	54.00	-29.54	AVG	150	93	
3	2400.000	42.57	-6.27	36.30	74.00	-37.70	peak	150	141	
4	2400.000	32.87	-6.27	26.60	54.00	-27.40	AVG	150	223	

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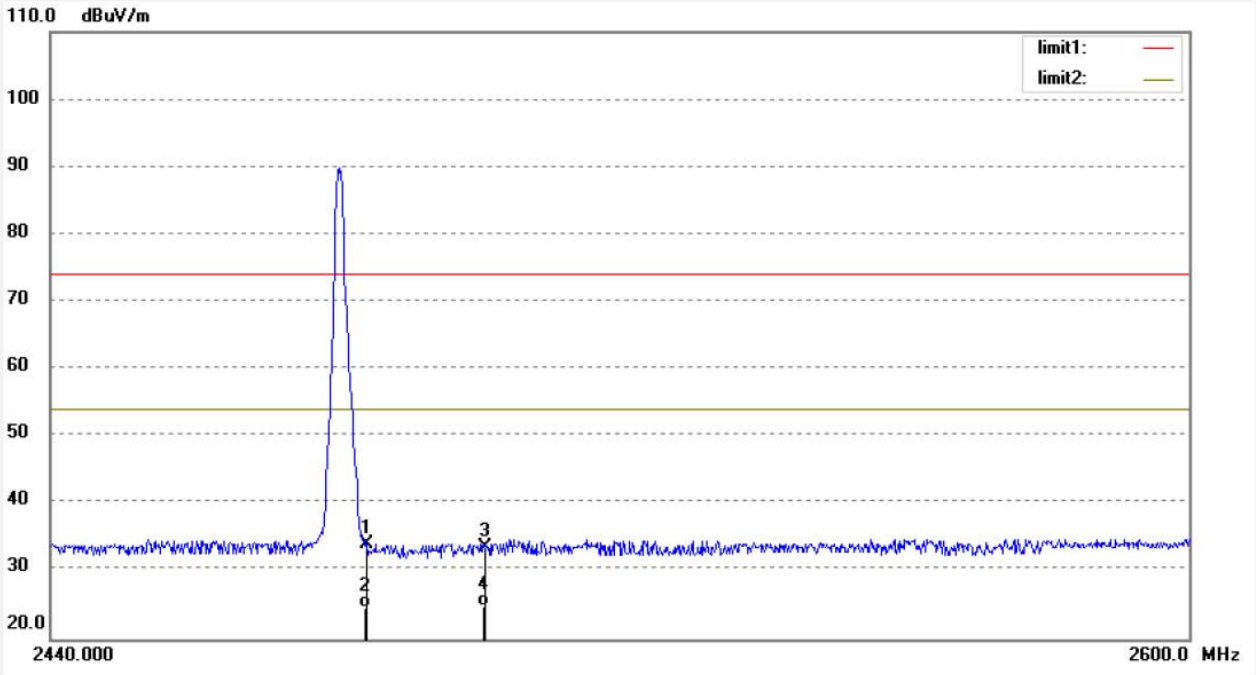
Job No.: FRANK2019 #183
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth earphone
Mode: TX 2480MHz
Model: J06
Manufacturer: Shenzhen Junde Technology Co., Ltd.

Polarization: Horizontal
Power Source: DC 3.7V
Date: 19/01/23/
Time: 09/05/53
Engineer Signature:
Distance: 3m

Note: Report NO.:ATE20190030



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	39.96	-5.89	34.07	74.00	-39.93	peak	200	149	
2	2483.500	30.45	-5.89	24.56	54.00	-29.44	AVG	200	92	
3	2500.000	39.48	-5.81	33.67	74.00	-40.33	peak	200	115	
4	2500.000	30.75	-5.81	24.94	54.00	-29.06	AVG	200	302	

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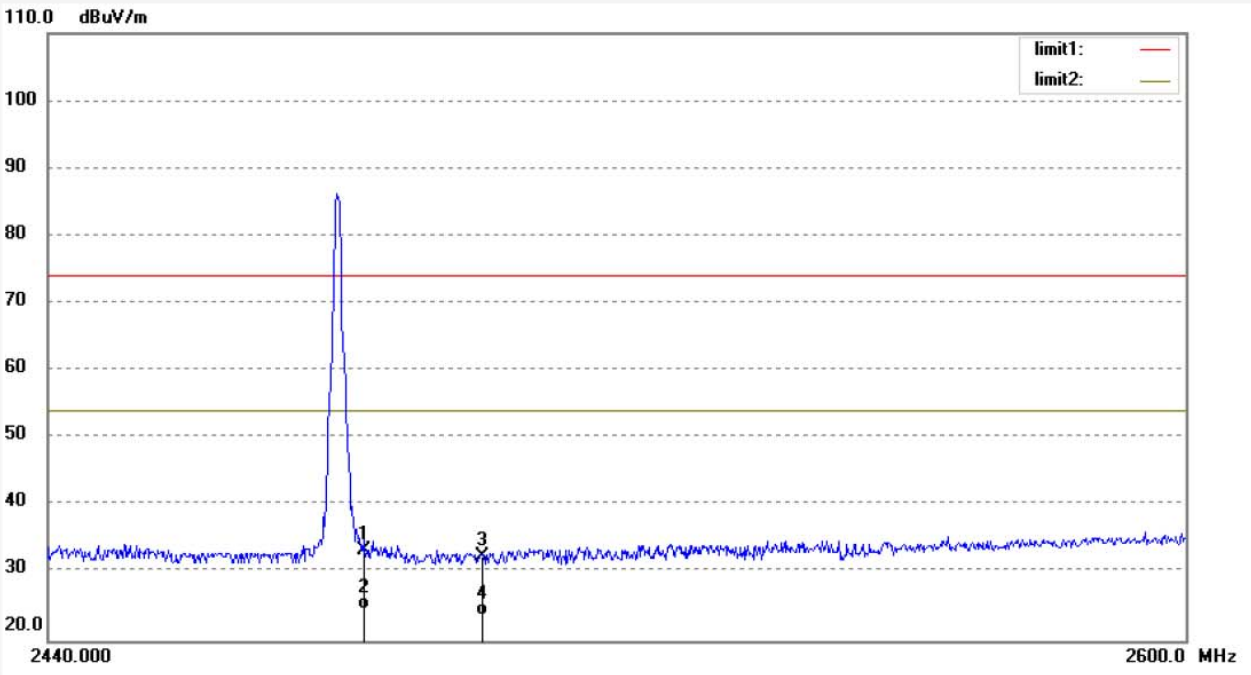
Job No.: FRANK2019 #182	Polarization: Vertical
Standard: FCC PK	Power Source: DC 3.7V
Test item: Radiation Test	Date: 19/01/23/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 08/59/54
EUT: Bluetooth earphone	Engineer Signature:
Mode: TX 2480MHz	Distance: 3m
Model: J06	
Manufacturer: Shenzhen Junde Technology Co., Ltd.	

Note: Report NO.:ATE20190030



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	39.29	-5.89	33.40	74.00	-40.60	peak	150	48	
2	2483.500	30.45	-5.89	24.56	54.00	-29.44	AVG	150	62	
3	2500.000	38.33	-5.81	32.52	74.00	-41.48	peak	150	221	
4	2500.000	29.45	-5.81	23.64	54.00	-30.36	AVG	150	103	

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

9. RADIATED SPURIOUS EMISSION TEST

9.1.Block Diagram of Test Setup

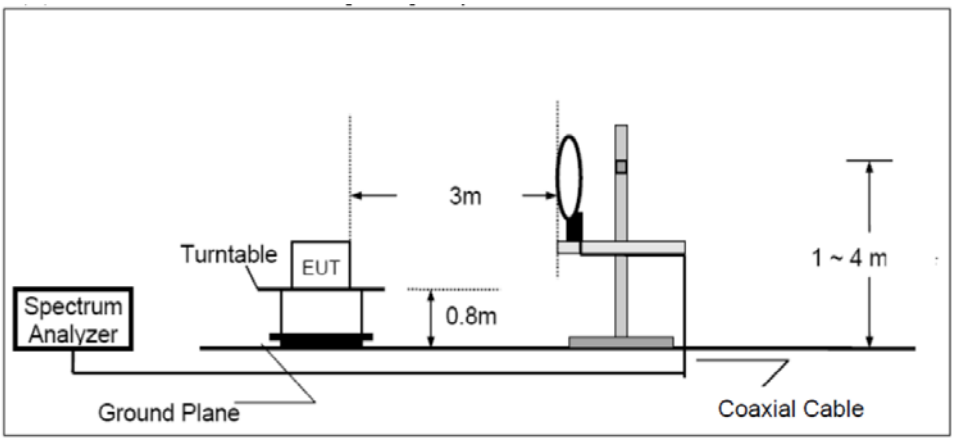
9.1.1.Block diagram of connection between the EUT and peripherals

EUT

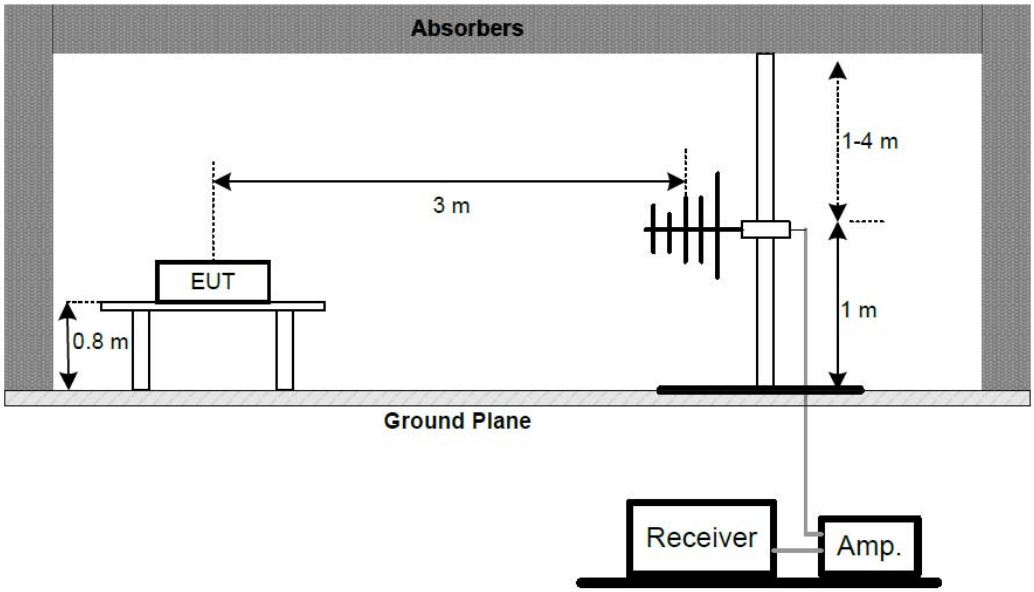
Figure 1 Setup: Transmitting mode

9.1.2.Semi-Anechoic Chamber Test Setup Diagram

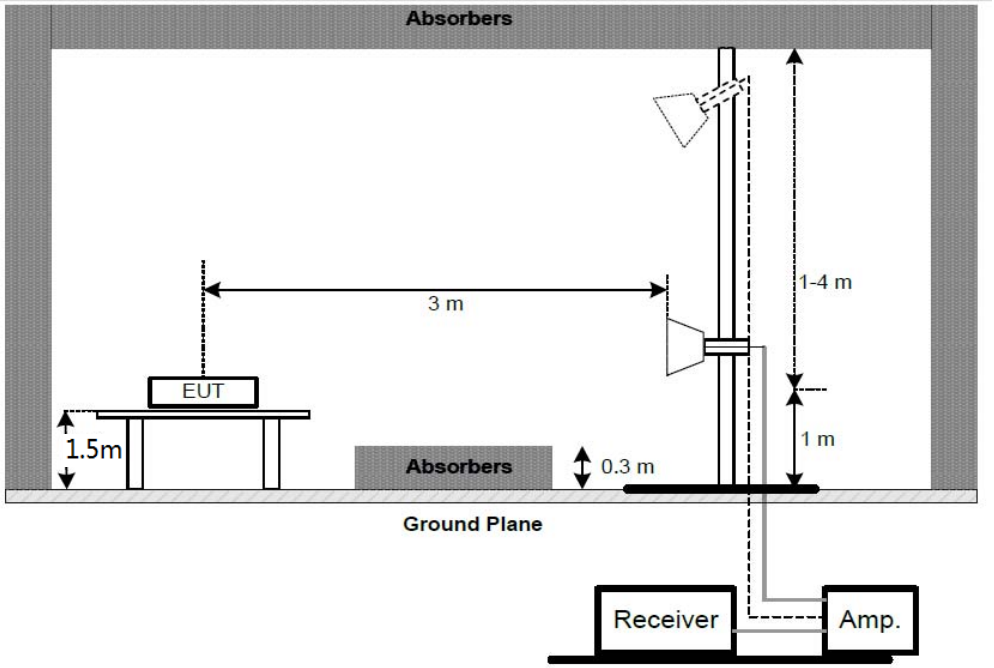
(A) Radiated Emission Test Set-Up, Frequency below 30MHz



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



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



9.2.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).

9.3.Restricted bands of operation

9.3.1.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.

9.4. 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.

9.5. Operating Condition of EUT

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

9.5.2. Turn on the power of all equipment.

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

9.6. 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. The EUT was tested in 3 orthogonal planes.

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

The frequency range from 9 kHz to 25GHz 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. The basic equation calculation is as follows:
Result = Reading + Corrected Factor
Where Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

9.7.Data Sample

Frequency (MHz)	Reading (dBμv)	Factor (dB/m)	Result (dBμv/m)	Limit (dBμv/m)	Margin (dB)	Remark
X.XX	28.66	-15.19	13.47	40.0	-26.53	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.

9.8.The Field Strength of Radiation Emission Measurement Results

PASS.

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

2. *: Denotes restricted band of operation.

3. The radiation emissions from 9kHz-30MHz and 18-25GHz are not reported, because the test values lower than the limits of 20dB.

Below 1GHz

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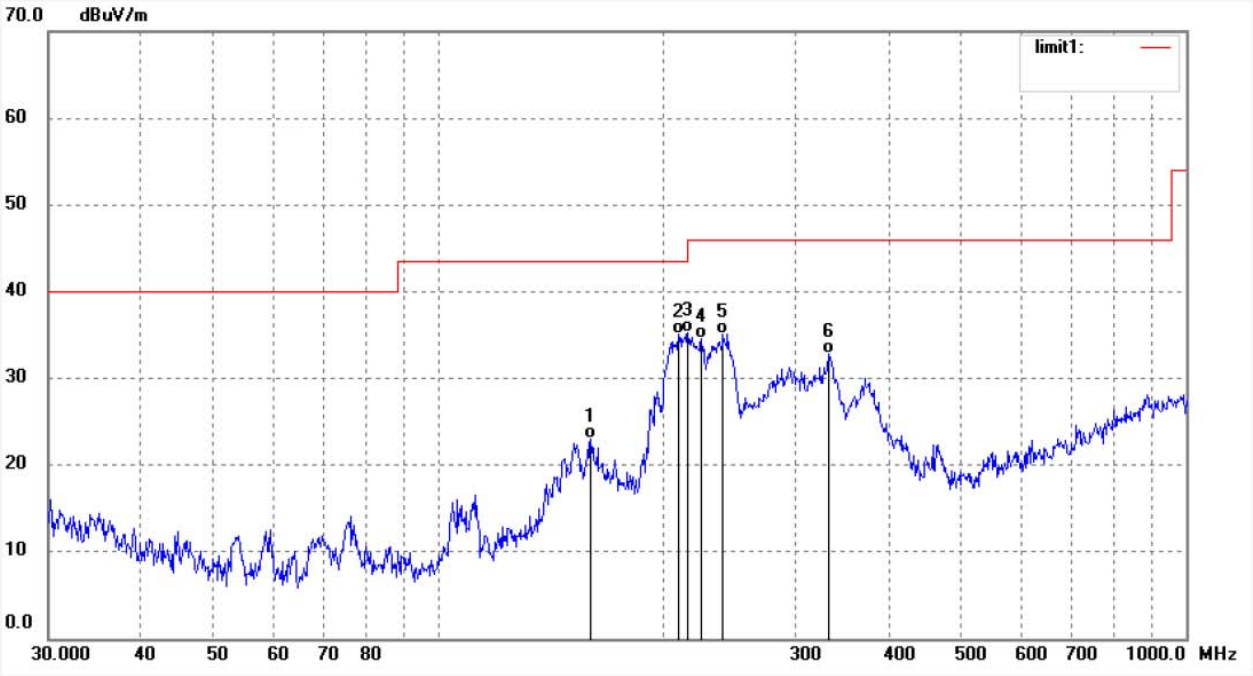
Job No.: FRANK2019 #41	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 19/01/23/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 14/16/05
EUT: Bluetooth earphone	Engineer Signature:
Mode: Charging	Distance: 3m
Model: J06	
Manufacturer: Shenzhen Junde Technology Co., Ltd.	

Note: Report NO.:ATE20190030



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	159.7586	50.06	-27.09	22.97	43.50	-20.53	QP	200	132	
2	209.3924	59.18	-24.12	35.06	43.50	-8.44	QP	200	201	
3	215.3616	59.27	-24.05	35.22	43.50	-8.28	QP	200	92	
4	224.6359	58.42	-23.94	34.48	46.00	-11.52	QP	200	49	
5	240.1442	58.86	-23.72	35.14	46.00	-10.86	QP	200	193	
6	331.7857	52.84	-20.07	32.77	46.00	-13.23	QP	200	248	

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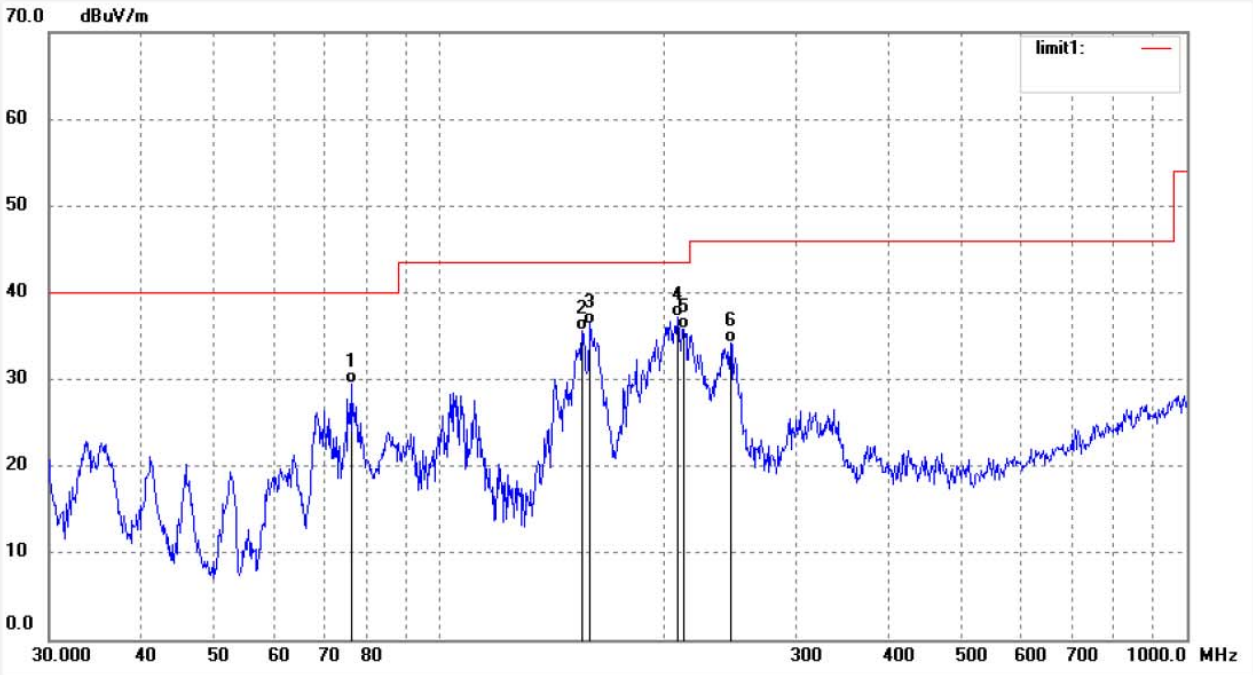
Job No.: FRANK2019 #42
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth earphone
Mode: Charging
Model: J06
Manufacturer: Shenzhen Junde Technology Co., Ltd.

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 19/01/23/
Time: 14/16/47
Engineer Signature:
Distance: 3m

Note: Report NO.:ATE20190030



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	76.1188	57.11	-27.64	29.47	40.00	-10.53	QP	100	141	
2	155.3305	63.23	-27.58	35.65	43.50	-7.85	QP	100	55	
3	159.1982	63.55	-27.15	36.40	43.50	-7.10	QP	100	116	
4	207.9259	61.34	-24.14	37.20	43.50	-6.30	QP	100	95	
5	212.3558	59.89	-24.09	35.80	43.50	-7.70	QP	100	221	
6	245.2606	57.90	-23.67	34.23	46.00	-11.77	QP	100	163	

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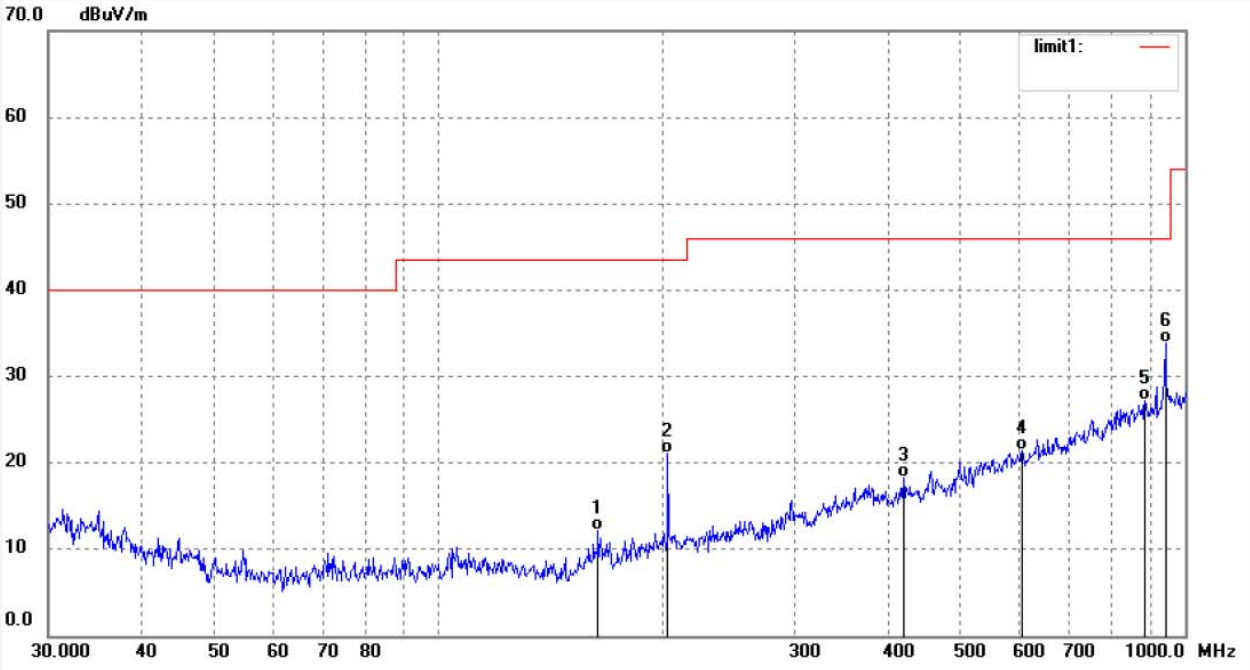
Job No.: FRANK2019 #49
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth earphone
Mode: TX 2402MHz
Model: J06
Manufacturer: Shenzhen Junde Technology Co., Ltd.

Polarization: Horizontal
Power Source: DC 3.7V
Date: 19/01/23/
Time: 14/31/14
Engineer Signature:
Distance: 3m

Note: Report NO.:ATE20190030



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	163.7366	38.79	-26.68	12.11	43.50	-31.39	QP	200	200	
2	202.8745	45.39	-24.25	21.14	43.50	-22.36	QP	200	152	
3	419.8509	36.36	-18.00	18.36	46.00	-27.64	QP	200	62	
4	605.0508	35.09	-13.58	21.51	46.00	-24.49	QP	200	59	
5	884.2853	34.68	-7.46	27.22	46.00	-18.78	QP	200	221	
6	942.0180	40.26	-6.47	33.79	46.00	-12.21	QP	200	103	

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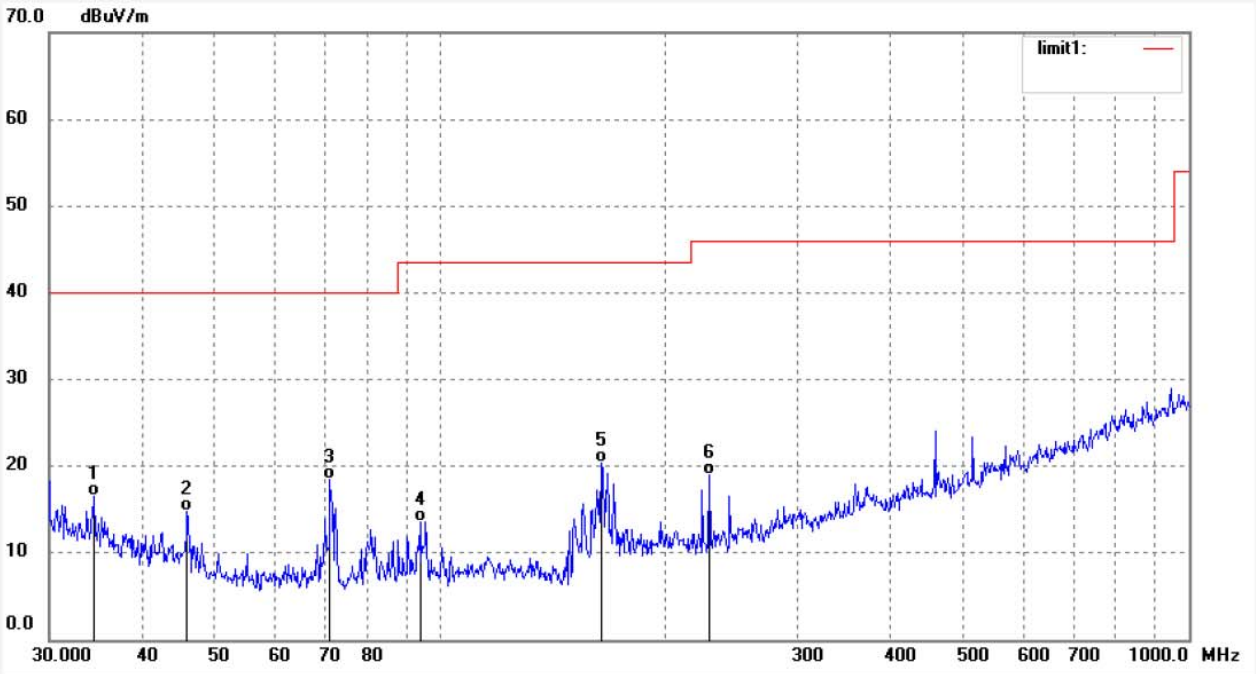
Job No.: FRANK2019 #50
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth earphone
Mode: TX 2402MHz
Model: J06
Manufacturer: Shenzhen Junde Technology Co., Ltd.

Polarization: Vertical
Power Source: DC 3.7V
Date: 19/01/23/
Time: 14/32/03
Engineer Signature:
Distance: 3m

Note: Report NO.:ATE20190030



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	34.4059	37.83	-21.30	16.53	40.00	-23.47	QP	100	103	
2	45.8943	39.48	-24.74	14.74	40.00	-25.26	QP	100	101	
3	71.2032	46.00	-27.54	18.46	40.00	-21.54	QP	100	92	
4	93.9829	41.00	-27.42	13.58	43.50	-29.92	QP	100	230	
5	164.3129	46.99	-26.61	20.38	43.50	-23.12	QP	100	116	
6	228.6173	42.96	-23.89	19.07	46.00	-26.93	QP	100	62	

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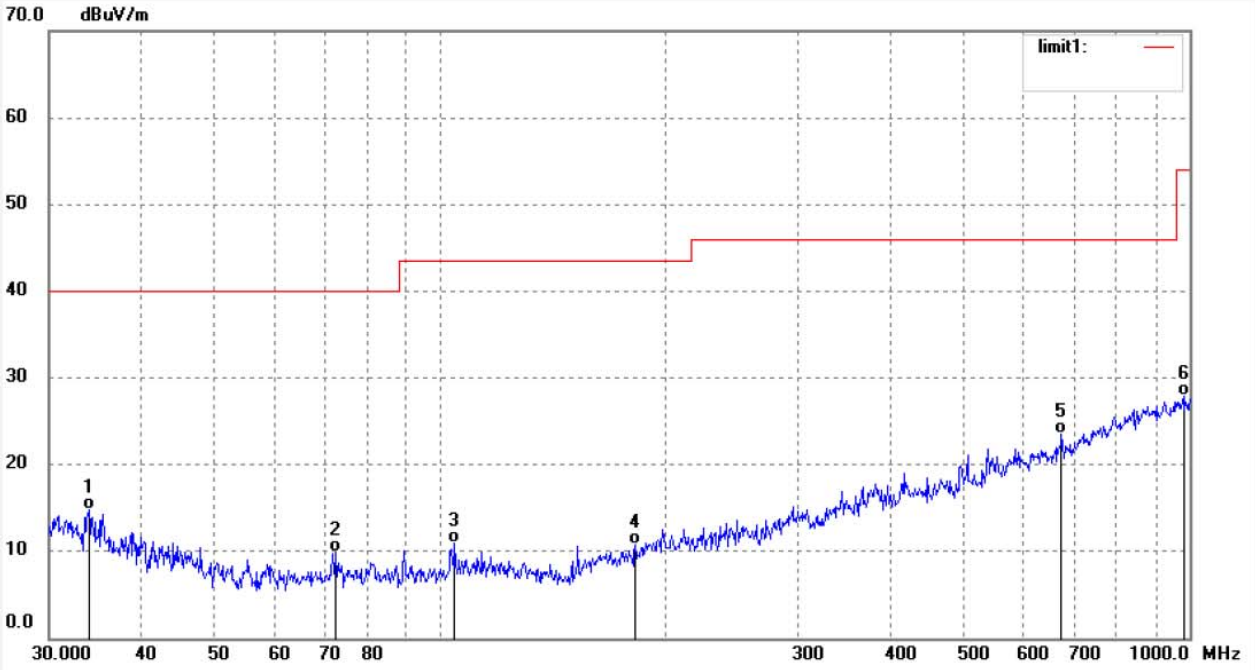
Job No.: FRANK2019 #52
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth earphone
Mode: TX 2440MHz
Model: J06
Manufacturer: Shenzhen Junde Technology Co., Ltd.

Polarization: Horizontal
Power Source: DC 3.7V
Date: 19/01/23/
Time: 14/32/54
Engineer Signature:
Distance: 3m

Note: Report NO.:ATE20190030



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	33.9256	35.91	-21.18	14.73	40.00	-25.27	QP	200	141	
2	72.4652	37.56	-27.59	9.97	40.00	-30.03	QP	200	66	
3	104.4303	39.09	-28.14	10.95	43.50	-32.55	QP	200	112	
4	181.9380	36.58	-25.84	10.74	43.50	-32.76	QP	200	99	
5	674.6767	35.56	-12.05	23.51	46.00	-22.49	QP	200	116	
6	982.5855	33.38	-5.47	27.91	54.00	-26.09	QP	200	302	

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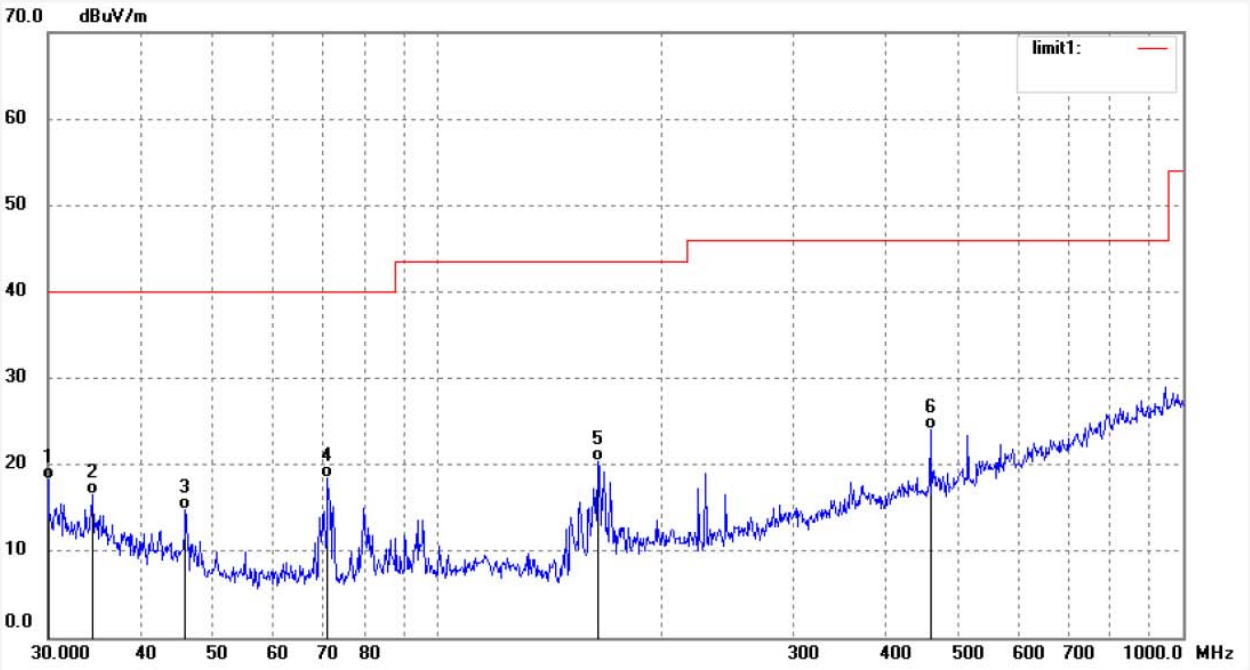
Job No.: FRANK2019 #51
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth earphone
Mode: TX 2440MHz
Model: J06
Manufacturer: Shenzhen Junde Technology Co., Ltd.

Polarization: Vertical
Power Source: DC 3.7V
Date: 19/01/23/
Time: 14/32/12
Engineer Signature:
Distance: 3m

Note: Report NO.:ATE20190030



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.0000	38.45	-20.20	18.25	40.00	-21.75	QP	100	163	
2	34.4059	37.83	-21.30	16.53	40.00	-23.47	QP	100	45	
3	45.8943	39.48	-24.74	14.74	40.00	-25.26	QP	100	95	
4	71.2032	46.00	-27.54	18.46	40.00	-21.54	QP	100	106	
5	164.3129	46.99	-26.61	20.38	43.50	-23.12	QP	100	201	
6	458.3987	41.04	-17.02	24.02	46.00	-21.98	QP	100	163	

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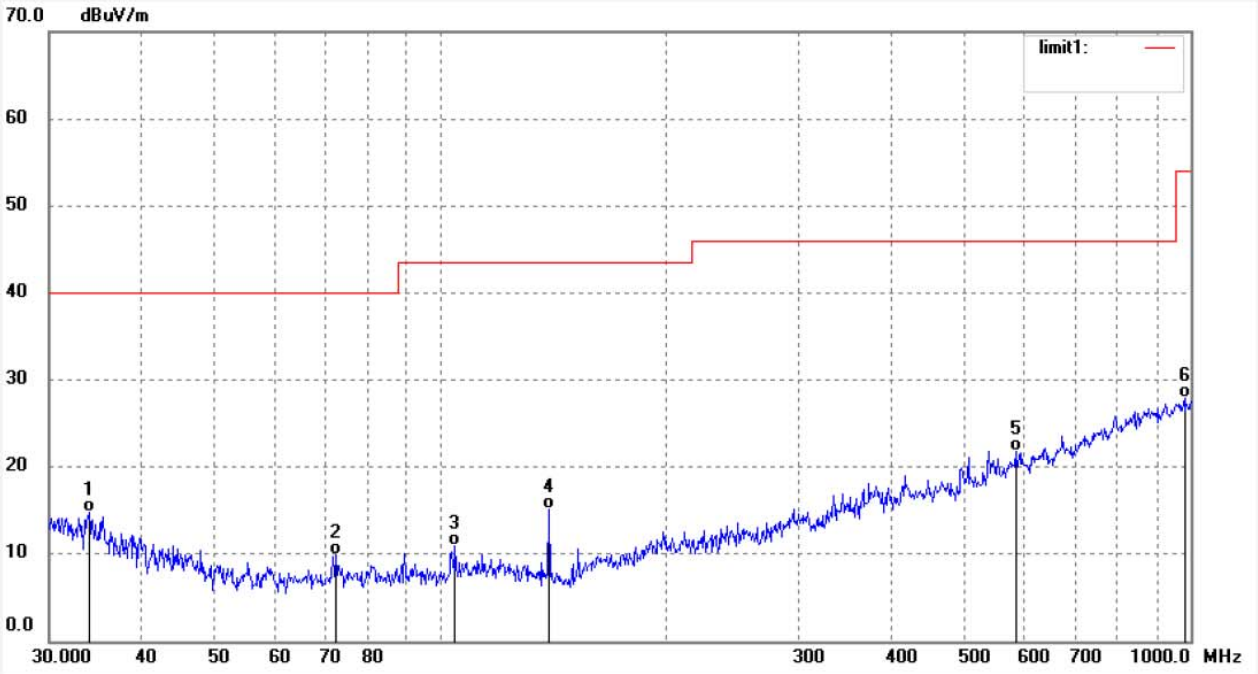
Fax:+86-0755-26503396

Job No.: FRANK2019 #53
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth earphone
Mode: TX 2480MHz
Model: J06
Manufacturer: Shenzhen Junde Technology Co., Ltd.

Polarization: Horizontal
Power Source: DC 3.7V
Date: 19/01/23/
Time: 14/33/04
Engineer Signature:
Distance: 3m

Note: Report NO.:ATE20190030



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	33.9256	35.91	-21.18	14.73	40.00	-25.27	QP	200	302	
2	72.4652	37.56	-27.59	9.97	40.00	-30.03	QP	200	119	
3	104.4303	39.09	-28.14	10.95	43.50	-32.55	QP	200	201	
4	139.3006	43.02	-27.94	15.08	43.50	-28.42	QP	200	195	
5	584.1611	35.89	-14.02	21.87	46.00	-24.13	QP	200	66	
6	982.5855	33.38	-5.47	27.91	54.00	-26.09	QP	200	132	

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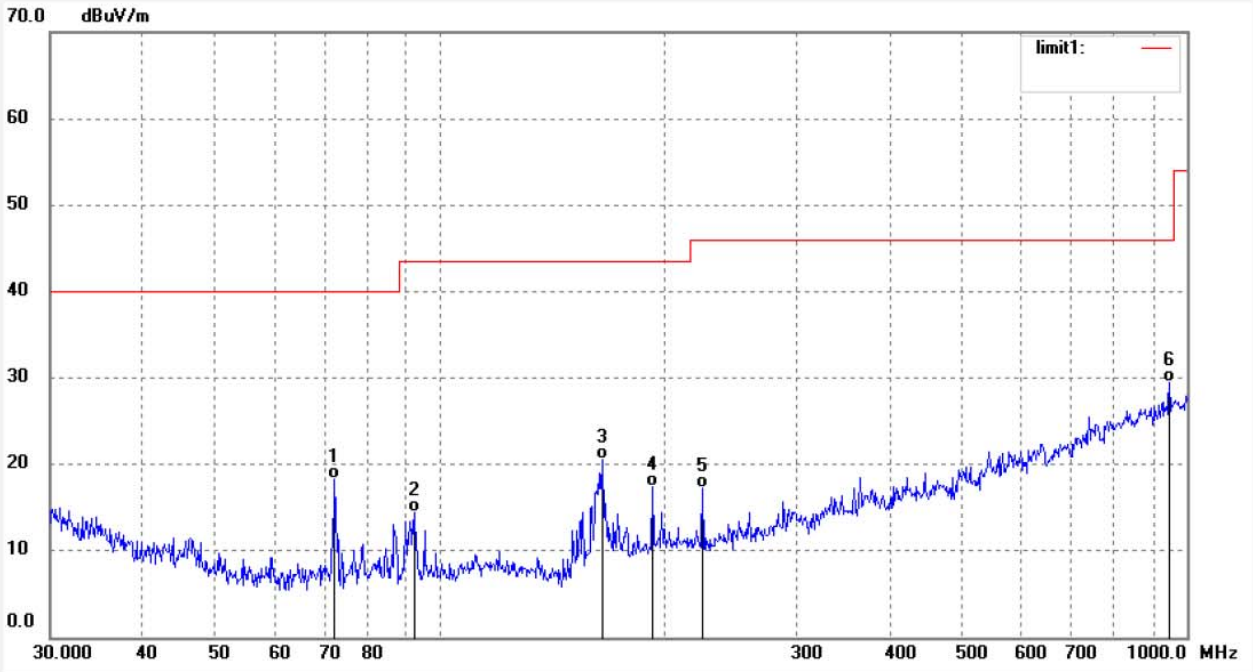
Job No.: FRANK2019 #54	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 19/01/23/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 14/33/51
EUT: Bluetooth earphone	Engineer Signature:
Mode: TX 2480MHz	Distance: 3m
Model: J06	
Manufacturer: Shenzhen Junde Technology Co., Ltd.	

Note: Report NO.:ATE20190030



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	72.2111	45.88	-27.58	18.30	40.00	-21.70	QP	100	166	
2	92.3461	41.82	-27.42	14.40	43.50	-29.10	QP	100	54	
3	164.8911	47.04	-26.55	20.49	43.50	-23.01	QP	100	229	
4	192.4590	42.22	-24.89	17.33	43.50	-26.17	QP	100	201	
5	224.6360	41.20	-23.94	17.26	46.00	-28.74	QP	100	116	
6	948.6609	35.78	-6.35	29.43	46.00	-16.57	QP	100	302	

Above 1GHz

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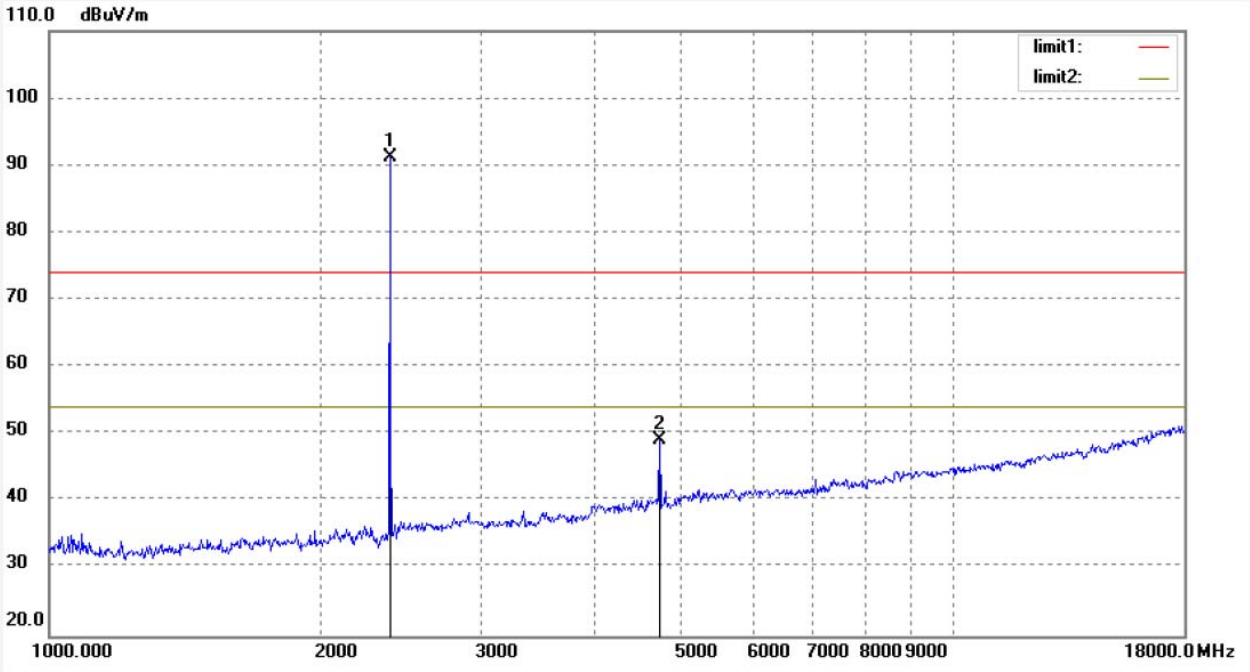
Job No.: FRANK2019 #176	Polarization: Horizontal
Standard: FCC PK	Power Source: DC 3.7V
Test item: Radiation Test	Date: 19/01/23/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 08/35/34
EUT: Bluetooth earphone	Engineer Signature:
Mode: TX 2402MHz	Distance: 3m
Model: J06	
Manufacturer: Shenzhen Junde Technology Co., Ltd.	

Note: Report NO.:ATE20190030



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.219	97.56	-6.37	91.19			peak	200	116	
2	4804.457	48.35	0.70	49.05	74.00	-24.95	peak	200	302	

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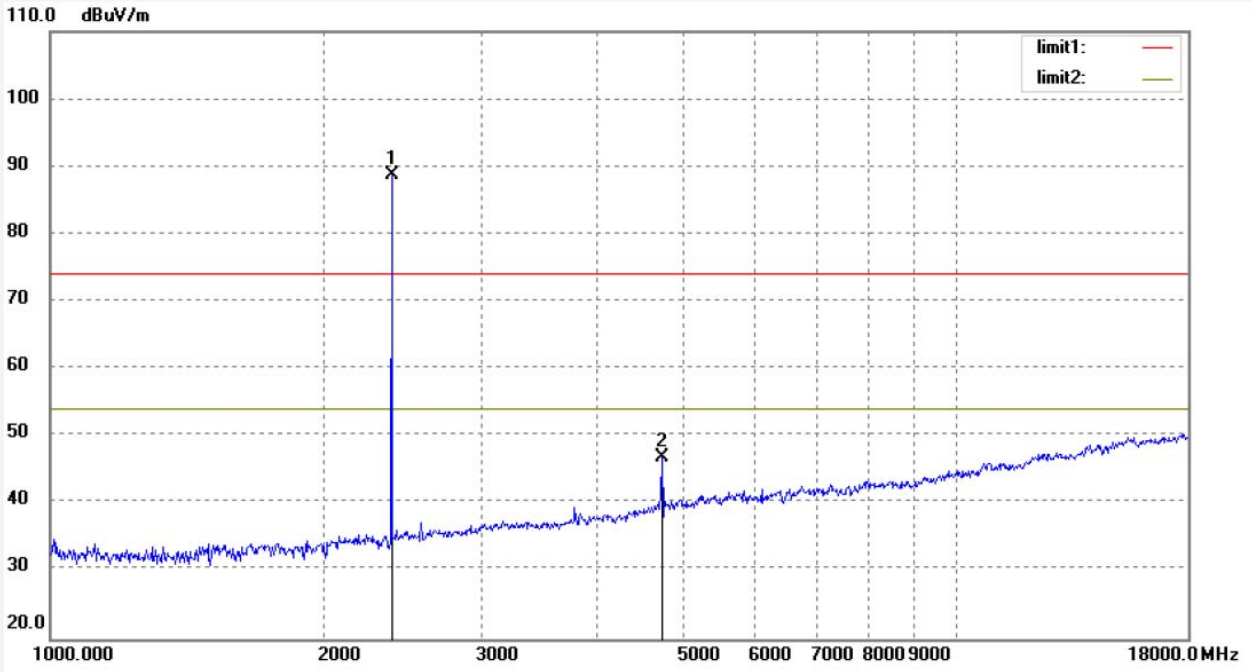
Job No.: FRANK2019 #177
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth earphone
Mode: TX 2402MHz
Model: J06
Manufacturer: Shenzhen Junde Technology Co., Ltd.

Polarization: Vertical
Power Source: DC 3.7V
Date: 19/01/23/
Time: 08/39/43
Engineer Signature:
Distance: 3m

Note: Report NO.:ATE20190030



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.219	95.04	-6.37	88.67			peak	150	41	
2	4804.457	46.22	0.70	46.92	74.00	-27.08	peak	150	302	

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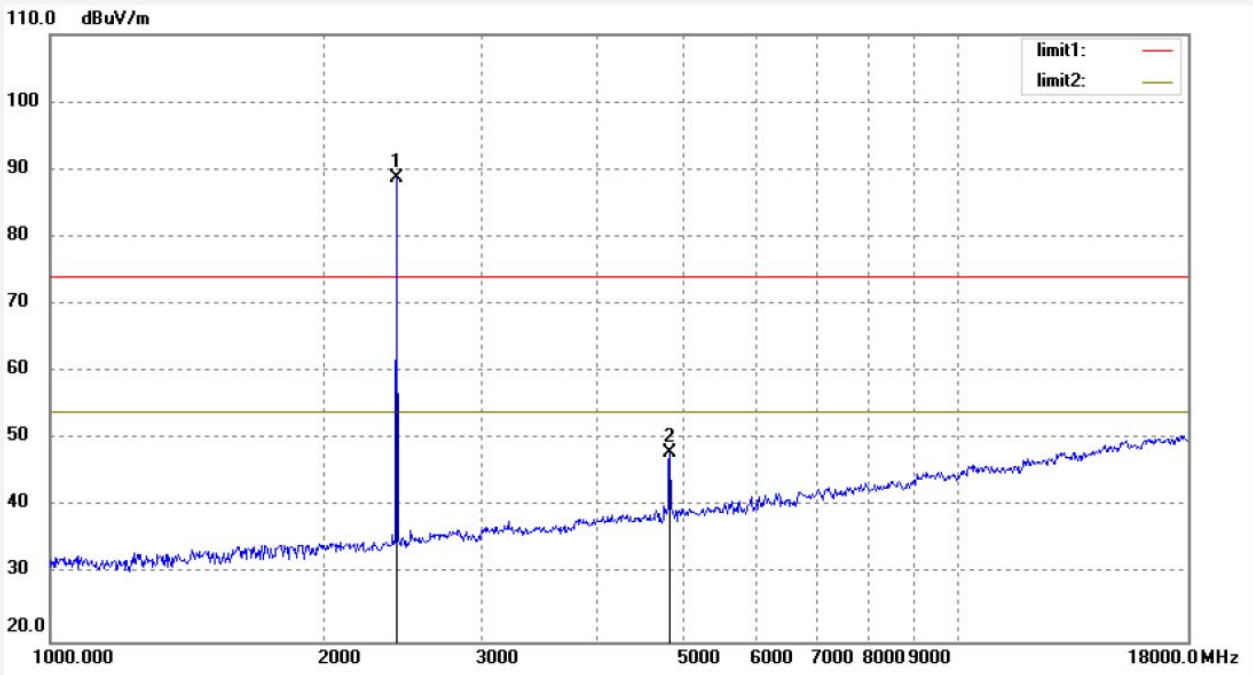
Job No.: FRANK2019 #179
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth earphone
Mode: TX 2440MHz
Model: J06
Manufacturer: Shenzhen Junde Technology Co., Ltd.

Polarization: Horizontal
Power Source: DC 3.7V
Date: 19/01/23/
Time: 08/46/54
Engineer Signature:
Distance: 3m

Note: Report NO.:ATE20190030



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.200	95.05	-6.24	88.81			peak	200	66	
2	4880.400	46.87	1.13	48.00	74.00	-26.00	peak	200	109	

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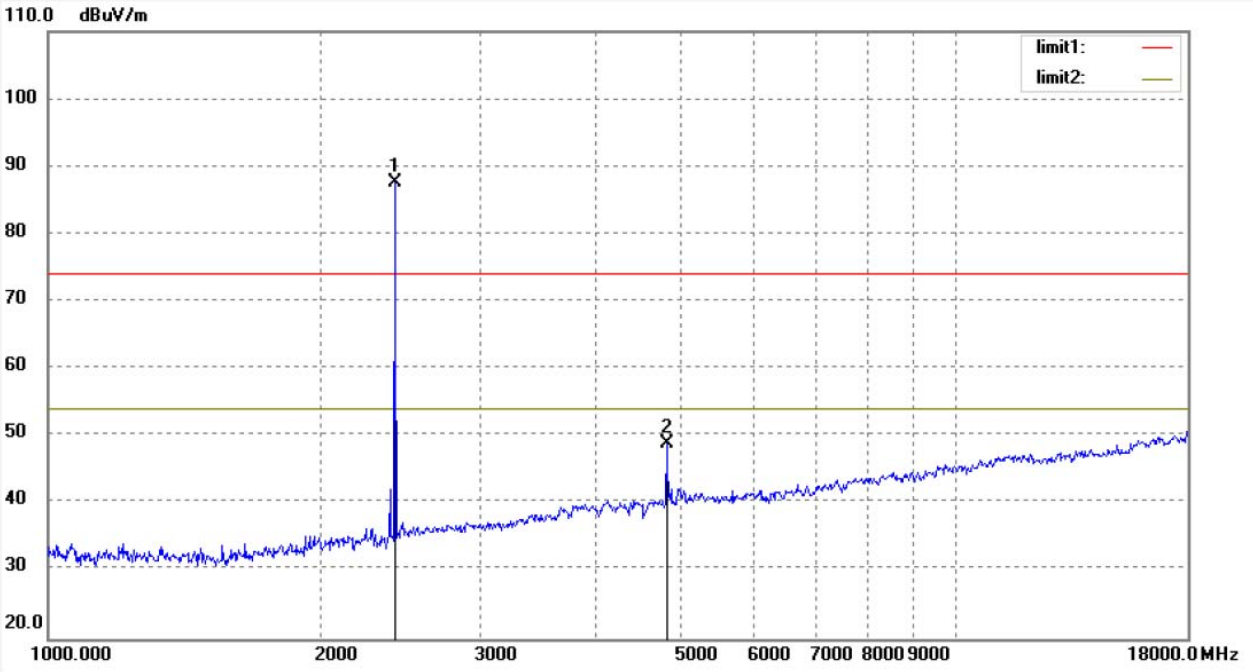
Job No.: FRANK2019 #178
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth earphone
Mode: TX 2440MHz
Model: J06
Manufacturer: Shenzhen Junde Technology Co., Ltd.

Polarization: Vertical
Power Source: DC 3.7V
Date: 19/01/23/
Time: 08/43/53
Engineer Signature:
Distance: 3m

Note: Report NO.:ATE20190030



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.200	93.79	-6.24	87.55			peak	150	201	
2	4880.400	47.99	1.00	48.99	74.00	-25.01	peak	150	103	

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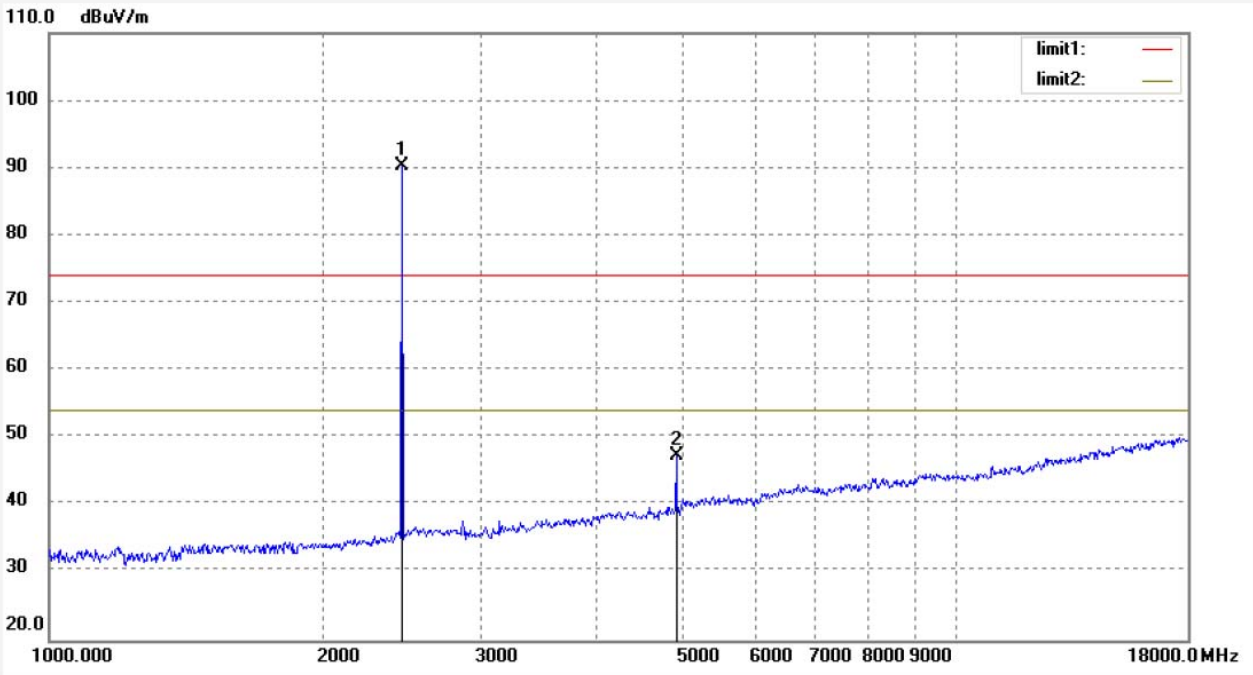
Job No.: FRANK2019 #180
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth earphone
Mode: TX 2480MHz
Model: J06
Manufacturer: Shenzhen Junde Technology Co., Ltd.

Polarization: Horizontal
Power Source: DC 3.7V
Date: 19/01/23/
Time: 08/49/37
Engineer Signature:
Distance: 3m

Note: Report NO.:ATE20190030



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	96.30	-6.04	90.26			peak	200	211	
2	4960.064	45.93	1.50	47.43	74.00	-26.57	peak	200	106	

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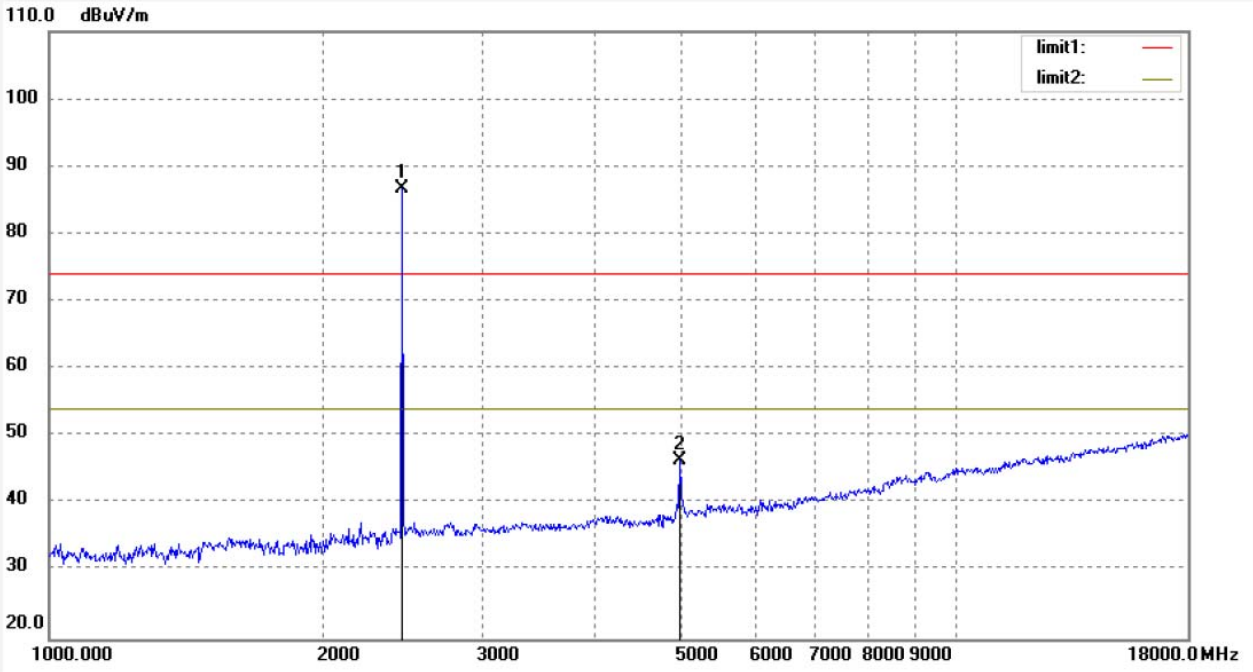
Job No.: FRANK2019 #181
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Bluetooth earphone
Mode: TX 2480MHz
Model: J06
Manufacturer: Shenzhen Junde Technology Co., Ltd.

Polarization: Vertical
Power Source: DC 3.7V
Date: 19/01/23/
Time: 08/53/35
Engineer Signature:
Distance: 3m

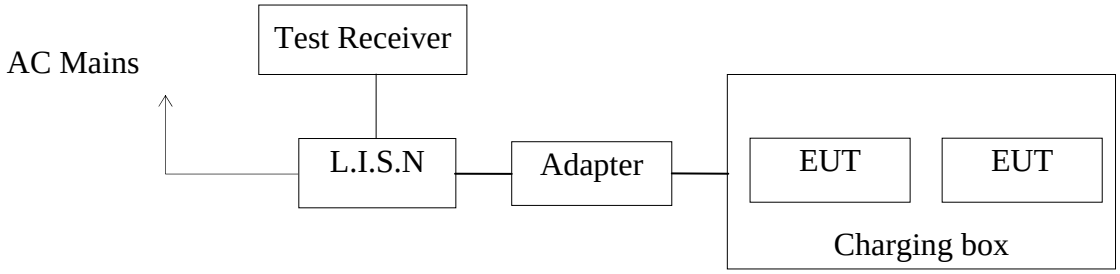
Note: Report NO.:ATE20190030



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	92.81	-6.04	86.77			peak	150	55	
2	4960.066	44.71	1.68	46.39	74.00	-27.61	peak	150	106	

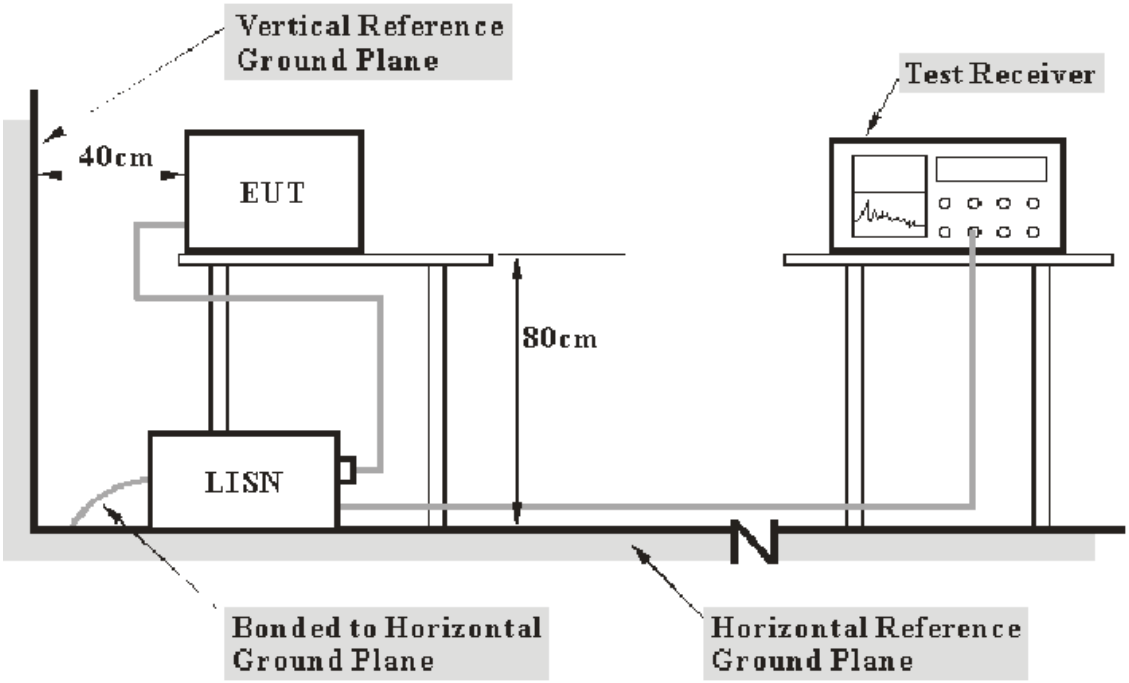
10. AC POWER LINE CONDUCTED EMISSION FOR FCC PART 15 SECTION 15.207(A)

10.1. Block Diagram of Test Setup



(EUT: Bluetooth earphone)

10.2. 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.

10.3.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.		

10.4.Configuration of EUT on Measurement

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

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 test mode and measure it.

10.6.Test Procedure

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

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

10.7.Data Sample

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

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

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

10.8.Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150kHz to 30MHz is checked.
Maximizing procedure was performed on the six (6) highest emissions of the EUT.
Emissions attenuated more than 20 dB below the permissible value are not reported.
We tested the conducted emission of high and low voltage mode and recorded the worst mode data. All data was recorded in the Quasi-peak and average detection mode.

Test mode : CHARGING (AC 120V/60Hz)

MEASUREMENT RESULT: "F-0028-1_fin"

2019-1-21 9:16

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.150000	50.80	10.8	66	15.2	QP	N	GND
0.501000	37.90	11.0	56	18.1	QP	N	GND
1.081500	33.50	11.1	56	22.5	QP	N	GND
2.391000	31.00	11.3	56	25.0	QP	N	GND
12.165000	27.90	11.6	60	32.1	QP	N	GND
14.775000	27.50	11.6	60	32.5	QP	N	GND

MEASUREMENT RESULT: "F-0028-1_fin2"

2019-1-21 9:16

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.150000	45.80	10.8	56	10.2	AV	N	GND
0.487500	35.70	11.0	46	10.5	AV	N	GND
0.942000	26.50	11.1	46	19.5	AV	N	GND
2.391000	24.20	11.3	46	21.8	AV	N	GND
6.252000	21.40	11.5	50	28.6	AV	N	GND
12.948000	18.90	11.6	50	31.1	AV	N	GND

MEASUREMENT RESULT: "F-0028-2_fin"

2019-1-21 9:21

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.150000	41.10	10.8	66	24.9	QP	L1	GND
0.505500	33.80	11.0	56	22.2	QP	L1	GND
0.973500	33.50	11.1	56	22.5	QP	L1	GND
2.229000	25.80	11.3	56	30.2	QP	L1	GND
12.124500	25.50	11.6	60	34.5	QP	L1	GND
16.953000	25.80	11.7	60	34.2	QP	L1	GND

MEASUREMENT RESULT: "F-0028-2_fin2"

2019-1-21 9:21

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.150000	35.90	10.8	56	20.1	AV	L1	GND
0.487500	25.50	11.0	46	20.7	AV	L1	GND
1.081500	23.30	11.1	46	22.7	AV	L1	GND
2.224500	18.80	11.3	46	27.2	AV	L1	GND
11.800500	15.30	11.6	50	34.7	AV	L1	GND
14.347500	15.80	11.6	50	34.2	AV	L1	GND

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

The spectral diagrams are attached as below.

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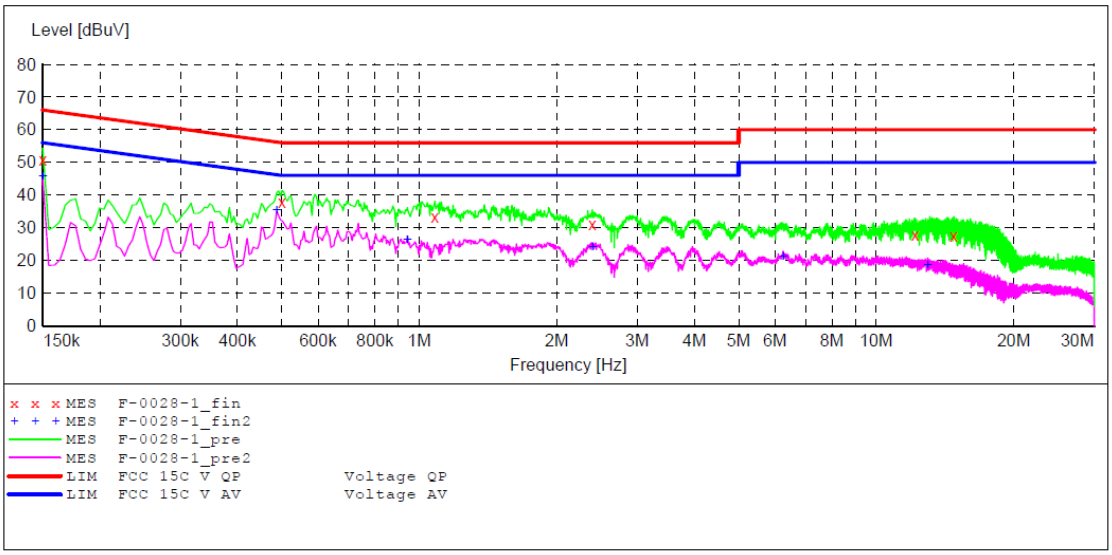
CONDUCTED EMISSION STANDARD FCC PART 15C

EUT: Bluetooth earphone M/N:J06
Manufacturer: Shenzhen Junde Technology Co.,Ltd
Operating Condition: Charging
Test Site: 1#Shielding Room
Operator: Frank
Test Specification: N 120V/60Hz
Comment: Report NO.:ATE20190030
Start of Test: 2019-1-11 / 9:12:48

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

Short Description: SUB STD VTERM2 1.70

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



MEASUREMENT RESULT: "F-0028-1_fin"

2019-1-21 9:16

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.150000	50.80	10.8	66	15.2	QP	N	GND
0.501000	37.90	11.0	56	18.1	QP	N	GND
1.081500	33.50	11.1	56	22.5	QP	N	GND
2.391000	31.00	11.3	56	25.0	QP	N	GND
12.165000	27.90	11.6	60	32.1	QP	N	GND
14.775000	27.50	11.6	60	32.5	QP	N	GND

MEASUREMENT RESULT: "F-0028-1_fin2"

2019-1-21 9:16

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.150000	45.80	10.8	56	10.2	AV	N	GND
0.487500	35.70	11.0	46	10.5	AV	N	GND
0.942000	26.50	11.1	46	19.5	AV	N	GND
2.391000	24.20	11.3	46	21.8	AV	N	GND
6.252000	21.40	11.5	50	28.6	AV	N	GND
12.948000	18.90	11.6	50	31.1	AV	N	GND

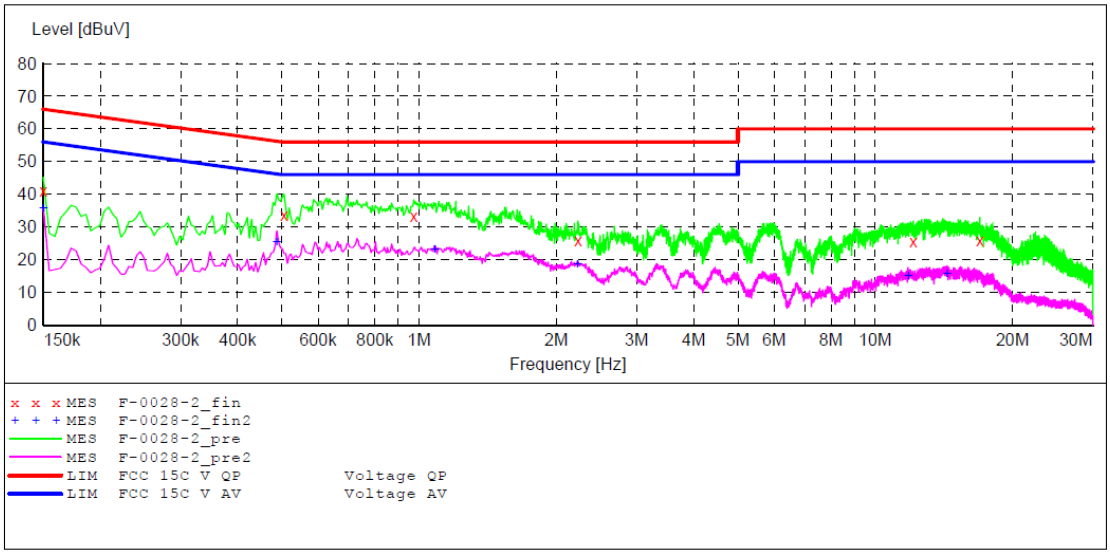
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15C

```
EUT:                  Bluetooth earphone  M/N:J06
Manufacturer:         Shenzhen Junde Technology Co.,Ltd
Operating Condition:  Charging
Test Site:            1#Shielding Room
Operator:             Frank
Test Specification:   L  120V/60Hz
Comment:              Report NO.:ATE20190030
Start of Test:        2019-1-21 / 9:19:23
```

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: "F-0028-2_fin"

2019-1-21 9:21

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.150000	41.10	10.8	66	24.9	QP	L1	GND
0.505500	33.80	11.0	56	22.2	QP	L1	GND
0.973500	33.50	11.1	56	22.5	QP	L1	GND
2.229000	25.80	11.3	56	30.2	QP	L1	GND
12.124500	25.50	11.6	60	34.5	QP	L1	GND
16.953000	25.80	11.7	60	34.2	QP	L1	GND

MEASUREMENT RESULT: "F-0028-2_fin2"

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Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.150000	35.90	10.8	56	20.1	AV	L1	GND
0.487500	25.50	11.0	46	20.7	AV	L1	GND
1.081500	23.30	11.1	46	22.7	AV	L1	GND
2.224500	18.80	11.3	46	27.2	AV	L1	GND
11.800500	15.30	11.6	50	34.7	AV	L1	GND
14.347500	15.80	11.6	50	34.2	AV	L1	GND

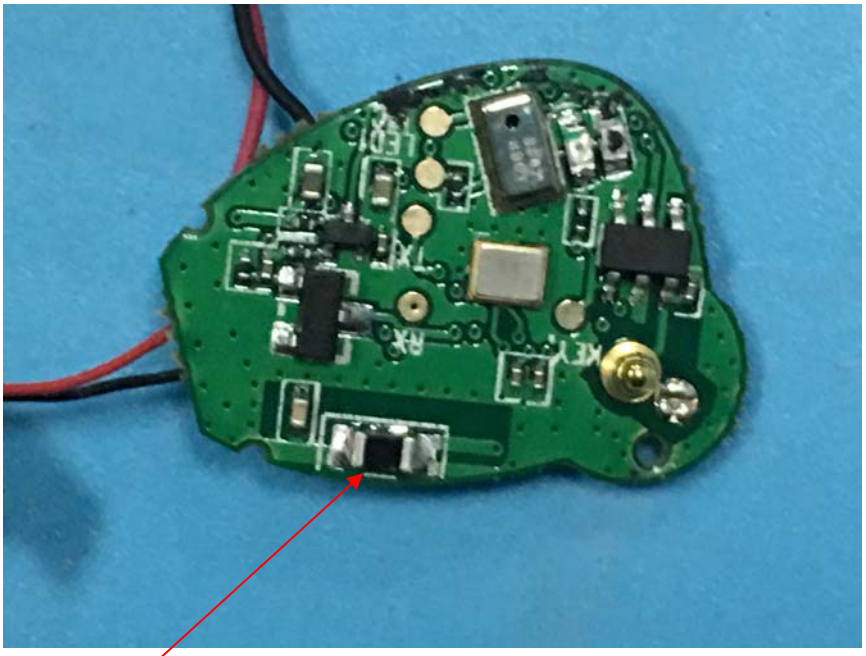
11. ANTENNA REQUIREMENT

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 1.72dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Chip Antenna