

APPLICATION CERTIFICATION FCC Part 15C
On Behalf of
GOOD EVER TRADING LIMITED

Color Changing BT Speaker

Model No.: CB-335082, 74497, CB-335072C, 74486, CB-335093, 74521, CB-335096,
74526, CB-335089A, 74525, FISHER-FBT360

FCC ID: 2AM7T-CB-335082

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Report No. : ATE20171688
Date of Test : August 16-31, 2017
Date of Report : September 4, 2017

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Test Report Certification

Applicant : GOOD EVER TRADING LIMITED
Manufacturer : GOOD EVER TRADING LIMITED
EUT Description : Color Changing BT Speaker
Model No. : CB-335082, 74497, CB-335072C, 74486, CB-335093, 74521,
CB-335096, 74526, CB-335089A, 74525, FISHER-FBT360
Trade Mark : n.a.

Measurement Procedure Used:

**FCC Rules and Regulations Part 15 Subpart C Section 15.247: 2016
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 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 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 ACCURATE TECHNOLOGY CO. LTD.

Date of Test : August 16-31, 2017
Date of Report: September 4, 2017

Prepared by : Bob Wang
(Bob Wang, Engineer)

Approved & Authorized Signer : Sean Liu
(Sean Liu, Manager)



1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	:	Color Changing BT Speaker
Model Number	:	CB-335082, 74497, CB-335072C, 74486, CB-335093, 74521, CB-335096, 74526, CB-335089A, 74525, FISHER-FBT360 (Note: We hereby state that these models are identical in interior structure, electrical circuits and components, and just model names are different for the marketing requirement. So we prepare the CB-335082 for test.)
Trade Mark	:	n.a.
Bluetooth version	:	BT V4.2
Frequency Range	:	2402MHz-2480MHz
Number of Channels	:	40
Antenna Gain	:	1dBi
Antenna type	:	PCB Antenna
Power Supply	:	DC 3.7V & DC 5V(Power by USB port)
Modulation mode	:	GFSK
Applicant	:	GOOD EVER TRADING LIMITED
Address	:	RM 1701, Zhuoyue Building, Fuhua Yi Rd., Futian Central Zone, Shenzhen, China
Manufacturer	:	GOOD EVER TRADING LIMITED
Address	:	RM 1701, Zhuoyue Building, Fuhua Yi Rd., Futian Central Zone, Shenzhen, China
Date of sample received	:	August 15 2017
Date of Test	:	August 16-31, 2017
Sample No.	:	1701389

1.2. Special Accessory and Auxiliary Equipment

Adapter:	Model:BEK-QC-001
	INPUT: 120V~60Hz
	OUTPUT:5V/1A

1.3.Carrier Frequency of Channels

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channe 1	Frequency (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

1.4. Description of Test Facility

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

1.5. Measurement Uncertainty

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

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 7, 2017	1 Year
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 7, 2017	1 Year
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 7, 2017	1 Year
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 7, 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. 7, 2017	1 Year
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 7, 2017	1 Year
Highpass Filter	Wainwright Instruments	WHKX3.6/18 G-10SS	N/A	Jan. 7, 2017	1 Year
Band Reject Filter	Wainwright Instruments	WRCG2400/2 485-2375/2510 -60/11SS	N/A	Jan. 7, 2017	1 Year

3. OPERATION OF EUT DURING TESTING

3.1. Operating Mode

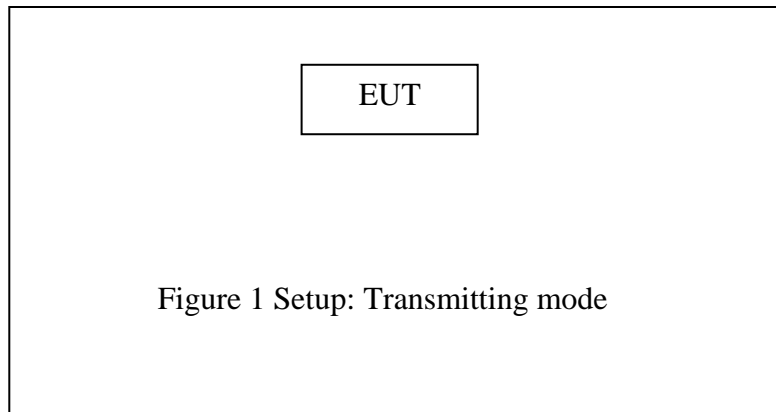
The mode is used: **BLE Transmitting mode**

Low Channel: 2402MHz

Middle Channel: 2440MHz

High Channel: 2480MHz

3.2. Configuration and peripherals



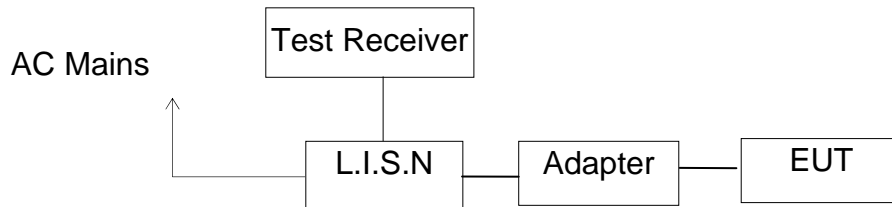
4. TEST PROCEDURES AND RESULTS

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

5. POWER LINE CONDUCTED MEASUREMENT

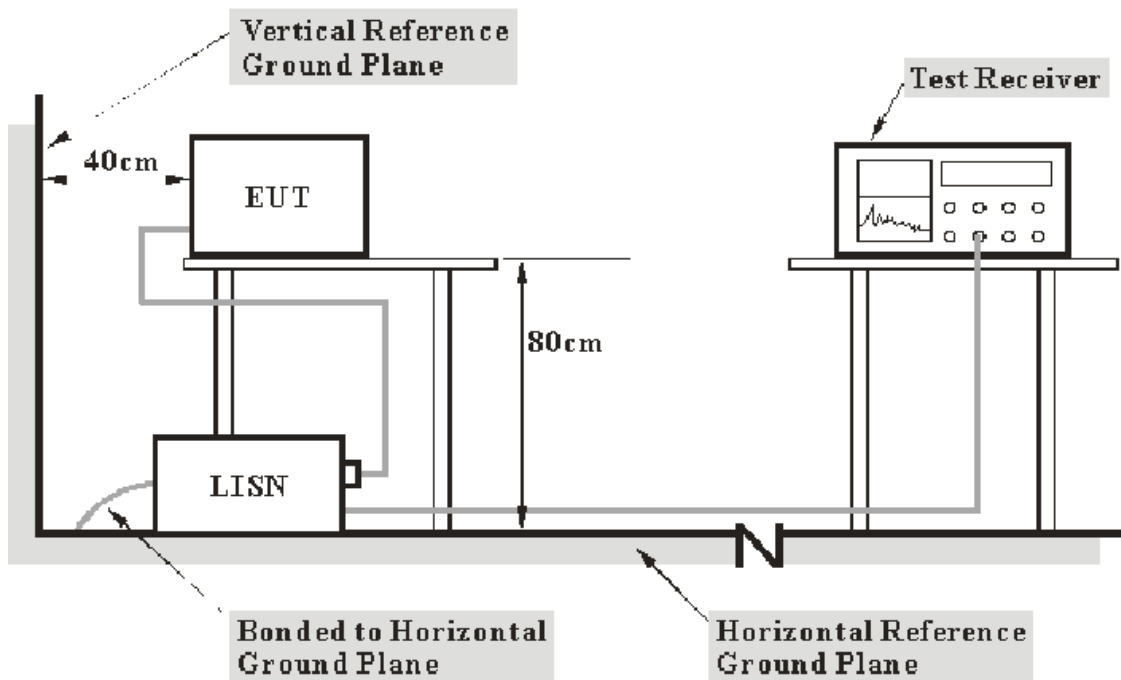
5.1. Block Diagram of Test

5.1.1. Block diagram of connection between the EUT and simulators



(EUT: Color Changing BT Speaker)

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(μ V)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

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

5.3. Configuration of EUT on Measurement

The following 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 0.8m 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 C63.10 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 (dB μ V)	Average Level (dB μ V)	QuasiPeak Limit (dB μ V)	Average Limit (dB μ V)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)
0.456875	10.7	40.50	30.20	57.0	47.0	16.2	16.5	Pass

Frequency(MHz) = Emission frequency in MHz

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

Level(dB μ V) = Quasi-peak Reading/Average Reading + Transducer value

Limit (dB μ V) = Limit stated in standard

Margin = Limit (dB μ V) - Level (dB μ V)

Calculation Formula:

Margin = Limit (dB μ V) - Level (dB μ V)

5.7. Power Line Conducted Emission Measurement Results

PASS.

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

Test mode : Charging(AC 120V/60Hz)								
EUT mode : CB-335082								
MEASUREMENT RESULT: "1688-1_fin"								
8/16/2017 3:45PM								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.155487	40.50	10.5	66	25.2	QP	N	GND	
0.456875	40.50	10.7	57	16.2	QP	N	GND	
1.899908	31.00	11.0	56	25.0	QP	N	GND	
3.375882	28.30	11.1	56	27.7	QP	N	GND	
11.777127	35.40	11.3	60	24.6	QP	N	GND	
14.094719	36.90	11.4	60	23.1	QP	N	GND	
MEASUREMENT RESULT: "1688-1_fin2"								
8/16/2017 3:45PM								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.330648	24.50	10.6	49	24.9	AV	N	GND	
0.456875	30.20	10.7	47	16.5	AV	N	GND	
0.948564	19.80	10.8	46	26.2	AV	N	GND	
3.760084	22.40	11.1	46	23.6	AV	N	GND	
11.777127	25.60	11.3	50	24.4	AV	N	GND	
12.604118	25.90	11.3	50	24.1	AV	N	GND	
MEASUREMENT RESULT: "1688-2_fin"								
8/16/2017 3:48PM								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.157361	40.90	10.5	66	24.7	QP	L1	GND	
0.473588	42.20	10.7	57	14.3	QP	L1	GND	
1.877290	40.20	11.0	56	15.8	QP	L1	GND	
3.295983	29.40	11.1	56	26.6	QP	L1	GND	
12.159314	37.20	11.3	60	22.8	QP	L1	GND	
18.197598	29.80	11.4	60	30.2	QP	L1	GND	
MEASUREMENT RESULT: "1688-2_fin2"								
8/16/2017 3:48PM								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.340018	24.90	10.6	49	24.3	AV	L1	GND	
0.469822	35.20	10.7	47	11.3	AV	L1	GND	
0.933537	31.40	10.8	46	14.6	AV	L1	GND	
3.295983	19.80	11.1	46	26.2	AV	L1	GND	
11.730206	28.70	11.3	50	21.3	AV	L1	GND	
12.654535	26.20	11.3	50	23.8	AV	L1	GND	

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

The spectral diagrams are attached as below.

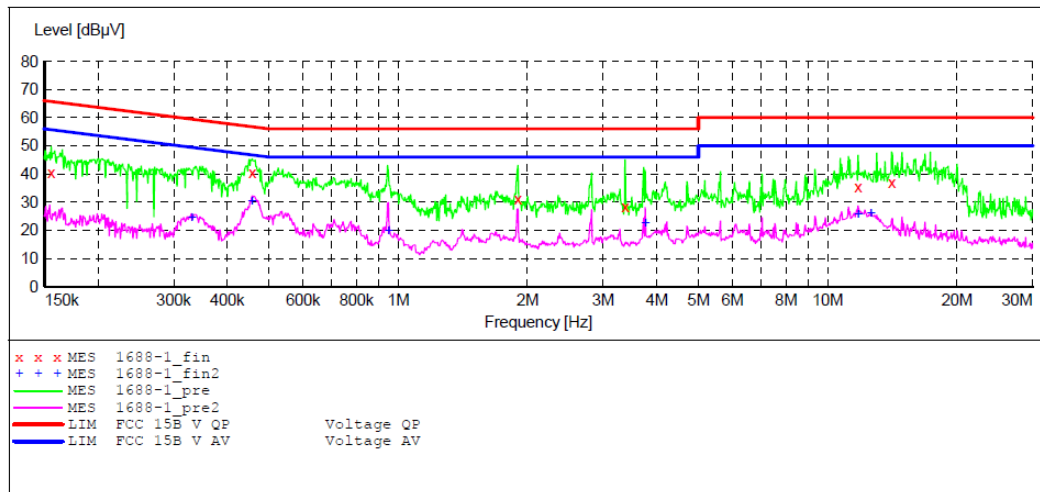
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Color Charging BT Speaker M/N:CB-335082
 Manufacturer: GOOD EVER TRADING LIMITED
 Operating Condition: Charging
 Test Site: 1#Shielding Room
 Operator: Frank
 Test Specification: N 120V/60Hz
 Comment: Report NO.:ATE20171688
 Start of Test: 8/16/2017 / 3:44:03PM

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

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



MEASUREMENT RESULT: "1688-1_fin"

8/16/2017 3:45PM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.155487	40.50	10.5	66	25.2	QP	N	GND
0.456875	40.50	10.7	57	16.2	QP	N	GND
1.899908	31.00	11.0	56	25.0	QP	N	GND
3.375882	28.30	11.1	56	27.7	QP	N	GND
11.777127	35.40	11.3	60	24.6	QP	N	GND
14.094719	36.90	11.4	60	23.1	QP	N	GND

MEASUREMENT RESULT: "1688-1_fin2"

8/16/2017 3:45PM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.330648	24.50	10.6	49	24.9	AV	N	GND
0.456875	30.20	10.7	47	16.5	AV	N	GND
0.948564	19.80	10.8	46	26.2	AV	N	GND
3.760084	22.40	11.1	46	23.6	AV	N	GND
11.777127	25.60	11.3	50	24.4	AV	N	GND
12.604118	25.90	11.3	50	24.1	AV	N	GND

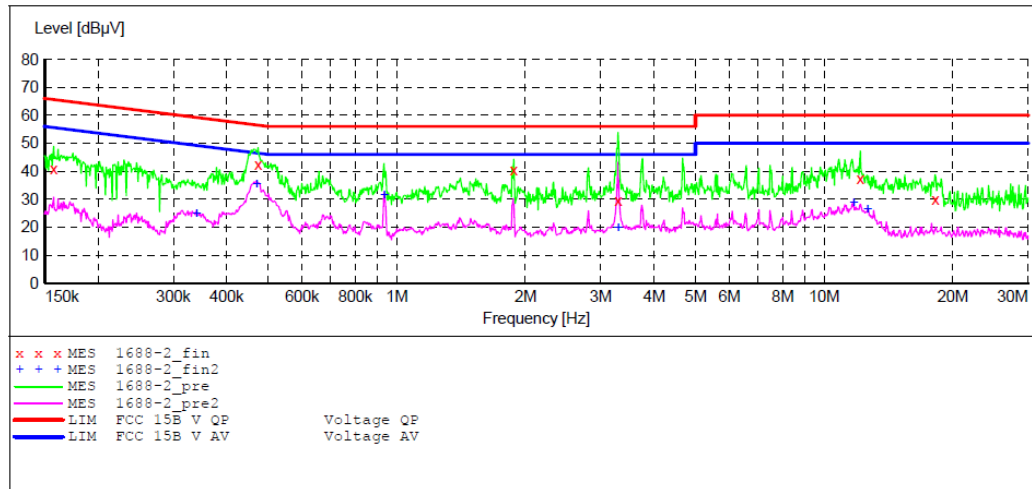
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Color Charging BT Speaker M/N:CB-335082
 Manufacturer: GOOD EVER TRADING LIMITED
 Operating Condition: Charging
 Test Site: 1#Shielding Room
 Operator: Frank
 Test Specification: L 120V/60Hz
 Comment: Report NO.:ATE20171688
 Start of Test: 8/16/2017 / 3:45:45PM

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

Short Description:		_SUB_STD_VTERM2 1.70					
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer	
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	NSLK8126 2008	
Average							
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	NSLK8126 2008	
Average							



MEASUREMENT RESULT: "1688-2_fin"

8/16/2017 3:48PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.157361	40.90	10.5	66	24.7	QP	L1	GND
0.473588	42.20	10.7	57	14.3	QP	L1	GND
1.877290	40.20	11.0	56	15.8	QP	L1	GND
3.295983	29.40	11.1	56	26.6	QP	L1	GND
12.159314	37.20	11.3	60	22.8	QP	L1	GND
18.197598	29.80	11.4	60	30.2	QP	L1	GND

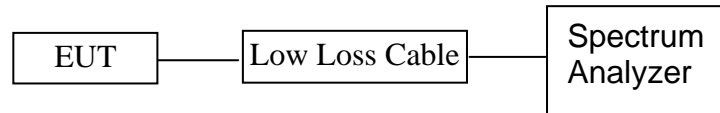
MEASUREMENT RESULT: "1688-2_fin2"

8/16/2017 3:48PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.340018	24.90	10.6	49	24.3	AV	L1	GND
0.469822	35.20	10.7	47	11.3	AV	L1	GND
0.933537	31.40	10.8	46	14.6	AV	L1	GND
3.295983	19.80	11.1	46	26.2	AV	L1	GND
11.730206	28.70	11.3	50	21.3	AV	L1	GND
12.654535	26.20	11.3	50	23.8	AV	L1	GND

6. 6DB BANDWIDTH MEASUREMENT

6.1. Block Diagram of Test Setup



(EUT: Color Changing BT Speaker)

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 2402-2480 MHz. 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.

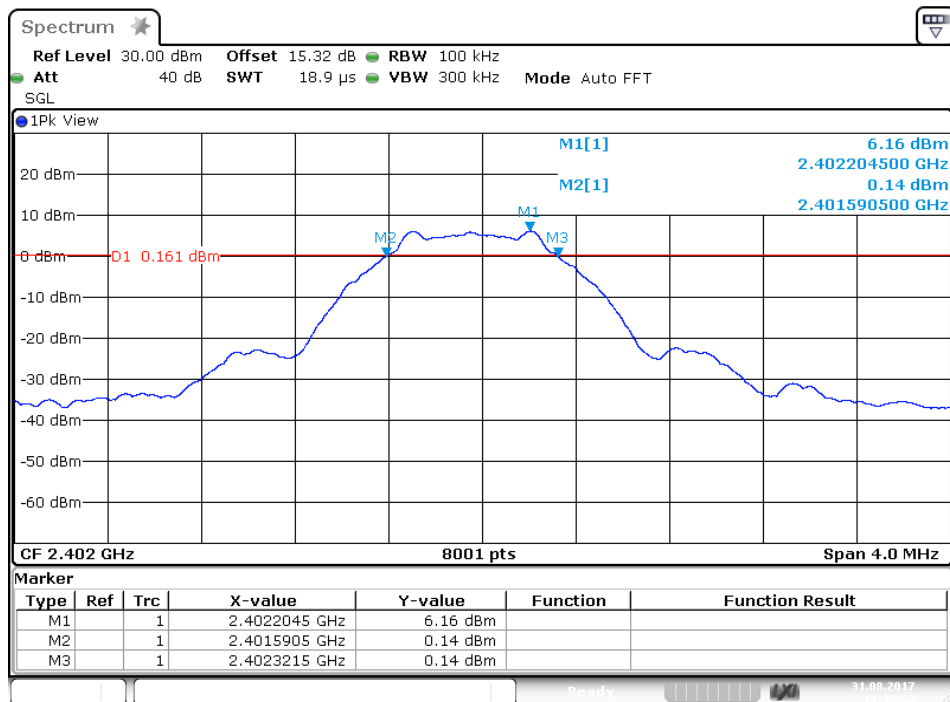
6.5.3. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

6.6.Test Result

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit(MHz)	PASS/FAIL
0	2402	0.731	0.5	PASS
19	2440	0.731	0.5	PASS
39	2480	0.766	0.5	PASS

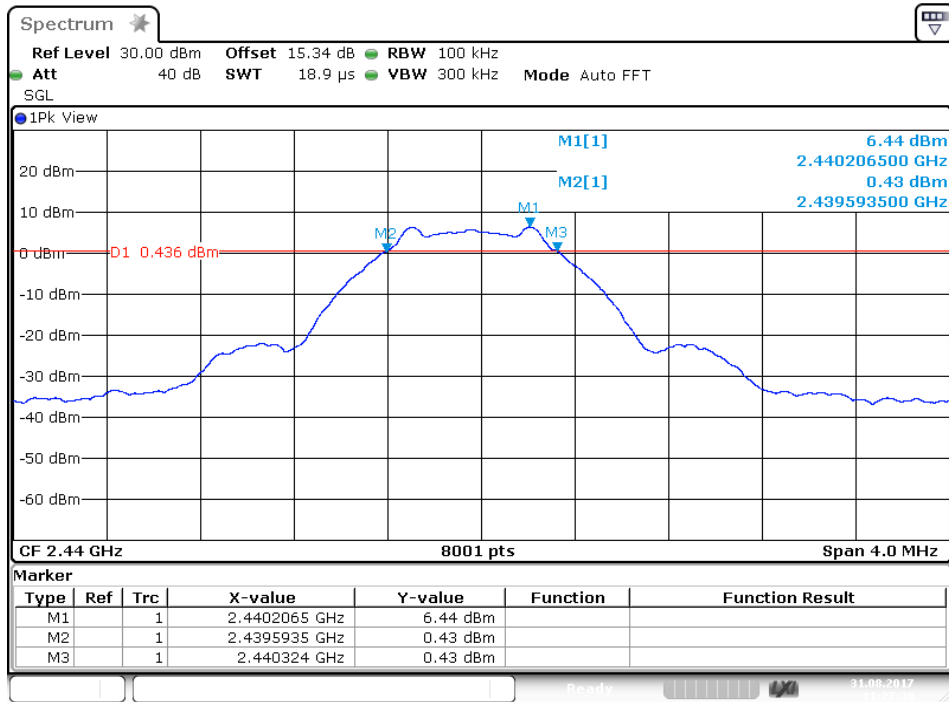
The spectrum analyzer plots are attached as below.

channel 0



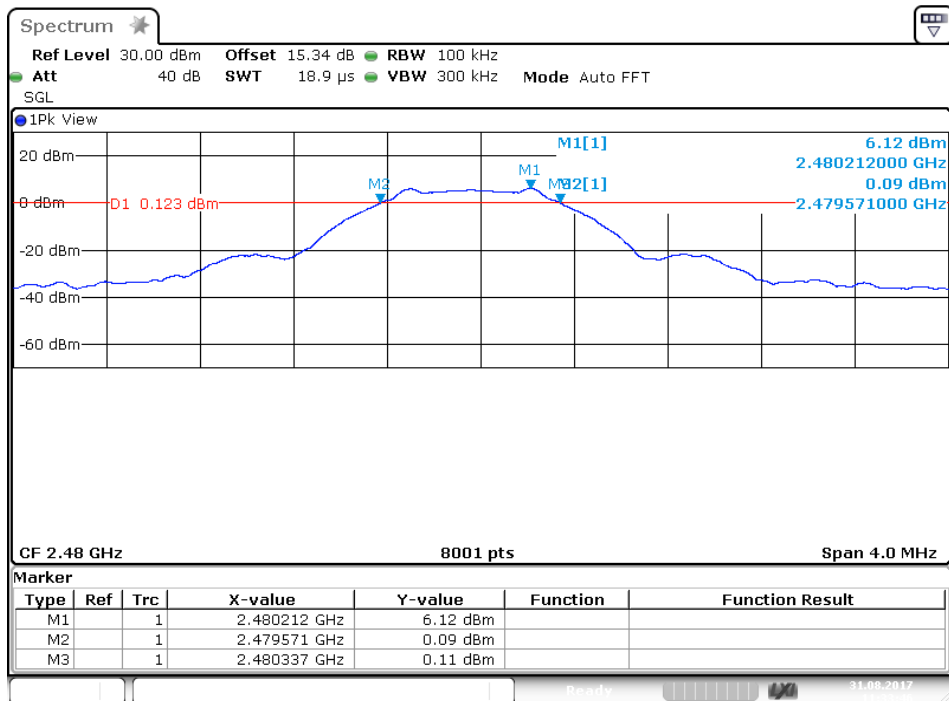
Date: 31.AUG.2017 11:30:57

channel 19



Date: 31.AUG.2017 11:27:39

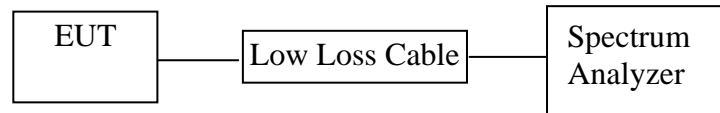
channel 39



Date: 31.AUG.2017 11:33:46

7. MAXIMUM PEAK OUTPUT POWER

7.1. Block Diagram of Test Setup



(EUT: Color Changing BT Speaker)

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 2402-2480 MHz. 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 3 MHz and VBW to 3 MHz.

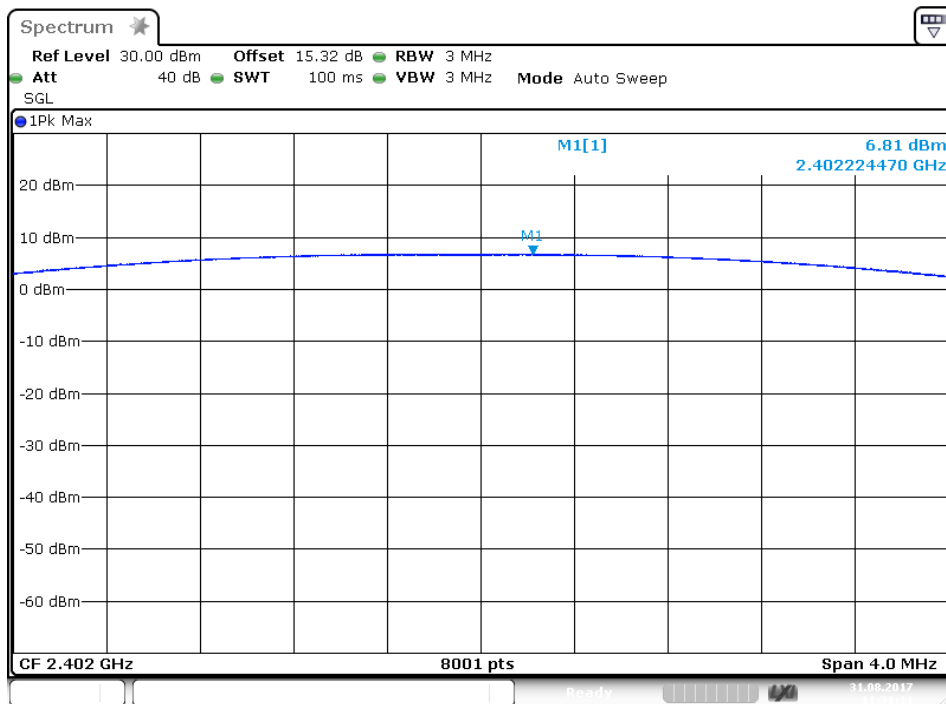
7.5.3. Measurement the maximum peak output power.

7.6. Test Result

Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Limit (dBm)	Pass / Fail
0	2402	6.81	30	PASS
19	2440	6.85	30	PASS
39	2480	6.79	30	PASS

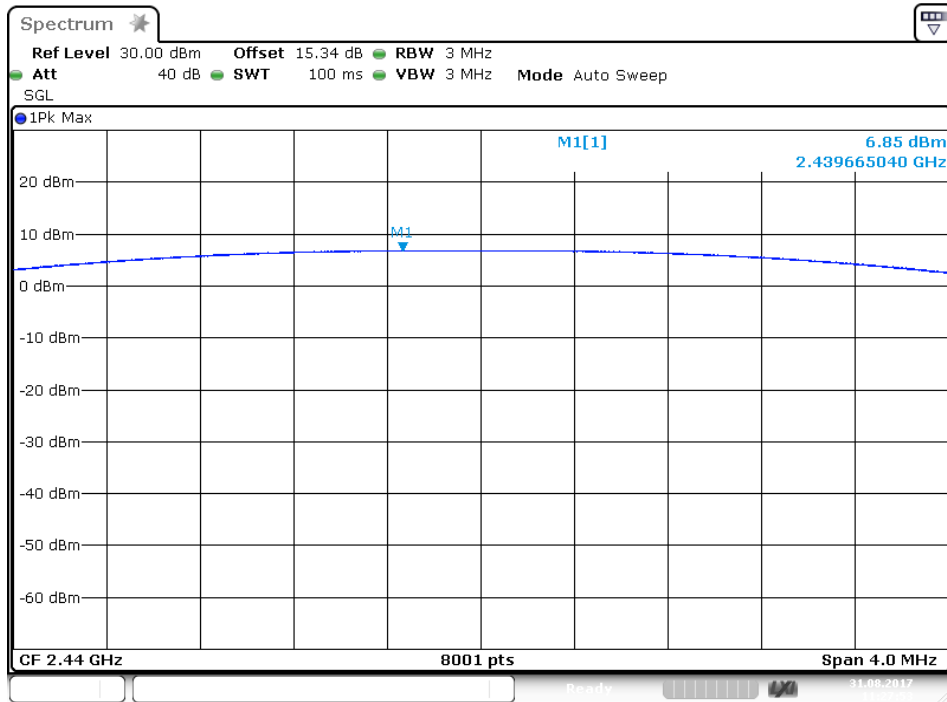
The spectrum analyzer plots are attached as below.

channel 0



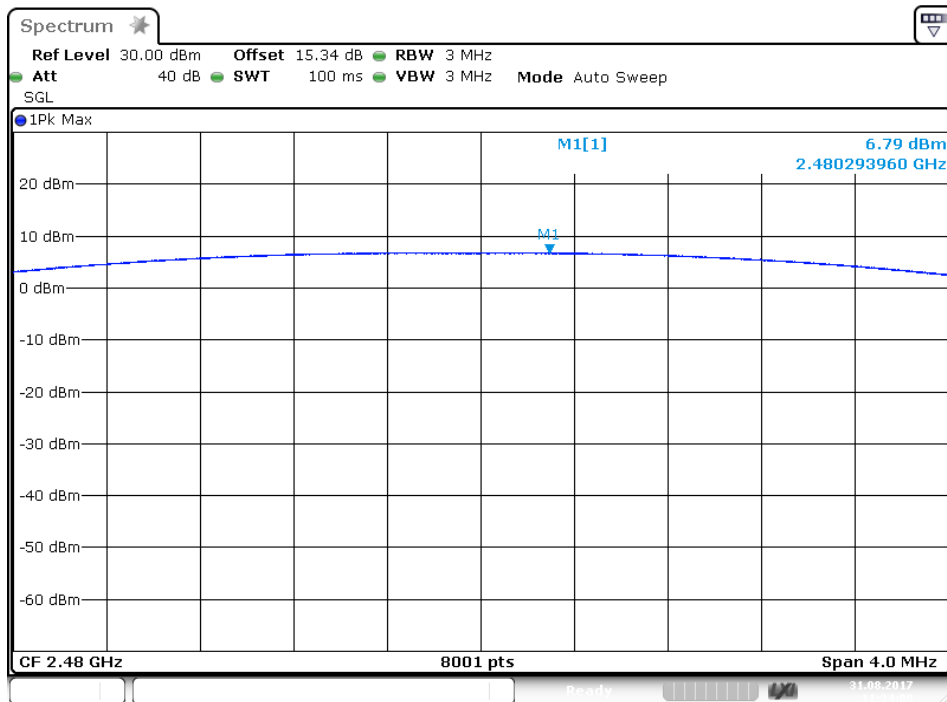
Date: 31.AUG.2017 11:31:11

channel 19



Date: 31.AUG.2017 11:27:53

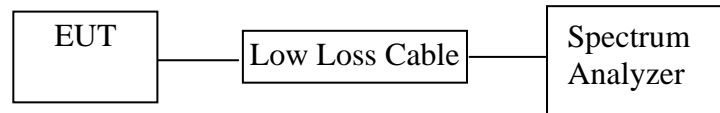
channel 39



Date: 31.AUG.2017 11:34:00

8. POWER SPECTRAL DENSITY MEASUREMENT

8.1. Block Diagram of Test Setup



(EUT: Color Changing BT Speaker)

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 2402-2480. 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: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
4. Set the VBW $\geq 3 \times \text{RBW}$.
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 3 kHz) and repeat.

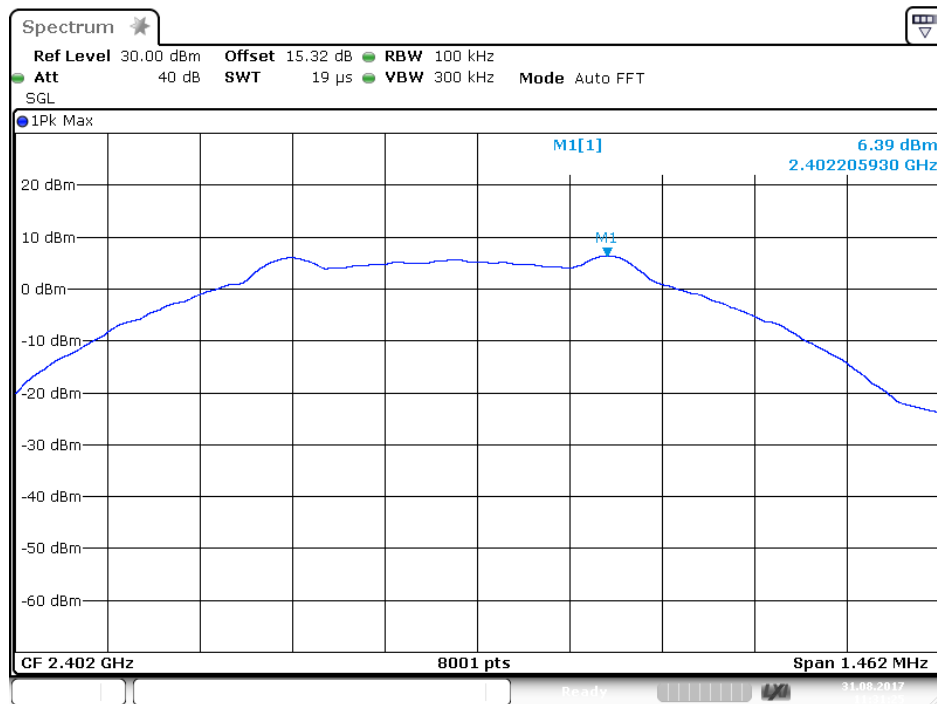
8.5.4. Measurement the maximum power spectral density.

8.6. Test Result

CHANNEL NUMBER	FREQUENCY (MHz)	PSD (dBm/3KHz)	LIMIT (dBm/3KHz)	PASS/FAIL
0	2402	6.39	8	PASS
19	2440	6.37	8	PASS
39	2480	6.02	8	PASS

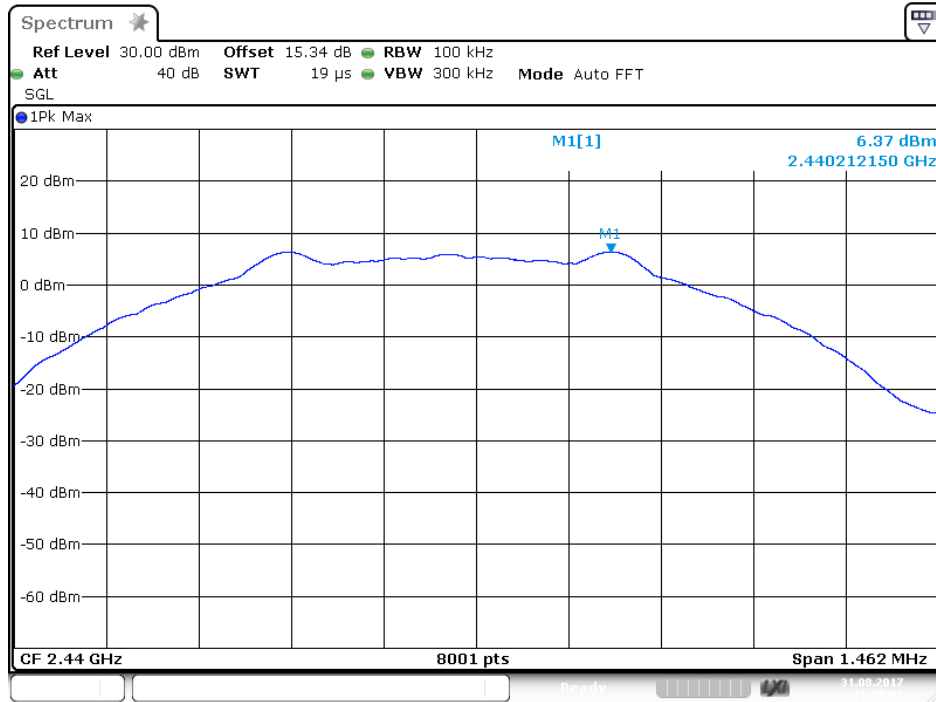
The spectrum analyzer plots are attached as below.

channel 0



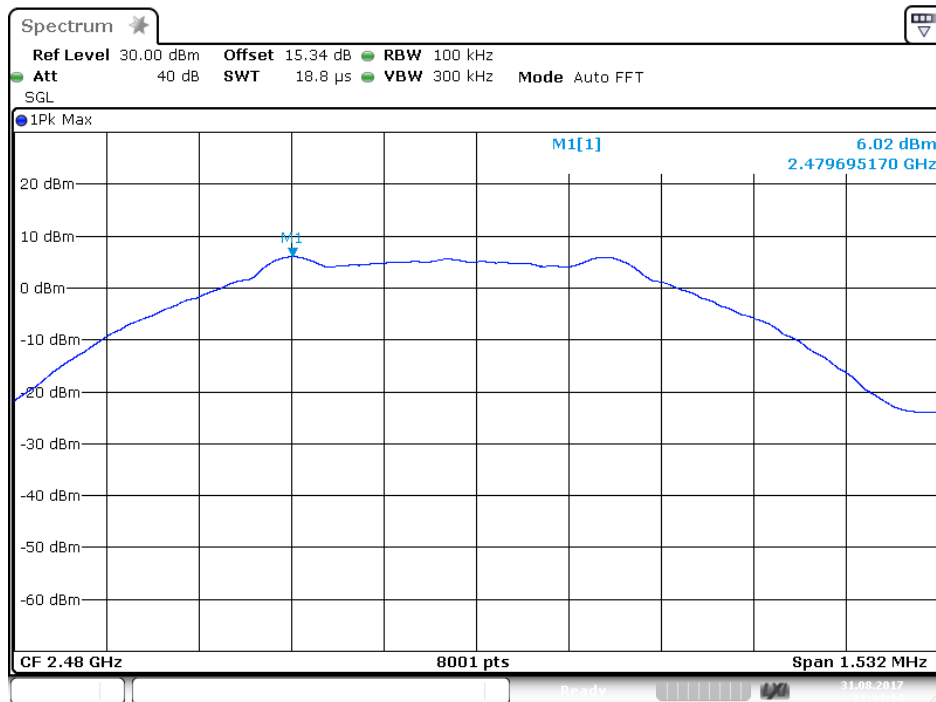
Date: 31.AUG.2017 11:31:25

channel 19



Date: 31.AUG.2017 11:28:07

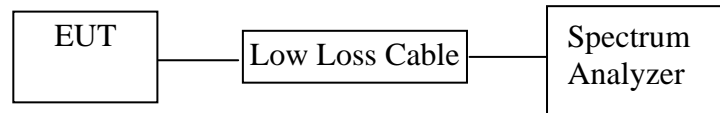
channel 39



Date: 31.AUG.2017 11:34:14

9. BAND EDGE COMPLIANCE TEST

9.1. Block Diagram of Test Setup



(EUT: Color Changing BT Speaker)

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 2402-2480 MHz. 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 0.8m 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=100kHz, VBW=300kHz.

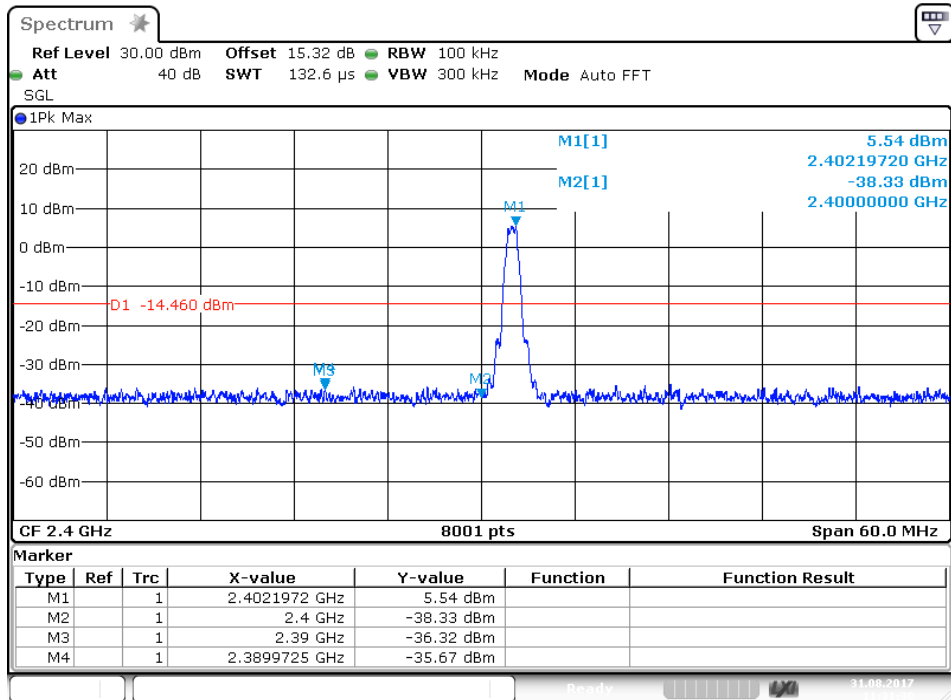
9.5.9. The band edges was measured and recorded.

9.6. Test Result

Pass

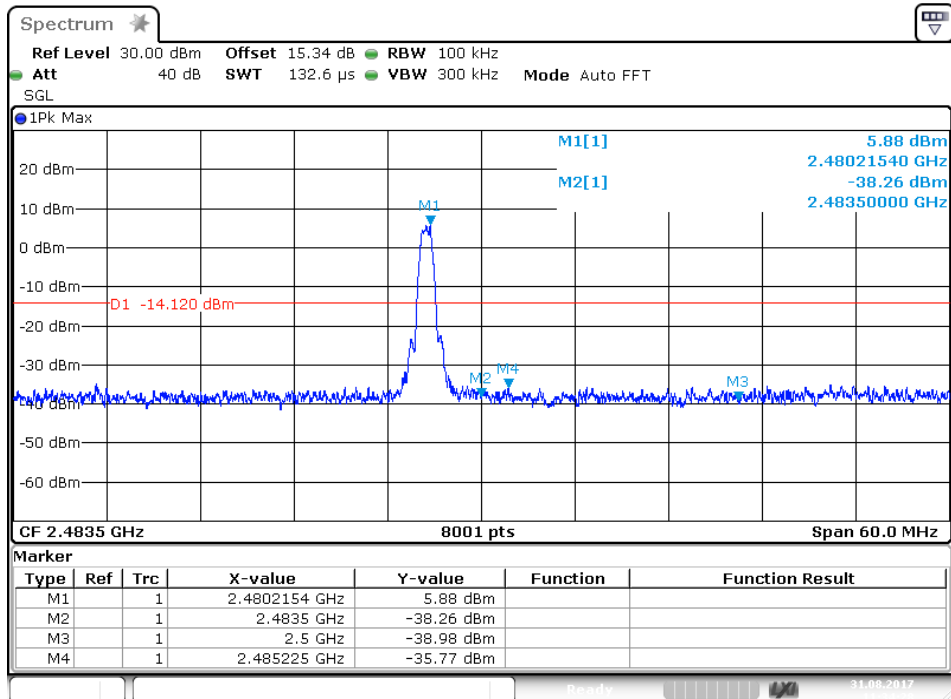
Channel	Frequency	Delta peak to band emission	Limit(dBc)
0	2.4GHz	32.79	20
39	2.4835GHz	32.38	20

channel 0



Date: 31.AUG.2017 11:31:38

channel 39



Date: 31.AUG.2017 11:34:28

Radiated Band Edge Result

Date of Test: <u>August 31, 2017</u>	Temperature: <u>25°C</u>
EUT: <u>Color Changing BT Speaker</u>	Humidity: <u>50%</u>
Model No.: <u>CB-335082</u>	Power Supply: <u>AC 120V/60Hz</u>
Test Mode: <u>TX (2402MHz) GFSK</u>	Test Engineer: <u>Frank</u>

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2390.000	31.67	40.55	-5.89	25.78	34.66	54.00	74.00	-28.22	-39.34	Vertical
2400.000	49.22	59.29	-5.80	43.42	53.49	54.00	74.00	-10.58	-20.51	Vertical
2390.000	32.48	41.22	-5.89	26.59	35.33	54.00	74.00	-27.41	-38.67	Horizontal
2400.000	49.63	58.79	-5.80	43.83	52.99	54.00	74.00	-10.17	-21.01	Horizontal

Date of Test: <u>August 31, 2017</u>	Temperature: <u>25°C</u>
EUT: <u>Color Changing BT Speaker</u>	Humidity: <u>50%</u>
Model No.: <u>CB-335082</u>	Power Supply: <u>AC 120V/60Hz</u>
Test Mode: <u>TX (2480MHz) GFSK</u>	Test Engineer: <u>Frank</u>

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2483.500	34.69	43.78	-5.51	29.18	38.27	54.00	74.00	-24.82	-35.73	Vertical
2500.000	31.42	40.88	-5.50	25.92	35.38	54.00	74.00	-28.08	-38.62	Vertical
2483.500	32.46	41.72	-5.51	26.95	36.21	54.00	74.00	-27.05	-37.79	Horizontal
2500.000	29.82	38.94	-5.50	24.32	33.44	54.00	74.00	-29.68	-40.56	Horizontal

Note:

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



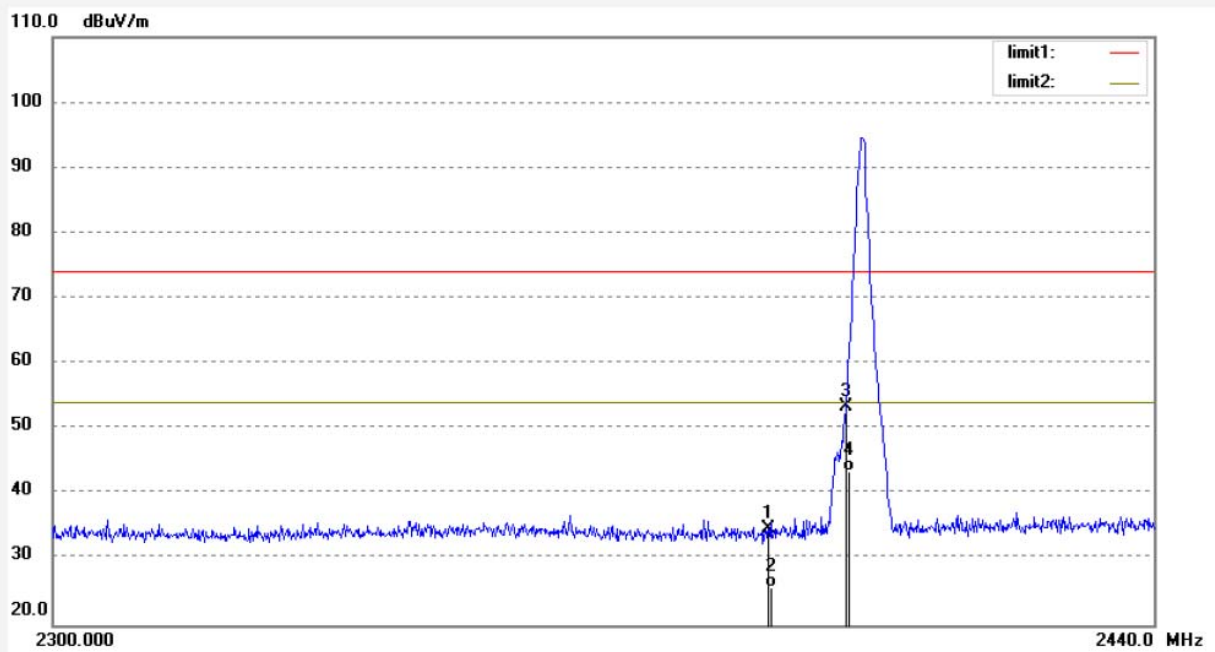
ACCURATE TECHNOLOGY CO., LTD.

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

Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: Frank2017 #155	Polarization: Vertical
Standard: FCC PK	Power Source: DC 5V
Test item: Radiation Test	Date: 17/08/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 09/27/25
EUT: Color Charging BT Speaker	Engineer Signature: Frank
Mode: TX 2402MHz	Distance: 3m
Model: CB-335082	
Manufacturer: GOOD EVER TRADING LIMITED	

Note: Report NO.:ATE20171688

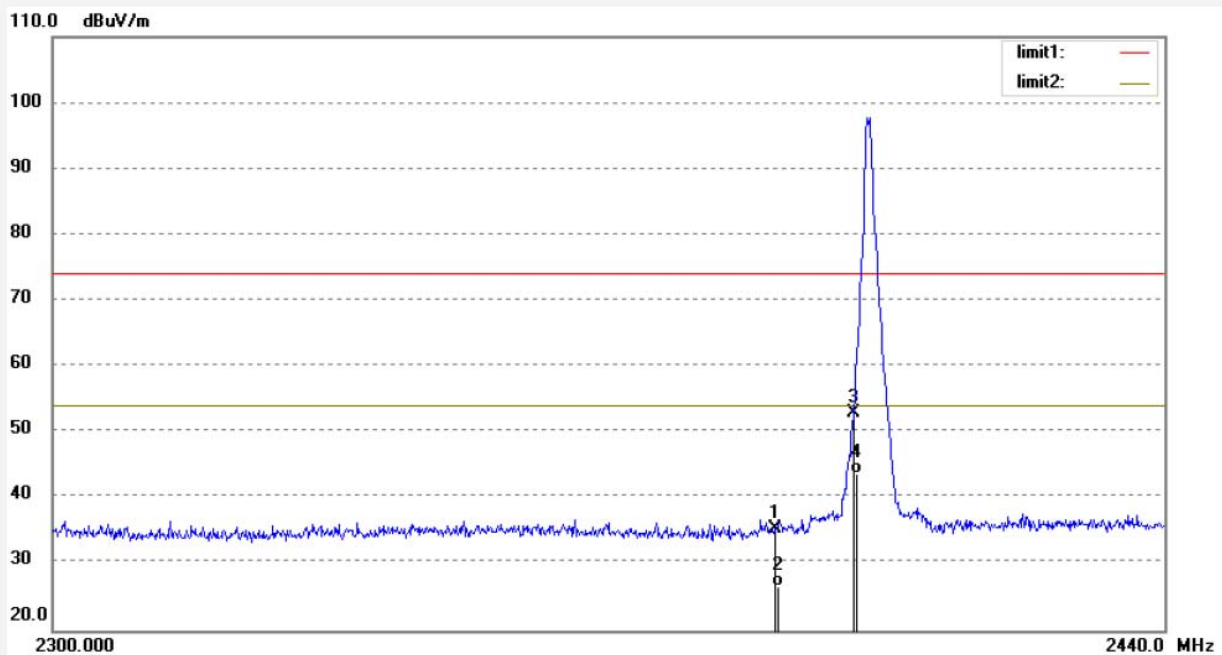


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	40.55	-5.89	34.66	74.00	-39.34	peak	150	135	
2	2390.000	31.67	-5.89	25.78	54.00	-28.22	AVG	150	135	
3	2400.000	59.29	-5.80	53.49	74.00	-20.51	peak	150	221	
4	2400.000	49.22	-5.80	43.42	54.00	-10.58	AVG	150	221	

Job No.: Frank2017 #156
 Standard: FCC PK
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 25 C / 55 %
 EUT: Color Charging BT Speaker
 Mode: TX 2402MHz
 Model: CB-335082
 Manufacturer: GOOD EVER TRADING LIMITED

Polarization: Horizontal
 Power Source: DC 5V
 Date: 17/08/31/
 Time: 09/36/21
 Engineer Signature: Frank
 Distance: 3m

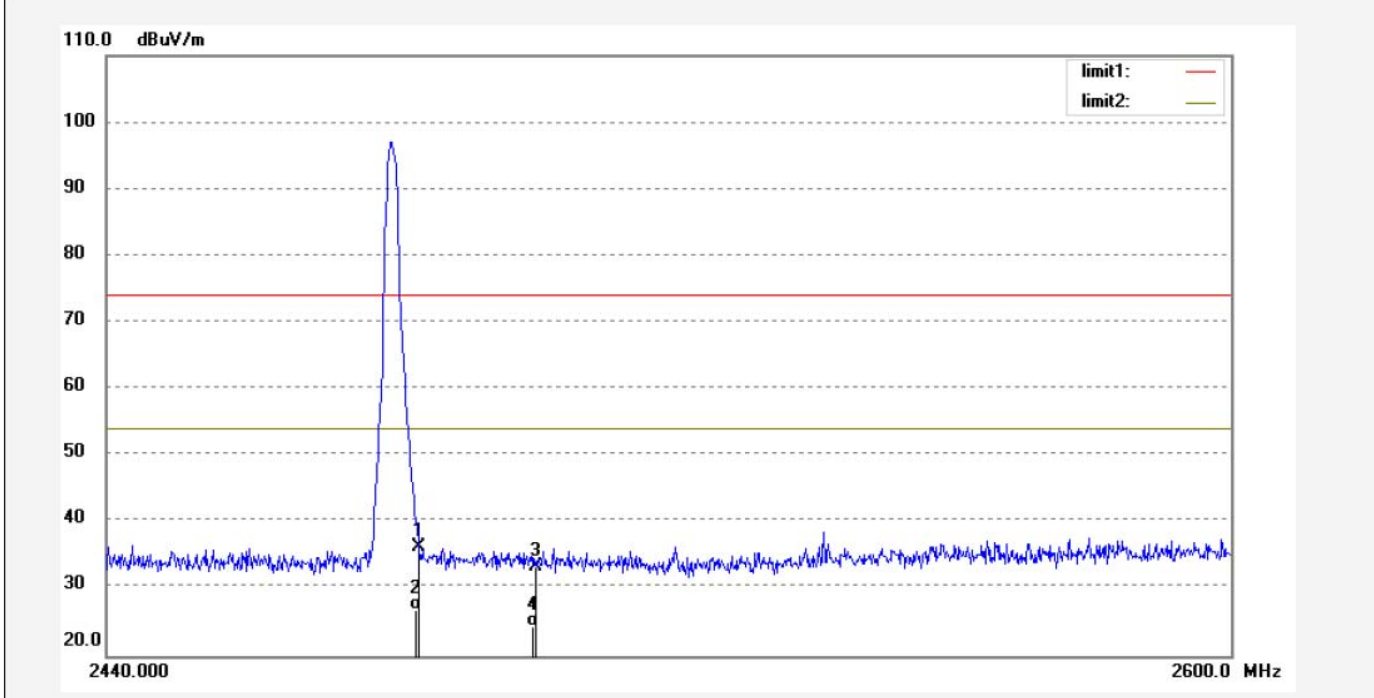
Note: Report NO.:ATE20171688



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	41.22	-5.89	35.33	74.00	-38.67	peak	150	121	
2	2390.000	32.48	-5.89	26.59	54.00	-27.41	AVG	150	121	
3	2400.000	58.79	-5.80	52.99	74.00	-21.01	peak	150	220	
4	2400.000	49.63	-5.80	43.83	54.00	-10.17	AVG	150	220	

Job No.: Frank2017 #157	Polarization: Horizontal
Standard: FCC PK	Power Source: DC 5V
Test item: Radiation Test	Date: 17/08/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 09/45/36
EUT: Color Charging BT Speaker	Engineer Signature: Frank
Mode: TX 2480MHz	Distance: 3m
Model: CB-335082	
Manufacturer: GOOD EVER TRADING LIMITED	

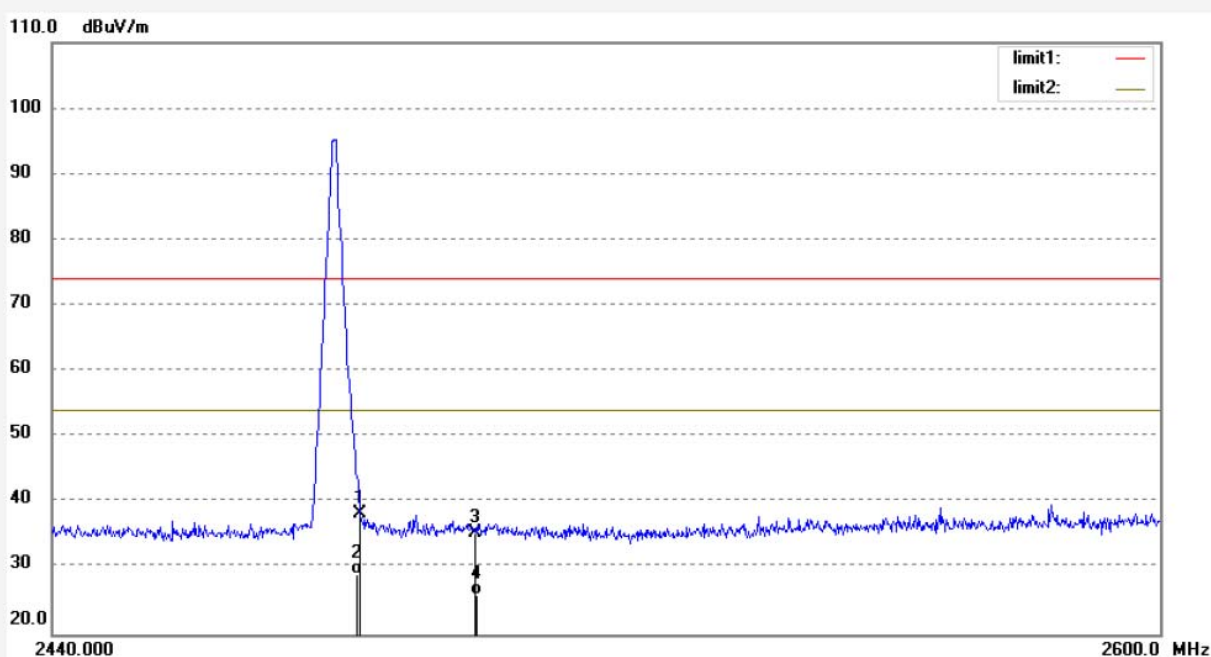
Note: Report NO.:ATE20171688



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	41.72	-5.51	36.21	74.00	-37.79	peak	150	120	
2	2483.500	32.46	-5.51	26.95	54.00	-27.05	AVG	150	120	
3	2500.000	38.94	-5.50	33.44	74.00	-40.56	peak	120	267	
4	2500.000	29.82	-5.50	24.32	54.00	-29.68	AVG	120	267	

Job No.: Frank2017 #158	Polarization: Vertical
Standard: FCC PK	Power Source: DC 5V
Test item: Radiation Test	Date: 17/08/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 09/54/43
EUT: Color Charging BT Speaker	Engineer Signature: Frank
Mode: TX 2480MHz	Distance: 3m
Model: CB-335082	
Manufacturer: GOOD EVER TRADING LIMITED	

Note: Report NO.:ATE20171688



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	43.78	-5.51	38.27	74.00	-35.73	peak	150	197	
2	2483.500	34.69	-5.51	29.18	54.00	-24.82	AVG	150	197	
3	2500.000	40.88	-5.50	35.38	74.00	-38.62	peak	150	302	
4	2500.000	31.42	-5.50	25.92	54.00	-28.08	AVG	150	302	

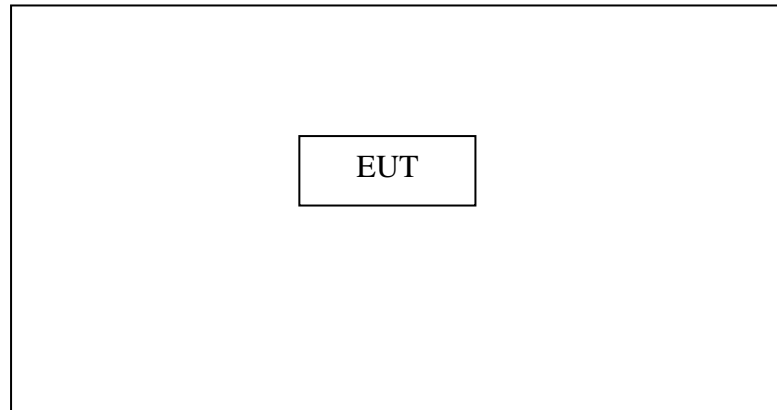
Note:

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

10.RADIATED SPURIOUS EMISSION TEST

10.1.Block Diagram of Test Setup

10.1.1.Block diagram of connection between the EUT and peripherals

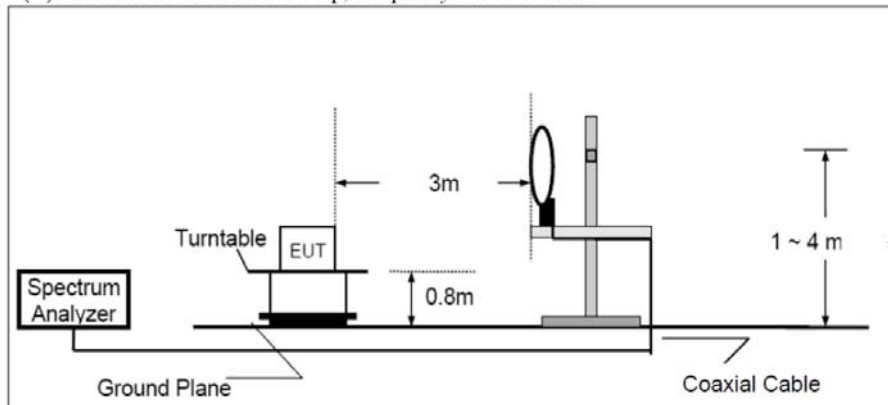


Setup: Transmitting mode

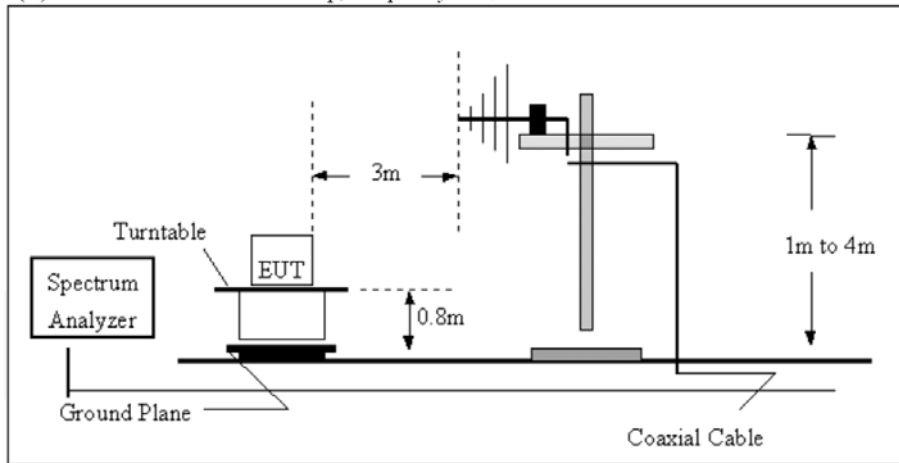
(EUT: Color Changing BT Speaker)

10.1.2.Semi-Anechoic Chamber Test Setup Diagram

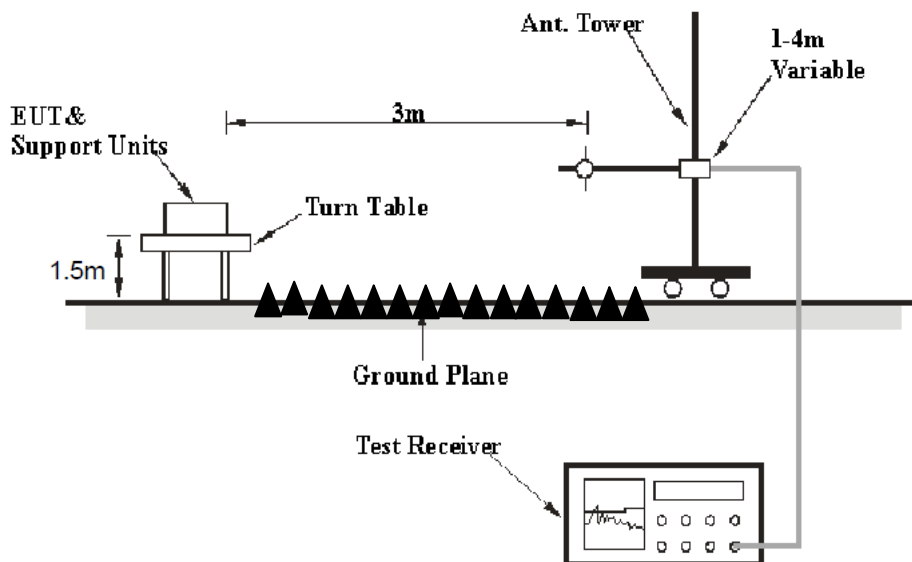
(A)Radiated Emission Test Set-Up, Frequency below 30MHz



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



(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			

¹Until February 1, 1999, this restricted band shall be 0.490-0.510

²Above 38.6

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

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. 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

10.7. Data Sample

Frequency (MHz)	Reading (dB μ v)	Factor (dB/m)	Result (dB μ v/m)	Limit (dB μ v/m)	Margin (dB)	Remark
35.0157	50.45	-15.96	34.49	40.00	-5.51	QP

Frequency(MHz) = Emission frequency in MHz

Reading(dB μ v) = Uncorrected Analyzer/Receiver reading

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

Result(dB μ v/m) = Reading(dB μ v) + Factor(dB/m)

Limit (dB μ v/m) = Limit stated in standard

Margin (dB) = Result(dB μ v/m) - Limit (dB μ v/m)

QP = Quasi-peak Reading

Calculation Formula:

Margin(dB) = Result (dB μ V/m)–Limit(dB μ V/m)

Result(dB μ V/m)= Reading(dB μ V)+ Factor(dB/m)

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

10.8.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 18-25GHz are not reported, because the test values lower than the limits of 20dB.



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Site: 1# Chamber

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Fax:+86-0755-26503396

Job No.: frank2017 #936

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Color Charging BT Speaker

Mode: TX2402MHz

Model: CB-335082

Manufacturer: GOOD EVER TRADING LIMITED

Polarization: Vertical

Power Source: DC 5V

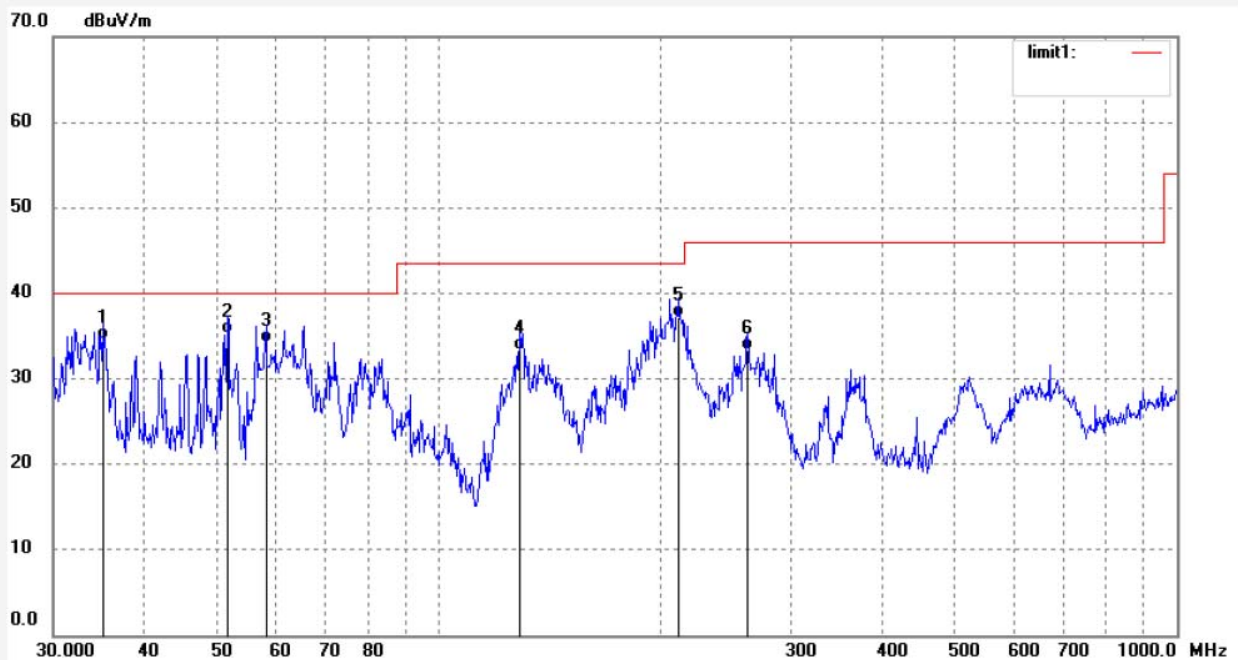
Date: 17/08/29/

Time: 9/50/45

Engineer Signature: Frank

Distance: 3m

Note: Report NO.:ATE20171688



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.0157	50.45	-15.96	34.49	40.00	-5.51	QP	100	121	
2	51.7179	56.35	-21.08	35.27	40.00	-4.73	QP	100	223	
3	58.2802	56.01	-21.74	34.27	40.00	-5.73	QP	100	302	
4	128.4861	55.44	-22.10	33.34	43.50	-10.16	QP	100	206	
5	210.8689	55.68	-18.44	37.24	43.50	-6.26	QP	100	171	
6	262.1926	50.67	-17.41	33.26	46.00	-12.74	QP	100	336	

Job No.: frank2017 #937

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Color Charging BT Speaker

Mode: TX2402MHz

Model: CB-335082

Manufacturer: GOOD EVER TRADING LIMITED

Polarization: Horizontal

Power Source: DC 5V

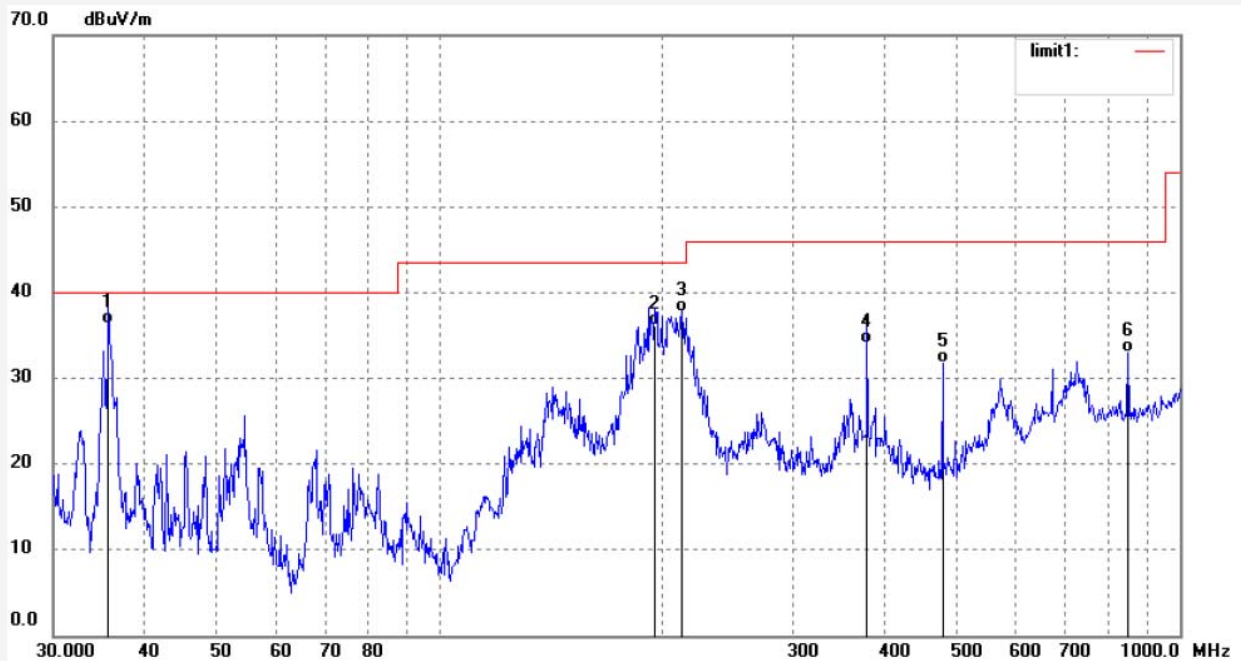
Date: 17/08/29/

Time: 9/51/20

Engineer Signature: Frank

Distance: 3m

Note: Report NO.:ATE20171688



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.6362	52.49	-16.22	36.27	40.00	-3.73	QP	100	215	
2	195.1830	55.12	-18.92	36.20	43.50	-7.30	QP	100	157	
3	212.3559	56.24	-18.44	37.80	43.50	-5.70	QP	100	267	
4	377.8480	47.35	-13.26	34.09	46.00	-11.91	QP	100	336	
5	478.1394	42.95	-11.25	31.70	46.00	-14.30	QP	100	97	
6	850.7603	36.21	-3.21	33.00	46.00	-13.00	QP	100	115	

Job No.: frank2017 #938

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Color Charging BT Speaker

Mode: TX2440MHz

Model: CB-335082

Manufacturer: GOOD EVER TRADING LIMITED

Polarization: Horizontal

Power Source: DC 5V

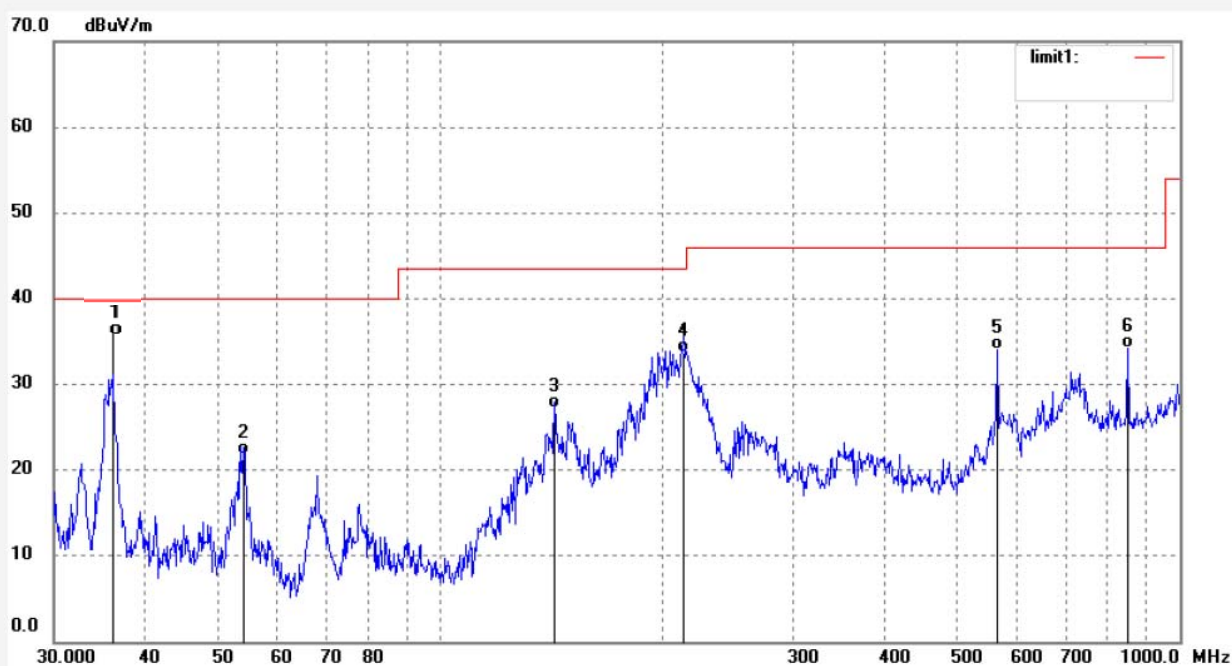
Date: 17/08/29/

Time: 9/51/58

Engineer Signature: Frank

Distance: 3m

Note: Report NO.:ATE20171688



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.1405	56.55	-16.45	46.35	40.00	-3.65	QP	100	101	
2	54.1349	43.21	-21.48	21.73	40.00	-18.27	QP	100	311	
3	142.7692	49.54	-22.35	27.19	43.50	-16.31	QP	100	125	
4	213.1034	52.12	-18.43	33.69	43.50	-9.81	QP	100	348	
5	565.9776	43.35	-9.29	34.06	46.00	-11.94	QP	100	247	
6	850.7603	37.37	-3.21	34.16	46.00	-11.84	QP	100	314	



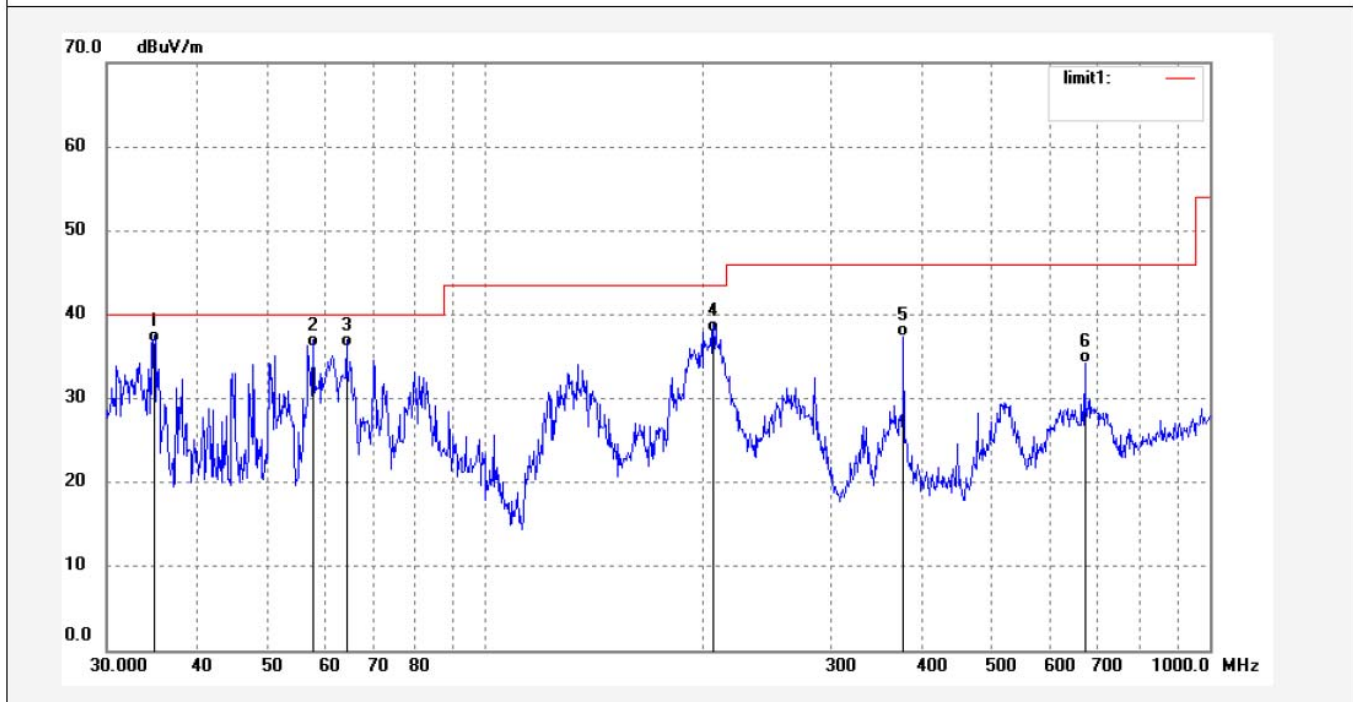
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F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: frank2017 #939	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 17/08/29/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 9/52/28
EUT: Color Charging BT Speaker	Engineer Signature: Frank
Mode: TX2440MHz	Distance: 3m
Model: CB-335082	
Manufacturer: GOOD EVER TRADING LIMITED	

Note: Report NO.:ATE20171688



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	34.8928	52.55	-15.92	36.63	40.00	-3.37	QP	100	98	
2	57.8721	57.80	-21.72	36.08	40.00	-3.92	QP	100	165	
3	64.3054	58.10	-21.89	36.21	40.00	-3.79	QP	100	64	
4	206.4701	56.32	-18.47	37.85	43.50	-5.65	QP	100	68	
5	377.8480	50.70	-13.26	37.44	46.00	-8.56	QP	100	112	
6	672.3103	41.14	-6.89	34.25	46.00	-11.75	QP	100	58	



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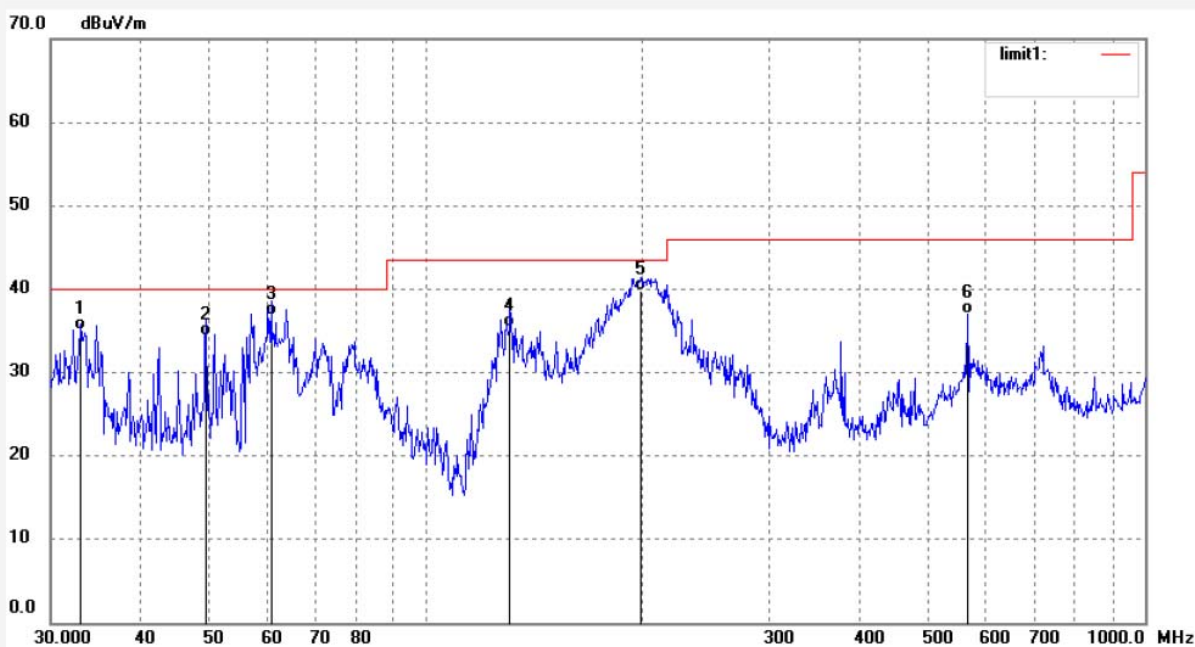
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: frank2017 #940
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Color Charging BT Speaker
Mode: TX2480MHz
Model: CB-335082
Manufacturer: GOOD EVER TRADING LIMITED

Polarization: Vertical
Power Source: DC 5V
Date: 17/08/29/
Time: 9/53/14
Engineer Signature: Frank
Distance: 3m

Note: Report NO.:ATE20171688



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.9853	50.54	-15.45	35.09	40.00	-4.91	QP	100	122	
2	49.4087	54.98	-20.57	34.41	40.00	-5.59	QP	100	221	
3	60.7901	58.65	-21.81	36.84	40.00	-3.16	QP	100	162	
4	130.7632	57.65	-22.15	35.50	43.50	-8.00	QP	100	223	
5	198.6424	58.54	-18.74	39.80	43.50	-3.70	QP	100	214	
6	565.9776	46.36	-9.29	37.07	46.00	-8.93	QP	100	111	


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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: frank2017 #941

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Color Charging BT Speaker

Mode: TX2480MHz

Model: CB-335082

Manufacturer: GOOD EVER TRADING LIMITED

Polarization: Horizontal

Power Source: DC 5V

Date: 17/08/29/

Time: 9/54/49

Engineer Signature: Frank

Distance: 3m

Note: Report NO.:ATE20171688



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.0139	47.20	-16.38	30.82	40.00	-9.18	QP	100	57	
2	189.7732	59.24	-19.44	39.80	43.50	-3.70	QP	100	222	
3	208.6580	58.94	-18.47	40.47	43.50	-3.03	QP	100	126	
4	377.8481	48.47	-13.26	35.21	46.00	-10.79	QP	100	261	
5	565.9776	43.20	-9.29	33.91	46.00	-12.09	QP	100	214	
6	850.7603	40.51	-3.21	37.30	46.00	-8.70	QP	100	24	



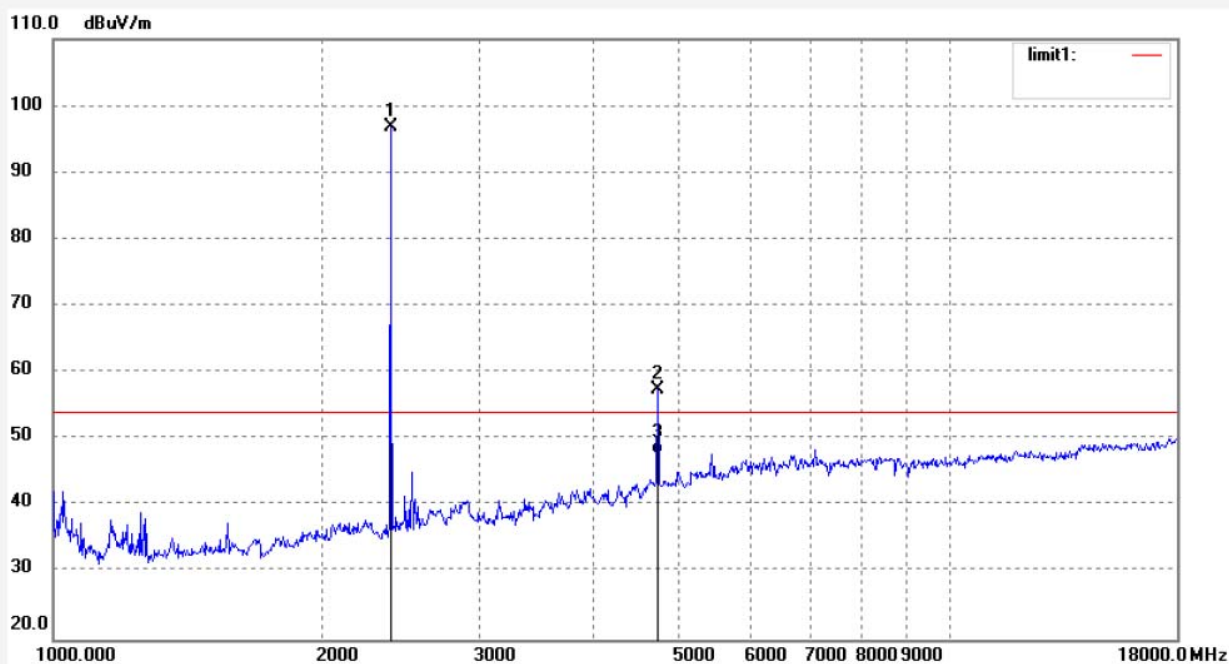
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F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: Frank2017 #149	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 17/08/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 08/35/21
EUT: Color Charging BT Speaker	Engineer Signature: Frank
Mode: TX 2402MHz	Distance: 3m
Model: CB-335082	
Manufacturer: GOOD EVER TRADING LIMITED	

Note: Report NO.:ATE20171688



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.000	102.77	-5.98	96.79			peak	150	100	
2	4804.000	54.21	3.15	57.36	74.00	-16.64	peak	150	221	
3	4804.000	44.53	3.15	47.68	54.00	-6.32	AVG	150	221	


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Site: 1# Chamber

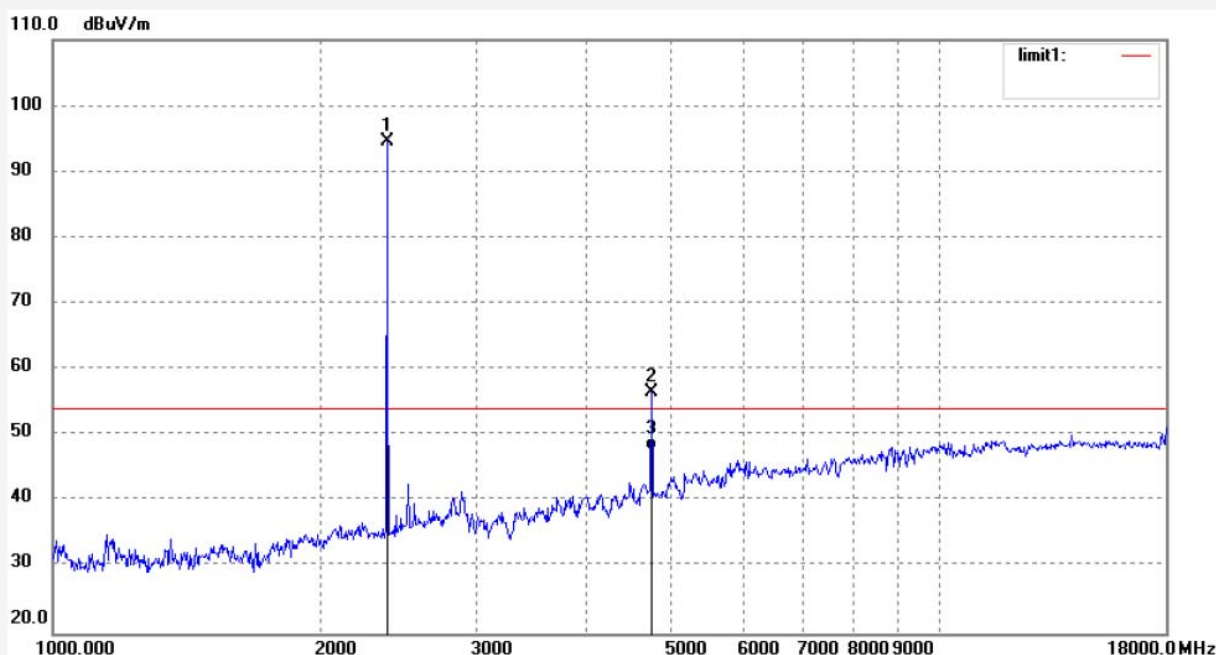
Tel:+86-0755-26503290

Fax:+86-0755-26503396

 Job No.: Frank2017 #150
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 25 C / 55 %
 EUT: Color Charging BT Speaker
 Mode: TX 2402MHz
 Model: CB-335082
 Manufacturer: GOOD EVER TRADING LIMITED

 Polarization: Vertical
 Power Source: DC 5V
 Date: 17/08/31/
 Time: 08/39/10
 Engineer Signature: Frank
 Distance: 3m

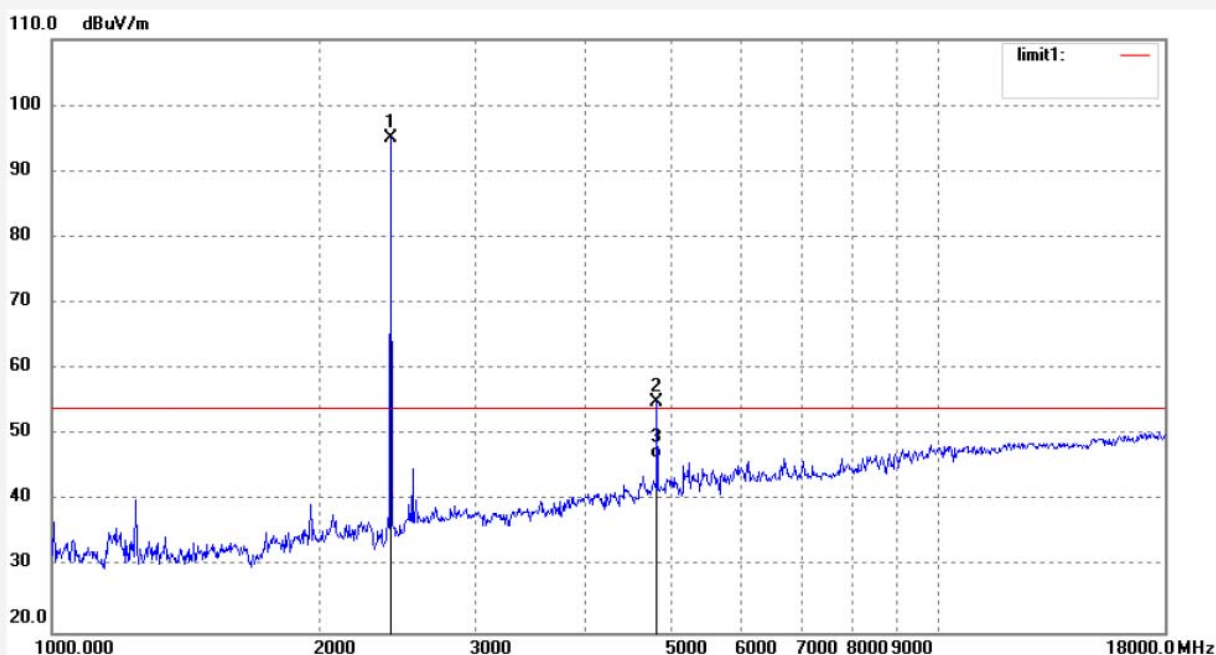
Note: Report NO.:ATE20171688



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.000	100.60	-5.98	94.62			peak	150	95	
2	4804.000	53.47	3.15	56.62	74.00	-17.38	peak	150	113	
3	4804.000	44.67	3.15	47.82	54.00	-6.18	AVG	150	113	

Job No.: Frank2017 #151	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 17/08/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 08/48/22
EUT: Color Charging BT Speaker	Engineer Signature: Frank
Mode: TX 2440MHz	Distance: 3m
Model: CB-335082	
Manufacturer: GOOD EVER TRADING LIMITED	

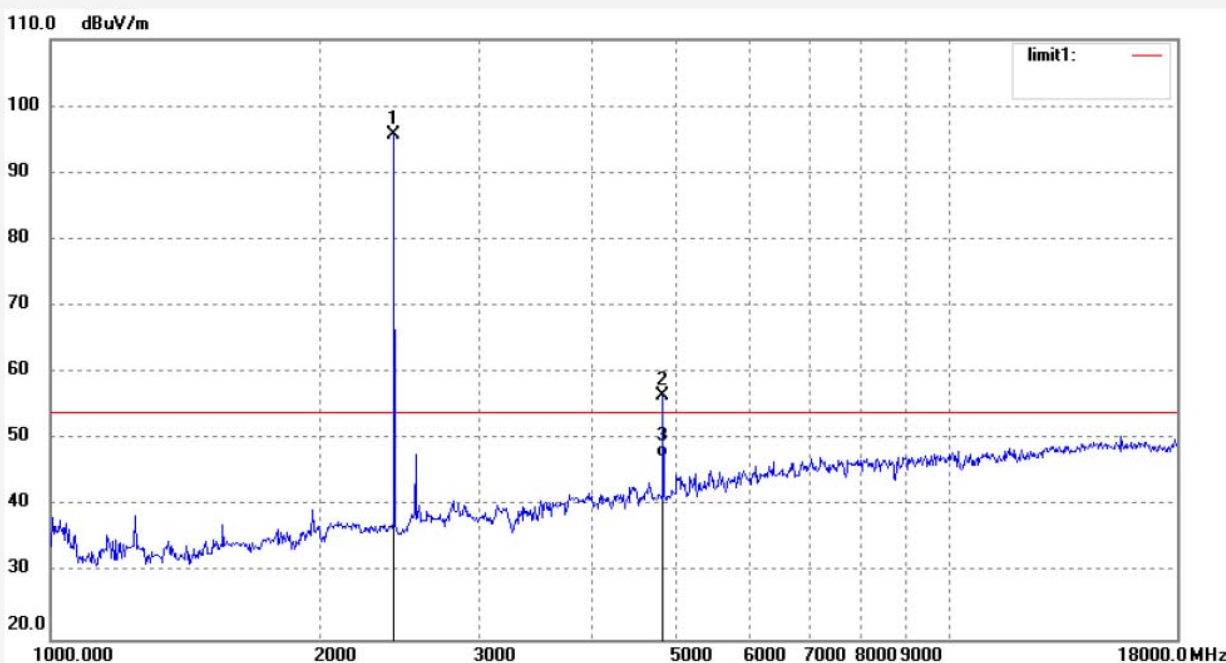
Note: Report NO.:ATE20171688



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.000	100.69	-5.76	94.93			peak	150	156	
2	4880.000	51.25	3.67	54.92	74.00	-19.08	peak	150	113	
3	4880.000	42.78	3.67	46.45	54.00	-7.55	AVG	150	113	

Job No.: Frank2017 #152	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 17/08/31/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 08/59/12
EUT: Color Charging BT Speaker	Engineer Signature: Frank
Mode: TX 2440MHz	Distance: 3m
Model: CB-335082	
Manufacturer: GOOD EVER TRADING LIMITED	

Note: Report NO.:ATE20171688



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.000	101.46	-5.72	95.74			peak	150	303	
2	4880.000	52.95	3.67	56.62	74.00	-17.38	peak	150	111	
3	4880.000	43.62	3.67	47.29	54.00	-6.71	AVG	150	111	



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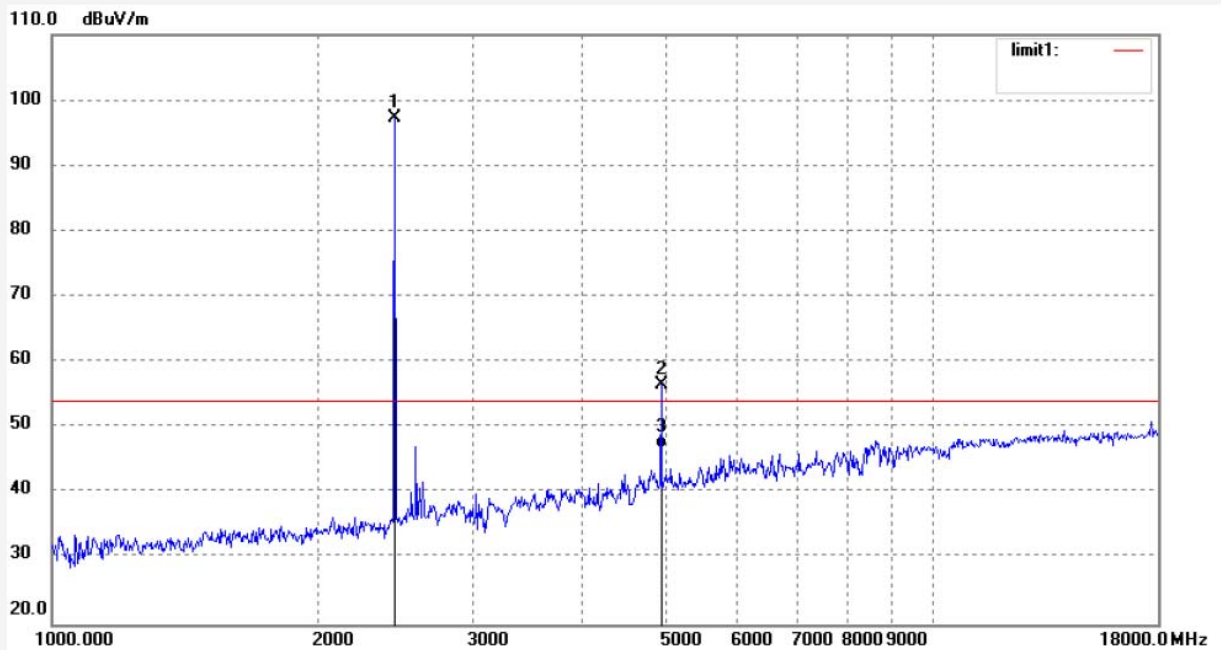
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: Frank2017 #153
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Color Charging BT Speaker
Mode: TX 2480MHz
Model: CB-335082
Manufacturer: GOOD EVER TRADING LIMITED

Polarization: Horizontal
Power Source: DC 5V
Date: 17/08/31/
Time: 09/10/54
Engineer Signature: Frank
Distance: 3m

Note: Report NO.:ATE20171688



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.000	102.80	-5.55	97.25			peak	150	246	
2	4960.000	51.94	4.54	56.48	74.00	-17.52	peak	150	222	
3	4960.000	42.36	4.54	46.90	54.00	-7.10	AVG	150	222	



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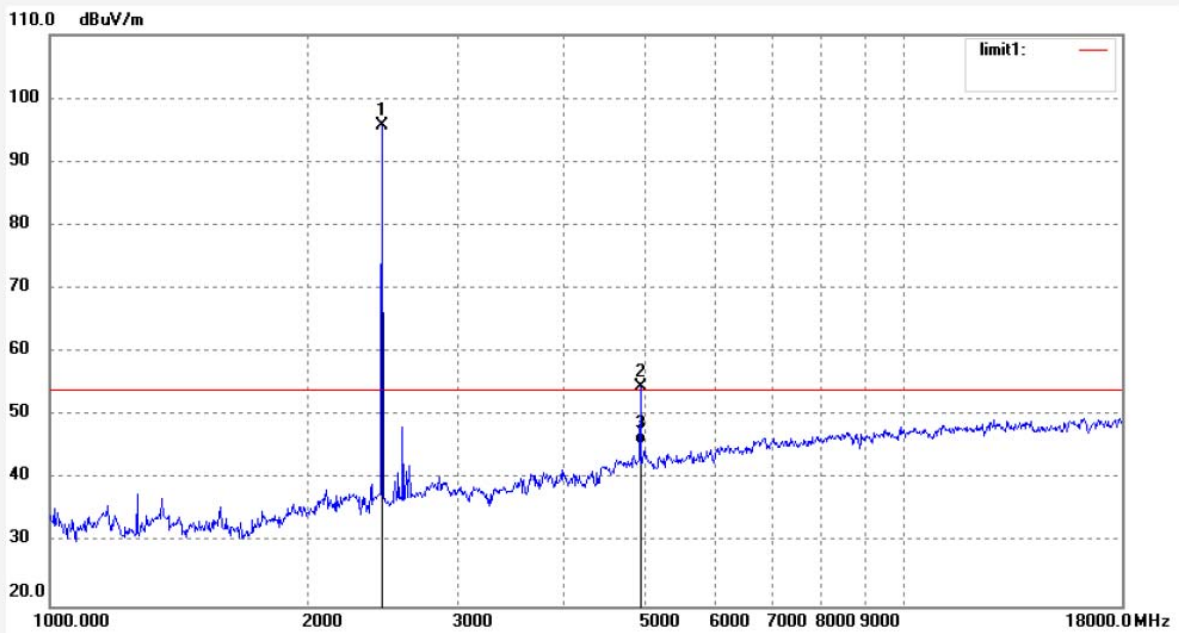
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: Frank2017 #154
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Color Charging BT Speaker
Mode: TX 2480MHz
Model: CB-335082
Manufacturer: GOOD EVER TRADING LIMITED

Polarization: Vertical
Power Source: DC 5V
Date: 17/08/31/
Time: 09/21/02
Engineer Signature: Frank
Distance: 3m

Note: Report NO.:ATE20171688



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.000	101.30	-5.55	95.75			peak	150	24	
2	4960.000	49.99	4.54	54.53	74.00	-19.47	peak	150	211	
3	4960.000	40.94	4.54	45.48	54.00	-8.52	AVG	150	211	

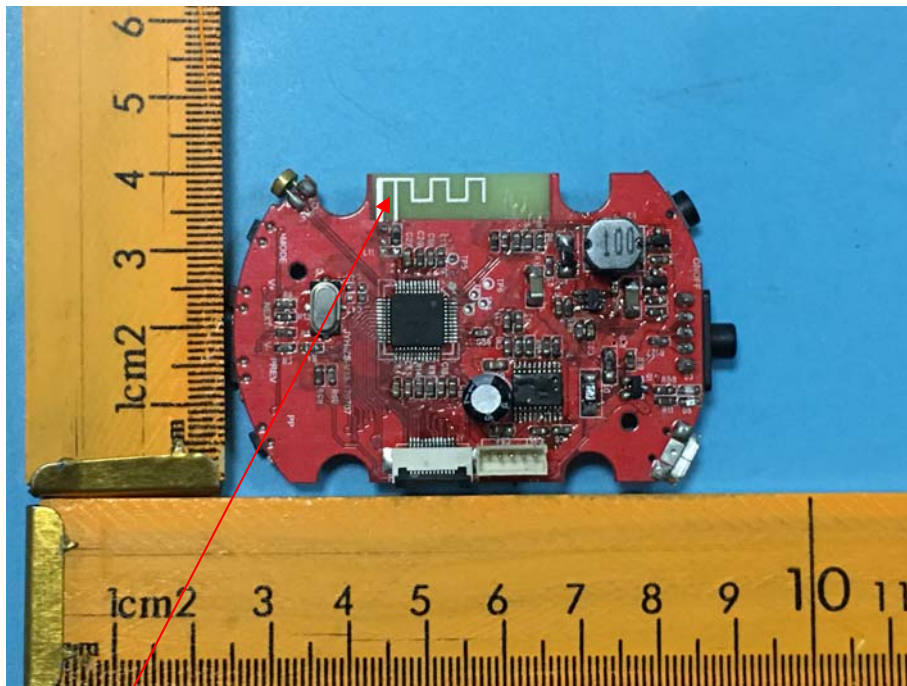
11. ANTENNA REQUIREMENT

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 external Antenna, which isn't displaced by other antenna. The Antenna gain of EUT is 1.0dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Antenna