



Report No.: FCC2002041 File Reference No.: 2020-04-07

Applicant: LEADER PREMIUMS LIMITED

Product: Bluetooth Speaker

Model No.: AE0043

Brand Name: N/A

Test Standards: FCC Part 15.249

Test Result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.4&FCC Part 15 Subpart C, Paragraph 15.249 regulations for the evaluation of

electromagnetic compatibility

Approved By

Jack Chung

Jack Chung

Manager

Dated: April 07, 2020

Results appearing herein relate only to the sample tested

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

# SHENZHEN TIMEWAY TESTING LABORATORIES

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

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

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# **Special Statement:**

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

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

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

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

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

# FCC-Registration No.: 744189

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

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

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

#### **A2LA** (Certification Number:5013.01)

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

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# Test Report Conclusion

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#### 1.0 General Details

#### 1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.

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

Village, Nanshan District, Shenzhen, China

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

Site on File with the Federal Communications Commission – United Sates

Registration Number: 744189 For 3m Anechoic Chamber

#### 1.2 Applicant Details

Applicant: LEADER PREMIUMS LIMITED

Address: 9/F.,Hengfu Mansion,NO.858 Fuming Road, Ningbo, China

Telephone: -Fax: --

#### 1.3 Description of EUT

Product: Bluetooth Speaker

Manufacturer: LEADER PREMIUMS LIMITED

Address: 9/F.,Hengfu Mansion,NO.858 Fuming Road, Ningbo, China

Brand Name: N/A
Model Number: AE0043
Additional Model Name N/A

Input Voltage: DC3.7V, Built-in 3.7V, 200mAh Li-ion battery

Modulation Type: GFSK (Bluetooth Low Energy)

Operation Frequency 2402-2480MHz

Channel Number: 40 Channel Separation: 2MHz

Antenna Designation PCB antenna with gain 0.58dBi Max

#### 1.4 Submitted Sample

1 Sample

#### 1.5 Test Duration

2020-02-21 to 2020-04-07

#### 1.6 Test Uncertainty

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Conducted Emissions Uncertainty = 3.6dB

Radiated Emissions below 1GHz Uncertainty =4.7dB

Radiated Emissions above 1GHz Uncertainty =6.0dB

Conducted Power Uncertainty = 6.0dB

Occupied Channel Bandwidth Uncertainty =5%

Conducted Emissions Uncertainty = 3.6dB

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

1.7 Test Engineer

Terry Tang

The sample tested by

Print Name: Terry Tang

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2.0 Test Equipment	M. C. C.	M. 1.1	C 1 NI.	D. t CC. 1	D . D. (
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date
ESPI Test Receiver	R&S	ESPI 3	100379	2019-06-21	2020-06-20
LISN	R&S	EZH3-Z5	100294	2019-06-21	2020-06-20
LISN	R&S	EZH3-Z5	100253	2019-06-21	2020-06-20
Ultra Broadband ANT	R&S	HL562	100157	2019-06-21	2020-06-20
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2019-06-21	2020-06-20
Loop Antenna	EMCO	6507	00078608	2018-06-25	2021-06-24
Spectrum	R&S	FSIQ26	100292	2019-06-21	2020-06-20
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2019-06-21	2021-06-20
Horn Antenna	R&S	BBHA 9120D	9120D-631	2018-07-09	2021-07-08
Power meter	Anritsu	ML2487A	6K00003613	2019-08-22	2020-08-21
Power sensor	Anritsu	MA2491A	32263	2019-08-22	2020-08-21
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2018-07-04	2021-07-03
9*6*6 Anechoic			N/A	2018-02-07	2021-02-06
EMI Test Receiver	RS	ESVB	826156/011	2019-06-21	2020-06-20
EMI Test Receiver	RS	ESH3	860904/006	2019-06-21	2020-06-20
Spectrum	HP/Agilent	ESA-L1500A	US37451154	2019-06-21	2020-06-20
Spectrum	HP/Agilent	E4407B	MY50441392	2019-06-21	2020-06-20
Spectrum	RS	FSP	1164.4391.38	2020-01-18	2021-01-17
RF Cable	Zhengdi	ZT26-NJ-NJ-8 M/FA		2019-06-21	2020-06-20
RF Cable	Zhengdi	7m		2019-06-21	2020-06-20
RF Switch	EM	EMSW18	060391	2019-06-21	2020-06-20
Pre-Amplifier	Schwarebeck	BBV9743	#218	2019-06-21	2020-06-20
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2019-06-21	2020-06-20
LISN	SCHAFFNER	NNB42	00012	2020-01-07	2021-01-06

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#### 3.0 Technical Details

#### 3.1 Summary of test results

The EUT has been tested according to the following spec	ifications:
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Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.207	Conducted Emission Test	PASS	Complies
FCC Part 15 Subpart C Paragraph 15.249(a) & 15.249(b) Limit	Field Strength of Fundamental	PASS	Complies
FCC Part 15, Paragraph 15.209 and RSS-210	Radiated Emission Test	PASS	Complies
FCC Part 15 Subpart C Paragraph 15.249(d) Limit	Band Edge Test	PASS	Complies

#### 3.2 Test Standards

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

#### 4.0 EUT Modification

No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

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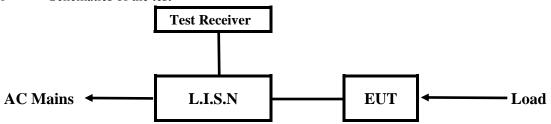
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#### 5. Power Line Conducted Emission Test

#### 5.1 Schematics of the test

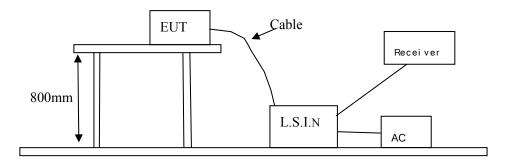


**EUT: Equipment Under Test** 

#### 5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2014. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4-2014.

#### Block diagram of Test setup



#### 5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.4-2014. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

One channels are provided to the EUT

# A. EUT

Device	Manufacturer	Model	FCC ID	
Bluetooth Speaker	LEADER PREMIUMS	AE0043	2APYYAE0043	
Diuctootii Speakei	LIMITED	AE0043		

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#### B. Internal Device

Device	Manufacturer	Model	FCC ID/SDOC
N/A			

#### C. Peripherals

Device	Manufacturer	Model	Rating
Power Supply	Keyu	KA-23-0502000DEU	Input:100-240V~,
			50/60Hz,0.35A;
			Output: DC5V, 2A

# 5.4 EUT Operating Condition

Operating condition is according to ANSI C63.4 -2014

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

#### 5.5 Power line conducted Emission Limit according to Paragraph 15.107 and 15.207

Eraguanay (MHz)	Class A Li	mits (dBµV)	Class B Limits (dBµV)		
Frequency(MHz)	Quasi-peak Level	Average Level	Quasi-peak Level	Average Level	
$0.15 \sim 0.50$	79.0	66.0	66.0~56.0*	56.0~46.0*	
$0.50 \sim 5.00$	73.0	60.0	56.0	46.0	
$5.00 \sim 30.00$	73.0	60.0	60.0	50.0	

Notes:

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

#### 5.6 Test Results: PASS

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

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

#### **EUT Operating Environment**

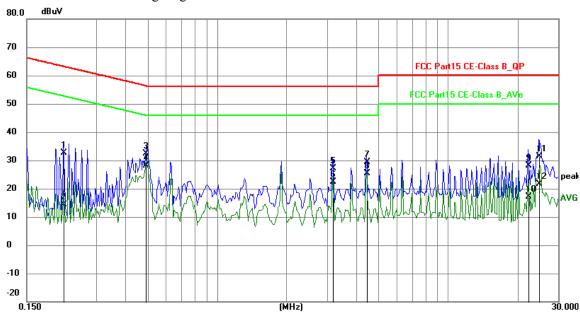
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Charging and Keep Transmitting** 

**Equipment Level: Class B** 

**Results: PASS** 

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2163	22.97	9.75	32.72	62.96	-30.24	QP	Р
2	0.2163	4.54	9.75	14.29	52.96	-38.67	AVG	Р
3	0.4932	22.73	9.77	32.50	56.11	-23.61	QP	Р
4	0.4932	18.32	9.77	28.09	46.11	-18.02	AVG	Р
5	3.1677	17.23	9.85	27.08	56.00	-28.92	QP	Р
6	3.1677	12.61	9.85	22.46	46.00	-23.54	AVG	Р
7	4.4391	19.59	9.91	29.50	56.00	-26.50	QP	Р
8	4.4391	15.46	9.91	25.37	46.00	-20.63	AVG	Р
9	22.1919	17.39	10.82	28.21	60.00	-31.79	QP	Р
10	22.1919	6.28	10.82	17.10	50.00	-32.90	AVG	Р
11	24.7658	20.47	10.98	31.45	60.00	-28.55	QP	Р
12	24.7658	10.77	10.98	21.75	50.00	-28.25	AVG	Р

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

**EUT Operating Environment** 

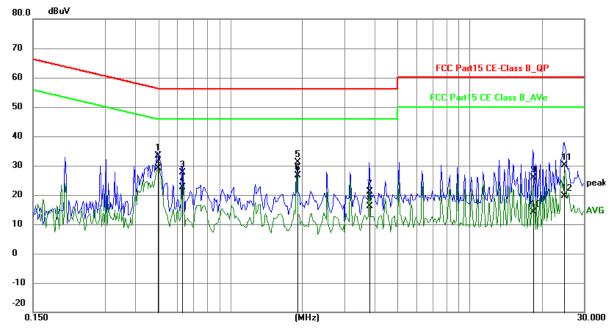
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Charging and Keep Transmitting** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.4971	23.51	9.77	33.28	56.05	-22.77	QP	Р
2	0.4971	19.35	9.77	29.12	46.05	-16.93	AVG	Р
3	0.6297	17.76	9.78	27.54	56.00	-28.46	QP	Р
4	0.6297	12.78	9.78	22.56	46.00	-23.44	AVG	Р
5	1.9011	21.25	9.80	31.05	56.00	-24.95	QP	Р
6	1.9011	16.85	9.80	26.65	46.00	-19.35	AVG	Р
7	3.7995	11.28	9.88	21.16	56.00	-34.84	QP	Р
8	3.7995	6.18	9.88	16.06	46.00	-29.94	AVG	Р
9	18.3776	15.27	10.58	25.85	60.00	-34.15	QP	Р
10	18.3776	3.67	10.58	14.25	50.00	-35.75	AVG	Р
11	24.7113	19.12	10.97	30.09	60.00	-29.91	QP	Р
12	24.7113	8.62	10.97	19.59	50.00	-30.41	AVG	Р

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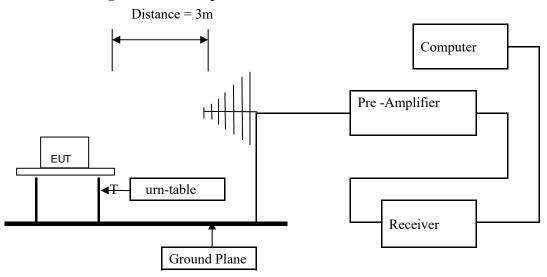


#### **6** Radiated Emission Test

- 6.1 Test Method and test Procedure:
- (1) The EUT was t ested according to ANSI C63.10-2013. The radiated test was performed at T imeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.10-2013.
- (3) The frequency spectrum from 30 MHz to 25 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 kHz. All readings are above 1 GHz, peak values with a resolution bandwidth of 1 MHz. Measurements were made at 3 meters.

  For fundamental frequency, RBW>=20dB BW, VBW>=RBW, PK detector is for PK value, RMS detector is for AV value.
- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) The antenna polarization: Vertical polarization and Horizontal polarization.

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



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

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#### 6.4 Radiated Emission Limit

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

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

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

Note:

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

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

Frequency Range (MHz)	Distance (m)	Field strength (dBμV/m)
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
- 2. In the Above Table, the tighter limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT
- 4. All scanning using PK detector. And the final emission level was get using QP detector for frequency range from 30-1000MHz.As to 1G-25G, the final emission level got using PK. For fundamental measurement, PK detector used.
- 5. For radiated emissions below 30MHz, it was the floor noise.
- 6. Full charged battery was used during tests.
- 7. This is a handhold device. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), After pre-test. It was found that the worse radiated emission was get at the lying position.

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#### 6.5 Test result

#### **A** Fundamental & Harmonics Radiated Emission Data

Product:	Bluetooth Speaker	Test Mode:	Keep transmitting-Low Channel
Test Item:	Fundamental Radiated Emission	Temperature:	25℃
	Data		
Test Voltage:	DC3.7V	Humidity:	56%
Test Result:	Pass		

Frequency	Emission PK/AV	Horiz /	Limits PK/AV	Margin
(MHz)	(dBuV/m)	Vert	(dBuV/m)	(dB)
2402	92.34 (PK)	Н	114/94	-1.66
2402	79.48 (PK)	V	114/94	-14.52
4804	51.61 (PK)	Н	74/54	-2.39
4804	48.14 (PK)	V	74/54	-5.86
7206		H/V	74/54	
9608		H/V	74/54	
12010		H/V	74/54	
14412		H/V	74/54	
16814		H/V	74/54	
19216		H/V	74/54	
21627		H/V	74/54	
24020		H/V	74/54	

Note: (1) PK= Peak, AV= Average

- (2) Emission Level = Reading Level + Antenna Factor + Cable Loss Pre-Amplifier
- (3)Margin=Emission-Limits
- (4)According to section 15.35(b), the peak limit is 20dB higher than the average limit
- (5) For test purpose, keep EUT continuous transmitting
- (6) The PK emission level less than the AV limit. No necessary to record the AV emission level.

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Product:	Bluetooth Speaker	Test Mode:	Keep transmitting-Middle Channel
Test Item:	Fundamental Radiated Emission	Temperature:	25℃
	Data		
Test Voltage:	DC3.7V	Humidity:	56%
Test Result:	Pass		

Frequency	Emission PK/AV	Horiz /	Limits PK/AV	Margin
(MHz)	(dBuV/m)	Vert	(dBuV/m)	(dB)
2440	92.10 (PK)	Н	114/94	-1.90
2440	77.99 (PK)	V	114/94	-16.01
4880	51.47 (PK)	Н	74/54	-2.53
4880	42.71 (PK)	V	74/54	-11.29
7320		H/V	74/54	
9760		H/V	74/54	
12200		H/V	74/54	
14640		H/V	74/54	
17080		H/V	74/54	
19520		H/V	74/54	
21960		H/V	74/54	
24400		H/V	74/54	

Note: (1) PK= Peak, AV= Average

- (2) Emission Level = Reading Level + Antenna Factor + Cable Loss Pre-Amplifier
- (3)Margin=Emission-Limits
- (4)According to section 15.35(b), the peak limit is 20dB higher than the average limit
- (5) For test purpose, keep EUT continuous transmitting
- (6) The PK emission level less than the AV limit. No necessary to record the AV emission level.

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Product:	Bluetooth Speaker	Test Mode:	Keep transmitting-High Channel
Test Item:	Fundamental Radiated Emission	Temperature:	25℃
	Data		
Test Voltage:	DC3.7V	Humidity:	56%
Test Result:	Pass		

Frequency	Emission PK/AV	Horiz /	Limits PK/AV	Margin
(MHz)	(dBuV/m)	Vert	(dBuV/m)	(dB)
2480	92.64 (PK)	Н	114/94	-1.36
2480	81.96 (PK)	V	114/94	-12.04
4960	50.99 (PK)	Н	74/54	-3.01
4960	48.92 (PK)	V	74/54	-5.08
7440		Н	74/54	
7440		V	74/54	
9920		H/V	74/54	
12400		H/V	74/54	
14880		H/V	74/54	
17360		H/V	74/54	
19840		H/V	74/54	
22320		H/V	74/54	
24800		H/V	74/54	

Note: (1) PK= Peak, AV= Average

- (2) Emission Level = Reading Level + Antenna Factor + Cable Loss Pre-Amplifier
- (3)Margin=Emission-Limits
- (4)According to section 15.35(b), the peak limit is 20dB higher than the average limit
- (5) For test purpose, keep EUT continuous transmitting
- (6) The PK emission level less than the AV limit. No necessary to record the AV emission level.

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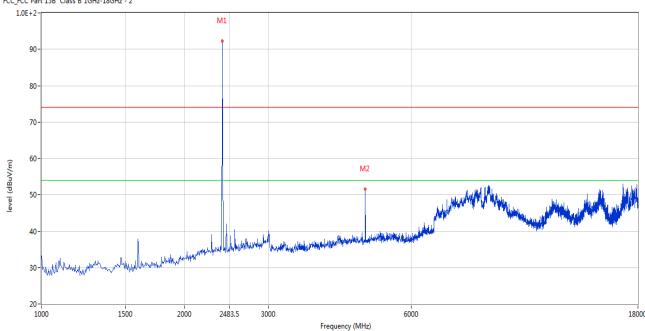
Date: 2020-04-07



### Please refer to the following test plots for details: Low Channel

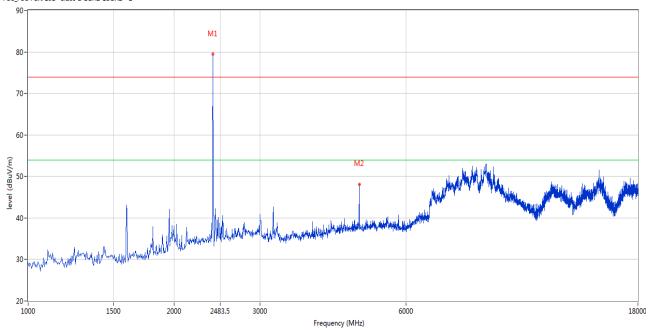
#### Horizontal





#### Vertical

#### FCC\_FCC Part 15B Class B 1GHz-18GHz - 2



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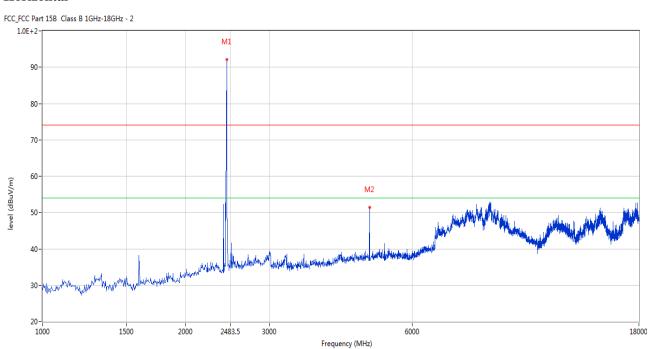
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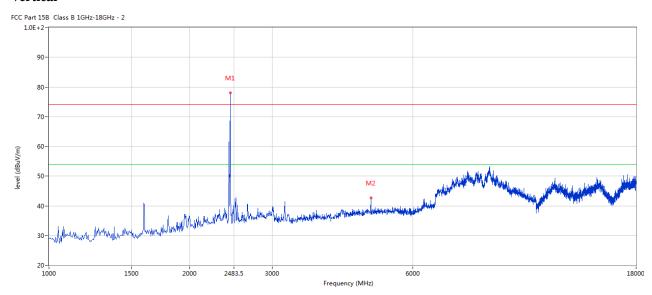


Please refer to the following test plots for details: Middle Channel

#### Horizontal



#### Vertical



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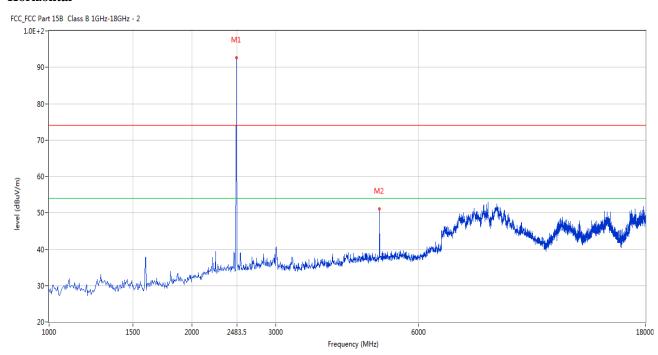
Report No.: FCC2002041

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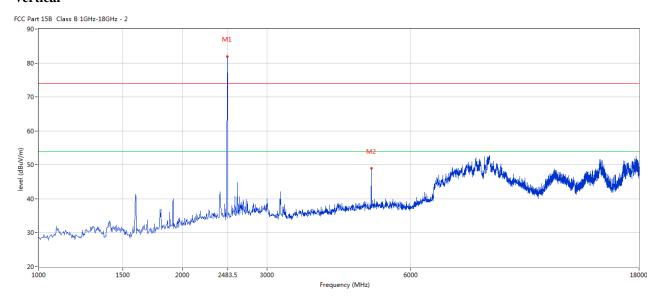


Please refer to the following test plots for details: High Channel

#### Horizontal



#### Vertical



For emission above 18GHz, It is only the floor noise. No necessary to take down.

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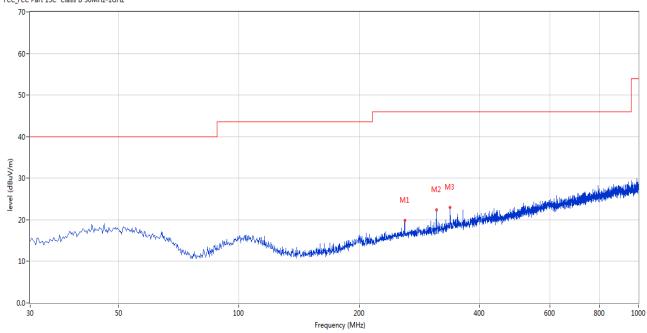
# B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results:** Pass

Please refer to following diagram for individual

FCC\_FCC Part 15C Class B 30MHz-1GHz



No.	Frequency	Results	Factor (dB)	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)		(dBuV/m)	(dB)		(o)	(cm)		
1	260.075	19.76	-11.84	46.0	-26.24	Peak	163.00	100	Н	Pass
2	311.957	22.40	-10.76	46.0	-23.60	Peak	0.00	100	Н	Pass
3	337.898	22.94	-9.79	46.0	-23.06	Peak	122.00	100	Н	Pass

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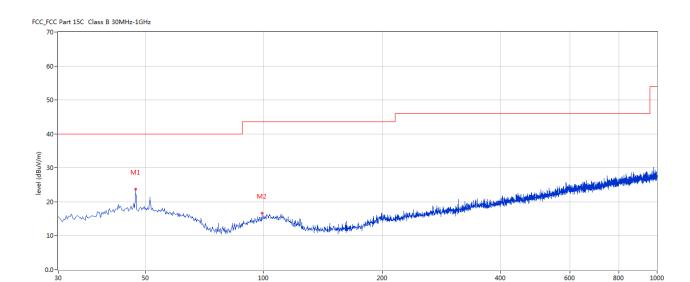


#### Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results:** Pass

Please refer to following diagram for individual



No.	Frequen	Results	Factor	Limit	Over	Detector	Table (o)	Height	ANT	Verdict
	cy (MHz)	(dBuV/m	(dB)	(dBuV/m	Limit			(cm)		
		)		)	(dB)					
1	47.213	23.76	-11.41	40.0	-16.24	Peak	347.00	100	V	Pass
2	98.853	16.63	-13.68	43.5	-26.87	Peak	258.00	100	V	Pass

Frequency (MHz)

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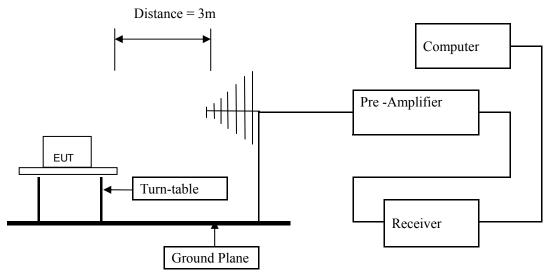


#### 7. Band Edge

#### 7.1 Test Method and test Procedure:

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

# 7. 2 Radiated Test Setup



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

#### 7.3 Configuration of The EUT

Same as section 5.3 of this report

# 7.4 EUT Operating Condition

Same as section 5.4 of this report.

# 7.5 Band Edge Limit

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

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#### 7.6 Test Result

	Product:		Bluetoo	oth Speaker		Po	olarity		Horizon	ıtal
	Mode		Keeping	Transmittir	ng	Test	Voltage		DC3.7	V
Γ	emperature		24	deg. C,		Hu	midity	56% RH		Н
]	Test Result:		]	Pass						
	C Part 15B Class B 1GHz-18	GHz - 2								
	90-									
	80-								$\int \int \int$	
	70-									
level (dBuV/m)	60-									1
leve	40-			al Anni bilan	hat had been been	الإناهيل لينزلنا فانتسالها	Marin V.			Marin
	30- <del> </del> 2360				Freque	ncy (MHz)				2
No	. Frequency (MHz)	Results (dBuV/m	Factor (dB)	Limit (dBuV/m	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2390	48.44	-3.53	54.0	-5.56	Peak	150.00	100	Н	Pass
2	2400	57.36	-3.57	74.0	-16.64	Peak	69.00	100	Н	Pass
2*	2400	33.12	-3.57	54.0	-20.88	AV	69.00	100	Н	Pass

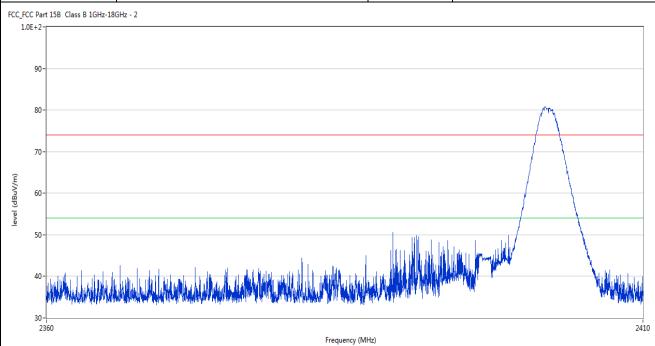
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Product:	Bluetooth Speaker	Detector	Vertical
Mode	Keeping Transmitting	Test Voltage	DC3.7V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2388.930	50.64	-3.53	54.0	-3.36	Peak	108.00	100	V	Pass
2	2390	45.86	-3.53	54.0	-8.14	Peak	120.00	100	V	Pass
3	2400	53.68	-3.57	74.0	-20.32	Peak	88.00	100	V	Pass
3*	2400	32.39	-3.57	54.0	-21.61	AV	88.00	100	V	Pass

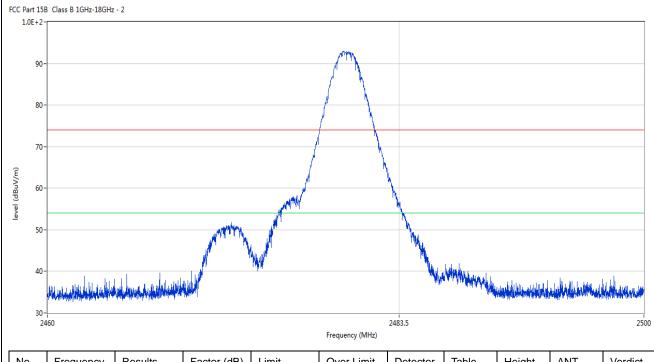
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Product:	Bluetooth Speaker	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	DC3.7V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



No.	Frequency	Results	Factor (dB)	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)		(dBuV/m)	(dB)		(o)	(cm)		
1**	2483.5	33.74	-3.57	54.0	-20.26	AV	277.00	100	Н	Pass
1	2483.5	56.60	-3.57	74.0	-17.40	Peak	277.00	100	Н	Pass

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Pl	roduct:	Bluetooth Speaker  Keeping Transmitting  24 deg. C,  Pass				Detecto	r	Vertical			
1	Mode					Test Voltage		DC3.7V			
Ten	nperature					Humidit	ty	56% RH			
Tes	st Result:										
248	33.5MHz	PK (dBμV/m)		Limit			74 dBμV/m				
248	33.5MHz	AV (dBμ'	V/m)			Limit		54 dBμV/m		ı	
Part 15E	B Class B 1GHz-18GHz	z - 2				1	1				
80-					1						
70-	0										
60-											
50-											
50-											
	I		1	- Apply Harden		<b>\</b>	d	l l	i. i h	. 1	
	- 1 10 . da		J. Judy Mary	النالية		Male of c				alaki, dh	
40-		tari bili ilika kisalikan kita ili	The state of the s	Part Life Hart		"TUNK!	על האווים או או או או אויים			I MAKEN	
			MW.	THAT IN		Market I		A PROPERTY THE PROPERTY OF	Hu Addunda h si		
		Lalia Libbilib palamathapar basa	W	**************************************	Frequency (MHz	2483.5			Hu sirthund ha	250	
30- 2460	Frequency	Results	Factor	Limit	Frequency (MHz	)	Table (o)	Height	ANT		
30- 2460	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	T	)	Table (o)	Height (cm)	ANT	Verdict	

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

2. This is a handhold device. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), After pre-test. It was found that the worse radiated emission was get at the lying position.

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#### 8.0 Antenna Requirement

#### **Applicable Standard**

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

This product has a PCB antenna. The antenna gain is 0.58dBi Max. It fulfills the requirement of this section. Test Result: Pass

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Product:	Bluetooth Speaker  Keeping Transmitting  24 deg. C,  Pass				t Mode:	Keep transmitting			
Mode					Test Voltage Humidity Detector		DC3.7V 56% RH PK		
Temperature									
Test Result:									
dB Bandwidth	1.								
<b>&gt;</b>	Marker 1 [T1 ndB]			BW	100 kH	Iz R	RF Att 20 di		
Ref Lvl	ndB	20.00 dB	V	BW	300 kH				
10 dBm	BW 1.	.14228457 MHz	SI	TW	5 ms	s U:	nit	dBm	
					<b>v</b> <sub>1</sub>	[T1]	(	.67 dBm	
		1					2.40185	271 GHz	
0					ndB		20	0.00 dB	
					BW ⊽⊤i	[T1]	1.14228		
-10					<u> </u>			186 GHz	
	Ţ	Jan 1			<b>V</b> ≢⊉	[T1]		3.36 dBm	
-20					<del>- \</del>		2.40257	415 GHz	
1MAX								]	
-30						-			
	~~~							The same of the sa	
-40									
-50									
-60									
-70									
-80									
-90									
Center 2.40	)2 GHz	300	kHz/				Spa	an 3 MHz	

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Product:	Blue	tooth Speaker	Те	st Mode:	Keep trai	nsmitting
Mode	Keeping Transmitting			st Voltage	DC3	3.7V
Temperature	2	24 deg. C,	Н	lumidity	56%	RH
Test Result:		Pass	Γ	Detector	P	K
20dB Bandwidth	1				-	
	Marker	1 [T1 ndB]	RBW	100 kHz		20 dB
Ref Lvl	ndB	20.00 dB	VBW	300 kHz		
10 dBm	BW 1	1.14228457 MHz	SWT	5 ms	Unit	dBm
0		1	~	▼1 [¹	[1] 4 2.43985 20	.39 dBm 271 GHz .00 dB
-10				BW ▼ <sub>T1</sub>	1.14228 [T1] -15	457 MHz .71 dBm
		T1		▼ <sub>T</sub> 2		186 GHz .50 dBm
-20 1MAX					2.44057	415 GHz
-30						
-40						
-50						
-60						
-70						
_ 7 0						
-80						
-90 Center 2.	AA CUR	300	cup/		C = C	n 3 MHz
		57:03	X112 /		spa	II 3 PIIIZ

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Product:	Blueto	ooth Speaker	Te	est Mode:	Keep tra	nsmitting
Mode	Keeping	Те	st Voltage	DC:	3.7V	
Temperature	24	I	Iumidity	56%	6 RH	
Test Result:		I	Detector	P	rK	
20dB Bandwidth	1.	1.148MHz			-	- <b>-</b>
(S)		1 [T1 ndB]	RBW	100 kHz		20 dB
Ref Lvl	ndB	20.00 dB	VBW	300 kHz		2-
10 dBm	BW 1	.14829659 MHz	SWT	5 ms	Unit	dBm
		1	~	▼1 [	T1] !	3.02 dBm 1669 GHz
0				ndB	2.17,33	0.00 dB
				BW	1.14829	9659 MHz
-10		المسير		V <sub>T</sub>	[T1] -1!	.32 dBm
	I					3186 GHz
-20	У			$\nabla_{\mathrm{T}}$	[T1] -1!	
1MAX				\	2.48058	3016 GHz
-30						The same of the sa
-40						
-50						
-60						
-70						
- 70						
-80						
-90 Center 2.	48 GHz	300	kHz/		Spa	an 3 MHz
Date: 7.2	APR.2020 09:	54:39				

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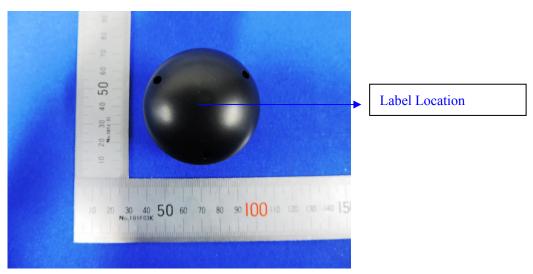
#### 10.0 FCC ID Label

#### FCC ID: 2APYY--AE0043

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

#### **Mark Location:**



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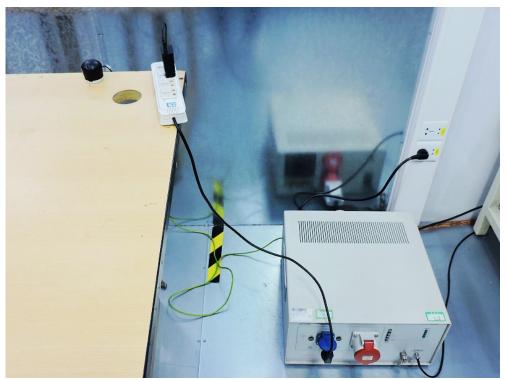
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#### 11.0 Photo of testing

#### 11.1 Conducted test View

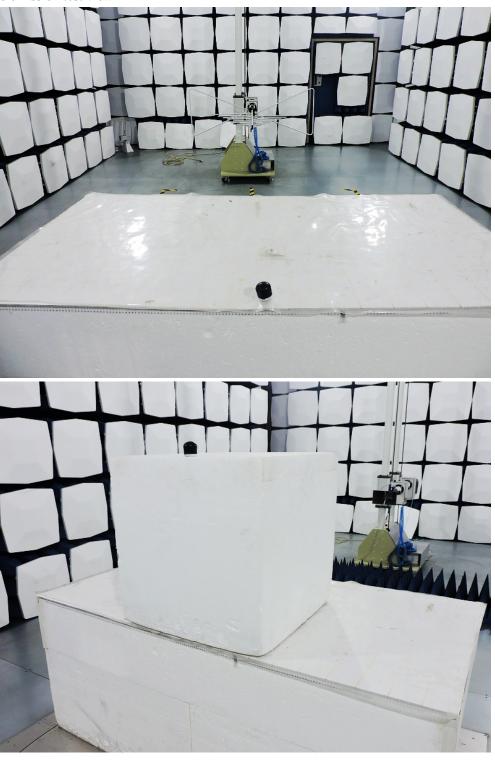


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#### 11.2 Radiated emission test view



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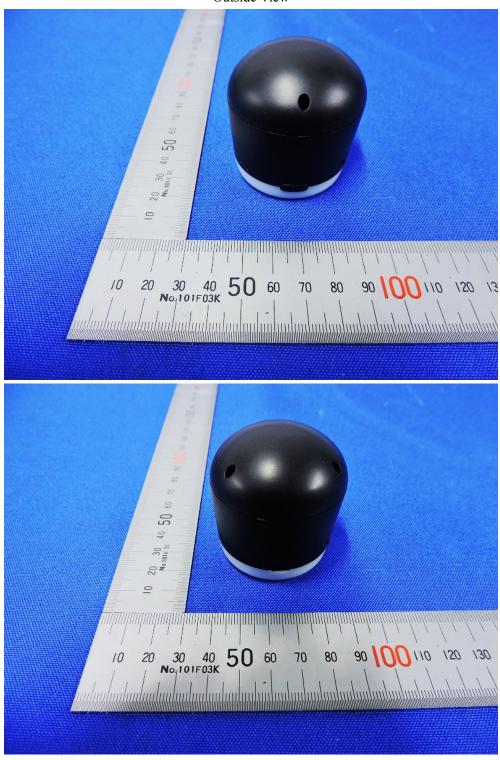
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#### 11.3 Photographs – EUT

Outside View



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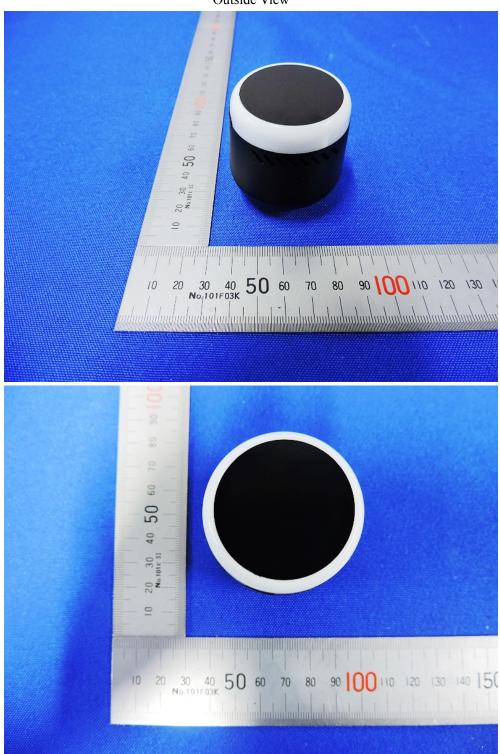
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Outside View



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Outside View



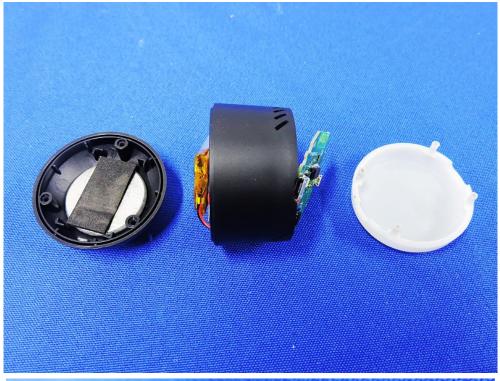
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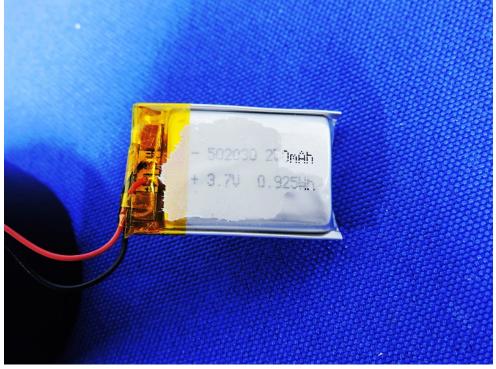
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Inside view





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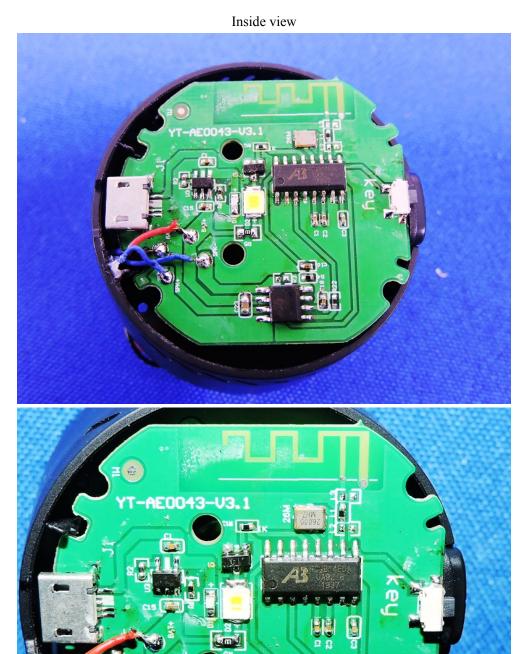
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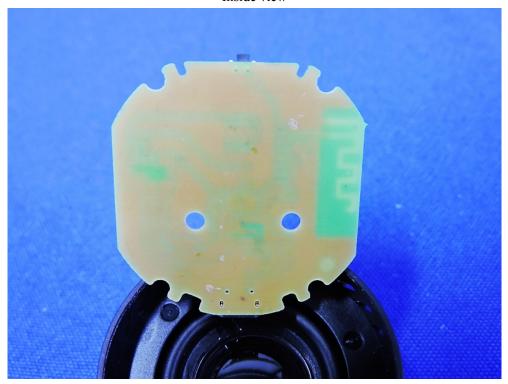
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#### Inside view



-- End of the report--