Report No.:	TW2403253E
Applicant:	Bytech NY Inc.
Product:	Bluetooth Speaker
Model No.:	P90, SI-AU-BS-103
Trademark:	Bytech, SHARPER IMAGE
Test Standards:	FCC Part 15.249
Test result:	It is herewith confirmed and found to comply with the requirements set up by ANSI C63.10 & FCC Part 15 Subpart C, Paragraph 15.249 regulations for the evaluation of electromagnetic compatibility
Approved By	

Terry long

Terry Tang

Manager

Dated:

March 29, 2024

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



Special Statement:

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

CAB identifier: CN0033

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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, ChinaTelephone:(755) 83448688Fax:(755) 83442996Site on File with the Federal Communications Commission – United SatesRegistration Number: 744189For 3m Anechoic Chamber

1.2 Applicant Details

Applicant:	Bytech NY Inc.
Address:	2585 West 13th Street Brooklyn NY 11223 USA
Telephone:	(718) 449 3700
Fax:	(718) 449 3700

1.3 Description of EUT

Product:	Bluetooth Speaker
Manufacturer:	Bytech NY Inc.
Address:	2585 West 13th Street Brooklyn NY 11223 USA
Trademark:	Bytech, SHARPER IMAGE
Model Number:	P90
Additional Model Name	SI-AU-BS-103
Rating:	Input: 5V/1A
Battery:	DC3.7V, 1200mAh Li-ion battery
Serial No.:	P90202410249
Hardware Version:	RH-P90-V1.5
Software Version:	SV1.1
Operation Frequency:	2402-2480MHz
Modulation Type:	GFSK, JI/4DQPSK
Number of Channels:	79
Channel Separation:	1MHz
Antenna Designation	PCB antenna with gain 1.7dBi maximum (Get from the antenna specification)

1.4 Submitted Sample: 2 Samples

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- 1.5 Test Duration 2024-03-26 to 2024-03-29
- 1.6 Test Uncertainty Conducted Emissions Uncertainty =3.6dB Radiated Emissions below 1GHz Uncertainty =4.7dB Radiated Emissions above 1GHz Uncertainty =6.0dB Conducted Power Uncertainty =6.0dB Occupied Channel Bandwidth Uncertainty =5% Conducted Emissions Uncertainty =3.6dB Note: The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.
- 1.7 Test Engineer

Andy - Xing

The sample tested by

Print Name: Andy Xing

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2.0 Test Equipment					
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date
ESPI Test Receiver	R&S	ESPI 3	100379	2023-07-14	2024-07-13
LISN	R&S	EZH3-Z5	100294	2023-07-14	2024-07-13
LISN	R&S	EZH3-Z5	100253	2023-07-14	2024-07-13
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2023-07-14	2024-07-13
Loop Antenna	EMCO	6507	00078608	2022-07-18	2025-07-17
Spectrum	R&S	FSIQ26	100292	2023-07-14	2024-07-13
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2022-07-18	2025-07-17
Horn Antenna	R&S	BBHA 9120D	9120D-631	2022-07-18	2024-07-17
Power meter	Anritsu	ML2487A	6K00003613	2023-07-14	2024-07-13
Power sensor	Anritsu	MA2491A	32263	2023-07-14	2024-07-13
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2022-07-18	2025-07-17
9*6*6 Anechoic			N/A	2022-07-26	2025-07-25
EMI Test Receiver	RS	ESVB	826156/011	2023-07-14	2024-07-13
EMI Test Receiver	RS	ESCS 30	834115/006	2023-07-14	2024-07-13
Spectrum	HP/Agilent	E4407B	MY50441392	2023-07-14	2024-07-13
Spectrum	RS	FSP	1164.4391.38	2023-07-14	2024-07-13
RF Cable	Zhengdi	ZT26-NJ-NJ-8M/FA		2023-07-14	2024-07-13
RF Cable	Zhengdi	7m		2023-07-14	2024-07-13
Pre-Amplifier	Schwarebeck	BBV9743	#218	2023-07-14	2024-07-13
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2023-07-14	2024-07-13
LISN	SCHAFFNER	NNB42	00012	2023-07-14	2024-07-13
ESPI Test Receiver	R&S	ESPI 3	100379	2023-07-14	2024-07-13
LISN	R&S	EZH3-Z5	100294	2023-07-14	2024-07-13

2.2 Automation Test Software

For Conducted Emission Test

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

For Radiated Emissions

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

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The EUT has been tested according to the following specifications:

3.0 Technical Details

3.1 Summary of test results

The EOT has been tested according to the following specifications.				
Standard	Test Type	Result	Notes	
FCC Part 15, Paragraph 15.203	Antenna Requirement	Pass	Complies	
FCC Part 15, Paragraph 15.207	Conducted Emission Test	Pass	Complies	
FCC Part 15 Subpart C Paragraph 15.249(a) & 15.249(b) Limit	Field Strength of Fundamental	Pass	Complies	
FCC Part 15, Paragraph 15.209	Radiated Emission Test	Pass	Complies	
FCC Part 15 Subpart C Paragraph 15.249(d) Limit	Band Edge Test	Pass	Complies	
FCC Part 15.215(c)	20dB bandwidth	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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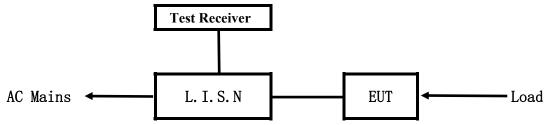
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5.0 Power Line Conducted Emission Test

5.1 Schematics of the test

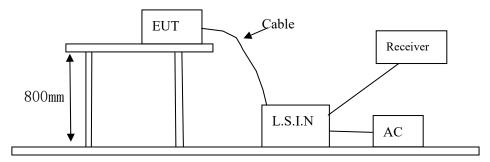


EUT: Equipment Under Test

5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.10-2013. The Frequency spectrum from 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.10–2013. Test Voltage: 120V~, 60Hz

Block diagram of Test setup



5.3 Configuration of the EUT

The EUT was configured according to ANSI C63.10-2013. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below. 79 channels are provided to the EUT

А.	EUT

Device Manufacturer Model		Model	FCC ID
Bluetooth Speaker	Bytech NY Inc.	P90, SI-AU-BS-103	2AHN6-AUBS103

B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

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C. Peripherals

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

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.10-2013

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

Frequency	Limits (dB µ V)				
(MHz)	Quasi-peak Level	Aver ge Level			
$0.15~\sim~0.5$	66.0~56.0*	56.0~46.0*			
$0.50~\sim~5.00$	56.0	46.0			
$5.00~\sim~30.00$	60.0	50.0			

5.5 Power line conducted Emission Limit according to Paragraph 15.207

Notes: 1. *Decreasing linearly with logarithm of frequency.

2. The tighter limit shall apply at the transition frequencies

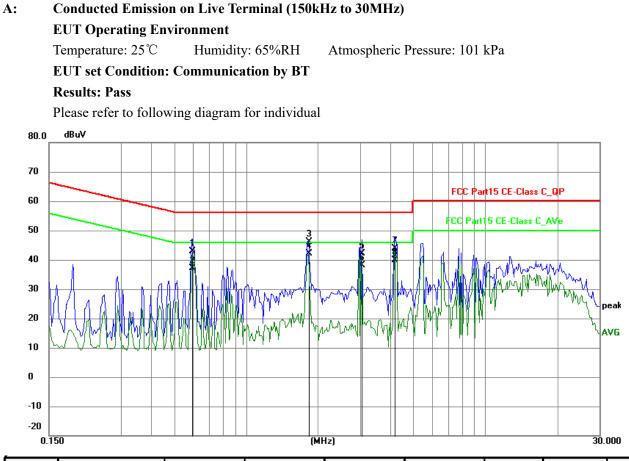
5.6 Test Results:

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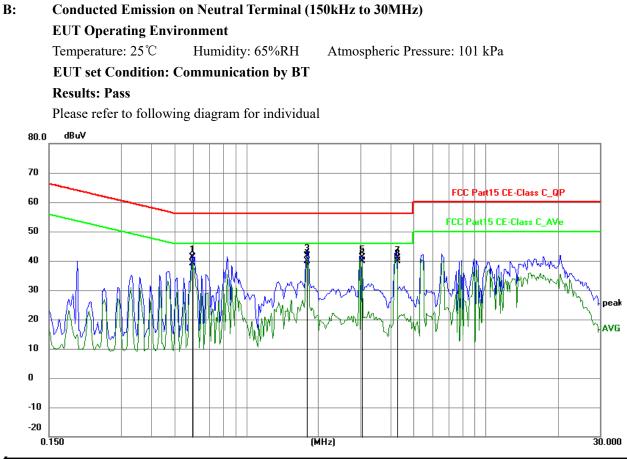


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.5946	33.14	9.77	42.91	56.00	-13.09	QP	Р
2	0.5946	27.38	9.77	37.15	46.00	-8.85	AVG	Р
3	1.8270	36.36	9.80	46.16	56.00	-9.84	QP	Р
4	1.8270	32.43	9.80	42.23	46.00	-3.77	AVG	Р
5	3.0507	32.33	9.85	42.18	<u>56.00</u>	-13.82	QP	Р
6	3.0507	28.27	9.85	38.12	46.00	-7.88	AVG	Р
7	4.1739	34.03	9.89	43.92	56.00	-12.08	QP	Р
8	4.1739	29.96	9.89	39.85	46.00	-6.15	AVG	Ρ

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No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.5946	31.28	9.77	41.05	56.00	-14.95	QP	Р
2	0.5946	29.47	9.77	39.24	46.00	-6.76	AVG	Ρ
3	1.7880	31.83	9.80	41.63	56.00	-14.37	QP	Ρ
4	1.7880	30.13	9.80	39.93	46.00	-6.07	AVG	Ρ
5	3.0468	31.17	9.85	41.02	56.00	-14.98	QP	Ρ
6	3.0468	29.99	9.85	39.84	46.00	-6.16	AVG	Ρ
7	4.2636	31.04	9.90	40.94	56.00	-15.06	QP	Ρ
8	4.2636	29.94	9.90	39.84	46.00	-6.16	AVG	Ρ

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6 Radiated Emission Test

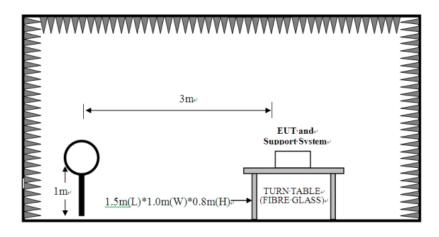
- 6.1 Test Method and test Procedure:
- The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.10-2013.
- (3) The frequency spectrum from 9kHz to 25 GHz was investigated. The frequency spectrum is set as follows:

Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
Above IGHZ	Peak	1MHz	10Hz	Average

(Note: for Fundamental frequency radiated emission measurement, RBW=3MHz, VBW=10MHz). Measurements were made at 3 meters.

- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) The antenna polarization: Vertical polarization and Horizontal polarization.Block diagram of Test setup

For radiated emissions from 9kHz to 30MHz

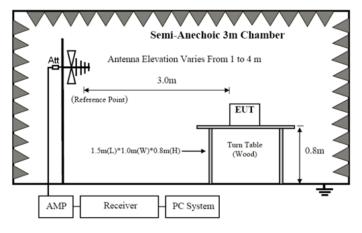


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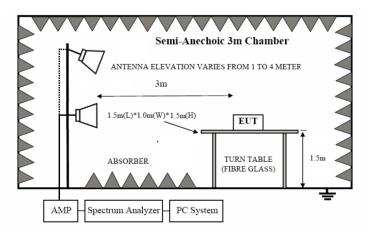
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For radiated emissions from 30MHz to1GHz



For radiated emissions above 1GHz



- 6.2 Configuration of the EUT Same as section 5.3 of this report
- 6.3 EUT Operating Condition Same as section 5.4 of this report.
- 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 FCCTart 15 Subp		agraph 13.247(a) Linnt		
Fundamental Frequency	Field Stre	ength of Fundamental (3m)	Field S	trength of Harmonics (3m)
(MHz)	mV/m	dBuV/m	uV/m	dBuV/m

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

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2	2400-2483.5	50	94 (Average)	114 (Peak)	500	54 (Average)	74 (Peak)
Note:	1. RF Field Streng	gth (dBuV)	= 20 log RF Volt	age (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.

Frequency Range (MHz) Distance (m) Field strength (dB μ V/m) 0.009-0.490 3 $20\log(2400/F(kHz)) + 40\log(300/3)$ 3 $20\log(24000/F(kHz)) + 40\log(30/3)$ 0.490-1.705 3 1.705-30 69.5 30-80 3 40.0 88-216 3 43.5 216-960 3 46.0 Above 960 3 54.0

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

Note:

1. RF Voltage (dBuV) = $20 \log \text{RF}$ 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. The two modulation modes of GFSK and Pi/4D-QPSK were tested. And only the worst case was recorded in the test report. GFSK was the worst case.

6. 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 stand position.

7. Battery fully charged was used during the test.

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100

100

Horizontal

Horizontal

Pass

Pass

136.00

199.00

6.5 Test resultA Fundamental & Harmonics Radiated Emission Data

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

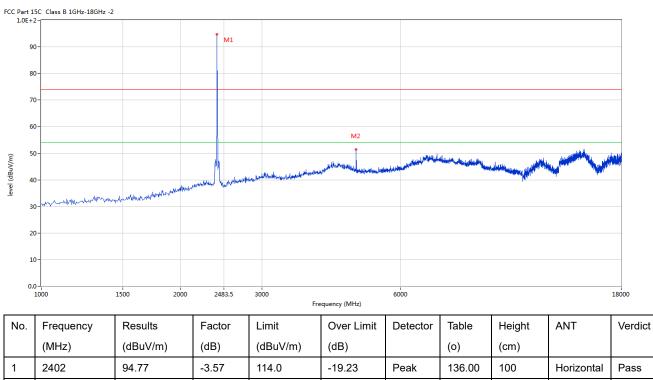
Horizontal

1**

2

2402

4802.799



-8.71

-22.59

AV

Peak

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

85.29

51.41

-3.57

3.12

94.0

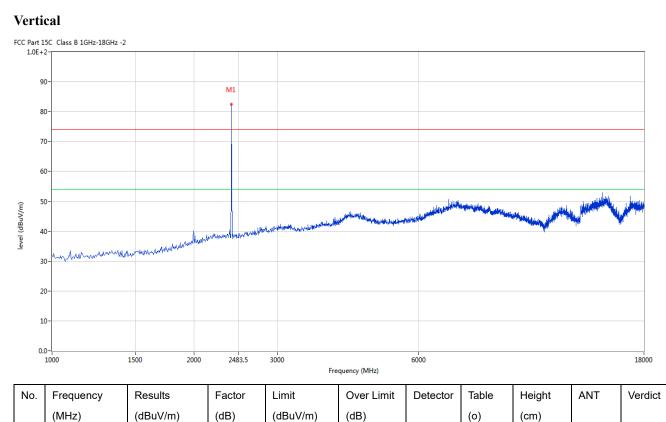
74.0

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Pass

Vertical



-31.57

184.00

100

Peak

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

82.43

1

2402

-3.57

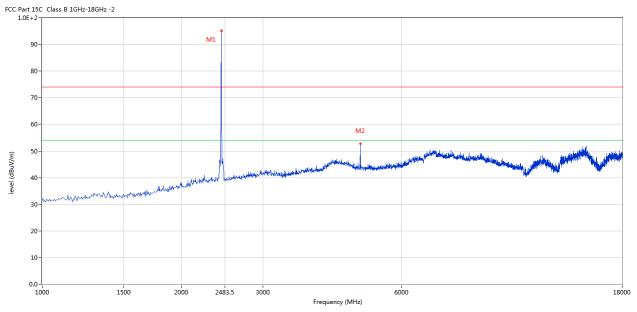
114.0

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

Horizontal

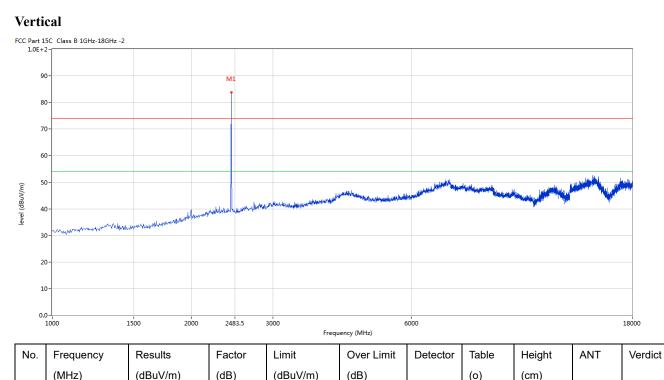


No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2441	95.12	-3.57	114.0	-18.88	Peak	148.00	100	Horizontal	Pass
1**	2441	85.43	-3.57	94.0	-8.57	AV	148.00	100	Horizontal	Pass
2	4879.280	52.69	3.20	74.0	-21.31	Peak	154.00	100	Horizontal	Pass

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296.00

100

Vertical

Pass

Peak

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

83.86

-3.57

114.0

-30.14

2441

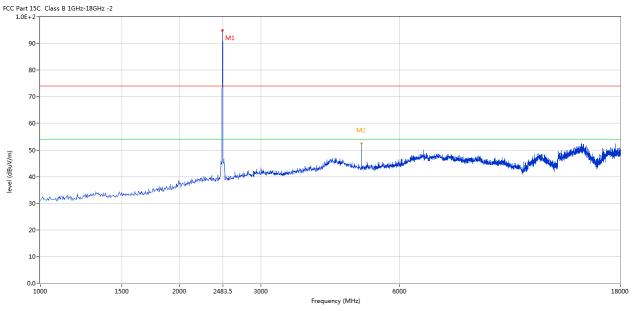
1

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

Horizontal

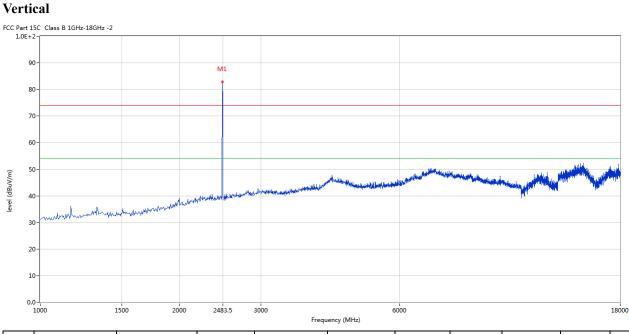


No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	94.96	-3.57	114.0	-19.04	Peak	112.00	100	Horizontal	Pass
1**	2480	85.31	-3.57	94.0	-8.69	AV	112.00	100	Horizontal	Pass
2	4960.010	52.32	3.36	74.0	-21.68	Peak	142.00	100	Horizontal	Pass

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	No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
l	1	2480	82.81	-3.57	114.0	-31.19	Peak	305.00	100	Vertical	Pass

Note: (1) Emission Level = Reading Level + Antenna Factor + Cable Loss-Amplifier

(2) Margin=Emission-Limits

(3) According to section 15.35(b), the peak limit is 20dB higher than the average limit

(4) For test purpose, keep EUT continuous transmitting

(5) For emission above 18GHz and Below 30MHz, It is only the floor noise and less than the limit for more than 20dB. No necessary to take down.

(6) the measured PK value less than the AV limit.

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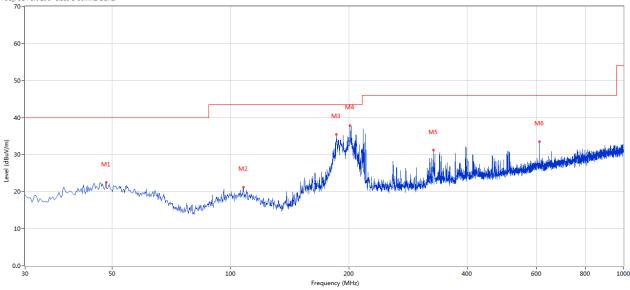
B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual

FCC_FCC Part 15C Class B 30MHz-1GHz



No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1	48.183	22.48	-11.26	40.0	17.52	Peak	177.00	100	Horizontal	Pass
2	107.823	21.20	-13.41	43.5	22.30	Peak	1.00	100	Horizontal	Pass
3	185.646	35.52	-14.84	43.5	7.98	Peak	360.00	100	Horizontal	Pass
4	201.405	37.78	-13.42	43.5	5.72	Peak	5.00	100	Horizontal	Pass
5	328.685	31.18	-10.30	46.0	14.82	Peak	25.00	100	Horizontal	Pass
6	611.612	33.53	-5.12	46.0	12.47	Peak	358.00	100	Horizontal	Pass

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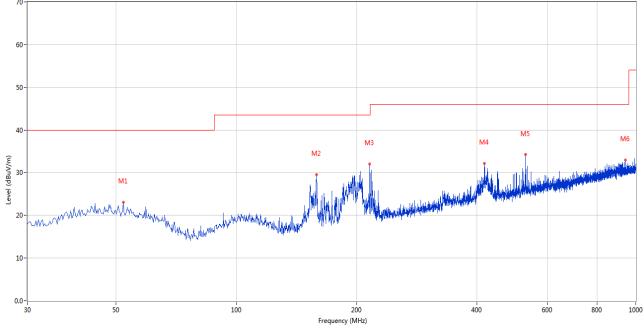
Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual

FCC_FCC Part 15C Class B 30MHz-1GHz 70-



No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1	52.062	23.06	-11.43	40.0	16.94	Peak	189.00	100	Vertical	Pass
2	158.735	29.51	-16.46	43.5	13.99	Peak	49.00	100	Vertical	Pass
3	215.709	32.04	-13.60	43.5	11.46	Peak	93.00	100	Vertical	Pass
4	417.903	32.22	-8.11	46.0	13.78	Peak	251.00	100	Vertical	Pass
5	530.152	34.21	-6.45	46.0	11.79	Peak	304.00	100	Vertical	Pass
6	940.602	32.92	-1.87	46.0	13.08	Peak	252.00	100	Vertical	Pass

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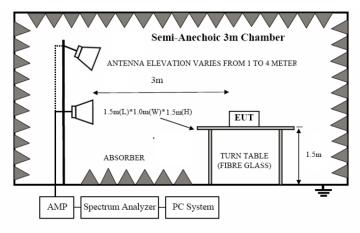


7. Band Edge

7.1 Test Method and test Procedure:

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

7.2 Radiated Test Setup



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

7.3 Configuration of the EUT

Same as section 5.3 of this report

7.4 EUT Operating Condition

Same as section 5.4 of this report.

7.5 Band Edge Limit

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

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7.6 Test Result

Product:			Bluetooth Speaker			Polarity		Horizontal		
Mode		Keeping Transmitting				Test Voltage		DC3.7V		
Temperature		24 deg. C,				Humidity		56% RH		
Test Result:			Pass							
	rt 15C Class B 1GHz-18G E+2-	iHz -2								
1.0	E+2-							M1		
	90-							m		
	80-							/		
	70-							/	J.	
	60-								<u> </u>	
						M3			- N.	
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level (dBuV/m)	50- 40-	and the state of the	willing and the galitation of the	ite, mendelige Anther Anther gold	M4	e sa politika p			Andrew Contraction	naj kalika
level (dBuV/m)	50- 40- 30-	www.andersonality.orbiday.orbiday.	naille generalise gehine billigehine	la, mailin Alder Ander gib		er san personal solution of	·		and the second sec	ny Mari
level (dBuV/m)		mention and the state of the st	naliti banyi yangi ya	ta muliindadaa ku ku ku ku		er san weeken berkelijk die berkelijk die berkelijk die berkelijk die berkelijk die berkelijk die berkelijk die Een de berkelijk die berkeli	the .		Jury Marine	ny ji Albiy
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level (dBuV/m)	30	understandelige seinelinge ser beitragel	nadio poridi o go ^{ta} n i i i i poridi o goti a	ita, maddar Aidea o sifai god		er som som her her for det som			and the second se	
level (dBuV/m)	20-	uningly and his similar and his single	ndin poridi ngo ^{ti} ni kingotini	ita, mailika Aidan karida ya	Frequency (MHz)	a. a. and and a state of the st			June 1997	2410
	30	Results	Factor	Limit		Detector	Table	Height	ANT	r
	30- 20- 10- .0.0- .2370			1	Frequency (MHz)	Detector	Table (o)	Height (cm)	ANT	r
No.	30- 20- 10- 2370 Frequency	Results	Factor	Limit	Frequency (MHz) Over Limit	Detector Peak			ANT	r
No. 1	30- 20- 10- 2370 Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Frequency (MHz) Over Limit (dB)		(o)	(cm)		Verdio
No.	30- 20- 10- 2370 Frequency (MHz) 2402.032	Results (dBuV/m) 94.48	Factor (dB) -3.57	Limit (dBuV/m) 74.0	Frequency (MHz) Over Limit (dB) 20.48	Peak	(o) 142.00	(cm) 100	Horizontal	Verdio N/A
No.	30- 20- 10- 2370 Frequency (MHz) 2402.032 2400.000	Results (dBuV/m) 94.48 63.29	Factor (dB) -3.57 -3.57	Limit (dBuV/m) 74.0 74.0	Frequency (MHz) Over Limit (dB) 20.48 -10.71	Peak Peak	(o) 142.00 118.11	(cm) 100 100	Horizontal Horizontal	Pass

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Product:			Bluetooth Speaker			Detector		Vertical		
Mode		e Keeping Transmitting				Test Voltage		DC3.7V		
Temperature		24 deg. C,				Humidity		56% RH		
Τe	est Result:		Pa	ISS						
C Part : 1.1E+	15C Class B 1GHz-18GHz +2-	z -2								
1.0E+	+2-									
c	90 -									
								M1		
8	80-							$ \land $		
7	70-							$/ \rightarrow$		
6	50 -						/	/ `	\setminus —	
	50-						/			
							· · · · · ·		N	
	10-				M2		M3			
2	40 -	lenerginese opensoende soeth dae belegen fan f	Harristan da aristan da ar	ورادها والفقار والمقار والمتعار والمتعارفين والمتقالين	M2	tion first of a final state of the	M3			
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3	9	โรการรู้สามสารเหลือเหลือเหลือเหลือเหลือเสร็จหรื	4	an a		19444	• •			24
3	0.0-	Results	Factor	Limit	ing damp of the other states of the states	Detector	Table	Height	ANT	
2 2 1 0	20- 10- 2370		Factor (dB)		Frequency (MHz)			Height (cm)	ANT	
2 2 1 0	20- 10- 2370 Frequency	Results		Limit	Frequency (MHz)		Table	-	ANT	
2 1 0 No.	20- 2370 Frequency (MHz)	Results (dBuV/m)	(dB)	Limit (dBuV/m)	Frequency (MHz) Over Limit (dB)	Detector	Table (o)	(cm)		Verdic
3 1 0 No.	barry by subtraction with 30- 20- 10- 2370 Frequency (MHz) 2402.212	Results (dBuV/m) 81.93	(dB) -3.57	Limit (dBuV/m) 74.0	Frequency (MHz) Over Limit (dB) 7.93	Detector Peak	Table (o) 160.00	(cm) 100	Vertical	Verdic N/A
1 0 No.	Frequency (MHz) 2402.212 2390.000	Results (dBuV/m) 81.93 37.63	(dB) -3.57 -3.53	Limit (dBuV/m) 74.0 74.0	Frequency (MHz) Over Limit (dB) 7.93 -36.37	Detector Peak Peak	Table (o) 160.00 169.50	(cm) 100 100	Vertical Vertical	Pass

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Product:		Bluetooth Speaker				Polarity			Horizontal	
	Mode		Keeping Transmitting			Test Voltage			DC3.7V	
Te	mperature		24 deg. C,			Humidity		56% RH		ł
	est Result:		Pass							
CC Part 1 1.0E+	15C Class B 1GHz-18GH:	z -2								
	90 -		M							
8	80-									
7	70-		/							
e	50 -		/							
		/			No.					
u/Angp) iavai	50	in the stand of the state of th		M •		an da han an a	hard y generation of the second	p performance of the second		h/huhihihiny/li
II/Angp) 4	all many and the second start second	a see a difference of the second state of the		•		hel in this part with provide some	hereing generatively the	d ocidad a state di mo	ennenikkinget finger	h/hu/hitehenyis
W/Ang 19491 3 2	40	anna Hiring ann Ailfe an Ailfe		•		eden and a state of the second se	hadiyayininyekilin	d seilingessestime	ennennik siten etter som	YA-ANNANAN
W/Ango) 4 3 2 1	40 - 30 - 20 -	Anno Harley in All Martin Contraction		M • 248	3.5	ha bining a Sunday karakawan 	bent gegenerup Miles	e notificación de mo		25
۲/۱۳۵۵ ۱۹۸۹ ۱ ۱	10	Results	Factor	248		Detector	Table	L	ANT	
4 (Indiana) 3 2 2 1	10	Results (dBuV/m)	Factor (dB)		3.5 Frequency (MHz)	L	L	Height (cm)		
level (dBuV/m 3 5 7	40- 30- 20- 10- 2470 Frequency			Limit	3.5 Frequency (MHz) Over	L	Table	Height		
(ngp) 4 2 1 0 No.	40 - 30 - 20 - 10 - 2470 Frequency (MHz)	(dBuV/m)	(dB)	Limit (dBuV/m)	3.5 Frequency (MHz) Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdic N/A Pass

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]	Product:		Bluetooth	1 Speaker		Detector			Vertical	
	Mode	ŀ	Keeping Transmitting			Test Voltage		DC3.7V		
Te	Temperature		24 deg. C,			Humidity		56% RH		
Те	est Result:	t Result: Pass								
FCC Pa	rt 15C Class B 1GHz-18Gi E+2 - 90 - 80 - 70 - 60 -	lz -2	M							
level (dBuV/m)	50- 40-	المحلولية ومستعند ومستعمل المحلول		M2	Maran and a state of the state	nas deter vill skille inderse hidde	her them with the sector	ىلەلۈر خەرلۇقىلىرىيەت مەربىتىر تەقىر	doffer methodisk ikalioner og so	allehang da salah Maturat
	40 - 40 - 40 - 40 - 40 - 40 - 40 - 40 -			2483.	5 Frequency (MHz)			1		2500
	40	Results (dBuV/m)	Factor (dB)		5	Detector	Table (o)	Height (cm)	ANT	2500
(m/Vull level (dBu/V)) No.	40- 40- 40- 40- 40- 40- 40- 40-	Results		2483. Limit	5 Frequency (MHz) Over Limit		Table	Height		2500 Verdic

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

2. The two modulation modes of GFSK and, Pi/4D-QPSK were tested. And only the worst case was recorded in the test report. GFSK was the worst case.

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8.0 Antenna Requirement

Applicable Standard

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

This product has a PCB antenna with gain 1.7dBi maximum. It fulfills the requirement of this section. Test Result: Pass

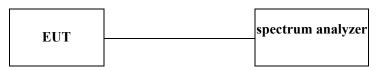
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9.0 20dB Bandwidth Measurement

Test Configuration



Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30kHz RBW and 100kHz VBW.

The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

Limit

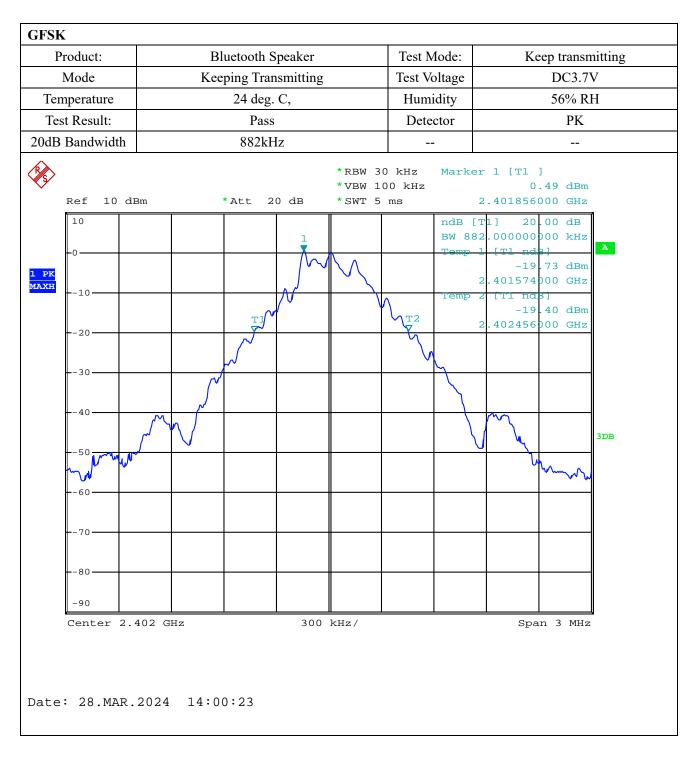
N/A

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Test Result



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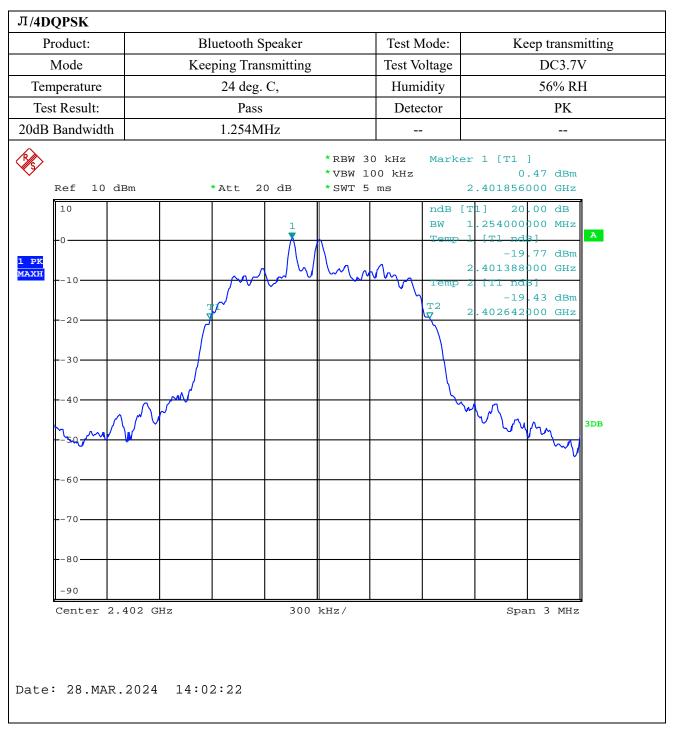


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Mode Keeping Transmitting Test Voltage DC3.7V emperature 24 deg. C, Humidity 56% RH Test Result: Pass Detector PK B Bandwidth 1.290MHz * RBW 30 kHz Marker 1 [T1] *VBW 100 kHz -0.32 dBm * Ref 10 dBm * Att 20 dB *SWT 5 ms 2.440018000 GHz 10 ndB [T1] 20 00 dB BW 1.290000 00 MHz -0 Temp 1 [T1 ndB] -20 .22 dBm -20 .22 dBm -20 .22 dBm	Product:	Bluetooth Speaker	Test Mode: Keep transmitting
emperature 24 deg. C, Humidity 56% RH rest Result: Pass Detector PK B Bandwidth 1.290MHz * RBW 30 kHz Marker 1 [T1] Ref 10 dBm * Att 20 dB * SWT 5 ms 2.440018000 GHz 10 Image: Detector index	Mode	Keeping Transmitting	
B Bandwidth 1.290MHz * RBW 30 kHz Marker 1 [T1] * * Ref 10 dBm * Att 20 dB * SWT 5 ms 2.440018000 GHz 10 ndB [T1] 20 00 dB BW 1.290000000 MHz -20 0.22 dBm 10 ndB [T1] 20 00 dB -20 0.22 dBm -20 0.22 dBm -10 -10 -20 0.22 dBm -20 0.22 dBm -20 -20 -20 0.22 dBm -20 0.22 dBm -20 -20 -20 0.22 dBm -20 0.29 dBm -20 -20 -20 0.29 dBm -20 0.29 dBm -20 -20 -20 0.29 dBm -20 0.29 dBm -20 -30 -40 -40 -40 -60 -60 -60 -60 -60	Temperature		Humidity 56% RH
* RBW 30 kHz Marker 1 [T1] * VBW 100 kHz -0.32 dBm * VBW 100 kHz -0.32 dBm * VBW 100 kHz -0.32 dBm * VBW 100 kHz -0.32 dBm 2.440018000 GHz Temp 1 [T1 ndb] -20,22 dBm 2.439388 00 GHz -20,22 dBm 2.439388 00 GHz -20,29 dBm T ² 2.440678 00 GHz -20,29 dBm T ² 2.440678 00 GHz -20,29 dBm -20,29 dBm -20,2	Test Result:		Detector PK
* VEW 100 kHz -0.32 dBm 2.440018000 GHz 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20dB Bandwidth	1.290MHz	
80	Ref 10 dl		RBW 30 kHz Marker 1 [T1] VBW 100 kHz -0.32 dBm SWT 5 ms 2.440018000 GHz ndB [T1] 20 00 dB BW 1.29000000 MHz Temp 1 [T1 ndB] -20.22 dBm 2.439388000 GHz Temp 2 [T1 ndB] -20.29 dBm T2 2.440678000 GHz
	Center 2.	44 GHz 300	z/ Span 3 MHz

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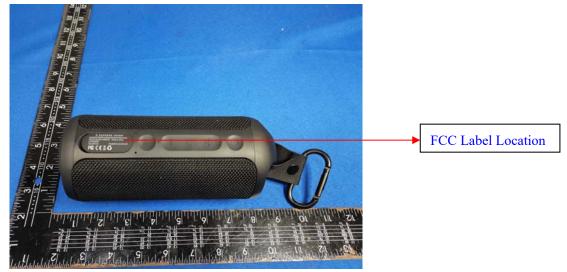
10.0 FCC ID Label

FCC ID: 2AHN6-AUBS103

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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11.0 Photo of testing

11.1 Conducted test View



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Radiated emission test view



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Photographs-EUT11.2

Outside View



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Inside View

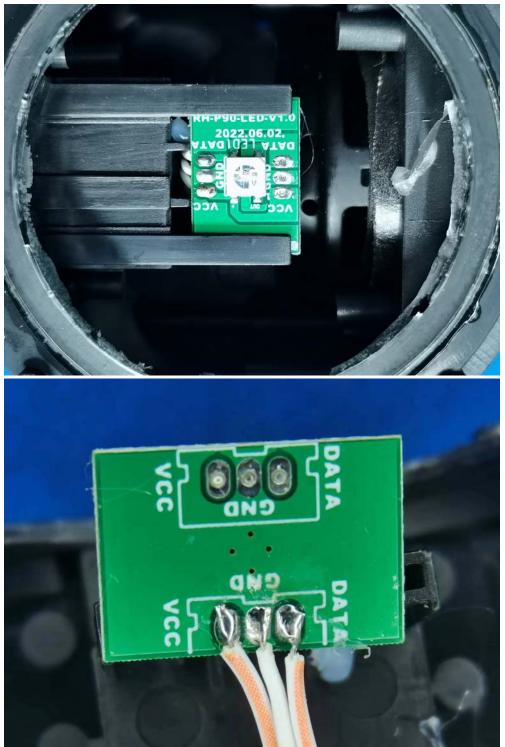


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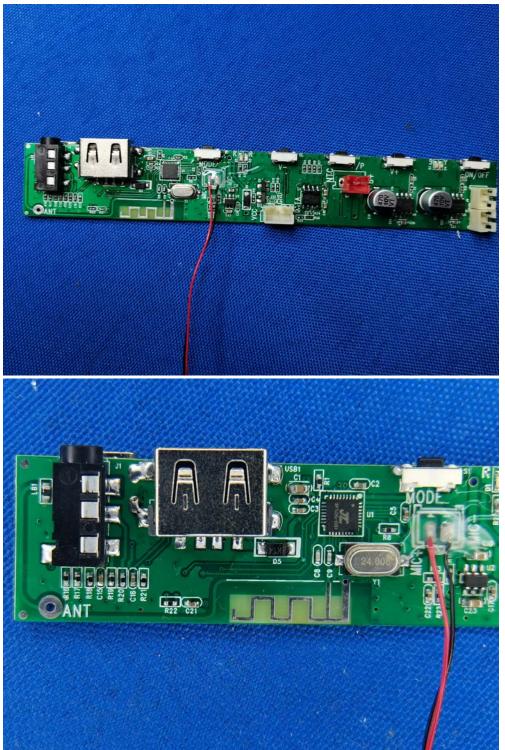
Inside View



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Inside View

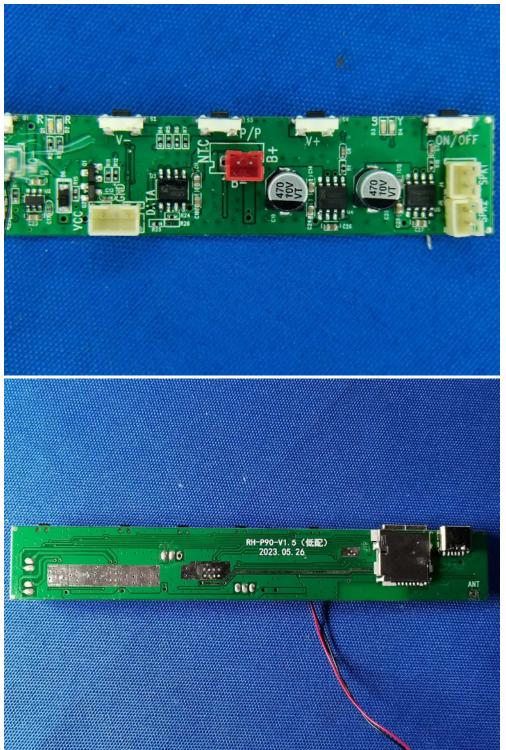


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Inside View



--End of the report--

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