

Applicant: QFX Inc.

Product: CASSETTE RECORDER WITH USB & BLUETOOTH

Model No.: RETRO-39BT, RETRO-40, Retro-39BT, Retro-40, Retro-40BT,

Retro-30BT, J-100BT, J-39BT, Retro-38BT, Retro-41

Trademark: QFX

Test Standards: FCC Part 15.249

It is herewith confirmed and found to comply with the Test result:

requirements set up by ANSI C63.10 & FCC Part 15 Subpart C, 15.249 regulations for the evaluation

electromagnetic compatibility

Approved By

Terry Tang

Manager

Dated: October 10, 2022

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 17025:2017 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

Date: 2022-10-10



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: QFX Inc.

Address: 2957 E. 46th Street, Vernon, Ca. 90058

Telephone: -Fax: --

1.3 Description of EUT

Product: CASSETTE RECORDER WITH USB & BLUETOOTH

Manufacturer: MEDIA POWER INDUSTRIAL LIMITED

Address: 58 JIN SHA ROAD, SHA JIAO VILLAGE, SHIPAI TOWN, DONGGUAN,

GUANGDONG, CHINA.

Trademark: QFX

Model Number: RETRO-39BT

Additional Model Name RETRO-40, Retro-39BT, Retro-40, Retro-40BT, Retro-30BT, J-100BT, J-39BT,

Retro-38BT, Retro-41

Rating: DC6V (UM-2 x 4 pcs or from a switching power supply)

Power Supply: Model: GJ15WD-0600120UW

Input: 100-240V~, 50/60Hz, 0.5A; Output: 6.0V, 1.2A, 7.2W

Remark: During the test, the power supply was selected for the final measurement, and it was the worst case.

Modulation Type: GFSK, Л/4DQPSK Operation Frequency: 2402-2480MHz

Channel Number: 79
Channel Separation: 1MHz
Hardware Version: V1.3
Software Version: V1.0

Serial No.: 00001-10000

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Antenna Designation PCB antenna with gain -0.58dBi Max (Get from the antenna specification)

1.4 Submitted Sample: 2 Samples

1.5 Test Duration

2022-09-23 to 2022-10-10

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

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	2022-07-15	2023-07-14			
LISN	R&S	EZH3-Z5	100294	2022-07-18	2023-07-17			
LISN	R&S	EZH3-Z5	100253	2022-07-18	2023-07-17			
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2022-07-18	2023-07-17			
Loop Antenna	EMCO	6507	00078608	2022-07-18	2025-07-17			
Spectrum	R&S	FSIQ26	100292	2022-07-15	2023-07-14			
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	2022-07-18	2023-07-17			
Power sensor	Anritsu	MA2491A	32263	2022-07-18	2023-07-17			
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	2022-07-15	2023-07-14			
EMI Test Receiver	RS	ESCS 30	834115/006	2022-07-15	2023-07-14			
Spectrum	HP/Agilent	E4407B	MY50441392	2022-07-15	2023-07-14			
Spectrum	RS	FSP	1164.4391.38	2022-07-15	2023-07-14			
RF Cable	Zhengdi	ZT26-NJ-NJ-8M/FA		2022-07-15	2023-07-14			
RF Cable	Zhengdi	7m		2022-07-15	2023-07-14			
Pre-Amplifier	Schwarebeck	BBV9743	#218	2022-07-15	2023-07-14			
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2022-07-15	2023-07-14			
LISN	SCHAFFNER	NNB42	00012	2022-08-18	2023-07-17			
ESPI Test Receiver	R&S	ESPI 3	100379	2022-07-15	2023-07-14			
LISN	R&S	EZH3-Z5	100294	2022-07-18	2023-07-17			

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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3.0 Technical Details

3.1 Summary of test results

The	EUT I	has	been	tested	accord	ling t	o the	followi	ng sp	ecifications:

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 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

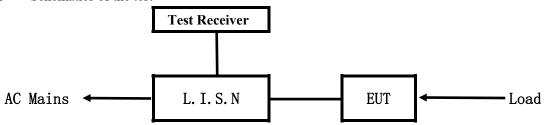
No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

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5. Power Line Conducted Emission Test

5.1 Schematics of the test

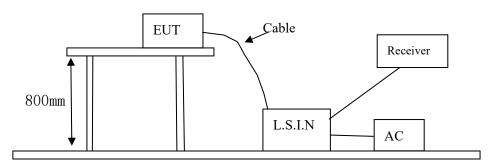


EUT: Equipment Under Test

5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.10-2013. 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

A. EUT

Device	Manufacturer	Model	FCC ID
		RETRO-39BT, RETRO-40,	
CASSETTE	MEDIA POWER	Retro-39BT, Retro-40,	
RECORDER WITH	INDUSTRIAL	Retro-40BT, Retro-30BT,	2AOMX-RETROBTJ3999
USB & BLUETOOTH	LIMITED	J-100BT, J-39BT, Retro-38BT,	
		Retro-41	

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B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

C. Peripherals

Device	Manufacturer	Model	Rating
N/A			

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

5.5 Power line conducted Emission Limit according to Paragraph 15.207

Frequency	Limits (dB µ V)			
(MHz)	Quasi-peak Level	Average Level		
$0.15 \sim 0.50$	66.0~56.0*	56.0~46.0*		
$0.50 \sim 5.00$	56.0	46.0		
5.00 ~ 30.00	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:

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

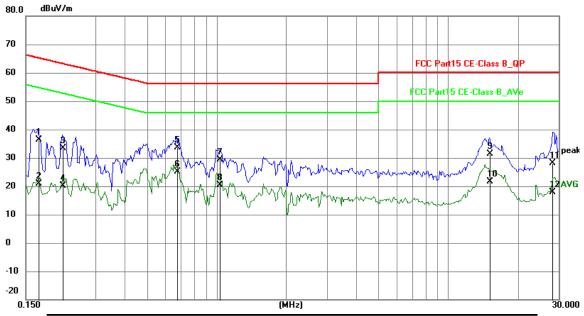
EUT Operating Environment

Temperature: 25°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

EUT set Condition: Communication by BT

Results: Pass

Please refer to following diagram for individual



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin	
	MHz					dB	Detector
1	0.1695	26.70	9.77	36.47	64.98	-28.51	QP
2	0.1695	11.09	9.77	20.86	54.98	-34.12	AVG
3	0.2163	23.61	9.75	33.36	62.96	-29.60	QP
4	0.2163	10.27	9.75	20.02	52.96	-32.94	AVG
5	0.6726	23.86	9.78	33.64	56.00	-22.36	QP
6 *	0.6726	15.39	9.78	25.17	46.00	-20.83	AVG
7	1.0353	19.56	9.79	29.35	56.00	-26.65	QP
8	1.0353	10.63	9.79	20.42	46.00	-25.58	AVG
9	15.1173	21.05	10.39	31.44	60.00	-28.56	QP
10	15.1173	11.22	10.39	21.61	50.00	-28.39	AVG
11	28.2291	17.05	11.19	28.24	60.00	-31.76	QP
12	28.2291	6.74	11.19	17.93	50.00	-32.07	AVG

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

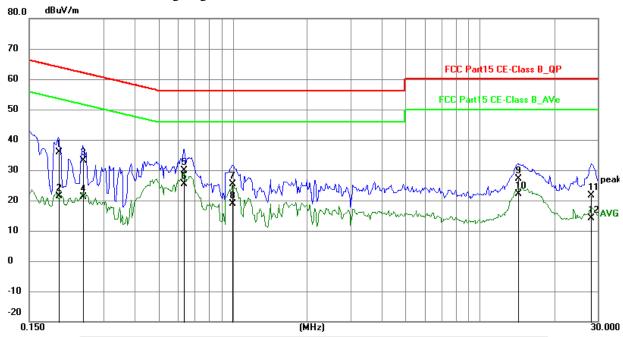
EUT Operating Environment

Temperature: 25°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

EUT set Condition: Communication by BT

Results: Pass

Please refer to following diagram for individual



				(
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin	
		MHz					dB	Detector
1		0.1968	26.09	9.75	35.84	63.74	-27.90	QP
2		0.1968	11.62	9.75	21.37	53.74	-32.37	AVG
3		0.2475	23.29	9.75	33.04	61.84	-28.80	QP
4		0.2475	11.34	9.75	21.09	51.84	-30.75	AVG
5		0.6336	20.21	9.78	29.99	56.00	-26.01	QP
6	*	0.6336	15.51	9.78	25.29	46.00	-20.71	AVG
7		0.9963	15.62	9.79	25.41	56.00	-30.59	QP
8		0.9963	9.10	9.79	18.89	46.00	-27.11	AVG
9		14.2398	16.74	10.35	27.09	60.00	-32.91	QP
10		14.2398	11.81	10.35	22.16	50.00	-27.84	AVG
11		28.1823	10.35	11.19	21.54	60.00	-38.46	QP
12		28.1823	3.01	11.19	14.20	50.00	-35.80	AVG

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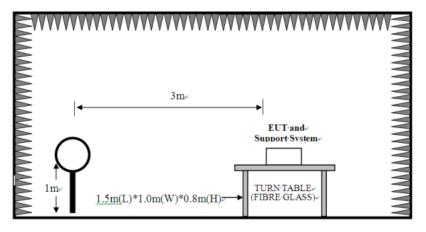


6 Radiated Emission Test

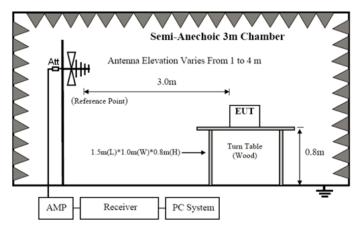
- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size 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 (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



For radiated emissions from 30MHz to1GHz



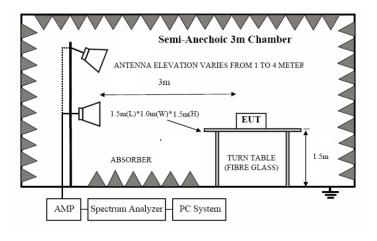
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For radiated emissions above 1GHz



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

Fundamental Frequency	Field Stre	ength of Fundame	ntal (3m)	Field S	trength of Harmo	nics (3m)
(MHz)	mV/m	n dBuV/m			dBuV/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.

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

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

Note:

- 1. RF Voltage $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 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 lying position.

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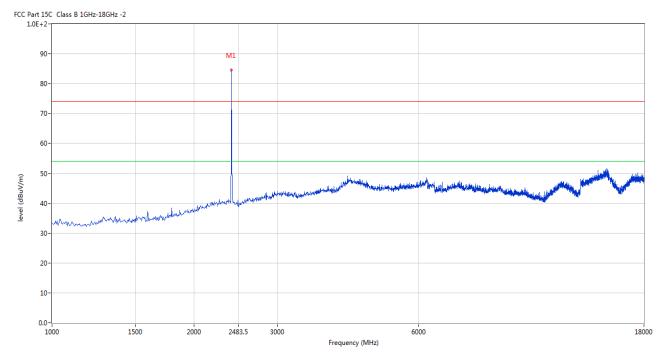


6.5 Test result

A Fundamental & Harmonics Radiated Emission Data

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

Horizontal



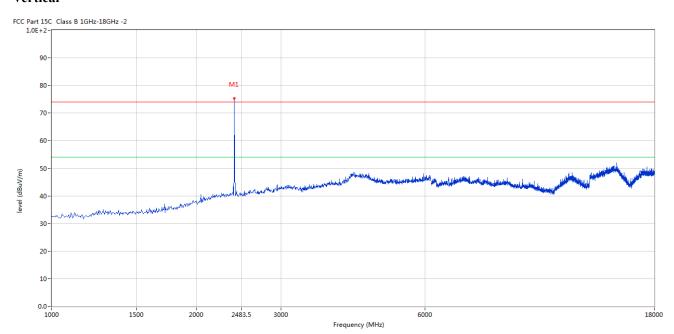
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2402	84.52	-3.57	114.0	-29.48	Peak	0.00	100	Horizontal	Pass

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Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2402	75.48	-3.57	114.0	-38.52	Peak	0.00	100	Vertical	Pass

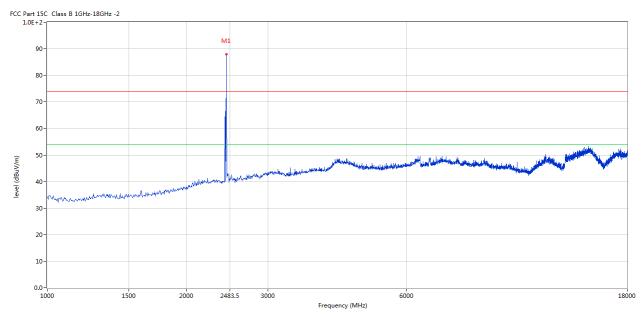
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Please refer to the following test plots for details: Middle Channel-2441MHz

Horizontal



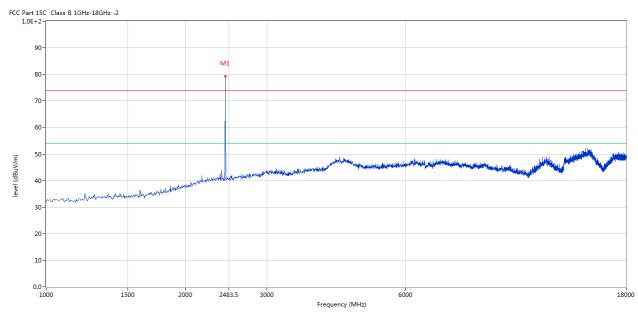
No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
1	2441	88.04	-3.57	114.0	-25.96	Peak	0.00	100	Horizontal	Pass

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Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2441	79.21	-3.57	114.0	-34.79	Peak	0.00	100	Vertical	Pass

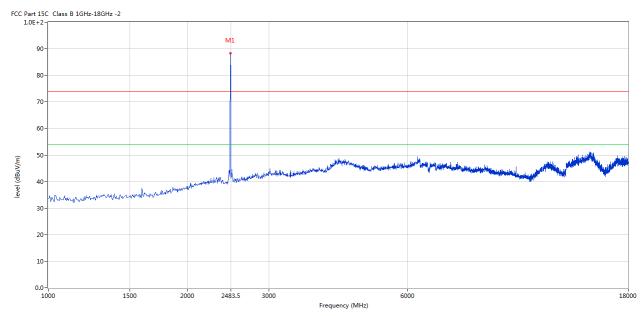
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Please refer to the following test plots for details: High Channel-2480MHz

Horizontal



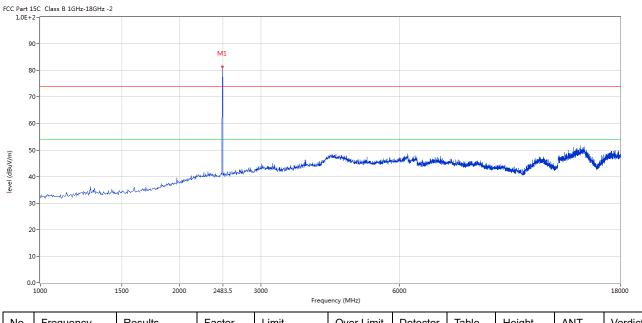
ı	No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
	1	2480	88.82	-3.57	114.0	-25.18	Peak	0.00	100	Horizontal	Pass

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Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	81.41	-3.57	114.0	-32.59	Peak	0.00	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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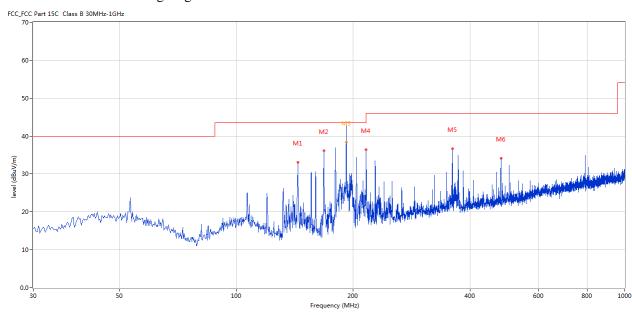


B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(0)	(cm)		
1	143.947	33.11	-17.10	43.5	-10.39	Peak	83.00	100	Horizontal	Pass
2	167.948	36.08	-16.14	43.5	-7.42	Peak	120.00	100	Horizontal	Pass
3*	191.950	38.42	-14.07	43.5	-5.08	QP	38.00	100	Horizontal	Pass
4	215.951	36.33	-13.60	43.5	-7.17	Peak	46.00	100	Horizontal	Pass
5	359.960	36.71	-9.46	46.0	-9.29	Peak	109.00	100	Horizontal	Pass
6	479.968	34.15	-7.40	46.0	-11.85	Peak	0.00	100	Horizontal	Pass

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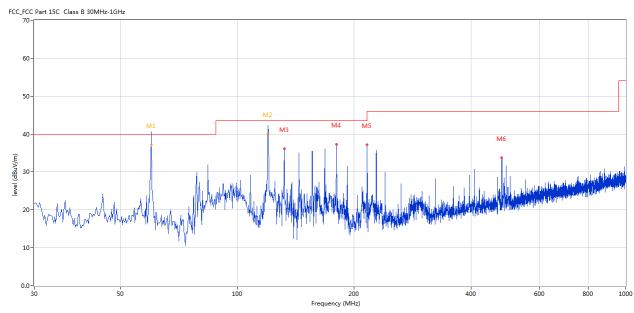


Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1*	60.062	37.15	-12.97	40.0	-2.85	QP	354.00	100	Vertical	Pass
2*	119.945	40.02	-15.32	43.5	-3.48	QP	359.00	100	Vertical	Pass
3	132.067	36.13	-17.03	43.5	-7.37	Peak	359.00	100	Vertical	Pass
4	180.070	37.37	-15.31	43.5	-6.13	Peak	349.00	100	Vertical	Pass
5	215.951	37.19	-13.60	43.5	-6.31	Peak	346.00	100	Vertical	Pass
6	479.725	33.79	-7.41	46.0	-12.21	Peak	360.00	100	Vertical	Pass

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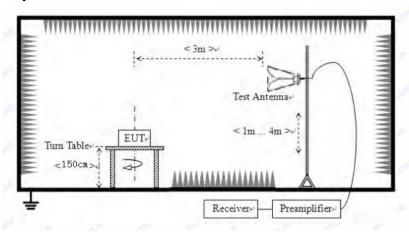


7. Band Edge

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 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.

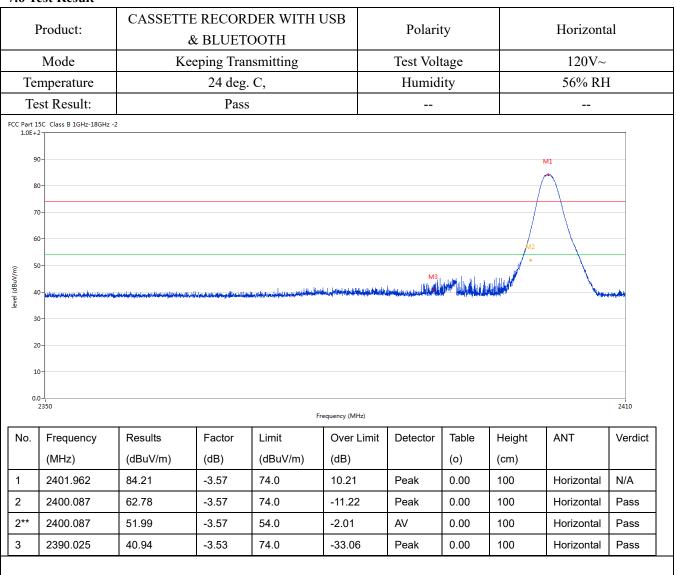
The report refers only to the sample tested and does not apply to the bulk.

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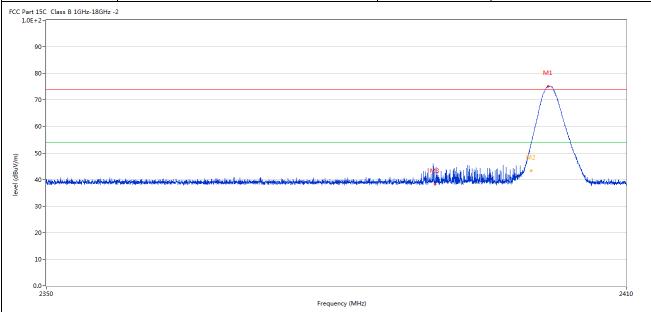
7.6 Test Result



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Product:	CASSETTE RECORDER WITH USB & BLUETOOTH	Detector	Vertical
Mode	Keeping Transmitting	Test Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		

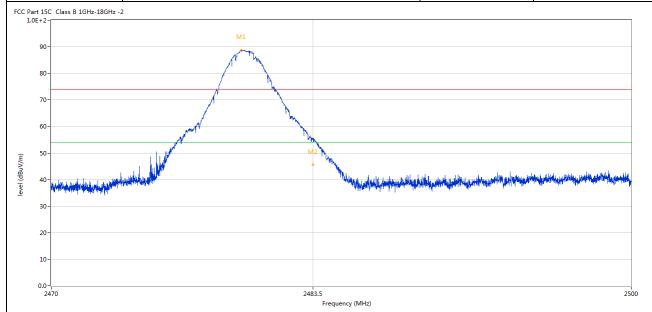


	No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
	1	2401.812	75.22	-3.57	74.0	1.22	Peak	0.00	100	Vertical	N/A
	2	2400.057	53.37	-3.57	74.0	-20.63	Peak	0.00	100	Vertical	Pass
	2**	2400.057	43.31	-3.57	54.0	-10.69	AV	0.00	100	Vertical	Pass
	3	2390.070	38.30	-3.53	74.0	-35.70	Peak	0.00	100	Vertical	Pass
Г											

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Product:	CASSETTE RECORDER WITH USB & BLUETOOTH	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2479.800	88.70	-3.57	74.0	14.70	Peak	0.00	100	Horizontal	N/A
2	2483.482	55.61	-3.57	74.0	-18.39	Peak	0.00	100	Horizontal	Pass
2**	2483.482	45.58	-3.57	54.0	-8.42	AV	0.00	100	Horizontal	Pass

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	Product:	CASS		CORDER WI UETOOTH	TH USB &		Detecto	or	Vertica	al
	Mode		Keepir	ng Transmittir	ng	7	Test Volta	age	120V	~
Т	emperature		2	4 deg. C,			Humidi		56% R	Н
]	Test Result:			Pass						
	t 15C Class B 1GHz-18GHz E+2-	-2				•		•		
level (dBuV/m)	90 - 80 - 70 - 60 - 50 - 30 - 20 - 10 - 10 - 10 - 10 - 10 - 10 - 1	anderson shines distributed	M1	M2	المراجعة الم	ally construent data law (in selection) and in section	sitting of a street of the state of the stat	مناحية الإركاء أويضان مطالحون	i-alta conferioran ballarili.	and district from
	0.0-			2483.5						2500
				Fre	quency (MHz)	<u></u>	ı	Γ		I
	_		Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdi
No	. Frequency	Results	1 40101			1	(-)	()	1	
No	. Frequency (MHz)	Results (dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
No 1				(dBuV/m) 74.0	(dB) 5.24	Peak	0.00	100	Vertical	N/A

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

2. For Restricted band test, 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. The antenna gain is -0.58dBi Max. It fulfills the requirement of this section. Test Result: Pass

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SK Modulation							1			
Product:	CASSETTE	E RECORDER BLUETOO		SB &	Test	nsmitting	smitting			
Mode	K	eeping Transn	nitting		Test V	Voltage		120	V~	
Temperature		24 deg. C	,		Hun	nidity		56%	RH	
Test Result:						ector		P)	K	
dB Bandwidth								_	-	
Ref Lvl 10 dBm	Mark ndB BW	er 1 [T1 : 20 865.73146	.00 dB	VI		30 ki 100 ki 8.5 m	Hz	F Att	40 dB	n
0			1			▼ ₁	[T1]	2.40183	.80 dBm	
-10						BW ▼ _{Tl}	86 [T1]	5.73146	293 kHz	
-20			\sim		W.	∇ _{T1}	[T1]	2.40154	008 GHz .14 dBm	
1 MAX		لمر				N		2.40240	7501 G112	11
-40		$^{\prime}$					7			
5.0								/\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		
\www.									Mum	
-60										
70										
-80										
-90 Center 2.	402 GH2		300	kH7/				Qn:	ın 3 MHz	

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GFSK Modulation Product:	ı		CORDER ' JETOOTI	WITH US H	В &	Т	est Mode:		Keep tra	insmitting	
Mode	Keeping Transmitting 24 deg. C,						est Voltage	120V~			
Temperature							Humidity		56%	6 RH	
Test Result:	Pass 865.73kHz						Detector		I	PK	
20dB Bandwidth											
Ref Lvl 10 dBm	1	ndB	1 [T1 n 20. 5.731462	00 dB	V	BW BW WT	30 kH 100 kH 8.5 ms	z	F Att	40 dB	ı
10				1				[T1]	-0 2.44083	.04 dBm	A
-10					\mathcal{N}	\	ndB BW ▼ _{T1}	86 [T1]	20 5.73146 -20	.00 dB 293 kHz .28 dBm	
-20			ŢĄ,	/ •		V	V _{T2} ∇ _{T2}	[T1]	2.44054	008 GHz	
1 MAX			<i></i>							301 0112	1M
-40								<u> </u>	. 0		
-50	/ W	<i>√</i>								. Aut	
-60									• •	Munum	
-70											
-80											
-90	111 -									2	
Center 2 Date: 9.	.441 GH	Z	49:36	300	kHz/				Spa	n 3 MHz	

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Product:	CASSETTE RECORDER WITH USB & BLUETOOTH Keeping Transmitting						est Mode:		Keep tra	nsmitting	
Mode							est Voltage		120V~ 56% RH		
Temperature	24 deg. C, Pass					Humidity Detector					
Test Result:									I	PΚ	
20dB Bandwidth		86	65.73kHz								
Ref Lvl		ndB	1 [T1 n 20. 5.731462	00 dB	V	BW BW WT	30 kH 100 kH 8.5 ms	Iz	F Att	40 dB	ı
10				1			v ₁	[T1]	2.47983	.42 dBm 467 GHz	A
-10					\bigvee	\	ndB BW ∇ _{T1}	86 [T1]	20 5.73146 -19	.00 dB 293 kHz .92 dBm	
-20			T.			\ 	$\sqrt{T_2} \Delta^{13}$	[T1]	2.47954 -19	008 GHz .91 dBm	
1MAX -30			<u> </u>				\/\	\	2.10010		1M
-40								4			
-50 	Mary Control	$\sqrt{}$						V		<u> </u>	
-60										num	
-70											
-80											
-90											
Center 2	.48 GHz			300	kHz/				Spa	n 3 MHz	

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Product:	CASS	CASSETTE RECORDER WITH USB & BLUETOOTH					est Mode:	Keep transmitting				
Mode			ng Transm			Те	st Voltage	120V~				
Temperature 24 deg. C,							Humidity		56%			
Test Result:			Pass				Detector		PI	Κ		
0dB Bandwidth		-	1.232MHz							-		
Ref Lvl		ndB		.00 dB		3W 3W	30 k 100 k	Hz	F Att	40 dB		
10 dBm		BW 1	L.232464	193 MHz	SI	TV	8.5 m	s U	nit	dBm	l.	
0				1			V ₁	[T1]	-1 2.40183	.80 dBm	A	
					لسم		ndF BW ▽ Ti	T1)	20 1.23246 -22	.00 dB 493 MHz		
-10		- d		* ^د ر		_}~\		2 [T1]	2.40135			
1MAX							ţ		2.40259	218 GHz	1M	
-30												
-40	<i>γ</i> \.	N.						μV	~			
-50	*									Munn		
-60												
-70												
-80												
-90 Center 2.	402 GI	Hz		300	kHz/				Spa	ın 3 MHz	ļ	

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Product:	CASSETTE RECORDER WITH USB & BLUETOOTH						est Mode:		Keep tra	nsmitting	
Mode	Keeping Transmitting						est Voltage		12	0V~	
Temperature		24	deg. C,			I	Humidity		56%	6 RH	
Test Result:			Pass				Detector		F	PΚ	
20dB Bandwidth		1.2	232MHz								
Ref Lvl	Ma no BV	dВ	1 [T1 n 20.	00 dB	V	BW BW WT	30 ki 100 ki 8.5 m	Hz	F Att	40 dB	1
10 dBiii	BV		.232404	:93 MHZ	د	W T			.11.0		i
				1			V 1	[T1]	-0 2.44083	.03 dBm 467 GHz	A
0					lm	~~	ndB BW ▼T1	[т1]	20 1.23246	.00 dB 493 MHz	
-10		ŢĮ				,,,	\dagger \dagg	2 [T1]	2.44035	972 GHz	
-20 1MAX								\	2.44159	218 GHz	1M
-30	h										
-50		<i>)</i>						M		\s. \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
										~W	
-60											
-70											
-80											
-90 Center 2	441 011-			200	kHz/				Cr.o	n 2 MII-]
	.441 GHz .OCT.2022			300	KHZ/				Spa	n 3 MHz	

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Л/4DQPSK Mode	ulation										
Product:	CASSI		CORDER UETOOTI	WITH US	В &	Те	est Mode:		Keep tra	ansmitting	
Mode		Keepin	g Transmitting				Test Voltage		120V~		
Temperature		2	4 deg. C,			F	Iumidity		569	% RH	
			Pass			I	Detector]	PK	
20dB Bandwidth	1.	.232MHz									
Ref Lvl 10 dBm		ndB	1 [T1 r 20. 1.232464	.00 dB	V	BW BW WT	30 ki 100 ki 8.5 ms	Hz	F Att nit	40 dB	ı
10				1			▼1	[T1]	2.47983	.47 dBm 467 GHz	A
-10					lω	~~	BW VT1	[T1]	1.23246	493 MHz	
-20		T.1	√ 				∇Ţ	2 [T1]	2.47935 -19 2.48059	972 GHz .61 dBm 218 GHz	
1MAX -30											1MA
- 40	_										
-50 %		/ 🗸						_\ _\	w\w.	M. /	
-60										wo.W.	
-70											
-80											
-90 Center 2				300	kHz/				Spa	ın 3 MHz	
Date: 9	.OCT.20	122 13:	57:36								

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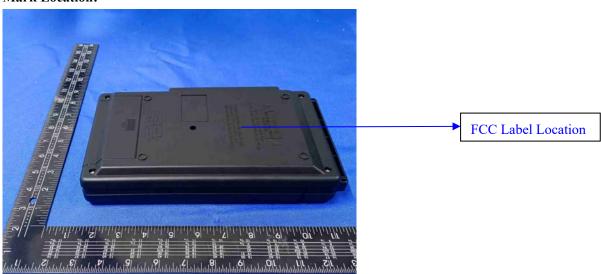
10.0 FCC ID Label

FCC ID: 2AOMX-RETROBTJ3999

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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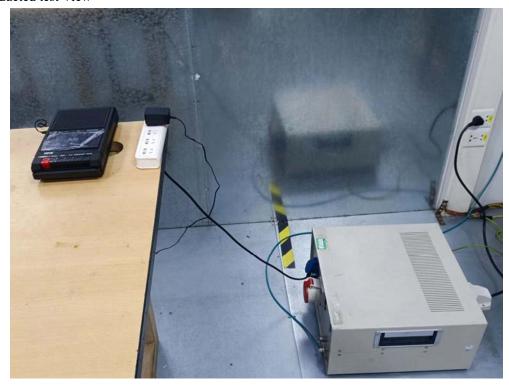
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11.0 Photo of testing

11.1 Conducted test View



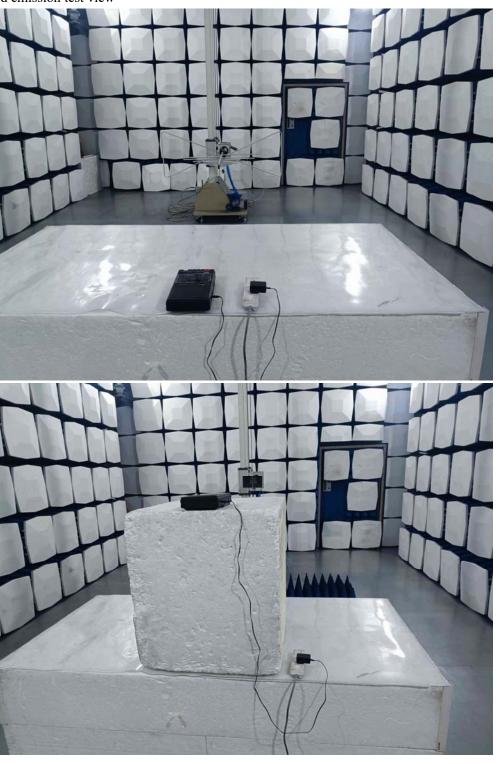
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Radiated emission test view



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11.2 Outside View



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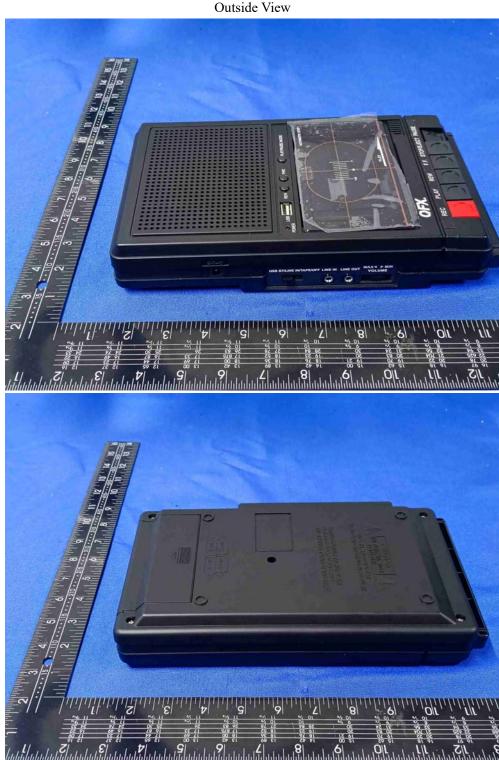
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Outside View



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Outside View





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Power Supply



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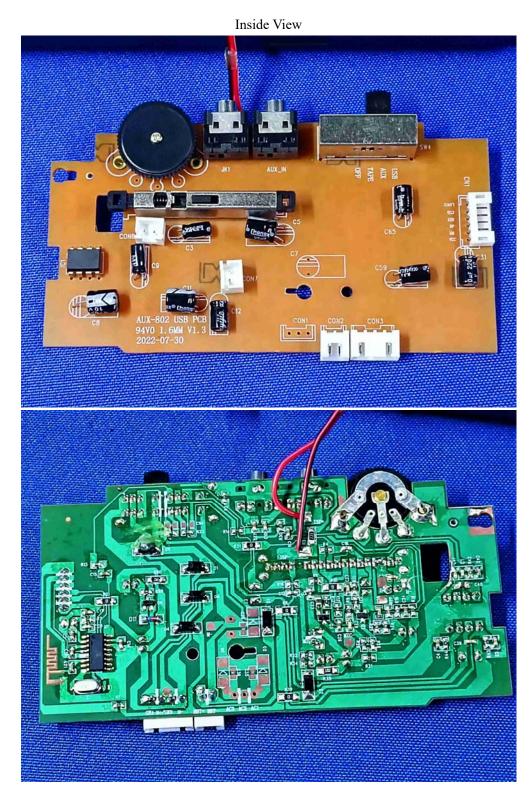
adopt any other remedies which may be appropriate.

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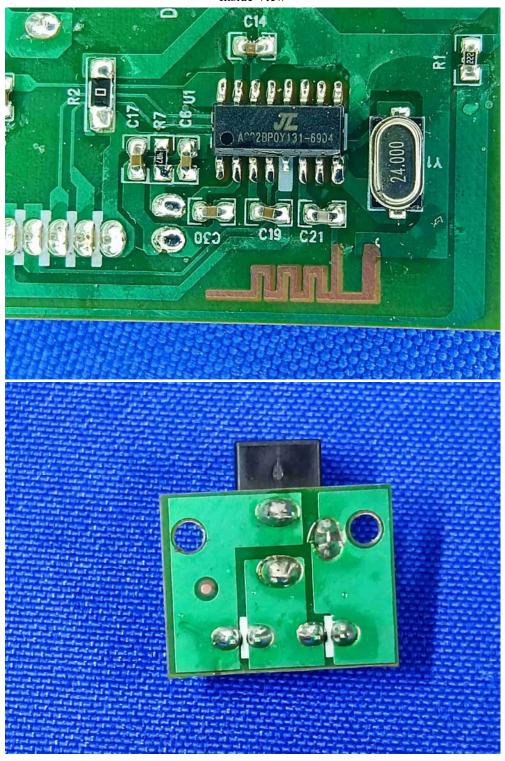
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Inside View



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

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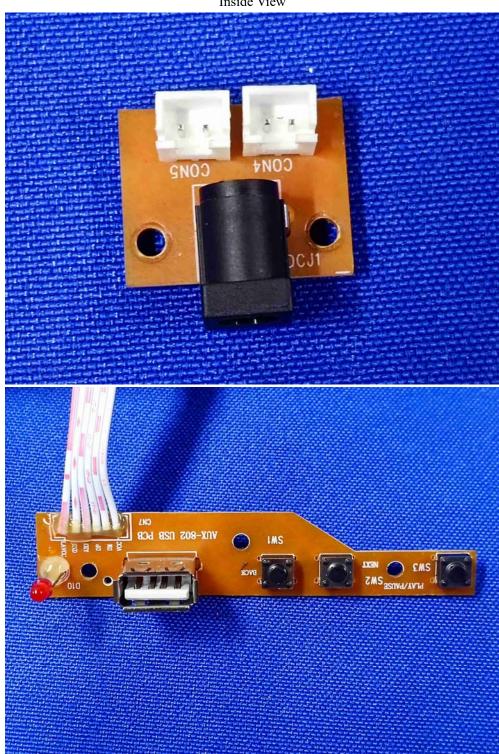
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Inside View



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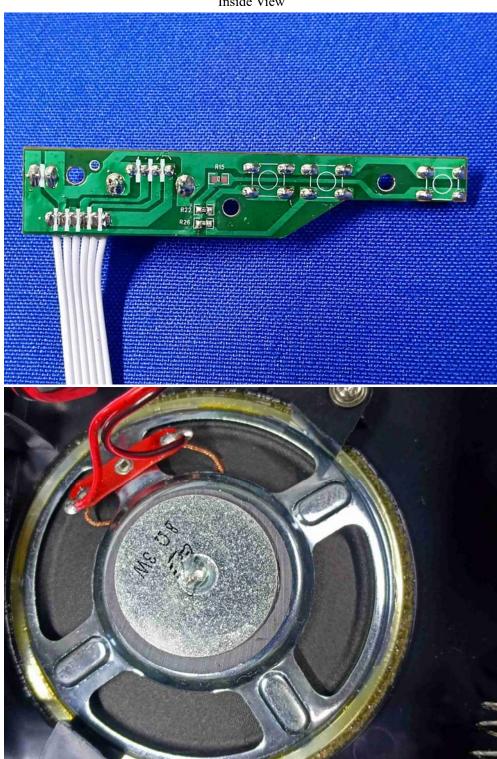
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Inside View



-End of the Report--

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