



Report No.: FCC1910072-01 File Reference No.: 2019-10-23

Applicant: Sharper Image

Product: Wireless TV Speaker

Model No.: 207072-01, TV-1000

Brand Name: 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 C63.4&FCC Part 15 Subpart C, Paragraph 15.249 regulations for the evaluation of

electromagnetic compatibility

Approved By

Jack Chung

Jack Chung

Manager

Dated: October 23, 2019

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

Report No.: FCC1910072-01 Page 2 of 38

Date: 2019-10-23



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

Date: 2019-10-23



Test Report Conclusion

Content

1.0	General Details	4
1.1	Test Lab Details	4
1.2	Applicant Details	4
1.3	Description of EUT	4
1.4	Submitted Sample	4
1.5	Test Duration.	5
1.6	Test Uncertainty.	5
1.7	Test By	5
2.0	List of Measurement Equipment	6
3.0	Technical Details	7
4.0	EUT Modification.	7
5.0	Power Line Conducted Emission Test.	8
5.1	Schematics of the Test.	8
5.2	Test Method and Test Procedure.	8
5.3	Configuration of the EUT.	8
5.4	EUT Operating Condition.	9
5.5	Conducted Emission Limit.	9
5.6	Test Result.	9
6.0	Radiated Emission test.	12
6.1	Test Method and Test Procedure.	12
6.2	Configuration of the EUT.	12
6.3	EUT Operation Condition.	12
6.4	Radiated Emission Limit.	13
6.5	Test Result.	14
7.0	Band Edge	22
7.1	Test Method and Test Procedure.	22
7.2	Radiated Test Setup.	22
7.3	Configuration of the EUT.	22
7.4	EUT Operating Condition.	22
7.5	Band Edge Limit.	22
7.6	Band Edge Test Result.	23
8.0	Antenna Requirement.	27
9.0	20dB bandwidth measurement.	28
10.0	FCC ID Label	31
11.0	Photo of Test Setup and EUT View.	32

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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2019-10-23



Page 4 of 38

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: Sharper Image

Address: 27725 Stansbury Blvd., Suite #175, Farmington Hills, MI 48334 USA

Telephone: 248-741-5100 Fax: 248-741-5100

1.3 Description of EUT

Product: Wireless TV Speaker

Manufacturer: Shenzhen HPS Science & Technology Co., LTD

Address: Room 508, Building 14, Majialong Industrial Zone, Nantou Street, Nanshan

District, Shenzhen, China

Brand Name: SHARPER IMAGE

Model Number: 207072-01 Additional Model Name TV-1000 Input Voltage: DC9V, 1.5V

Modulation Type: GFSK

Operation Frequency 2403-2478MHz

Channel Seperation 1MHz

Antenna Designation Integral antenna with gain 1.0dBi Max

Power Supply: Model: HYY-090150u; Input: 100-240V, 50/60Hz; Output: DC9V, 1.5A

1.4 Submitted Sample

1 Sample

Report No.: FCC1910072-01 Page 5 of 38

Date: 2019-10-23



1.5 Test Duration

209-10-11 to 2019-10-23

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

Terry Tang

The sample tested by

Print Name: Terry Tang

Report No.: FCC1910072-01 Page 6 of 38



2.0 Test Equipment					
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	2019-01-20	2020-01-19
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	2019-01-08	2020-01-07

Page 7 of 38

Report No.: FCC1910072-01

Date: 2019-10-23



3.0 Technical Details

3.1 Summary of test results

The EUT has been tested according	to the following specifications:
-----------------------------------	----------------------------------

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

Page 8 of 38

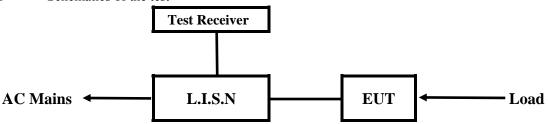
Report No.: FCC1910072-01

Date: 2019-10-23



5. Power Line Conducted Emission Test

5.1 Schematics of the test

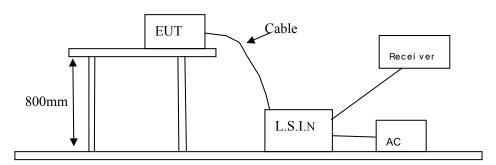


EUT: Equipment Under Test

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	
Wireless TV Speaker	Shenzhen HPS Science &	207072-01,	2ALJA-207072	
Wireless TV Speaker	Technology Co., LTD	TV-1000		

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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Report No.: FCC1910072-01 Page 9 of 38

Date: 2019-10-23



B. Internal Device

Device	Manufacturer	Model	FCC ID/SDOC
N/A			

C. Peripherals

Device	Manufacturer	Model	Rating

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 evel	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.

Date: 2019-10-23



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

EUT Operating Environment

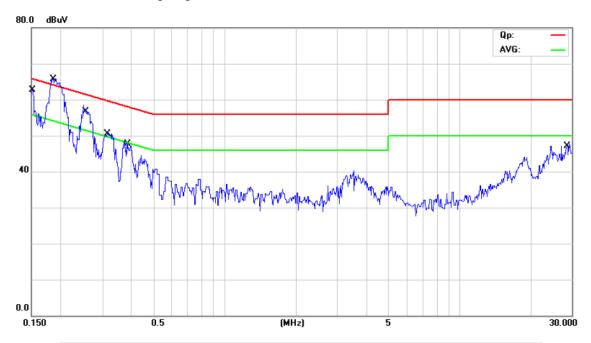
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep Transmitting

Equipment Level: Class B

Results: PASS

Please refer to following diagram for individual



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1853	52.30	9.76	62.06	64.24	-2.18	QP	
2		0.1853	18.30	9.76	28.06	54.24	-26.18	AVG	
3		0.1514	34.50	9.78	44.28	65.92	-21.64	QP	
4		0.1514	-1.80	9.78	7.98	55.92	-47.94	AVG	
5		0.2575	40.90	9.75	50.65	61.51	-10.86	QP	
6		0.2575	13.60	9.75	23.35	51.51	-28.16	AVG	
7		0.3105	32.90	9.76	42.66	59.96	-17.30	QP	
8		0.3105	0.40	9.76	10.16	49.96	-39.80	AVG	
9		0.3810	29.50	9.76	39.26	58.26	-19.00	QP	
10		0.3810	7.70	9.76	17.46	48.26	-30.80	AVG	
11		28.5990	26.40	11.21	37.61	60.00	-22.39	QP	
12		28.5990	15.70	11.21	26.91	50.00	-23.09	AVG	

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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2019-10-23



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

EUT Operating Environment

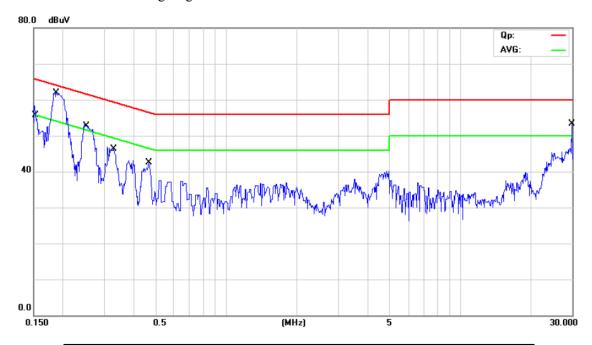
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep Transmitting

Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1528	33.10	9.78	42.88	65.85	-22.97	QP	
2		0.1528	-1.40	9.78	8.38	55.85	-47.47	AVG	
3	*	0.1900	48.60	9.76	58.36	64.04	-5.68	QP	
4		0.1900	21.70	9.76	31.46	54.04	-22.58	AVG	
5		0.2516	39.90	9.75	49.65	61.70	-12.05	QP	
6		0.2516	10.60	9.75	20.35	51.70	-31.35	AVG	
7		0.3345	30.10	9.76	39.86	59.34	-19.48	QP	
8		0.3345	-2.60	9.76	7.16	49.34	-42.18	AVG	
9		29.6520	28.50	11.28	39.78	60.00	-20.22	QP	
10		29.6520	19.90	11.28	31.18	50.00	-18.82	AVG	
11		0.4680	22.20	9.77	31.97	56.55	-24.58	QP	
12		0.4680	-5.00	9.77	4.77	46.55	-41.78	AVG	

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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Report No.: FCC1910072-01 Page 12 of 38

Date: 2019-10-23

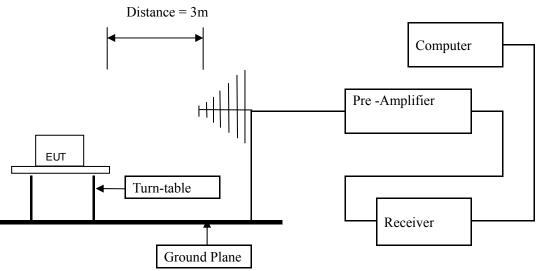


6 Radiated Emission Test

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



- 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.

Report No.: FCC1910072-01 Page 13 of 38

Date: 2019-10-23



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	nics (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.

Report No.: FCC1910072-01 Page 14 of 38

Date: 2019-10-23



6.5 Test result

A Fundamental & Harmonics Radiated Emission Data

Product:	Wireless TV Speaker	Test Mode:	Keep transmitting-Low Channel
Test Item:	Fundamental Radiated Emission	Temperature:	25℃
	Data		
Test Voltage:	120V~	Humidity:	56%
Test Result:	Pass		

Frequency	Emission PK/AV	Horiz /	Limits PK/AV	Margin
(MHz)	(dBuV/m)	Vert	(dBuV/m)	(dB)
2403	91.02 (PK)	Н	114/94	-2.98
2403	85.05 (PK)	V	114/94	-8.95
4806	47.61 (PK)	Н	74/54	-6.39
4806		V	74/54	
7209		H/V	74/54	
9612		H/V	74/54	
12015		H/V	74/54	
14418		H/V	74/54	
16821		H/V	74/54	
19224		H/V	74/54	
21627		H/V	74/54	
24030		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.

Report No.: FCC1910072-01 Page 15 of 38

Date: 2019-10-23



Product:	Wireless TV Speaker	Test Mode:	Keep transmitting-Middle Channel
Test Item:	Fundamental Radiated Emission	Temperature:	25℃
	Data		
Test Voltage:	120V~	Humidity:	56%
Test Result:	Pass		

Frequency	Emission PK/AV	Horiz /	Limits PK/AV	Margin
(MHz)	(dBuV/m)	Vert	(dBuV/m)	(dB)
2439	84.16 (PK)	Н	114/94	-9.84
2439	81.02 (PK)	V	114/94	-12.98
4878	48.39 (PK)	Н	74/54	-5.61
4878		V	74/54	
7317		H/V	74/54	
9756		H/V	74/54	
12195		H/V	74/54	
14634		H/V	74/54	
17073		H/V	74/54	
19512		H/V	74/54	
21951		H/V	74/54	
24390		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.

Page 16 of 38

Report No.: FCC1910072-01

Date: 2019-10-23



Product:	Wireless TV Speaker	Test Mode:	Keep transmitting-High Channel		
Test Item:	Fundamental Radiated Emission	Temperature:	25℃		
	Data				
Test Voltage:	120V~	Humidity:	56%		
Test Result:	Pass				

Frequency	Emission PK/AV	Horiz /	Limits PK/AV	Margin
(MHz)	(dBuV/m)	Vert	(dBuV/m)	(dB)
2478	85.86 (PK)	Н	114/94	-8.14
2478	81.83 (PK)	V	114/94	-12.17
4956		Н	74/54	
4956		V	74/54	
7434		Н	74/54	
7434		V	74/54	
9912		H/V	74/54	
12390		H/V	74/54	
14868		H/V	74/54	
17346		H/V	74/54	
19824		H/V	74/54	
22302		H/V	74/54	
24780		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.

Page 17 of 38

Report No.: FCC1910072-01

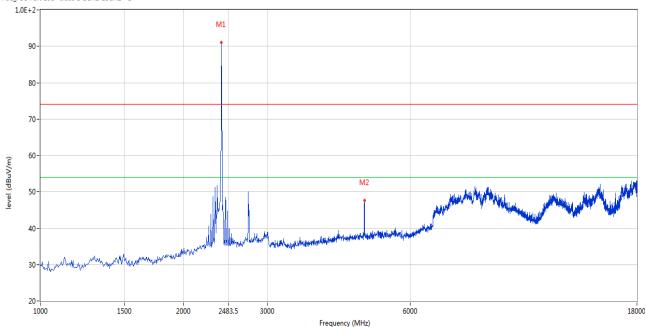
Date: 2019-10-23



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

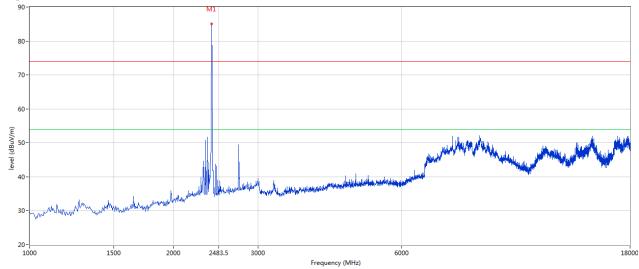
Horizontal





Vertical

FCC_FCC Part 15B Class B 1GHz-18GHz - 2



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

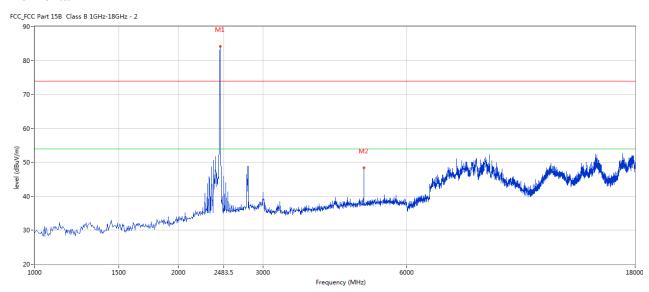
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2019-10-23

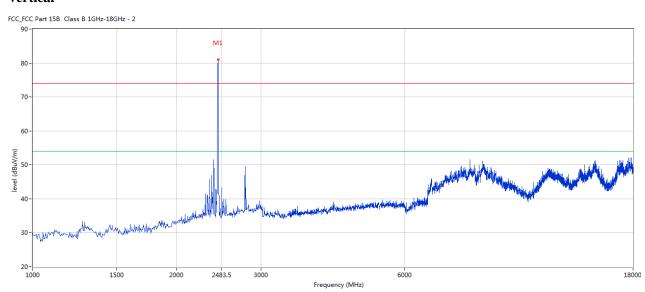


Please refer to the following test plots for details: Middle Channel

Horizontal



Vertical

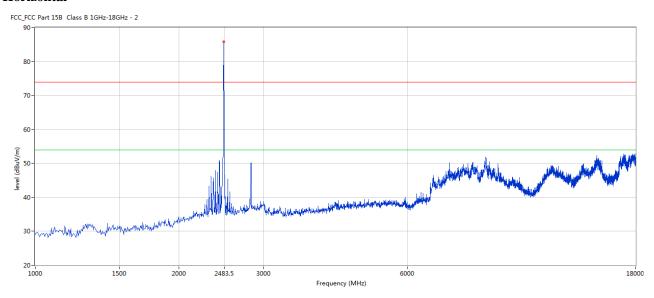


Date: 2019-10-23

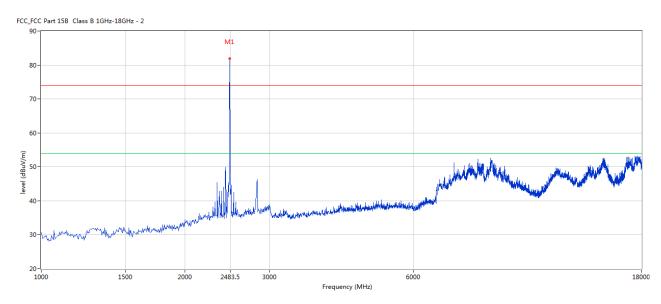


Please refer to the following test plots for details: High Channel

Horizontal



Vertical



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

Report No.: FCC1910072-01 Page 20 of 38

Date: 2019-10-23



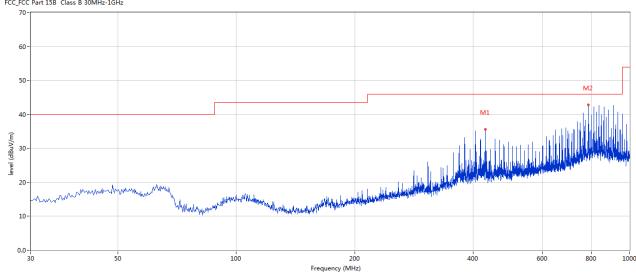
B. **General Radiated Emission Data** Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual

FCC_FCC Part 15B Class B 30MHz-1GHz



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	430.025	35.62	-7.97	46.0	-10.38	Peak	290.00	100	Н	Pass
2	786.411	42.77	-3.06	46.0	-3.23	Peak	170.00	100	Н	Pass

Report No.: FCC1910072-01 Page 21 of 38

Date: 2019-10-23

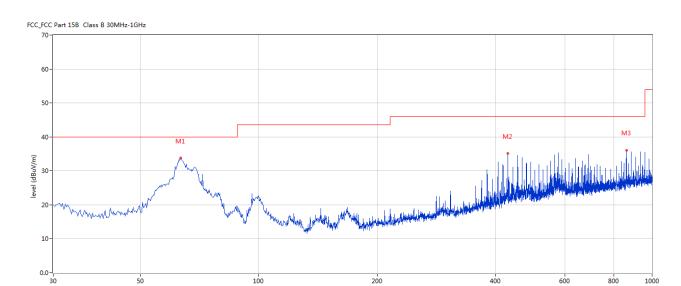


Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	63.214	33.83	-13.32	40.0	-6.17	Peak	98.00	100	V	Pass
2	430.025	35.16	-7.97	46.0	-10.84	Peak	140.00	100	V	Pass
3	860.112	36.09	-2.40	46.0	-9.91	Peak	92.00	100	V	Pass

Frequency (MHz)

Date: 2019-10-23

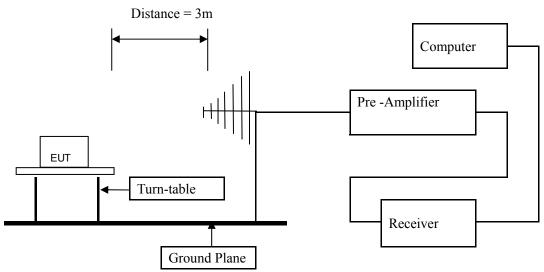


7. Band Edge

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, RMS detector used for AV
- (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.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

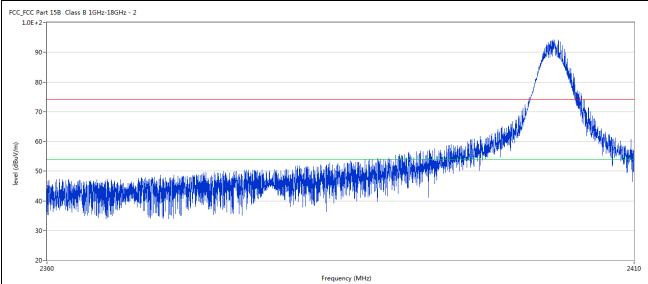
Report No.: FCC1910072-01 Page 23 of 38

Date: 2019-10-23



7.6 Test Result

Product:	Wireless TV Speaker	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



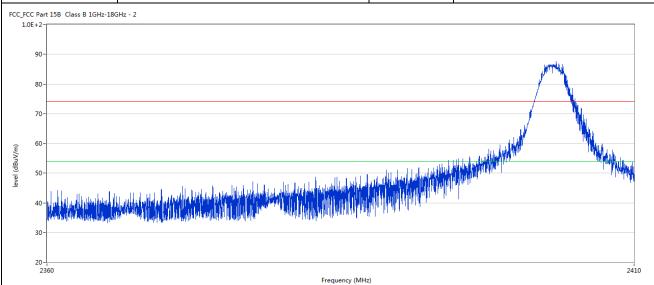
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1**	2400	40.43	-3.57	54.0	-13.57	AV	207.00	100	Н	Pass
1	2400	68.59	-3.57	74.0	-5.41	Peak	207.00	100	Н	Pass
2**	2390	35.57	-3.53	54.0	-18.43	AV	207.00	100	Н	Pass
2	2390	55.65	-3.53	74.0	-18.35	Peak	207.00	100	Н	Pass

Page 24 of 38

Report No.: FCC1910072-01



Product:	Wireless TV Speaker	Detector	Vertical
Mode	Keeping Transmitting	Test Voltage	120V∼
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



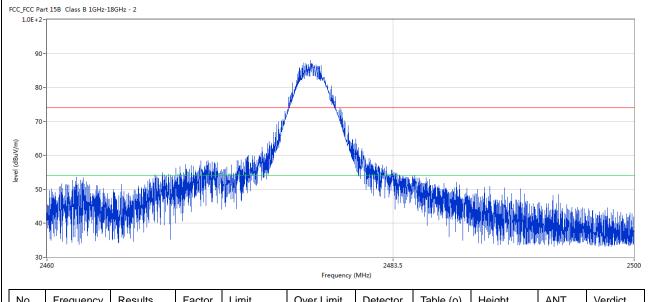
Ī	No.	Frequency	Results	Factor	Limit	Over	Detector	Table (o)	Height	ANT	Verdict
		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)			(cm)		
	1**	2400	37.43	-3.57	54.0	-16.57	AV	47.00	100	V	Pass
	1	2400	64.69	-3.57	74.0	-9.31	Peak	47.00	100	V	Pass
	2	2390	51.51	-3.53	54.0	-2.49	Peak	48.00	100	V	Pass

Page 25 of 38

Report No.: FCC1910072-01



Product:	Wireless TV Speaker	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



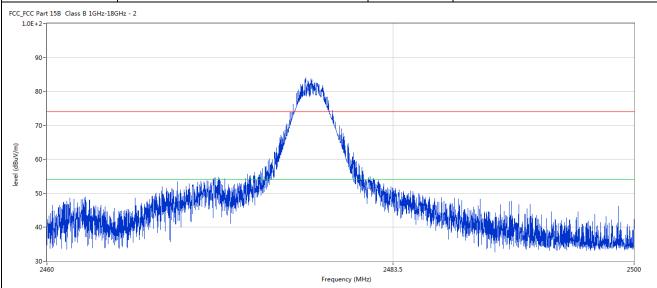
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1**	2483.5	30.09	-3.57	54.0	-23.91	AV	195.00	100	Н	Pass
1	2483.5	55.68	-3.57	74.0	-18.32	Peak	195.00	100	Н	Pass

Page 26 of 38

Report No.: FCC1910072-01



Product:	Wireless TV Speaker	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 (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1**	2483.5	28.98	-3.57	54.0	-25.02	AV	111.00	100	V	Pass
1	2483.5	51.49	-3.57	74.0	-22.51	Peak	111.00	100	٧	Pass

Report No.: FCC1910072-01 Page 27 of 38

Date: 2019-10-23



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 Integral antenna. The antenna gain is 1.0dBi Max. It fulfills the requirement of this section. Test Result: Pass

Page 28 of 38

Report No.: FCC1910072-01

Date: 2019-10-23



Windlaga TV Charles		
Wireless TV Speaker	Test Mode:	Keep transmitting
Keeping Transmitting	Test Voltage	120V~
24 deg. C,	Humidity	56% RH
Pass	Detector	PK
1.564MHz		
	Keeping Transmitting 24 deg. C, Pass	Keeping Transmitting Test Voltage 24 deg. C, Humidity Pass Detector



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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

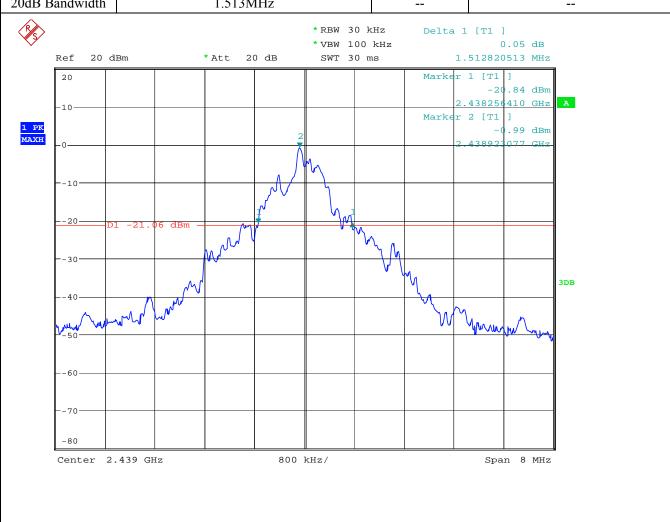
Page 29 of 38

Report No.: FCC1910072-01

Date: 2019-10-23



Product:	Wireless TV Speaker	Test Mode:	Keep transmitting
Mode	Keeping Transmitting	Test Voltage	120V~
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	1.513MHz		



Date: 14.OCT.2019 15:53:56

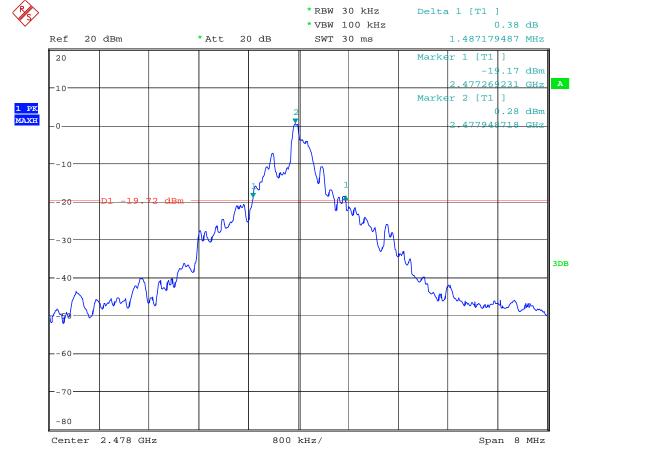
Page 30 of 38

Report No.: FCC1910072-01

Date: 2019-10-23



ModeKeeping TransmittingTest Voltage120V~Temperature24 deg. C,Humidity56% RHTest Result:PassDetectorPK	Product:	Wireless TV Speaker	Test Mode:	Keep transmitting
	Mode	Keeping Transmitting	Test Voltage	120V~
Test Result: Pass Detector PK	Temperature	24 deg. C,	Humidity	56% RH
	Test Result:	Pass	Detector	PK
20dB Bandwidth 1.487MHz	20dB Bandwidth	1.487MHz		



Date: 14.0CT.2019 15:42:59

Report No.: FCC1910072-01 Page 31 of 38

Date: 2019-10-23



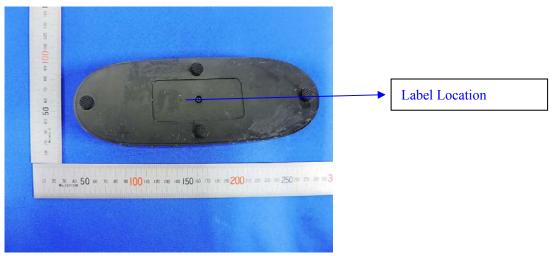
10.0 FCC ID Label

FCC ID: 2ALJA-207072

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:



Page 32 of 38

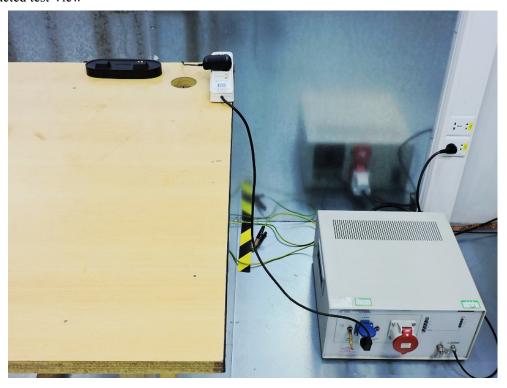
Report No.: FCC1910072-01

Date: 2019-10-23



11.0 Photo of testing

11.1 Conducted test View



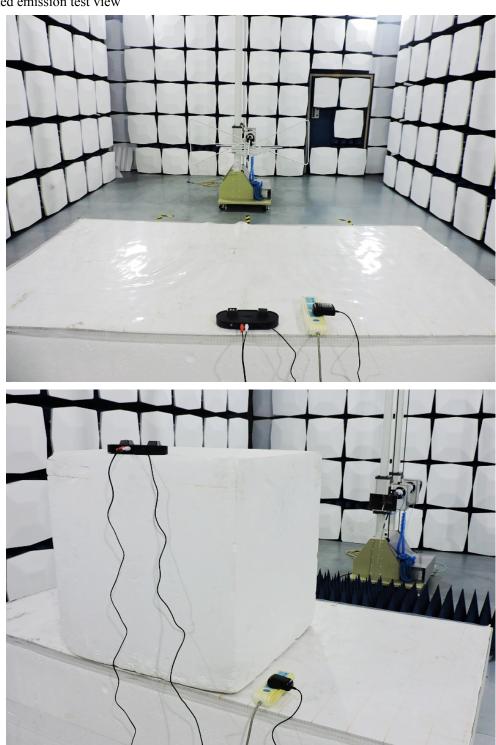
Page 33 of 38

Report No.: FCC1910072-01

Date: 2019-10-23



11.2 Radiated emission test view



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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2019-10-23



11.3 Photographs – EUT

Outside View



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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2019-10-23



Outside View





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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Page 36 of 38

Report No.: FCC1910072-01

Date: 2019-10-23



Outside View





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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

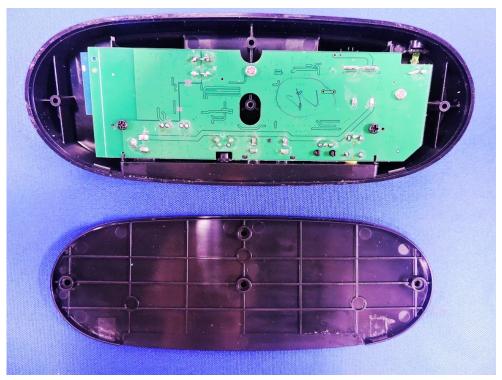
Page 37 of 38

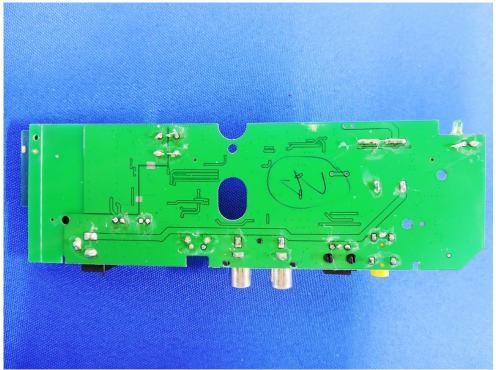
Report No.: FCC1910072-01

Date: 2019-10-23



Inside view





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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

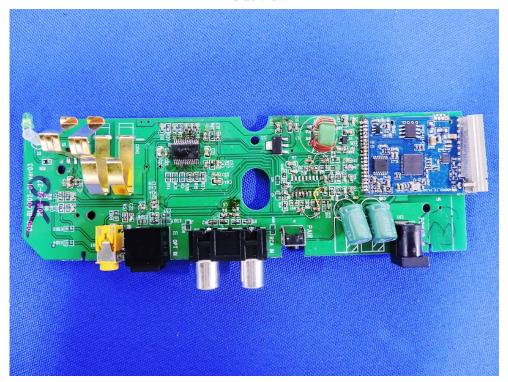
Page 38 of 38

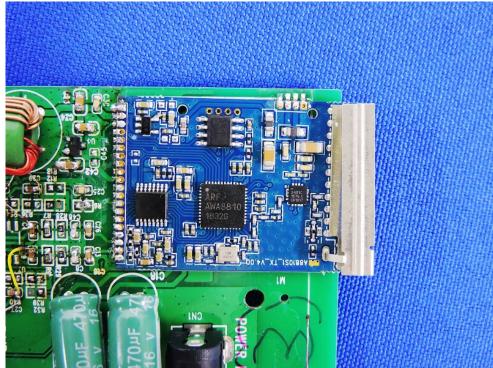
Report No.: FCC1910072-01

Date: 2019-10-23



Inside view





-- End of the report--

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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.