



FCC VERIFICATION TEST REPORT

REPORT NO.: BUUQ-ESH-P20081512B-R1

PRODUCT: Aluminum alloy automatic soap dispenser

MODEL NO.: See table 3.1 for details

RECEIVED: 2020.08.18

ISSUED: 2020.09.24

APPLICANT: NINGBO POWER (JORO) SANITARY
ELECTRICAL APPLIANCE CO., LTD

ADDRESS: No.99 Xiangyun North Road, High-Tech
Zone, Ningbo, China

ISSUED BY: BUREAU VERITAS ADT (SHANGHAI) CORPORATION

LAB LOCATION: No. 829, Xin Zhuan Road, Song Jiang District, Shanghai,
China

This test report replaces and cancels the previous test report BUUQ-ESH-P20081512B dated on 2020.09.04. This test report consists of 15 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The test results in the report only apply to the tested item. The test results in this report are traceable to the national or international standards.



Table of Contents

1	TEST PROGRAM	3
2	SUMMARY OF TEST RESULTS	4
2.1	MEASUREMENT UNCERTAINTY`	4
3	GENERAL INFORMATION	5
3.1	GENERAL DESCRIPTION OF EUT	5
3.2	DESCRIPTION OF TEST MODES	5
3.3	DESCRIPTION OF SUPPORT UNITS	6
4	EMISSION TEST	7
4.1	CONDUCTED EMISSION MEASUREMENT	7
4.1.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT	7
4.1.2	TEST INSTRUMENTS	7
4.1.3	TEST PROCEDURE	7
4.1.4	DEVIATION FROM TEST STANDARD	8
4.1.5	TEST SETUP	8
4.1.6	TEST RESULTS	9
4.2	RADIATED EMISSION MEASUREMENT	11
4.2.1	LIMITS OF RADIATED EMISSION MEASUREMENT	11
4.2.2	TEST INSTRUMENTS	12
4.2.3	TEST PROCEDURE	12
4.2.4	DEVIATION FROM TEST STANDARD	12
4.2.5	TEST SETUP	12
4.2.6	TEST RESULTS	13
5	PICTURES OF SAMPLE	15



1 TEST PROGRAM

PRODUCT: Aluminum alloy automatic soap dispenser
MODEL NO.: See table 3.1 for details
APPLICANT: NINGBO POWER (JORO) SANITARY ELECTRICAL
APPLIANCE CO., LTD
TESTED: 2020.08.18~2020.08.20
STANDARDS: CFR 47 FCC Part 15B
ANSI C63.4-2014

We, BUREAU VERITAS ADT (Shanghai) Corporation, declare that the equipment above has been tested in our facility and found compliance with the requirement limits of applicable standards. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate under the standards herein specified.

PREPARED BY : Ben ZHAO , **DATE:** 2020.09.24
Ben ZHAO
Project Engineer

**TECHNICAL
ACCEPTANCE :** Yi XU , **DATE:** 2020.09.24
Yi XU
Project Manager





2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

Standard	Test Type	Result	Remarks
FCC Part 15B Subpart B, Class B	Conducted Test	PASS	Meets Class B Limit
	Radiated Test	PASS	Meets Class B Limit

Notes:

The apparatus Aluminum alloy automatic soap dispenser and models See table 3.1 for details are in compliance with the requirements of the standard FCC Part 15B Subpart B, Class B.

2.1 MEASUREMENT UNCERTAINTY`

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

This lab's measurement uncertainty U_{Lab} , is low than U_{Cispr} , Table 1 – Values of U_{Cispr} of CISPR 16-4-2, therefore compliance is deemed to occur if no measured disturbance exceeds the disturbance limit.

Measurement		Value
Conducted emissions		2.55 dB
Radiated emissions	30 MHz ~ 1GHz	3.22 dB
	Above 1GHz	2.89 dB

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Aluminum alloy automatic soap dispenser
MODEL NO.	PW-M, PW-ML, PW-MJ, PW-MQ, PW-MS / PW-Mf, PW-MLf, PW-MJf, PW-MQf, PW-MSf / PW-Ms, PW-MLs, PW-MJs, PW-MQs, PW-MSs PW-N, PW-NX, PW-NJ, PW-NQ, PW-NS / PW-Nf, PW-NXf, PW-NJf, PW-NQf, PW-NSf / PW-Ns, PW-NXs, PW-NJs, PW-NQs, PW-NSs PW-H, PW-HL, PW-HJ, PW-MH, PW-HS / PW-Hf, PW-HLf, PW-HJf, PW-MQf, PW-HSf, PW-HLs, PW-HJs, PW-HQs, PW-HSs
POWER SUPPLY	DC5V or 4*1.5V(AA) batteries

Notes:

1. All models are similar as each other except mechanical components. So all EMC tests were performed on model PW-MS. All tests of charging mode of model PW-MS were tested with computer Lenovo L470.
2. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

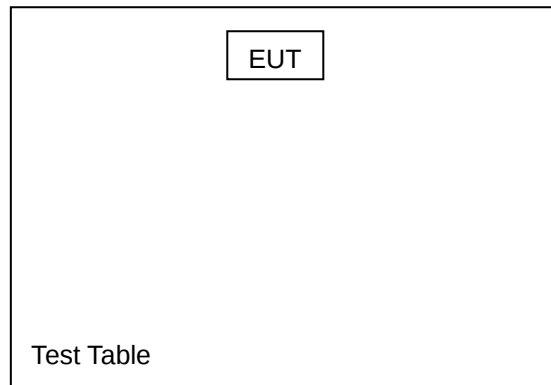
3.2 DESCRIPTION OF TEST MODES

Test Mode	Description
1	Charging and working mode

3.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit during the tests.

TEST CONFIGURATION





4 EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

TEST STANDARD:

CFR 47 FCC Part 15, Subpart B (Section: 15.107)

FREQUENCY (MHz)	Class A (dB μ V)		Class B (dB μ V)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATION UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	E1R1002	2021.05.11
LISN ROHDE & SCHWARZ	ENV216	E1L1011	2021.05.11
Software ADT	ADT_Conc_V7.3.1	N/A	N/A

4.1.3 TEST PROCEDURE

- a. Refer ANSI C63.4-2014 Clause 7.2



4.1.4 DEVIATION FROM TEST STANDARD

No deviation

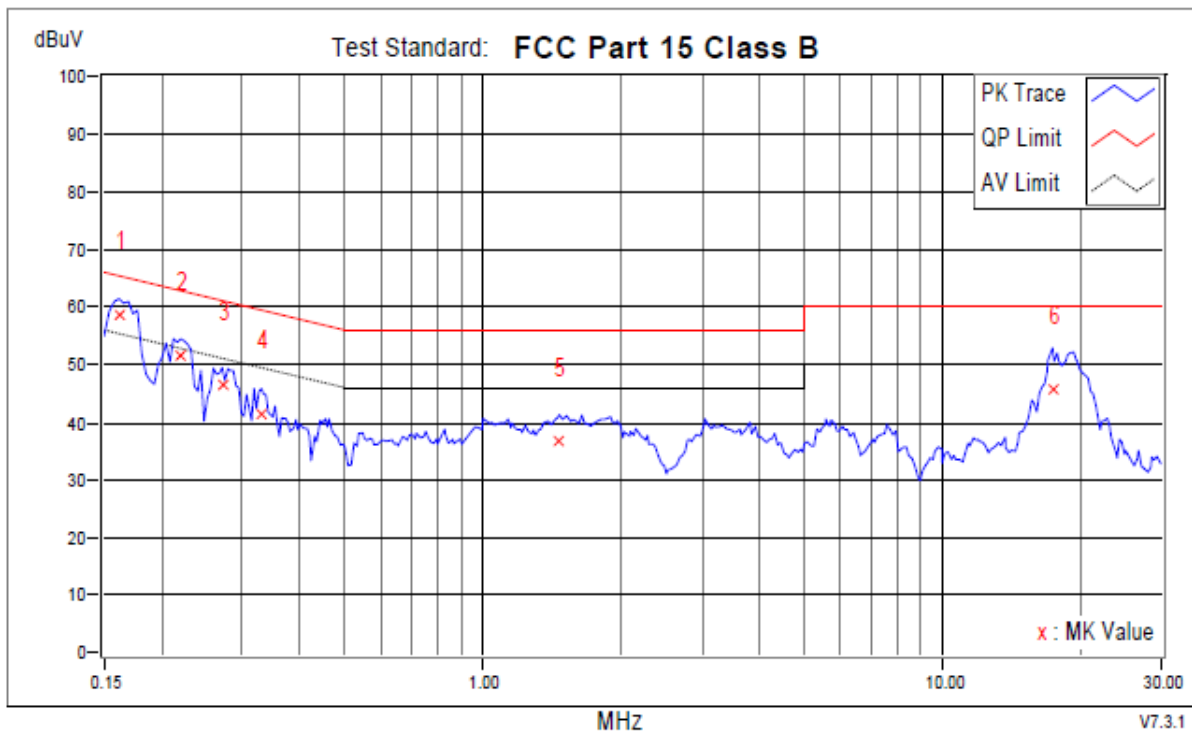
4.1.5 TEST SETUP

Refer ANSI C63.4-2014 Figure 10a,

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

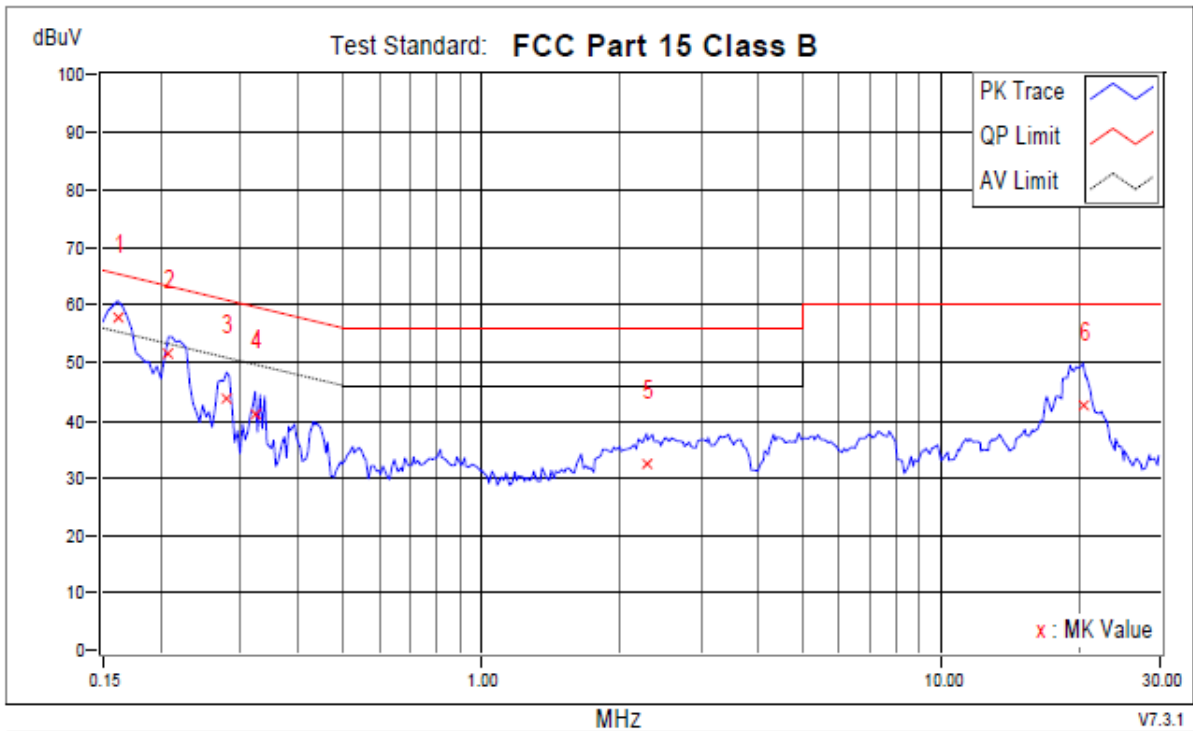
4.1.6 TEST RESULTS

TEST MODE	Mode 1	6dB BANDWIDTH	9 kHz
INPUT POWER	DC5V	PHASE	L
ENVIRONMENTAL CONDITIONS	23.0°C, 53.0% RH, 101.0kPa	TESTED BY: HZY	



	Frequency	Corr. Factor	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
No.	MHz	dB	QP	AV	QP	AV	QP	AV	QP	AV	
+1	0.16173	9.84	48.76	32.03	58.60	41.87	65.37	55.37	-6.77	-13.50	
2	0.22038	9.83	41.80	25.61	51.63	35.44	62.80	52.80	-11.18	-17.37	
3	0.27121	9.75	36.69	22.32	46.44	32.07	61.08	51.08	-14.64	-19.01	
4	0.32986	9.71	31.52	18.88	41.23	28.59	59.45	49.45	-18.23	-20.87	
5	1.46920	9.67	27.05	16.84	36.72	26.51	56.00	46.00	-19.28	-19.49	
6	17.38208	10.30	35.48	25.78	45.78	36.08	60.00	50.00	-14.22	-13.92	

TEST MODE	Mode 1	6dB BANDWIDTH	9 kHz
INPUT POWER	DC5V	PHASE	N
ENVIRONMENTAL CONDITIONS	23.0°C, 53.0% RH, 101.0kPa	TESTED BY: HZY	



	Frequency	Corr. Factor	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
No.	MHz	dB	QP	AV	QP	AV	QP	AV	QP	AV	
+1	0.16173	9.84	47.94	30.74	57.78	40.58	65.37	55.37	-7.60	-14.80	
2	0.20865	9.81	41.64	20.75	51.45	30.56	63.26	53.26	-11.81	-22.70	
3	0.27903	9.86	34.00	15.57	43.86	25.43	60.84	50.84	-16.99	-25.42	
4	0.32204	9.87	31.11	16.43	40.98	26.30	59.65	49.65	-18.68	-23.36	
5	2.29030	9.96	22.53	14.14	32.49	24.10	56.00	46.00	-23.51	-21.90	
6	20.38887	10.39	32.24	24.26	42.63	34.65	60.00	50.00	-17.37	-15.35	



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

TEST STANDARD:

CFR 47 FCC Part 15, Subpart B (Section: 15.109)

FOR FREQUENCY BELOW 1000 MHz

FREQUENCY (MHz)	Class A (at 10m)		Class B (at 3m)	
	$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$	$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$
30 – 88	90	39.1	100	40.0
88 – 216	150	43.5	150	43.5
216 – 960	210	46.4	200	46.0
960 – 1000	300	49.5	500	54.0

LIMIT OF RADIATED EMISSION OF FCC PART 15, SUBPART B FOR FREQUENCY ABOVE 1000 MHz

FREQUENCY (MHz)	Class A ($\text{dB}\mu\text{V/m}$) (at 3m)		Class B ($\text{dB}\mu\text{V/m}$) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80.0	60.0	74.0	54.0

Note: (1) The lower limit shall apply at the transition frequencies.

(2) Emission level ($\text{dB}\mu\text{V/m}$) = $20 \log$ Emission level ($\mu\text{V/m}$).

(3) All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.



4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATION UNTIL
Receiver R&S	ESR7	E1R1005	2021.04.19
Broadband Antenna Schwarzbeck	VULB 9168	E1A1012	2021.07.27
Preamplifier Agilent	8447D	E1A2001	2021.04.19

4.2.3 TEST PROCEDURE

- a. Refer to ANSI C 63.4-2014 Clause 8.3

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

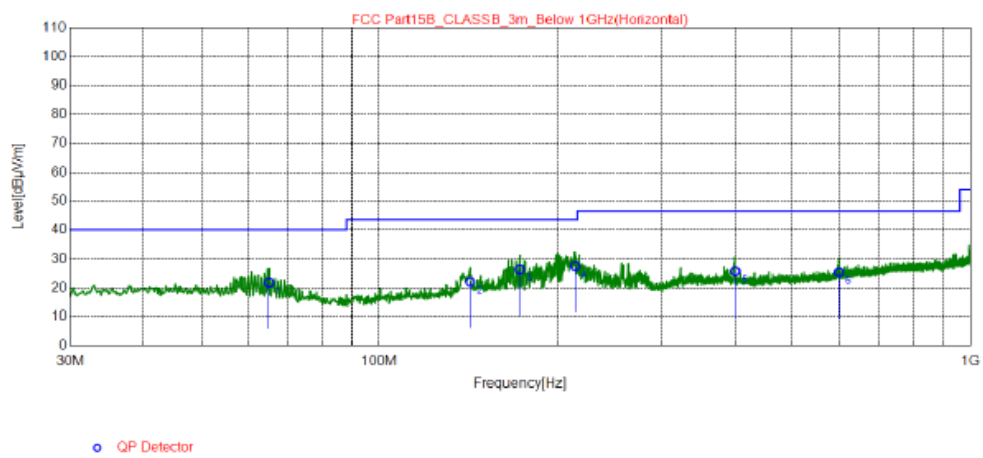
4.2.5 TEST SETUP

Refer to ANSI C 63.4-2014 Figure 11a

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

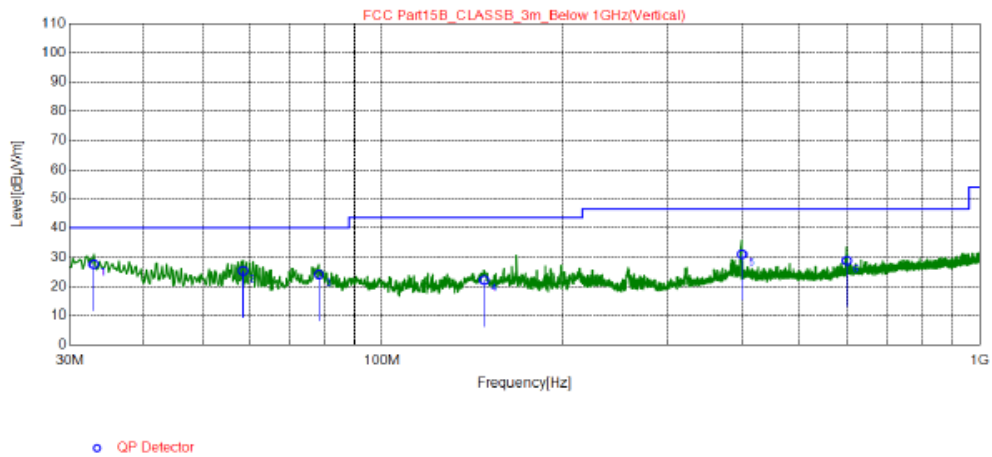
4.2.6 TEST RESULTS

TEST MODE	Mode 1	FREQUENCY RANGE	30-1000 MHz
INPUT POWER	DC5V	DETECTOR FUNCTION & BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	23.0°C, 53.0% RH, 101.0kPa	TESTED BY: HZY	



NO.	Freq. [MHz]	QP Reading [dBμV/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	65.11	33.13	-11.35	21.78	40.00	18.22	200	183	Horizontal
2	142.5	32.02	-9.95	22.07	43.50	21.43	200	70	Horizontal
3	172.7	36.37	-9.96	26.41	43.50	17.09	200	236	Horizontal
4	214.4	39.28	-11.71	27.57	43.50	15.93	200	274	Horizontal
5	399.7	33.63	-7.84	25.79	46.50	20.71	200	183	Horizontal
6	599.0	29.69	-4.26	25.43	46.50	21.07	200	221	Horizontal

TEST MODE	Mode 1	FREQUENCY RANGE	30-1000 MHz
INPUT POWER	DC5V	DETECTOR FUNCTION & BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	23.0°C, 53.0% RH, 101.0kPa	TESTED BY: HZY	



NO.	Freq. [MHz]	QP Reading [dBμV/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	32.91	38	-10.35	27.65	40.00	12.35	100	101	Vertical
2	58.51	35.8	-10.43	25.37	40.00	14.63	100	301	Vertical
3	78.30	37.57	-13.48	24.09	40.00	15.91	100	340	Vertical
4	148.1	31.64	-9.46	22.18	43.50	21.32	100	0	Vertical
5	399.7	38.95	-7.84	31.11	46.50	15.39	100	200	Vertical
6	599.1	33.14	-4.25	28.89	46.50	17.61	100	332	Vertical

5 PICTURES OF SAMPLE

