

# FCC TEST REPORT

**Report No.: ST20170612004-R**

Testing Laboratory Name .....	Shenzhen ST Testing Technology Co.,Ltd.
Address .....	3F, F1 Block, Huafeng Industrial Zone, Gushu, Bao'an District, Shenzhen, China
Applicant's Name .....	Smart Team Holdings Limited
Address .....	Flat A01, 5/F., Great Wall Factory Building, 11 Cheung Shun St., Lai Chi Kok, Kowloon, HK
Manufacturer .....	Shenzhen Smart Team Technology Limited
Address .....	Xutai Industrial Zone, Long Wo Road, Long Tian Village, Keng Zi Town, Longgang District, Shenzhen, Guangdong, China
Standard.....	FCC Part 15:2013
Product .....	UVC Sterilizer & Plasma Ion Air Purifier
Trademark .....	CSTT
Test Model .....	Ai202
Test date .....	Jun. 22-24, 2017
Date of report .....	Jun. 24, 2017
Tested by.....	<i>David Luo</i>
Approved & Authorized Signer.....	<i>Zhang</i>



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## TEST REPORT DECLARATION

Applicant	:	Smart Team Holdings Limited
Address	:	Flat A01, 5/F., Great Wall Factory Building, 11 Cheung Shun St., Lai Chi Kok, Kowloon, HK
EUT Description	:	UVC Sterilizer & Plasma Ion Air Purifier
Model Number	:	Ai202

Test Standards:

### FCC Part 15:2013

The EUT described above is tested by US to determine the maximum emission levels emanating from the EUT, the maximum emission levels are compared to the ST Part 15 limits. The measurement results are contained in this test report and Shenzhen ST Testing Technology Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT is to be technically compliant with the FCC requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen ST Testing Technology Co., Ltd.

## 1. GENERAL INFORMATION

### 1.1. Report information

- 1.1.1. This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that ST approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that ST in any way guarantees the later performance of the product/equipment.
- 1.1.2. The sample/s mentioned in this report is/are supplied by Applicant, ST therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.
- 1.1.3. Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through ST, unless the applicant has authorized ST in writing to do so.

### 1.2. Test Uncertainty

Conducted Emission Uncertainty =  $\pm 2.64$ dB  
Radiated Emission Uncertainty =  $\pm 4.24$ dB

## 2. PRODUCT DESCRIPTION

### 2.1.EUT Description

Description	:	UVC Sterilizer & Plasma Ion Air Purifier
Applicant	:	Smart Team Holdings Limited Flat A01, 5/F., Great Wall Factory Building, 11 Cheung Shun St., Lai Chi Kok, Kowloon, HK
Manufacturer	:	Shenzhen Smart Team Technology Limited Xutai Industrial Zone, Long Wo Road, Long Tian Village, Keng Zi Town, Longgang District, Shenzhen, Guangdong, China
Model Number	:	Ai202

### 2.2.Test Conditions

Temperature: 20~25°C

Relative Humidity: 50~63 %

### 3. TEST RESULTS SUMMARY

**Table 1 Test Results Summary**

Test Items	Test Results
Conducted disturbance	N/A
Radiated disturbance	Pass

Remark: "N/A" means "Not applicable."

## 4. TEST EQUIPMENT USED

### 4.1. For Conducted Emission Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS30	828985/018	Sep. 20, 16	1 Year
2.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100006	Sep. 20, 16	1 Year
3.	L.I.S.N.	Rohde & Schwarz	ESH2-Z5	834549/005	Sep. 20, 16	1 Year
4.	Conical	Emtek	N/A	N/A	N/A	N/A
5.	Voltage Probe	Schwarzbeck	TK9416	N/A	Sep. 20, 16	1 Year
6.	Coaxial Switch	Anritsu	MP59B	6100214550	Sep. 20, 16	1 Year

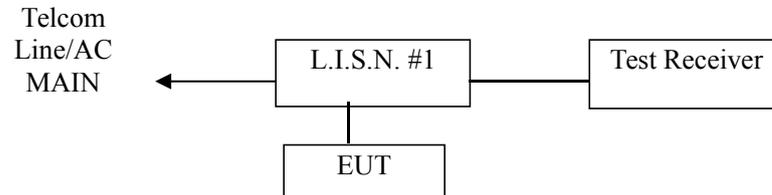
### 4.2. For Radiated Emission Measurement

#### Semi-Anechoic Chamber

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	ANRITSU	MS2661C	6200140915	Sep. 20, 16	1 Year
2.	Test Receiver	Rohde&Schwarz	ESC830	828982/018	Sep. 20, 16	1 Year
3.	Bilog Antenna	Schwarzbeck	VULB9163	142	Sep. 20, 16	1 Year
4.	50 Coaxial Switch	Anritsu Corp	MP59B	6100237248	Sep. 20, 16	1 Year
5.	Cable	Schwarzbeck	AK9513	ACRX1	Sep. 20, 16	1 Year
6.	Cable	Rosenberger	N/A	FR2RX2	Sep. 20, 16	1 Year
7.	Cable	Schwarzbeck	AK9513	CRRX2	Sep. 20, 16	1 Year
8.	Cable	Schwarzbeck	AK9513	CRRX2	Sep. 20, 16	1 Year
9.	Single Phase Power Line Filter	MPE	23332C	N/A	Sep. 20, 16	1 Year
10.	Single Phase Power Line Filter	MPE	23333C	N/A	Sep. 20, 16	1 Year
11.	Signal Generator	HP	864A	3625U00573	Sep. 20, 16	1 Year

## 5. CONDUCTED EMISSION TEST

### 5.1. Block Diagram of Test Setup



### 5.2. Test Standard

FCC Part 15: 2013

### 5.3. Conducted Emission Limit(Class B)

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

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

### 5.4. EUT Configuration on Test

The following equipments are installed on conducted emission test to meet Part 15 requirement and operating in a manner, which tends to maximize its emission characteristics in a normal application.

### 5.5. Operating Condition of EUT

5.5.1. Setup the EUT and simulators as shown in Section 5.1.

5.5.2. Turn on the power of all equipments.

5.5.3. Let the EUT work in test modes (EUT Working) and test it.

## 5.6. Test Procedure

The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI test receiver (R&S Test Receiver ESCS30) is used to test the emissions form both sides of AC line. The bandwidth of EMI test receiver is set at 9kHz.

The bandwidth of the test receiver (R&S Test Receiver ESHS30) is set at 10KHz.

## 5.7. Test Result

N/A.

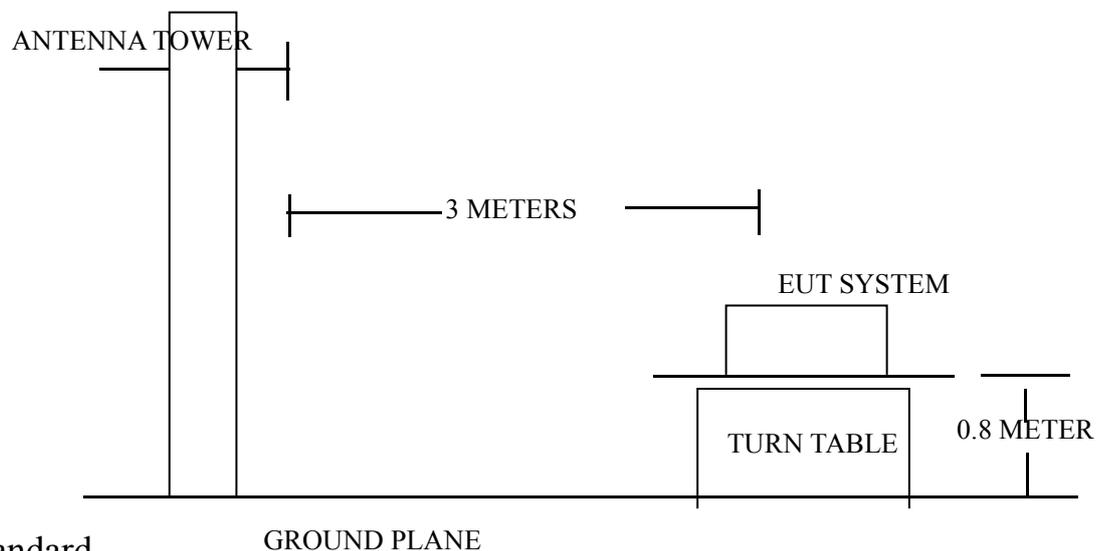
## 6. RADIATED EMISSION MEASUREMENT

### 6.1. Block Diagram of EUT Configuration

#### 6.1.1. Block Diagram of connection between the EUT and the simulators



#### 6.1.2. Semi-Anechoic Chamber Test Setup Diagram



### 6.2. Test Standard

FCC Part 15: 2013

### 6.3. Radiated Emission Limit(Class B)

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dB $\mu$ V/m)
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

- Note:(1) The smaller limit shall apply at the edge between two frequency bands.  
 (2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the EUT or system.

## 6.4.EUT Configuration on Test

The following equipment are installed on Radiated Emission Measurement to meet the Commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

## 6.5.Operating Condition of EUT

- 6.5.1.Setup the EUT as shown on Section 6.1.2
- 6.5.2.Turn on the power of all equipments.
- 6.5.3.Let the EUT work in test mode(EUT working) and measure it.

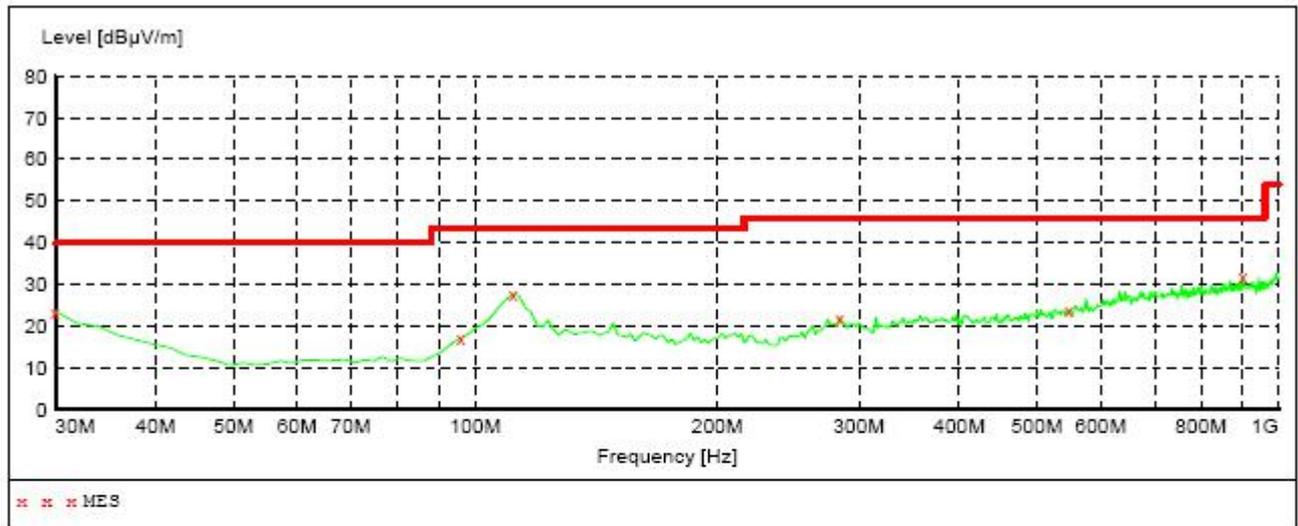
## 6.6.Test Procedure

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can move up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna (calibrated by dipole antenna) are used as a receiving antenna. Both horizontal and vertical polarization of the antenna are set on measurement.

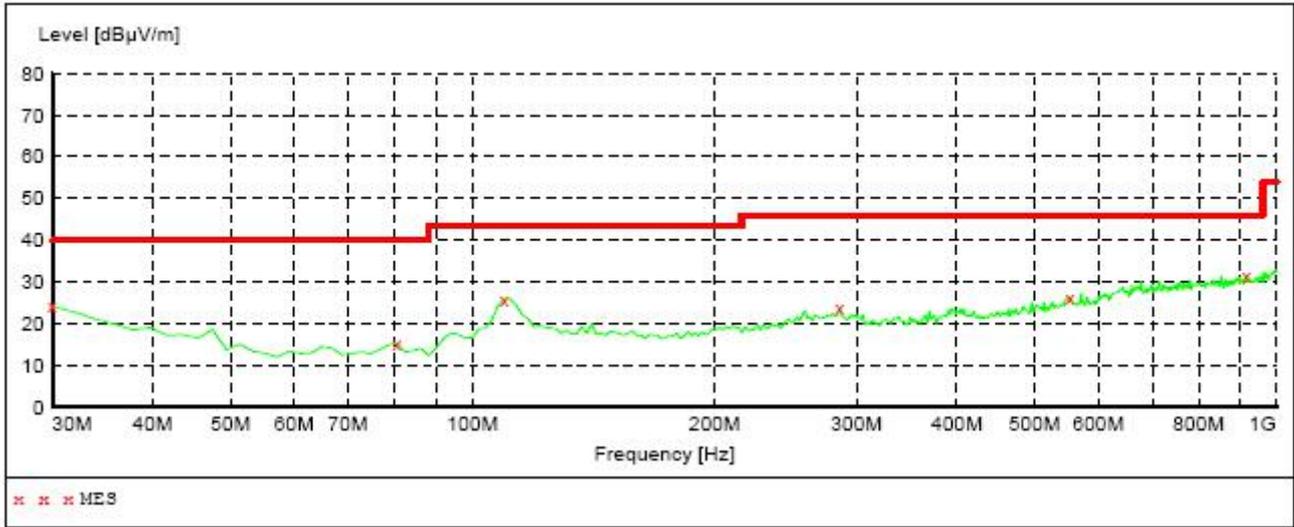
The bandwidth setting on the test receiver (R&S TEST RECEIVER ESCS20) is 120 KHz. The EUT is tested in Semi-Anechoic Chamber. The frequency range from 30MHz to 1000 MHz is checked.All the test results are listed in Section 6.7.

## 6.7.Test Result

**PASS**


**MEASUREMENT RESULT:**

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
30.000000	23.50	20.8	40.0	16.5	---	0.0	0.00	HORIZONTAL
95.960000	17.30	10.2	43.5	26.2	---	0.0	0.00	HORIZONTAL
111.480000	27.80	13.7	43.5	15.7	---	0.0	0.00	HORIZONTAL
284.140000	22.10	15.2	46.0	23.9	---	0.0	0.00	HORIZONTAL
547.980000	23.90	20.9	46.0	22.1	---	0.0	0.00	HORIZONTAL
903.000000	31.80	26.0	46.0	14.2	---	0.0	0.00	HORIZONTAL



**MEASUREMENT RESULT:**

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
30.000000	24.10	20.8	40.0	15.9	---	0.0	0.00	VERTICAL
80.440000	15.40	8.5	40.0	24.6	---	0.0	0.00	VERTICAL
109.540000	26.00	13.3	43.5	17.5	---	0.0	0.00	VERTICAL
286.080000	23.60	15.2	46.0	22.4	---	0.0	0.00	VERTICAL
553.800000	26.40	21.0	46.0	19.6	---	0.0	0.00	VERTICAL
916.580000	31.40	26.1	46.0	14.6	---	0.0	0.00	VERTICAL

## APPENDIX I

**Photo 1 General Appearance of the EUT**



**Photo 2 General Appearance of the EUT**



----- END OF THE REPORT -----