

## RF EXPOSURE TEST REPORT



Applicant	ALLSTAR MARKETING GROUP
Address	2 SKYLINE DRIVE HAWTHORNE NY 10532

Manufacturer or Supplier	ShenZhen V-Start Development co.,LTD.
Address	Room 1401 Zhongxi ECO building, Baoan district, Shenzhen, Guangdong, China
Product	EASY TOUCH SPEAKER
Brand Name	N/A
Model	VS2201
Additional Model & Model Difference	EST01106, see items 1.1
Date of tests	Jan. 25, 2022 ~ Feb. 28, 2022

The submitted sample of the above equipment has been tested according to the requirements of the following standard:

- ☒ 47 CFR PART 1, Subpart I, Section 1.1310
- ☒ KDB 680106 D01

**CONCLUSION: The submitted sample was found to COMPLY with the test requirement**

Tested by Lucas Chen Project Engineer / EMC Department	Approved by Glyn He Assistant Manager / EMC Department
	
	Data: Mar. 31, 2022

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Test Report No.: FM2201WDG0203

## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM2201WDG0203	Original release	Mar. 31, 2022

## 1. GENERAL INFORMATION

### 1.1. GENERAL DESCRIPTION OF EUT

<b>FCC ID</b>	2APZ3-EST01106
<b>PRODUCT</b>	EASY TOUCH SPEAKER
<b>MODEL NO.</b>	VS2201
<b>ADDITIONAL MODEL</b>	EST01106
<b>SAMPLE STATUS</b>	Engineering sample
<b>POWER SUPPLY</b>	DC 5V from USB Host Unit or DC 3.7V from Li-ion Battery; Wireless Charging: 5W MAX. (see notes 4)
<b>MODULATION TECHNOLOGY</b>	FSK
<b>OPERATING FREQUENCY RANGE</b>	111KHz ~ 205KHz
<b>ANTENNA TYPE</b>	Coil Antenna
<b>I/O PORTS</b>	Refer to user's manual
<b>CABLE SUPPLIED</b>	USB-A to 2*Micro USB Cable: Unshielded, Detachable, 40cm

#### NOTES:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions, but only the worst case was shown in test report.
3. Please refer to the EUT photo document (Reference No.: 2201WDG0203-1) for detailed product photo.
4. The battery power supply supports only the Aux In and Induction Horn functions, but does not support the wireless charging function. The wireless charging function requires independent DC 5V power supply.
5. Additional model EST01106 is identical with test model VS2201 except the appearance, trade name and model number for marketing purpose.

## 2. RF EXPOSURE MEASUREMENT

### 2.1 LIMITS

§ 1.1310 The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radiofrequency(RF) radiation as specified in § 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of § 2.1093 of this chapter.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3–3.0 .....	614	1.63	*(100)	6
3.0–30 .....	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30–300 .....	61.4	0.163	1.0	6
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3–1.34 .....	614	1.63	*(100)	30
1.34–30 .....	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30–300 .....	27.5	0.073	0.2	30
300–1500 .....	.....	.....	f/1500	30
1500–100,000 .....	.....	.....	1.0	30

f = frequency in MHz

\* = Plane-wave equivalent power density

NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

### Reference KDB 680106 D01 RF Exposure Wireless Charging App v03

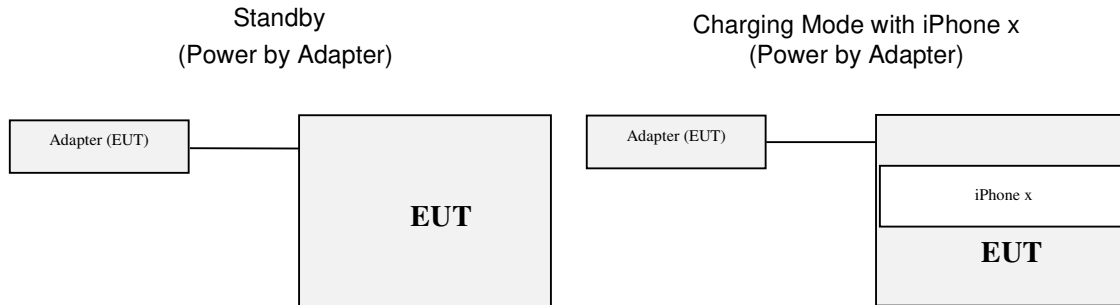
The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

### 2.2 DESCRIPTION OF SUPPORT UNITS

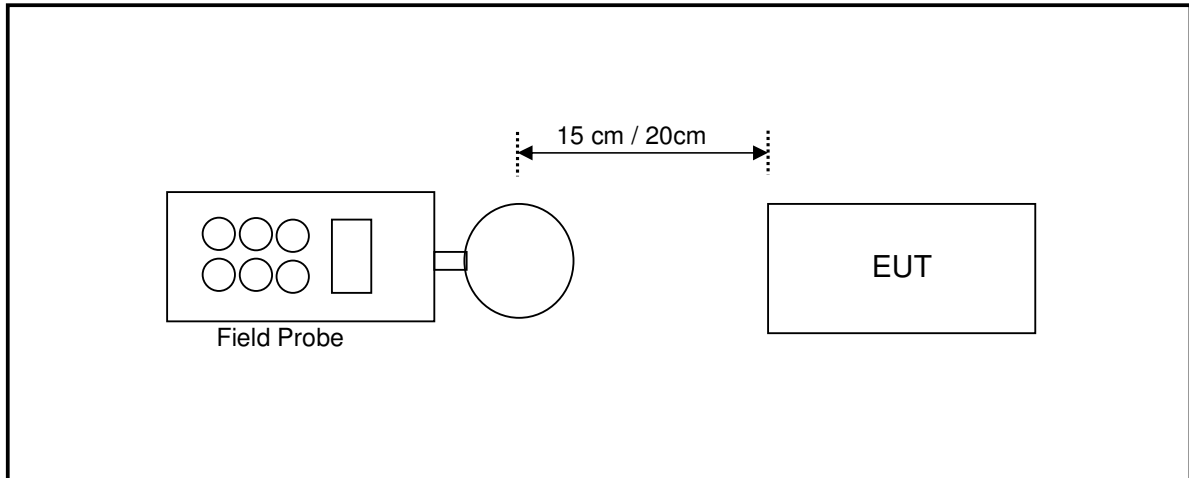
The EUT has been tested with associated equipment below

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	iPhone X	Apple	MQA52CH/A	N/A	N/A
2	Adapter	HUAWEI	N/A	N/A	N/A

## 2.3 CONFIGURATION OF SYSTEM UNDER TEST



## 2.4 TEST SETUP FOR WPT



Note: Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device.

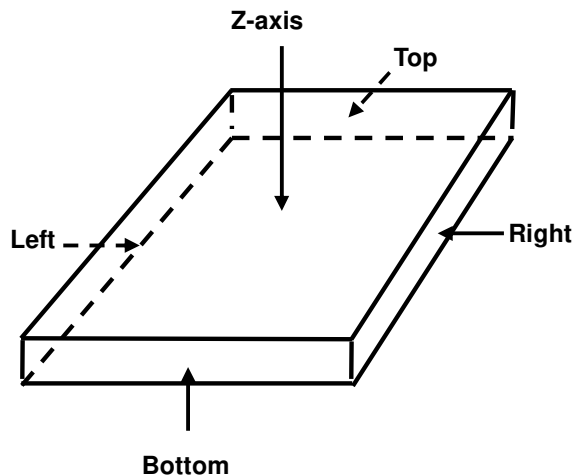
The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

## 2.5 EQUIPMENTS USED DURING TEST

Item	Test Equipment	Manufacturer	Model No.	Frequency Range	Next Cal.
1	RS Chamber	Chance Most	8m*4m*4m	E1-010019	2022-05-05
2	Narda Broadband Field Meter	Narda	NBM-520	100KHz-90GHz	2022-11-11
3	E-Field probe	Narda	EF0691	100KHz-6GHz	2022-06-13
4	Exposure Level Tester	Narda	ELT-400	1Hz-400KHz	2022-06-13

**NOTES:** 1. The test was performed in RS chamber.  
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

## 2.6 TEST POINT DESCRIPTION



## 2.7 TEST RESULTS

### Mode 1 Standby

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	0.62	0.69	0.62	0.58	1.7
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-613.38	-613.31	-613.38	-613.42	-612.3
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-306.38	-306.31	-306.38	-306.42	-305.3

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.228	0.232	0.236	0.241	0.339
Max H-field (A/m)	0.182	0.185	0.188	0.192	0.270
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.448	-1.445	-1.442	-1.438	-1.360
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.633	-0.630	-0.627	-0.623	-0.545

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

### Mode 2: Operating with iPhone x 10% Charger

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	1.92	1.01	1.34	1.85	2.86
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-612.08	-612.99	-612.66	-612.15	-611.14
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-305.08	-305.99	-305.66	-305.15	-304.14

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.23	0.228	0.229	0.231	0.239
Max H-field (A/m)	0.183	0.182	0.182	0.184	0.190
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.447	-1.448	-1.448	-1.446	-1.440
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.632	-0.633	-0.633	-0.631	-0.625

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



**Mode 3: Operating with iPhone x 50% Charger**

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	1.71	2.11	1.56	1.43	2.59
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-612.29	-611.89	-612.44	-612.57	-611.41
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-305.29	-304.89	-305.44	-305.57	-304.41

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.229	0.229	0.228	0.23	0.236
Max H-field (A/m)	0.182	0.182	0.182	0.183	0.188
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.448	-1.448	-1.448	-1.447	-1.442
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.633	-0.633	-0.633	-0.632	-0.627

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

**Mode 4: Operating with iPhone x 90% Charger**

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	1.58	1.67	1.33	1.37	2.96
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-612.42	-612.33	-612.67	-612.63	-611.04
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-305.42	-305.33	-305.67	-305.63	-304.04

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.23	0.229	0.228	0.231	0.336
Max H-field (A/m)	0.183	0.182	0.182	0.184	0.268
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.447	-1.448	-1.448	-1.446	-1.362
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.632	-0.633	-0.633	-0.631	-0.547

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



Test Report No.: FM2201WDG0203

### 3. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (FCC MPE Test Photo).

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