



FCC Test Report

Test Report
On Behalf of
Shenzhen Vanyust Technology Limited
For
Sixthgu S05 Wireless Magnetic Battery
Model No.: S2105, S2106

FCC ID: 2A8TZ-S2105

Prepared For: **Shenzhen Vanyust Technology Limited**
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Prepared By: **Shenzhen HUAKE Testing Technology Co., Ltd.**
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Date of Test: **Nov. 01, 2023 ~ Nov. 09, 2023**

Date of Report: **Nov. 09, 2023**

Report Number: **HK2311015152-2E**



Test Result Certification

Applicant's Name..... : Shenzhen Vanyust Technology Limited
Address..... : Room 2806, Tower A, Union Plaza, Binhe Avenue, Futian District, Shenzhen, China
Manufacture's Name..... : Shenzhen Vanyust Technology Limited
Address..... : Room 2806, Tower A, Union Plaza, Binhe Avenue, Futian District, Shenzhen, China
Product Description
Trade Mark..... : SIXTHGU
Product Name..... : Sixthgu S05 Wireless Magnetic Battery
Model and/or Type Reference: S2105, S2106
Standards..... : FCC CFR 47 PART 18, KDB 680106 D01

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Date of Test..... :
Date (s) of Performance of Tests..... : Nov. 01, 2023 ~ Nov. 09, 2023
Date of Issue..... : Nov. 09, 2023
Test Result..... : Pass

Testing Engineer :

Len Liao

(Len Liao)

Technical Manager :

Sliver Wan

(Sliver Wan)

Authorized Signatory :

Jason Zhou

(Jason Zhou)



Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

- 2.

	Test Frequency
01	125KHz

The EUT antenna is Coil Antenna. No antenna other than that furnished by the responsible party shall be used with the device.

2. Summary of Test Results

2.1. Test procedures according to the technical standards:

FCC KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01

FCC CFR 47			
Standard Section	Test Item	Judgment	Remark
FCC CFR 47 part1, 1.1310 KDB 680106 D01v03r01 (3)(3)	Magnetic Field Strength (H) (A/m)	PASS	

2.2. Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately **95 %**.

No.	Item	Uncertainty
1	All Emissions, Radiated(<30M)(9KHz-30MHz)	$\pm 3.90\text{dB}$
2	Temperature	$\pm 0.5^\circ\text{C}$
3	Humidity	$\pm 2\%$



2.3. Test Instruments

Description	Brand	Model No.	S/N	Calibrated Date	Calibrated Until
Electric and Magnetic Field Analyzer	narda	EHP-200AC	180ZX11028	Feb. 17, 2023	Feb. 16, 2024

NOTE: 1. the calibration interval of the above test instruments is 12 months.



3. Maximum Permissible Exposure

Limit of Maximum Permissible Exposure

Limits for Occupational / Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6
Limits for General Population / Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180 / f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1	30

Note 1: f = frequency in MHz; *Plane-wave equivalent power density.

Note 2: For the applicable limit, see FCC 1.1310, 680106 D01 RF Exposure Wireless Charging Apps v03.

Note 3: Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

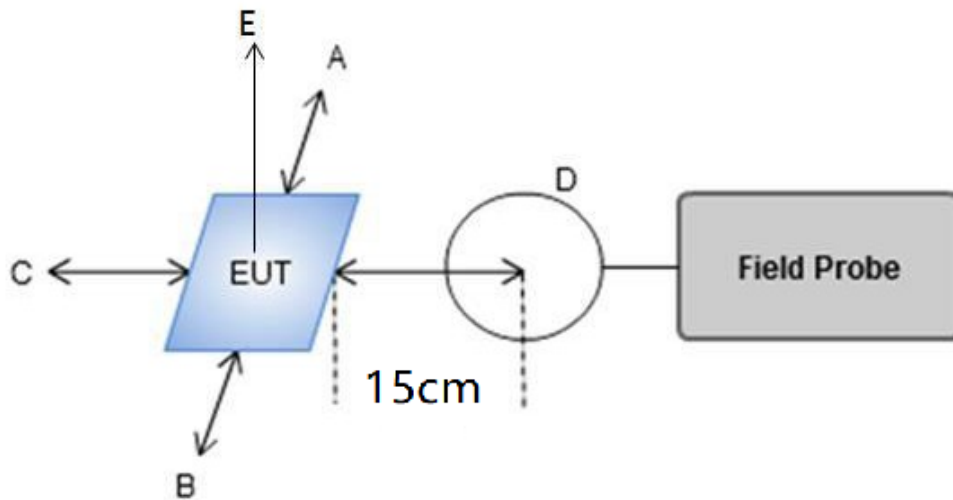


4. Test Procedure

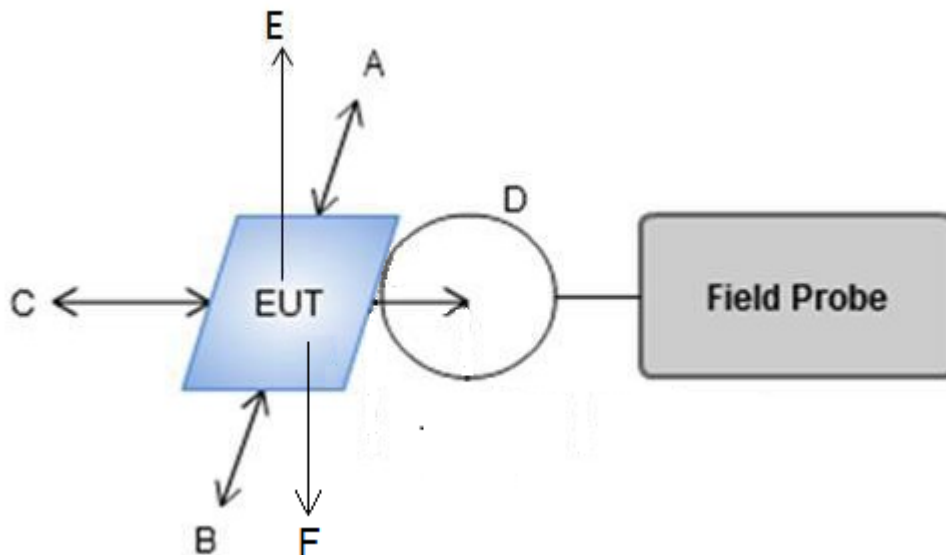
a. For devices designed for typical desktop applications, such as wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of (AC Mode: H-field & E-field strengths for all sides is 15cm, H-field strengths of top side is 20cm) and (DC Mode: H-field & E-field strengths for all sides is 0cm, H-field strengths of top side is 0cm). E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device.

4.1 Test Setup

AC Mode:



DC Mode:





4.2 Result of Maximum Permissible Exposure

AC Mode:

For Full load:

H-Field Strength at 15 cm (E top side: 20cm) from the edges surrounding the EUT (A/m)

Field strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Limits (A/m)
A/m	0.0201	0.0195	0.0225	0.0264	0.0283	1.63

For Half Load mode:

H-Field Strength at 15 cm (E top side: 20cm) from the edges surrounding the EUT (A/m)

Field strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Limits (A/m)
A/m	0.0184	0.0173	0.0200	0.0218	0.0266	1.63

For No load mode:

H-Field Strength at 15 cm (E top side: 20cm) from the edges surrounding the EUT (A/m)

Field strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Limits (A/m)
A/m	0.0162	0.0147	0.0153	0.0169	0.0185	1.63



DC Mode:

For Full load mode:

H-Field Strength at 0-20 cm from the edges surrounding the EUT (A/m)

Measuring distance (cm)	Field strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position F	Limits (A/m)
0	A/m	0.554	0.614	0.573	0.608	0.536	0.538	1.63
2	A/m	0.531	0.531	0.539	0.513	0.547	0.501	1.63
4	A/m	0.481	0.448	0.470	0.463	0.512	0.471	1.63
6	A/m	0.451	0.500	0.437	0.411	0.431	0.477	1.63
8	A/m	0.420	0.469	0.401	0.406	0.501	0.490	1.63
10	A/m	0.404	0.334	0.355	0.374	0.334	0.433	1.63
12	A/m	0.397	0.427	0.370	0.366	0.384	0.405	1.63
14	A/m	0.380	0.363	0.357	0.440	0.422	0.369	1.63
16	A/m	0.372	0.438	0.372	0.344	0.406	0.442	1.63
18	A/m	0.334	0.446	0.350	0.364	0.370	0.420	1.63
20	A/m	0.326	0.389	0.299	0.355	0.342	0.385	1.63

For Half Load mode:

H-Field Strength at 0-20 cm from the edges surrounding the EUT (A/m)

Measuring distance (cm)	Field strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position F	Limits (A/m)
0	A/m	0.573	0.522	0.552	0.599	0.534	0.589	1.63
2	A/m	0.555	0.533	0.504	0.502	0.489	0.511	1.63
4	A/m	0.542	0.505	0.527	0.488	0.500	0.502	1.63
6	A/m	0.525	0.501	0.501	0.444	0.509	0.473	1.63
8	A/m	0.501	0.442	0.487	0.490	0.492	0.499	1.63
10	A/m	0.469	0.427	0.376	0.390	0.495	0.470	1.63
12	A/m	0.430	0.398	0.367	0.351	0.392	0.407	1.63
14	A/m	0.382	0.390	0.346	0.360	0.351	0.371	1.63
16	A/m	0.353	0.374	0.282	0.366	0.298	0.311	1.63
18	A/m	0.287	0.314	0.305	0.330	0.291	0.280	1.63
20	A/m	0.242	0.246	0.296	0.229	0.217	0.278	1.63



For No load mode:

H-Field Strength at 0-20 cm from the edges surrounding the EUT (A/m)

Measuring distance (cm)	Field strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position F	Limits (A/m)
0	A/m	0.528	0.541	0.532	0.555	0.542	0.571	1.63
2	A/m	0.515	0.497	0.521	0.511	0.551	0.437	1.63
4	A/m	0.511	0.464	0.500	0.452	0.461	0.466	1.63
6	A/m	0.489	0.439	0.499	0.405	0.434	0.412	1.63
8	A/m	0.430	0.418	0.422	0.375	0.400	0.399	1.63
10	A/m	0.387	0.398	0.327	0.328	0.357	0.337	1.63
12	A/m	0.352	0.351	0.363	0.309	0.301	0.328	1.63
14	A/m	0.335	0.290	0.314	0.274	0.288	0.270	1.63
16	A/m	0.295	0.205	0.253	0.204	0.199	0.274	1.63
18	A/m	0.241	0.269	0.197	0.260	0.267	0.227	1.63
20	A/m	0.215	0.259	0.188	0.273	0.255	0.248	1.63



Remark: According KDB 680106 D01 RF Exposure Wireless Charging App v03r01, section 5, b). 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. The E- field evaluation conducted assuming a user separation distance of 15 cm according to the KDB 680106 D01 RF Exposure Wireless Charging App v03 section 3, c).

Result: The device comply with the RF exposure requirement according to 680106 D01 v03r01, section 5, b):

(1) Power transfer frequency is less than 1 MHz.

- The device operate in the frequency range for 112KHz~ 205KHz

(2) The output power from each transmitting element (e.g.. coil) is less than or equal to 15 watts.

- The maximum output power of ANT1 is 15W

(3) A client device providing the maximum permitted load is placed in physical contact with the transmitter (i.e, the surfaces of the transmitter and client device enclosures need to be in physical contact)

-The EUT is placed directly in contact with the transmitter

(4) Only§2.1091-Mobile exposure conditions apply (i.e, this provision does not cover§ 2.1093-Portable exposure conditions).

- This is a portable device.

(5) The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1. These measurements shall be taken along the principal axes of the device, with one axis oriented along the direction of the estimated maximum field strength, and for three points per axis or until a 1/d (inverse distance from the emitter structure) field strength decay is observed. Symmetry considerations may be used for test reduction purposes. The device shall be operated in documented worst-case compliance scenarios (i.e, the ones that lead to the maximum field components), and while all the radiating structures (e.g-, coils or antennas) that by design can simultaneously transmit are energized at their nominal maximum power.

-- The EUT meet the conditions.

(6) For systems with more than one radiating structure, the conditions specified in (5) must be met when the system is fully loaded (i.e, clients absorbing maximum power available), and with all the radiating structures operating at maximum power at the same time, as per design conditions. If the design allows one or more radiating structures to be powered at a higher level while other radiating structures are not powered, then those cases must be tested as well. For instance, a device may use three RF coils powered at 5 W, or one coil powered at 15 W: in this case, both scenarios shall be tested.

-- The EUT meet the conditions.



Photograph of Test

AC Mode:

A

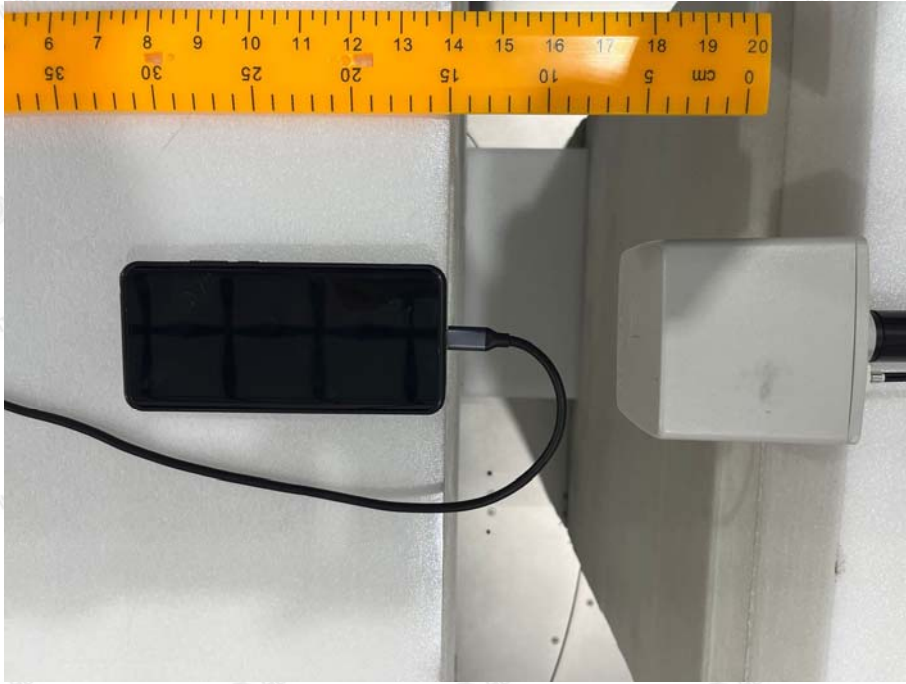


B





C

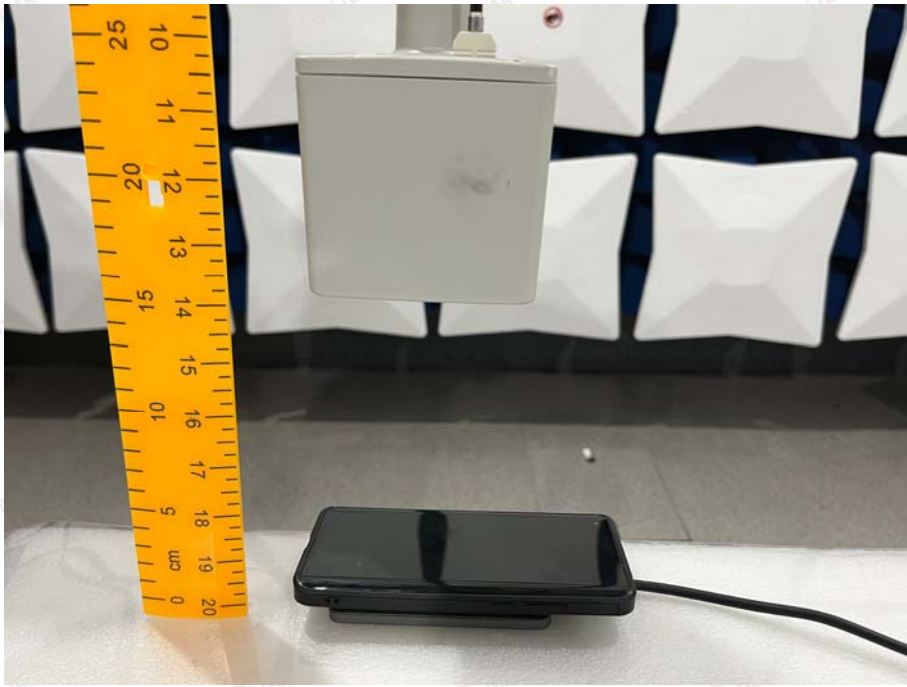


D





E



DC Mode:

A





C





E





F



※※※※※THE END※※※※※

