

Certificate of Conformity

NO.: ES170331005E

The following product has been tested by us with the listed standards and found in conformity with the council EMC directive 2014/30/EU. It is possible to use CE marking to demonstrate the conformity with this EMC Directive.

Applicant : SANTAK ELECTRONICS (SHENZHEN) CO LTD

Address : BLK 72, 8 BAOSHI RD, BAO'AN, SHENZHEN,
GUANGDONG, 518101, CN

Manufacturer : SANTAK ELECTRONICS (SHENZHEN) CO LTD

Address : BLK 72, 8 BAOSHI RD, BAO'AN, SHENZHEN,
GUANGDONG, 518101, CN

Trade Mark : 

EUT : sealed Lead Acid Battery

M/N : C12-7, C12-9, C12-18, C12-26, C12-38, C12-65, C12-100

Test Standards : EN 61000-6-3: 2007+A1:2011+ AC:2012
EN 61000-6-1: 2007



The certificate is based on a single evaluation of one sample of above-mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab. logo.

EMC TEST REPORT
For

SANTAK ELECTRONICS (SHENZHEN) CO LTD

sealed Lead Acid Battery

Model No.: C12-7, C12-9, C12-18, C12-26, C12-38, C12-65, C12-100

Prepared for : SANTAK ELECTRONICS (SHENZHEN) CO LTD
Address : BLK 72, 8 BAOSHI RD, BAO'AN, SHENZHEN,
GUANGDONG, 518101, CN

Prepared by : EMTEK (SHENZHEN) CO., LTD.
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Report Number : ES170331005E
Date of Test : March 31, 2017 to April 06, 2017
Date of Report : April 07, 2017

TABLE OF CONTENT

Test Report Description	Page
1. SUMMARY OF TEST RESULT.....	5
2. GENERAL INFORMATION.....	6
2.1. Description of Device (EUT).....	6
2.2. Description of Test Facility.....	6
2.3. Description of Support Device.....	7
2.4. Measurement Uncertainty.....	7
3. MEASURING DEVICE AND TEST EQUIPMENT.....	8
3.1. For Radiated Emission Measurement.....	8
3.2. For Electrostatic Discharge Immunity Test.....	8
3.3. For RF Strength Susceptibility Test.....	8
3.4. For Magnetic Field Immunity Test.....	8
4. RADIATED EMISSION MEASUREMENT.....	9
4.1. Block Diagram of Test Setup.....	9
4.2. Measuring Standard.....	9
4.3. Radiated Emission Limits.....	9
4.4. EUT Configuration on Measurement.....	10
4.5. Operating Condition of EUT.....	10
4.6. Test Procedure.....	10
4.7. Measuring Results.....	10
5. IMMUNITY PERFORMANCE CRITERIA DESCRIPTION.....	13
6. ELECTROSTATIC DISCHARGE IMMUNITY TEST.....	15
6.1. Block Diagram of Test Setup.....	15
6.2. Test Standard.....	15
6.3. Severity Levels and Performance Criterion.....	15
6.4. Operating Condition of EUT.....	16
6.5. Test Procedure.....	16
6.6. Test Results.....	16
7. RF FIELD STRENGTH SUSCEPTIBILITY TEST.....	18
7.1. Block Diagram of Test Setup.....	18
7.2. Test Standard.....	18
7.3. Severity Levels and Performance Criterion.....	19
7.4. Operating Condition of EUT.....	19
7.5. Test Procedure.....	19
7.6. Test Results.....	19
8. MAGNETIC FIELD SUSCEPTIBILITY TEST.....	22
8.1. Block Diagram of Test Setup.....	22
8.2. Test Standard.....	22
8.3. Severity Levels and Performance Criterion.....	22
8.4. Operating Condition of EUT.....	23
8.5. Test Procedure.....	23
8.6. Test Results.....	23
9. PHOTOGRAPHS.....	25
9.1. Photos of Radiation Emission Measurement.....	25
9.2. Photo of Electrostatic Discharge Test.....	26
9.3. Photo of RF Field Strength Susceptibility Test.....	26
9.4. Photo of Magnetic Field Immunity Test.....	27

APPENDIX (Photos of EUT) (2 Pages)

TEST REPORT DESCRIPTION

Applicant : SANTAK ELECTRONICS (SHENZHEN) CO LTD
Manufacturer : SANTAK ELECTRONICS (SHENZHEN) CO LTD
Trade Mark : 
EUT : sealed Lead Acid Battery
Model No. : C12-7, C12-9, C12-18, C12-26, C12-38, C12-65, C12-100
Power Supply : DC 12V

Measurement Procedure Used:

EN 61000-6-3: 2007+A1:2011+ AC:2012
EN 61000-6-1:2007
(IEC 61000-4-2:2008, IEC 61000-4-3:2006+A1:2007+A2:2010 IEC 61000-4-8:2009)

The device described above is tested by EMTEK (SHENZHEN) CO., LTD. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and EMTEK (SHENZHEN) CO., LTD. is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the EN61000-6-3 and EN61000-6-1 requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of EMTEK (SHENZHEN) CO., LTD.

Date of Test : March 31, 2017 to April 06, 2017

Prepared by : Bunny Zhang
Bunny Zhang/Editor

Reviewer : Jessie Hu
Jessie Hu/Supervisor

Approved & Authorized Signer : Lisa Wang
Lisa Wang/Manager

Modified Information

Version	Report No.	Revision Date	Summary
Ver.1.0	ES170331005E	/	Original Report

1. SUMMARY OF TEST RESULT

EMISSION			
Description of Test Item	Standard	Limits	Results
Conducted Disturbance at Mains Terminals	EN 61000-6-3:2007+A1:2011+ AC:2012	--	Pass
Radiated Disturbance	EN 61000-6-3:2007+A1:2011+ AC:2012	--	Pass
IMMUNITY (EN 61000-6-1:2007)			
Description of Test Item	Basic Standard	Performance Criteria	Results
Electrostatic Discharge (ESD)	IEC 61000-4-2:2008	B	Pass
Radio-Frequency, Continuous Radiated Disturbance	IEC 61000-4-3:2006+A1:2007+A2:2010	A	Pass
Power Frequency Magnetic Field	IEC 61000-4-8:2009	A	Pass
Note: N/A is an abbreviation for Not Applicable.			

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT	: sealed Lead Acid Battery
Model Number	: C12-7, C12-9, C12-18, C12-26, C12-38, C12-65, C12-100 (These models are identical in circuitry and electrical, mechanical and physical construction; the only differences is the model number and capacity. for trading purpose. We prepare C12-100 for test.)
Test Voltage	: DC 12V
Applicant	: SANTAK ELECTRONICS (SHENZHEN) CO LTD
Address	: BLK 72, 8 BAOSHI RD, BAO'AN, SHENZHEN, GUANGDONG, 518101, CN
Manufacturer	: SANTAK ELECTRONICS (SHENZHEN) CO LTD
Address	: BLK 72, 8 BAOSHI RD, BAO'AN, SHENZHEN, GUANGDONG, 518101, CN
Date of Received	: March 31, 2017
Date of Test	: March 31, 2017 to April 06, 2017

2.2. Description of Test Facility

Site Description EMC Lab.	: Accredited by CNAS, 2016.10.24 The certificate is valid until 2022.10.28 The Laboratory has been assessed and proved to be in compliance with CNAS-CL01:2006 (identical to ISO/IEC 17025:2005) The Certificate Registration Number is L2291. Accredited by TUV Rheinland Shenzhen 2010.5.25 The Laboratory has been assessed according to the requirements ISO/IEC 17025. Accredited by FCC, 2017/07/12 The Certificate Registration Number is 406365. Accredited by Industry Canada, November 24, 2015 The Certificate Registration Number is 4480A.
Name of Firm	: EMTEK (SHENZHEN) CO., LTD.
Site Location	: Bldg 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, China

2.3. Description of Support Device

N/A

2.4. Measurement Uncertainty

Test Item	Uncertainty
Radiated Emission Uncertainty (10m Chamber)	: 3.96dB (30M~1GHz Polarize: H) 4.04dB (30M~1GHz Polarize: V)
Uncertainty for R/S Test	: 2.10dB(80MHz-200MHz) 1.76dB(200MHz-1000MHz)
Uncertainty for test site temperature and humidity	: 0.6°C 4%

3. MEASURING DEVICE AND TEST EQUIPMENT

3.1. For Radiated Emission Measurement

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
<input checked="" type="checkbox"/>	EMI Test Receiver	Rohde & Schwarz	ESR3	1316.3003K03-1 01706-HN	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	EMI Test Receiver	Rohde & Schwarz	ESR3	1316.3003K03-1 01707-Z1	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Pre-Amplifier	Lunar EM	LNA10M1G-40	J1011130912001	May 28, 2016	1 Year
<input checked="" type="checkbox"/>	Pre-Amplifier	Lunar EM	LNA10M1G-40	J1011131126002	May 28, 2016	1 Year
<input checked="" type="checkbox"/>	Bilog Antenna	Schwarzbeck	VULB9163	659	May 28, 2016	1 Year
<input checked="" type="checkbox"/>	Bilog Antenna	Schwarzbeck	VULB9163	661	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Cable	Times Microwave	LMR-240 N-N 1m	SS26-P1	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Cable	Times Microwave	LMR-240 N-N 1m	SS26-P2	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Cable	Times Microwave	LMR-240 N-N 1.5m	N/A	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Cable	Times Microwave	LMR-240 N-N 1.5m	N/A	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Cable	Times Microwave	LMR-240 N-N 12m	N/A	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Cable	Times Microwave	LMR-240 N-N 11m	N/A	May 29, 2016	1 Year

3.2. For Electrostatic Discharge Immunity Test

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
<input checked="" type="checkbox"/>	ESD Tester	TESEQ AG	NSG 438A	130	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Impulse Module	TESEQ AG	IN NSG 438A A 4380-150pF/330Ohm	403-550/1712	May 29, 2016	1 Year

3.3. For RF Strength Susceptibility Test

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
<input checked="" type="checkbox"/>	Signal Generator	Agilent	N5181A	MY50145187	May 28, 2016	1 Year
<input checked="" type="checkbox"/>	RF Power Meter. Dual Channel	BOONTON	4232A	10539	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	50ohm Diode Power Sensor	BOONTON	51011EMC	34236/34238	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Field Strength Meter	DARE	RSS1006A	10I00037SO22	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	50ohm Diode Power Sensor	BOONTON	51011EMC	36164	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Power Amplifier	MILMEGA	80RF1000-175	1059345	May 28, 2016	1 Year
<input checked="" type="checkbox"/>	Power Amplifier	MILMEGA	AS0102-55	1018770	May 28, 2016	1 Year
<input checked="" type="checkbox"/>	Power Amplifier	MILMEGA	AS1860-50	1059346	May 28, 2016	1 Year
<input checked="" type="checkbox"/>	Log.-Per. Antenna	SCHWARZB ECK	VULP 9118E	811	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Broad-Band Horn Antenna	SCHWARZB ECK	STLP 9149	9149-227	May 29, 2016	1 Year
<input checked="" type="checkbox"/>	Multi-function interface system	DARE	CTR1009B	12I00250SNO7 2	N/A	N/A
<input checked="" type="checkbox"/>	Automatic switch group	DARE	RSW1004A	N/A	N/A	N/A

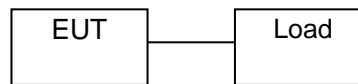
3.4. For Magnetic Field Immunity Test

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
<input checked="" type="checkbox"/>	Magnetic Field Tester	HAEFELY	MAG100	250040.1	May 28, 2016	1Year

4. RADIATED EMISSION MEASUREMENT

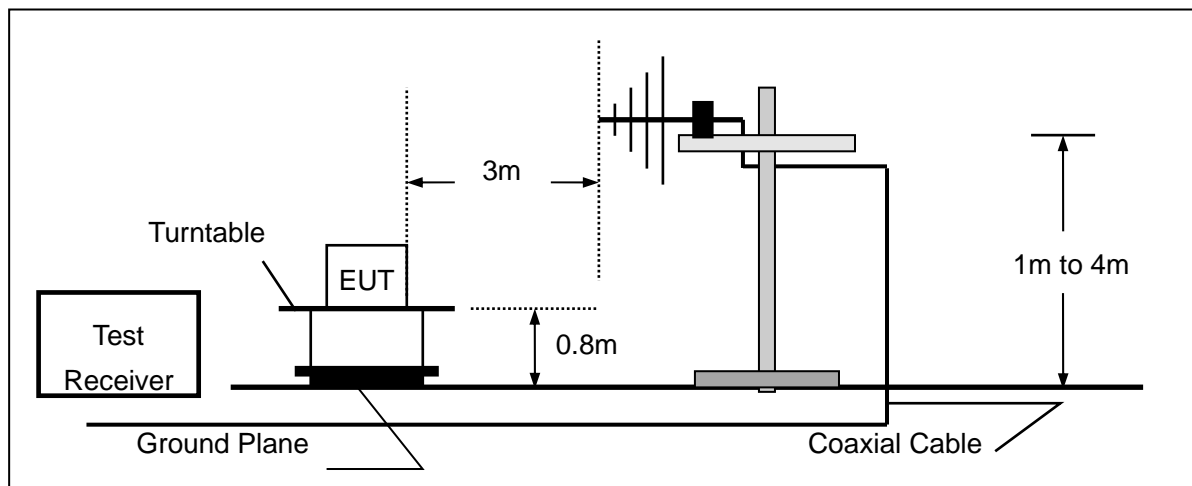
4.1. Block Diagram of Test Setup

4.1.1. Block diagram of connection between the EUT and simulators



(EUT: sealed Lead Acid Battery)

4.1.2. Block diagram of test setup (In chamber)



(EUT: sealed Lead Acid Battery)

4.2. Measuring Standard

EN 61000-6-3: 2007+A1:2011+ AC:2012

4.3. Radiated Emission Limits

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMIT (dB μ V/m)
30 ~ 230	10	30
230 ~ 1000	10	37

Note: (1) The smaller limit shall apply at the combination point 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.

4.4. EUT Configuration on Measurement

The EN 61000-6-3 regulations test method must be used to find the maximum emission during radiated emission measurement.

EUT : sealed Lead Acid Battery
Model Number : C12-100

4.5. Operating Condition of EUT

4.5.1. Setup the EUT as shown on Section 4.1.

4.5.2. Turn on the power of all equipment.

4.5.3. Let the EUT work in measuring mode (Discharging) and measure it.

4.6. Test Procedure

The EUT is placed on a turntable which is 0.8 meter high above the ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 10 meters away from the receiving antenna that is mounted on an antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Bilog antenna (calibrated by Dipole Antenna) is used as a receiving antenna. Both horizontal and vertical polarization of the antenna is set on test.

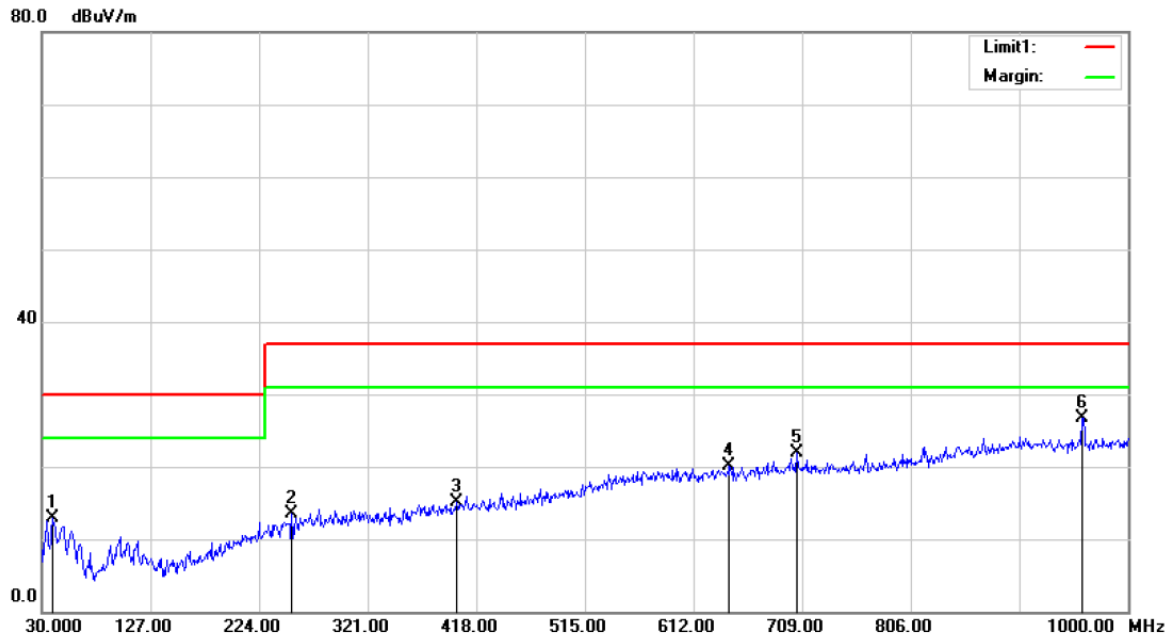
The bandwidth of the Receiver (ESCI) is set at 120kHz.
All the scanning curves are attached in the following pages.

4.7. Measuring Results

PASS.

The frequency range from 30MHz to 1000MHz is investigated.

Please reference to the following pages.



Site :10m Chamber #1

Polarization: Horizontal

Temperature: 26

Limit: (RE 10M)EN61000-6-3

Power: DC 12V

Humidity: 60 %

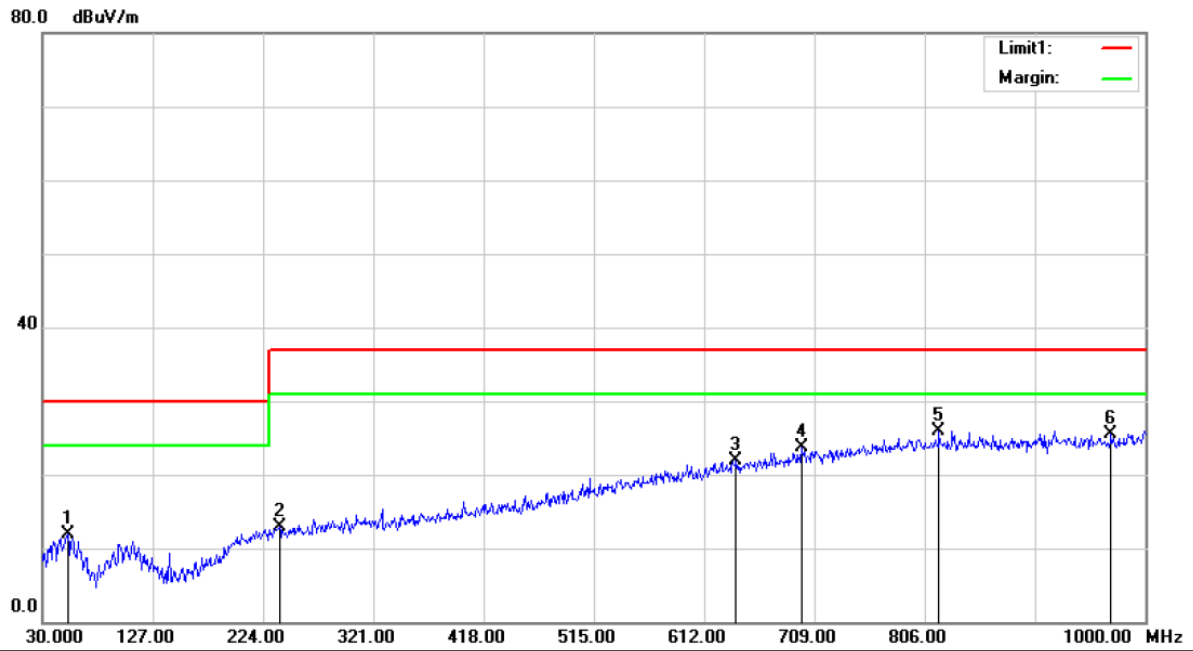
Mode:Discharging

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		39.7000	42.67	-29.86	12.81	30.00	-17.19	QP	306	0
2		253.1000	41.52	-28.05	13.47	37.00	-23.53	QP	306	242
3		400.5400	38.59	-23.42	15.17	37.00	-21.83	QP	306	226
4		644.0100	39.16	-19.07	20.09	37.00	-16.91	QP	400	138
5		704.1500	39.98	-18.03	21.95	37.00	-15.05	QP	400	236
6	*	959.2600	40.28	-13.53	26.75	37.00	-10.25	QP	306	295

*:Maximum data x:Over limit !:over margin

Operator: CSL



Site :10m Chamber #1

Polarization: **Vertical**

Temperature: 26

Limit: (RE 10M)EN61000-6-3

Power: DC 12V

Humidity: 60 %

Mode:Discharging

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1		52.3100	40.85	-28.92	11.93	30.00	-18.07	QP	199	168
2		238.5500	40.85	-28.02	12.83	37.00	-24.17	QP	101	70
3		640.1300	38.99	-17.13	21.86	37.00	-15.14	QP	199	311
4		697.3600	39.16	-15.45	23.71	37.00	-13.29	QP	101	176
5	*	818.6100	39.17	-13.28	25.89	37.00	-11.11	QP	199	137
6		969.9300	37.00	-11.51	25.49	37.00	-11.51	QP	199	297

*:Maximum data x:Over limit !:over margin

Operator: CSL

5. IMMUNITY PERFORMANCE CRITERIA DESCRIPTION

Performance Level

The test results shall be classified in terms of the loss of function or degradation of performance of the equipment under test, relative to a performance level by its manufacturer or the requestor of the test, or the agreed between the manufacturer and the purchaser of the product.

Definition related to the performance level:

1. Based on the used product standard
2. Based on the declaration of the manufacturer, requestor or purchaser

Criterion A:

Definition: normal performance within limits specified by the manufacturer, requestor and purchaser.

The equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

Criterion B:

Definition: temporary loss of function or degradation of performance which ceases after the disturbance ceases, and from which the equipment under test recovers its normal performance, without operator intervention.

After the test, the EUT shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the EUT is used as intended. The performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is allowed. However, no change of operating state or stored data is allowed to persist after the test. If the minimum performance level (or the permissible performance loss) is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the EUT if used as intended.

Criterion C:

Definition: temporary loss of function or degradation of performance, the correction of which requires operator intervention.

Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions. Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

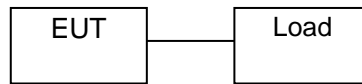
Criterion D

Definition: loss of function or degradation of performance, which is not recoverable, owing to damage to hardware or software, or loss of data.

6. ELECTROSTATIC DISCHARGE IMMUNITY TEST

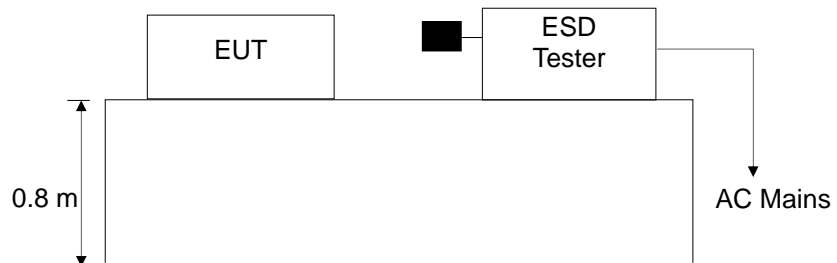
6.1. Block Diagram of Test Setup

6.1.1. Block diagram of connection between the EUT and simulators



(EUT: sealed Lead Acid Battery)

6.1.2. Block diagram of ESD test setup



(EUT: sealed Lead Acid Battery)

6.2. Test Standard

EN 61000-6-1:2007

(IEC 61000-4-2:2008 Severity Level: 3 / Air Discharge: $\pm 8\text{kV}$
Level: 2 / Contact Discharge: $\pm 4\text{kV}$)

6.3. Severity Levels and Performance Criterion

6.3.1. Severity level

Level	Test Voltage Contact Discharge (kV)	Test Voltage Air Discharge (kV)
1	± 2	± 2
2	± 4	± 4
3	± 6	± 8
4	± 8	± 15
X	Special	Special

6.3.2. Performance criterion: B

6.4. Operating Condition of EUT

- 6.4.1. Setup the EUT as shown on Section 6.1.
- 6.4.2. Turn on the power of all equipment.
- 6.4.3. Let the EUT work in test mode (Discharging) and test it.

6.5. Test Procedure

6.5.1. Air Discharge:

This test is done on a non-conductive surface. The round discharge tip of the discharge electrode shall be approached as fast as possible to touch the EUT. After each discharge, the discharge electrode shall be removed from the EUT. The generator is then re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed.

6.5.2. Contact Discharge:

All the procedure shall be same as Section 6.5.1. Except that the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

6.5.3. Indirect discharge for horizontal coupling plane

At least 10 single discharges (in the most sensitive polarity) shall be applied at the front edge of each HCP opposite the center point of each unit (if applicable) of the EUT and 0.1m from the front of the EUT. The long axis of the discharge electrode shall be in the plane of the HCP and perpendicular to its front edge during the discharge.

6.5.4. Indirect discharge for vertical coupling plane

At least 10 singles discharge (in the most sensitive polarity) shall be applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m×0.5m, is placed parallel to, and positioned at a distance of 0.1m from the EUT. Discharges shall be applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated.

6.6. Test Results

PASS.

Please refer to the following page.

Electrostatic Discharge Test Result

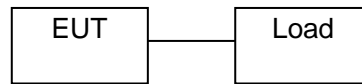
EMTEK (SHENZHEN) CO., LTD.

Applicant	SANTAK ELECTRONICS (SHENZHEN) CO LTD		
EUT	sealed Lead Acid Battery	Test Date	April 05, 2017
M/N	C12-100	Temperature	22°C
Power Supply	DC 12V	Humidity	50%
Air discharge	± 8.0kV	Test ode	Discharging
Contact discharge:	± 4.0kV	Criterion	B
Location	Kind A-Air Discharge C-Contact Discharge	Result	
Metal	C	A	
Slot	A	A	
HCP of all sides	C	A	
VCP of front	C	A	
VCP of rear	C	A	
VCP of left	C	A	
VCP of right	C	A	
Note:			

7. RF FIELD STRENGTH SUSCEPTIBILITY TEST

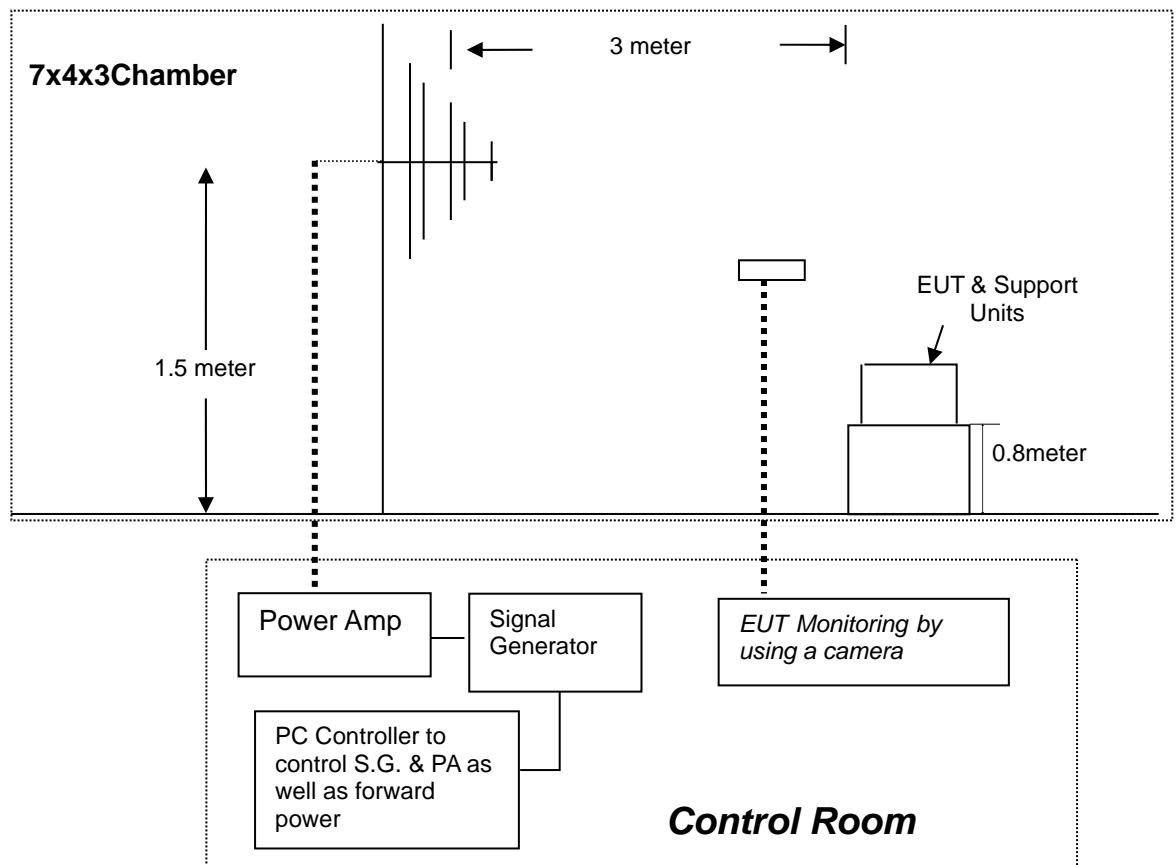
7.1. Block Diagram of Test Setup

7.1.1. Block diagram of connection between the EUT and simulators



(EUT: sealed Lead Acid Battery)

7.1.2. Block diagram of RS test setup



(EUT: sealed Lead Acid Battery)

7.2. Test Standard

EN 61000-6-1:2007

(IEC 61000-4-3:2006+A1:2007+A2:2010, Severity Level: 1V, 3V / m)

7.3. Severity Levels and Performance Criterion

7.3.1. Severity Levels

Level	Field Strength V/m
1.	1
2.	3
3.	10
X	Special

7.3.2. Performance Criterion: A

7.4. Operating Condition of EUT

7.4.1. Me Setup the EUT as shown on Section 7.1.

7.4.2. Turn on the power of all equipment.

7.4.3. Let the EUT work in test mode (Discharging) and test it.

7.5. Test Procedure

The EUT are placed on a table that is 0.8 meter high above the ground. The EUT is set 3 meters away from the transmitting antenna that is mounted on an antenna tower. Both horizontal and vertical polarization of the antenna is set on test. Each of the four sides of the EUT must be faced this transmitting antenna and measured individually.

In order to judge the EUT performance, a CCD camera is used to monitor it.

All the scanning conditions are as following:

Condition of Test	Remark
1. Fielded Strength	3V/m (Severity Level 2) 1V/m (Severity Level 1)
2. Radiated Signal	Modulated
3. Scanning Frequency	80-1000MHz
4. Sweep time of radiated	0.0015 Decade/s
5. Dwell Time	1 Sec.

7.6. Test Results

PASS.

Please refer to the following pages.

RF Field Strength Susceptibility Test Results

EMTEK (SHENZHEN) CO., LTD.

Applicant : SANTAK ELECTRONICS (SHENZHEN) CO LTD				
EUT : sealed Lead Acid Battery		Test Date : April 05, 2017		
M/N : C12-100		Temperature : 22°C		
Field Strength : 3 V/m		Humidity : 50%		
Power Supply : DC 12V		Criterion : A		
Test Mode : Discharging		Frequency Range : 80 MHz to 1000 MHz 1400 MHz to 2000 MHz		
Modulation: <input type="checkbox"/> None <input type="checkbox"/> Pulse <input checked="" type="checkbox"/> AM 1kHz 80%				
Frequency Rang 1: 80~ 1000MHz		Frequency Rang 2: 1400~ 2000MHz		
Steps	1%			
	Horizontal	Vertical	Horizontal	Vertical
Front	A	A	A	A
Right	A	A	A	A
Rear	A	A	A	A
Left	A	A	A	A
Test Equipment : 1. Signal Generator : N5181A (Agilent) 2. Power Amplifier : AS0102-55 (MILMEGA) & 80RF1000-175 (MILMEGA) & AS1860-50 (MILMEGA) 3. Log.-Per.Antenna: VULP9118E (SCHWARZBECK) 4. Broad-Band Horn Antenna: STLP 9149 (Schwarzbeck) 5. RF Power Meter. Dual Channel: 4232A (BOONTON) 6. Field Strength Meter: RSS1006A (DARE)				
Note:				

RF Field Strength Susceptibility Test Results

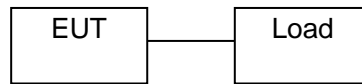
EMTEK (SHENZHEN) CO., LTD.

Applicant	: SANTAK ELECTRONICS (SHENZHEN) CO LTD			
EUT	: sealed Lead Acid Battery		Test Date	: April 05, 2017
M/N	: C12-100		Temperature	: 22°C
Field Strength	: 1 V/m		Humidity	: 50%
Power Supply	: DC 12V		Criterion	: A
Test Mode	: Discharging		Frequency Range	: 2000 MHz to 2700 MHz
Modulation: <input type="checkbox"/> None <input type="checkbox"/> Pulse <input checked="" type="checkbox"/> AM 1kHz 80%				
	Frequency Rang 1: 2000~ 2700MHz		Frequency Rang 2: N/A	
Steps	1%			
	Horizontal	Vertical	Horizontal	Vertical
Front	A	A		
Right	A	A		
Rear	A	A		
Left	A	A		
Test Equipment : 1. Signal Generator : N5181A (Agilent) 2. Power Amplifier : AS0102-55 (MILMEGA) & 80RF1000-175 (MILMEGA) & AS1860-50 (MILMEGA) 3. Log.-Per.Antenna: VULP9118E (SCHWARZBECK) 4. Broad-Band Horn Antenna: STLP 9149 (Schwarzbeck) 5. RF Power Meter. Dual Channel: 4232A (BOONTON) 6. Field Strength Meter: RSS1006A (DARE)				
Note:				

8. MAGNETIC FIELD SUSCEPTIBILITY TEST

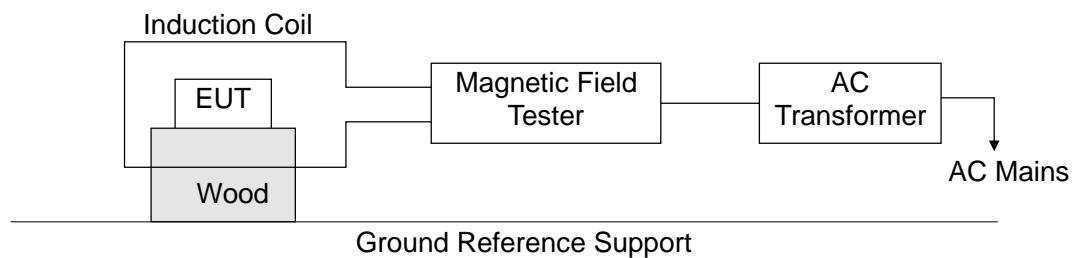
8.1. Block Diagram of Test Setup

8.1.1. Block diagram of the EUT



(EUT: sealed Lead Acid Battery)

8.1.2. Magnetic field test setup



(EUT: sealed Lead Acid Battery)

8.2. Test Standard

EN 61000-6-1:2007

(IEC 61000-4-8:2009, Severity Level: Level 2, 3A / m)

8.3. Severity Levels and Performance Criterion

8.3.1. Severity Levels

Level	Field Strength A/m
1	1
2	3
3	10
4	30
5	100
X	Special

8.3.2. Performance Criterion: A

8.4. Operating Condition of EUT

- 8.4.1. Me Setup the EUT as shown on Section 8.1.
- 8.4.2. Turn on the power of all equipment.
- 8.4.3. Let the EUT work in test mode (Discharging) and test it.

8.5. Test Procedure

The EUT is placed in the middle of a induction coil (1*1m), under which is a 1*1*0.1m (high) table, this small table is also placed on a larger table, above the ground. Both horizontal and vertical polarization of the induction coil is set on test, so that each side of the EUT is affected by the magnetic field. Also can reach the same aim by change the position of the EUT.

8.6. Test Results

PASS.

Please refer to the following page.

Magnetic Field Immunity Test Result

EMTEK (SHENZHEN) CO., LTD.

Standard: <input checked="" type="checkbox"/> IEC 61000-4-8	Result: <input checked="" type="checkbox"/> PASS / <input type="checkbox"/> FAIL			
<p>Applicant : <u>SANTAK ELECTRONICS (SHENZHEN) CO LTD</u></p> <p>EUT : <u>sealed Lead Acid Battery</u></p> <p>M/N : <u>C12-100</u></p> <p>Input Voltage : <u>DC 12V</u></p> <p>Date of Test : <u>April 05, 2017</u> Test Engineer: <u>ZCJ</u></p> <p>Ambient Condition : Temp : <u>22°C</u> Humid: <u>50%</u></p> <p>Criterion: A</p>				
Operation Mode: Discharging				
Test Level (A/m)	Testing Duration	Coil Orientation	Criterion	Result
3	5 mins	X	A	A
3	5 mins	Y	A	A
3	5 mins	Z	A	A
Operation Mode: N/A				
Test Level (A/m)	Testing Duration	Coil Orientation	Criterion	Result
Test Equipment	Magnetic Field Test: HEAFELY MAG 100.1			
Note:				

9. PHOTOGRAPHS

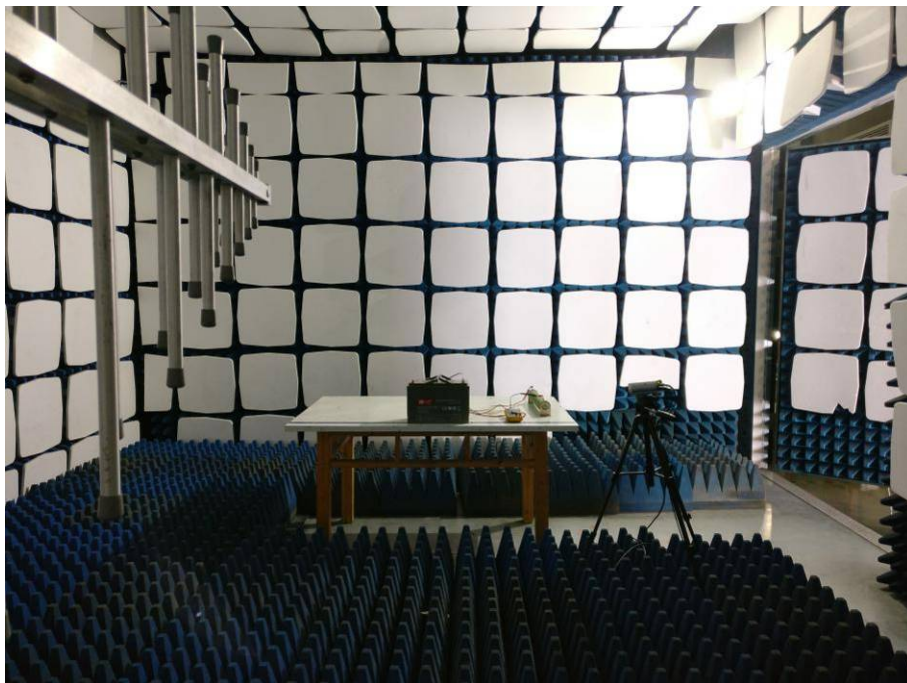
9.1. Photos of Radiation Emission Measurement



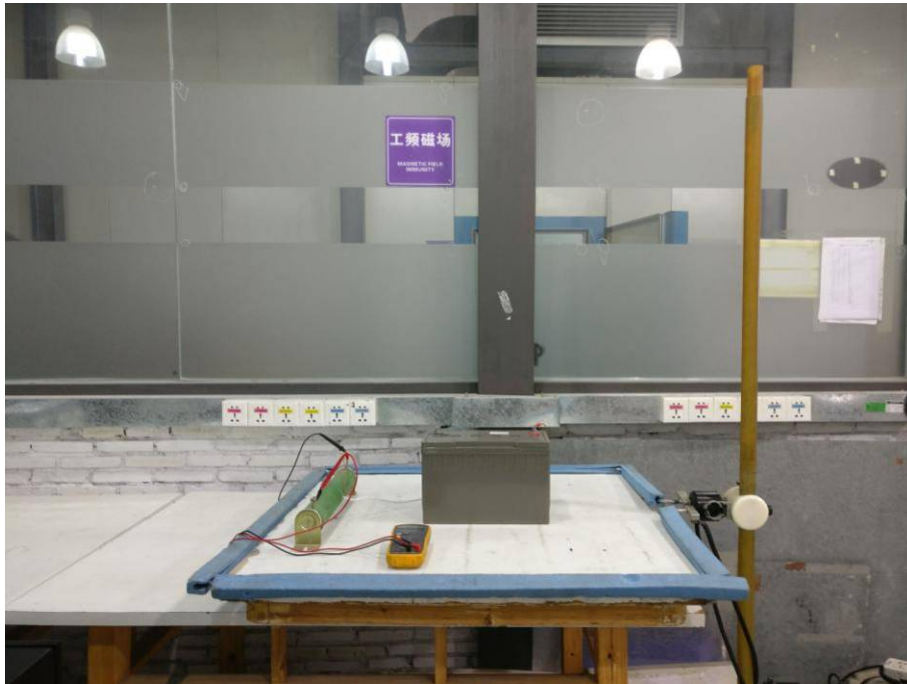
9.2.Photo of Electrostatic Discharge Test



9.3.Photo of RF Field Strength Susceptibility Test



9.4.Photo of Magnetic Field Immunity Test



APPENDIX (Photos of EUT)





-----The end-----