Technical Compliance Statement

CE EMC Test Report

For the following information **Ref. File No.: C1M1706083 (C1M1607262)**

Product Name : Multi Voltage Glow Plug Tester

Model Number : 9DM1A1

Applicant : King Tony Tools Co., Ltd.

Manufacturer : King Tony Tools Co., Ltd.

Standards :

EN 61326-1:2013

Emission: CISPR 11:2009 +A1:2010 (Class B)

Immunity: IEC 61000-4-2:2008, IEC 61000-4-3:2010, IEC 61000-4-8:2009

We hereby certify that the above product has been tested by us with the listed standards and found in compliance with the council medical directive 2014/30/EU. The test data and results are issued on the EMC test report no. **EM-E170607**.

Signature

Alex Deng/Deputy Manager
Date: 2017. 06. 06

Test Laboratory:
AUDIX Technology Corporation, EMC Department
TAF Accreditation No.: 1724
Web Site: www.audixtech.com

Testing Laboratory
1724

The statement is based on a single evaluation of one sample of the 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
King Tony Tools Co., Ltd.
Multi Voltage Glow Plug Tester
Models No.: 9DM1A1

Prepared for : King Tony Tools Co., Ltd.
No 11, 150 Alley, 516 Lane, 2 Sec., Hsi Nan Rd., Wu-Jih Dist., Taichung City, Taiwan, R.O.C

Prepared by : AUDIX Technology Corporation
EMC Department
No. 53-11, Dingfu, Linkou Dist.,
New Taipei City 244, Taiwan

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File Number	:	C1M1706083 (C1M1607262)
Report Number	:	EM-E170607
Date of Test	:	2014. 03. 14. ~ 17.
Date of Report	:	2017. 06. 06

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TEST REPORT VERIFICATION

Applicant	:	King Tony Tools Co., Ltd.
Manufacturer	:	King Tony Tools Co., Ltd.
EUT Description	:	Multi Voltage Glow Plug Tester
		(A) Model No. : 9DM1A1
		(B) Serial No. : N/A
		(C) Power Supply : DC 9V(Via Battery)

Measurement Standard Used:
EN 61326-1:2013

Emission: CISPR 11:2009 +A1:2010 (Class B)

Immunity: IEC 61000-4-2:2008, IEC 61000-4-3:2010, IEC 61000-4-8:2009,

The device described above was tested by AUDIX Technology Corporation to determine the maximum emission levels emanating from the device, its ensured severity levels, and performance criterion. This test report contains the measurement results, and AUDIX Technology Corporation assumes full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT is technically compliant with the requirements of EN 61326-1 standard.

This report applies to above tested sample only and shall not be reproduced in part without written approval of AUDIX Technology Corporation.

Date of Test : 2014. 03. 14. ~ 17. Date of Report: 2017. 06. 06

Producer : _____
(Ariel Chen/Administrator)

Signatory : _____
(Alex Deng/Deputy Manager)

1. DESCRIPTION OF VERSION

Edition No.	Date of Revision	Revision Summary	Report Number
0	2017. 06. 06	Original Report.	EM-E170607

2. SUMMARY OF STANDARDS AND RESULTS

2.1. Description of Standards and Results

The EUT has been tested according to the applicable standards as referenced below.

EMISSION			
Description of Test Item	**Standard**	**Limits**	**Results**
Conducted disturbance	CISPR 11:2009 +A1:2010	Group 1, Class B	N/A
Radiated disturbance	CISPR 11:2009 +A1:2010	Group 1, Class B	PASS
Harmonic distortion	EN 61000-3-2:2006 +A1:2009 +A2:2009	Class A	N/A
Voltage fluctuations and flicker	EN 61000-3-3:2008	Section 5	N/A
IMMUNITY (EN 61326-1)			
Description of Test Item	**Basic Standard**	**Performance Criteria**	**Results**
Electrostatic discharge (ESD)	IEC 61000-4-2:2008	B	PASS
Radiated RF electromagnetic fields	IEC 61000-4-3:2010	A	PASS
Electrical fast transients and bursts	IEC 61000-4-4:2012	B	N/A
Surge	IEC 61000-4-5:2005	B	N/A
Conducted disturbances, induced by RF fields	IEC 61000-4-6:2008	A	N/A
Power frequency magnetic fields	IEC 61000-4-8:2009	A	PASS
Voltage dips, 0% during 0.5cycle	IEC 61000-4-11:2004 (For EN 61326-1)	B	N/A
Voltage dips, 0% during 1 cycle		B	N/A
Voltage dips, 70% during 25/30 cycle		C	N/A
Voltage Interruptions, 0% during 250/300 cycle		C	N/A

Above items shown N/A are not applicable in this report and regarded as compliance due to EUT uses DC battery.

2.2. Description of Compliance Criteria

The general principles (performance criteria) for the evaluation of the immunity test results are the following.

Performance criterion A

The equipment shall continue to operate as intended during and after the test. 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, either of these may be derived from the product description and documentation and what the user may reasonably expect from the equipment if used as intended.

Performance criterion B

The equipment shall continue to operate as intended after the test. 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. During the test, degradation of performance is however allowed. No change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, either of these may be derived from the product description and documentation and what the user may reasonably expect from the equipment if used as intended.

EXAMPLE 1 A data transfer is controlled/checked by parity check or by other means. In the case of malfunctioning, such as caused by a lightning strike, the data transfer will be repeated automatically. The reduced data transfer rate at this time is acceptable.

EXAMPLE 2 During testing, an analogue function value may deviate. After the test, the deviation vanishes.

EXAMPLE 3 In the case of a monitor used only for man-machine monitoring, it is acceptable that some degradation takes place for a short time, such as flashes during the burst application.

EXAMPLE 4 An intended change of the operating state is allowed if self-recoverable.

Performance criterion C

Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls.

EXAMPLE 1 In the case of an interruption in the mains longer than the specified buffer time, the power supply unit of the equipment is switched off. The switch-on may be automatic or carried out by the operator.

EXAMPLE 2 After a programme interruption caused by a disturbance, the processor functions of the equipment stops at a defined position and is not left in a "crashed state". The operator's decision prompts may be necessary.

EXAMPLE 3 The test results in an opening of an over-current protection device that is replaced or reset by the operator.

3. GENERAL INFORMATION

3.1. Description of Device (EUT)

Description	:	Multi Voltage Glow Plug Tester
Model Number	:	9DM1A1
Serial No.	:	N/A
Applicant	:	King Tony Tools Co., Ltd. No 11, 150 Alley, 516 Lane, 2 Sec., Hsi Nan Rd., Wu-Jih Dist., Taichung City, Taiwan, R.O.C
Manufacturer	:	King Tony Tools Co., Ltd. No 11, 150 Alley, 516 Lane, 2 Sec., Hsi Nan Rd., Wu-Jih Dist., Taichung City, Taiwan, R.O.C
Battery	:	DC 9V (Battery)
Date of Receipt of Sample	:	2014. 03. 12.
Date of Test	:	2014. 03. 14. ~ 17.

3.2. Tested Supporting System Details

3.2.1. RESISTANCE LOAD

Model Number	:	N/A
Manufacturer	:	N/A

3.3. Description of Test Facility

Name of Firm	:	**AUDIX Technology Corporation** **EMC Department** No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan
Test Facility & Location	:	**No. 8 Open Area Test Site** No. 67-4, Dingfu, Linkou Dist., New Taipei City 244, Taiwan **Immunity Test Site** No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan
NVLAP Lab. Code	:	200077-0
TAF Accreditation No	:	1724

3.4. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty (dB)
Radiation Test (Distance: 10m)	30MHz~300MHz	± 2.99dB
	300MHz~1000MHz	± 2.73dB
RF Field Strength Susceptibility Test	80MHz ~ 200MHz	±1.505dB
	200MHz ~ 1000MHz	±1.461dB
	1GHz ~ 6GHz	± 1.906dB

Remark：Uncertainty = $ku_c(y)$

4. CONDUCTED DISTURBANCE MEASUREMENT

The conducted disturbance voltage limits are not required for EUT which only employ batteries for operation.

5. RADIATED DISTURBANCE MEASUREMENT

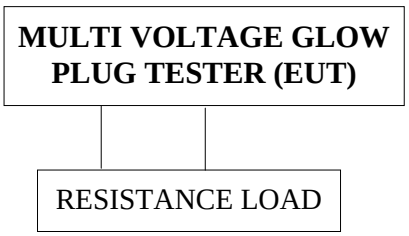
5.1. Test Equipment

The following test equipment was used during the radiated disturbance measurement: (No. 8 Open Area Test Site)

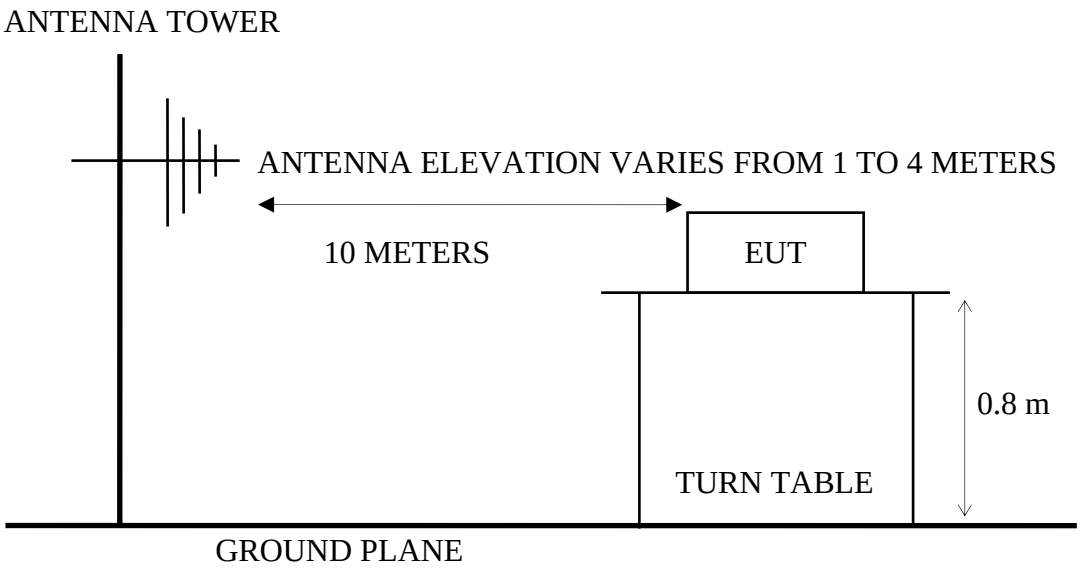
Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A-507	MY51250907	2015. 02. 28.	1 Year
2.	Test Receiver	R & S	ESCI	100558	2014. 11. 06.	1 Year
3.	Amplifier	HP	8447D	2944A06891	NCR	NCR
4.	Bilog Antenna	Schaffner	CBL6112B	2735	2015. 02. 28.	1 Year

5.2. Block Diagram of Test Setup

5.2.1. Block Diagram of connection between EUT and simulators



5.2.2. Open Area Test Site (10m) Setup Diagram



5.3. Limits for Radiated Disturbance

(CISPR 11, Group I/Class B)

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dBμV/m)
30 ~ 230	10	30
230 ~ 1000	10	37

Notes**:** (1) The tighter limit applies 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 E.U.T.

5.4. Operating Condition of EUT

5.4.1. Setup the **EUT (Multi Voltage Glow Plug Tester)** and simulator as shown on 5.2.

5.4.2. Turn on the power of all equipments.

5.4.3. The **Multi Voltage Glow Plug Tester (EUT)** was linked load and resistance load with full load of output voltage during the testing.

5.4.4. The **Multi Voltage Glow Plug Tester (EUT)** was on normal function during all testing.

5.5. Test Procedure

The EUT was placed on a turn table which was 0.8 meter above the ground.
The turn table rotated 360 degrees to determine the position of the maximum emission level. EUT was set to 10 meters away from the receiving antenna which was mounted on an antenna tower. The antenna moved up and down between 1 to 4 meters to find out the maximum emission level. Broadband antennas were used as a receiving antenna.
Both horizontal and vertical polarizations of the antenna were set on measurement.
In order to find the maximum emission, all of the interface cables were manipulated according to CISPR 11 requirement.

The bandwidth of the R & S Test Receiver ESCI was set at 120 kHz.

The frequency range from 30MHz to 1000MHz was pre-scanned with a peak detector and all final readings of measurement from Test Receiver are Quasi-Peak values.

5.6. Radiated Disturbance Measurement Results

PASSED. (All emissions not reported below are too low against the prescribed limits.)

The EUT was measured during this section testing and the test results are listed in next pages.

EUT：Multi Voltage Glow Plug Tester M/N：9DM1A1

Test Date: 2014. 03. 14. Temperature: 20℃ Humidity: 52%

The details of test modes are as follows：

Mode	Test Mode	Reference Test Data No.	
		Horizontal	Vertical
1.	Operating	# 2	# 1

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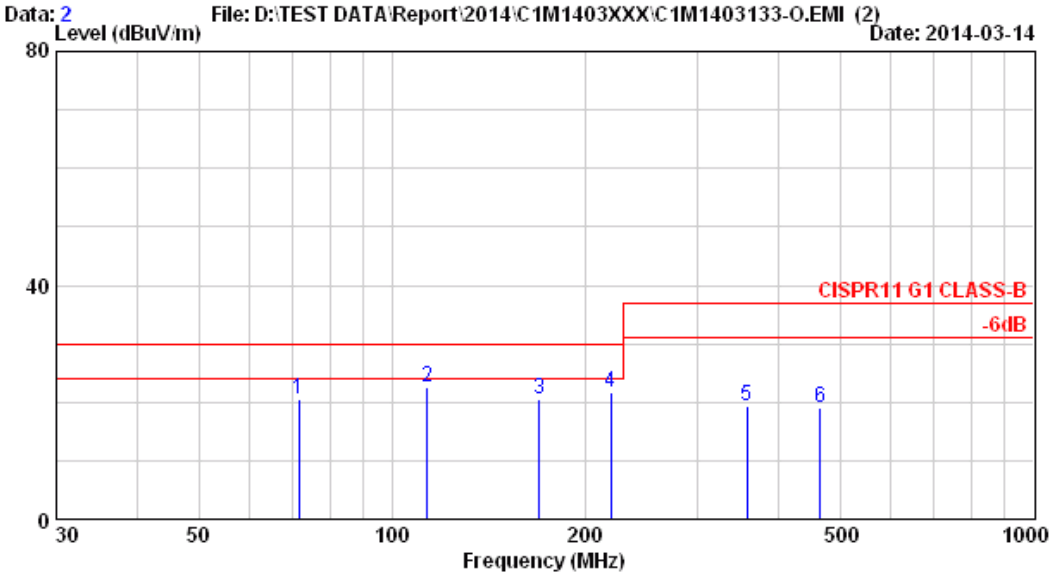

Site no. : OATS NO.8 Data no. : 2
Dis. / Ant. : 10m CBL6112B(2735) Ant. pol. : HORIZONTAL
Limit : CISPR11 G1 CLASS-B
Env. / Ins. : 20*C / 52% ESCI (558) Engineer : TIM
EUT M/N : 9DM1A1
Power Rating : DC 9V
Test Mode : Operating

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Remark
1	71.651	7.21	1.34	11.89	20.43	30.00	9.57	
2	113.540	12.37	1.70	8.58	22.65	30.00	7.35	*
3	169.600	10.05	2.14	8.40	20.58	30.00	9.42	
4	219.630	9.86	2.42	9.54	21.81	30.00	8.19	
5	357.158	15.00	3.23	1.06	19.29	37.00	17.71	
6	465.260	17.20	3.73	-1.87	19.06	37.00	17.94	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

3. The worst emission was detected at 113.540MHz with corrected signal level of 22.65dBµV/m (limit is 30.0dBµV/m) when the antenna was at horizontal polarization and was at 4.0m high and the turn table was at 210°.

4. 0°was the table front facing the antenna. Degree is calculated from 0°clockwise facing the antenna.

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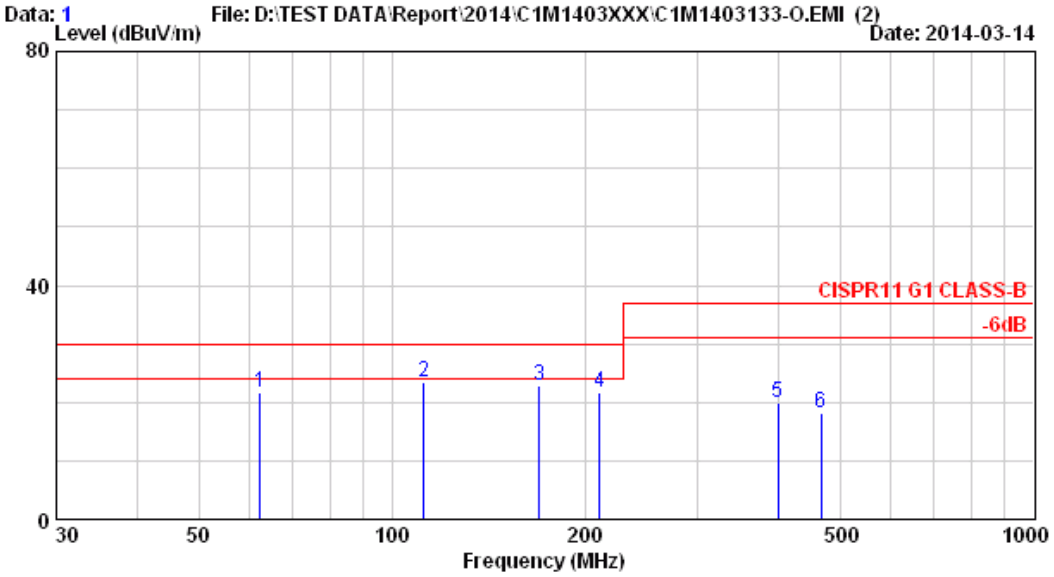


Site no. : OATS NO.8 Data no. : 1
Dis. / Ant. : 10m CBL6112B(2735) Ant. pol. : VERTICAL
Limit : CISPR11 G1 CLASS-B
Env. / Ins. : 20*C / 52% ESCI (558) Engineer : TIM
EUT M/N : 9DM1A1
Power Rating : DC 9V
Test Mode : Operating

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Remark
1	62.250	5.33	1.25	15.25	21.83	30.00	8.17	
2	112.324	12.29	1.69	9.56	23.53	30.00	6.47	*
3	169.660	10.05	2.14	10.58	22.76	30.00	7.24	
4	210.880	9.83	2.34	9.54	21.71	30.00	8.29	
5	399.355	16.04	3.46	0.40	19.90	37.00	17.10	
6	466.325	17.20	3.73	-2.84	18.09	37.00	18.91	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

3. The worst emission was detected at 112.324MHz with corrected signal level of 23.53dBµV/m (limit is 30.0dBµV/m) when the antenna was at vertical polarization and was at 1.0m high and the turn table was at 330°.

4. 0°was the table front facing the antenna. Degree is calculated from 0°clockwise facing the antenna.

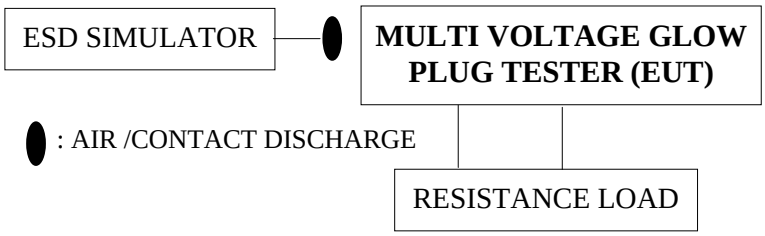
6. ELECTROSTATIC DISCHARGE IMMUNITY TEST

6.1. Test Equipment

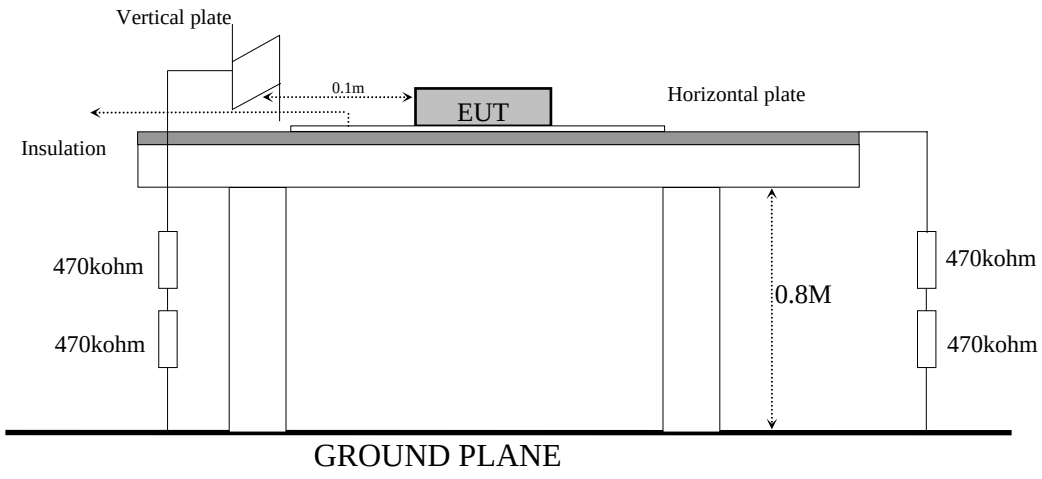
Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	ESD Simulator	EM TEST	dito	V0503100055	2014. 04. 14.	1 Year

6.2. Block Diagram of Test Setup

6.2.1. Block Diagram of connection between EUT and simulators



6.2.2. ESD Test Setup



6.3. Test Standard and Specification and Performance Criteria

EN 61326-1:2013 (Basic Electromagnetic Environment: EN 61000-4-2:2008)		
Test Specification		Performance Criteria
Air Discharge	±2kV; ±4kV; ±8kV	**B**
Contact Discharge	±2kV; ±4kV	

6.4. Operating Condition of EUT

Same as radiated disturbance measurement which is listed in 5.4 except the test set up replaced by section 6.2.

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 ESD generator discharge electrode shall be removed from the EUT. The generator is then retrigged for a new single discharge and repeated 10 discharges each at positive and negative polarity for each preselected 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 6.5.1. except that the tip of the discharge electrode shall touch the EUT's conductive surfaces before the discharge switch is operated.

6.5.3. Indirect discharge for horizontal coupling plane：

At least 10 discharges each at positive and negative polarity shall be applied to the horizontal coupling plane, at points on each side of the EUT. The ESD generator positions vertically at a distance of 0.1m from the EUT and with the discharge electrode touching the coupling plane.

6.5.4. Indirect discharge for vertical coupling plane：

At least 10 discharges each at positive and negative polarity shall be applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m X 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.

6.5.5. For above tests, the voltage was increased from the minimum to the selected test level.

6.6. Test Results

PASSED.

The EUT was measured during this section testing and the test results are listed in next page.

Electrostatic Discharge Immunity Test Results

AUDIX TECHNOLOGY CORPORATION

Applicant： King Tony Tools Co., Ltd.	Test Date： 2014. 03. 17.
EUT： Multi Voltage Glow Plug Tester, M/N 9DM1A1	Temperature： 21 ℃
Power Supply： DC 9V (Via Battery)	Humidity： 56 %
Working Condition： See section 5.4.	Atmospheric Pressure： 99 kPa
Engineer： Jamie Wang	Test Mode： Operating

Item	Amount of Discharge for per voltage	Test Voltage	Results & Performance Criterion
Contact Discharge	40	+2kV; +4kV	**Pass**
		-2kV; -4kV	**Pass**
Air Discharge	0	+2kV; +4kV; +8kV	**Pass**
		-2kV; -4kV; -8kV	**Pass**
Indirect Discharge (HCP)	20	+2kV; +4kV	**Pass**
		-2kV; -4kV	**Pass**
Indirect Discharge (VCP Front)	20	+2kV; +4kV	**Pass**
		-2kV; -4kV	**Pass**
Indirect Discharge (VCP Left)	20	+2kV; +4kV	**Pass**
		-2kV; -4kV	**Pass**
Indirect Discharge (VCP Back)	20	+2kV; +4kV	**Pass**
		-2kV; -4kV	**Pass**
Indirect Discharge (VCP Right)	20	+2kV; +4kV	**Pass**
		-2kV; -4kV	**Pass**

Measurement Points		
	1. ~ 4. SCREEN	Air Discharge
	5. ~ 10. SEAM	Air Discharge
	11. BUTTON	Air Discharge
	12. ~ 13. Metal	Contact Discharge
	Please refer to the Photos of ESD Test Points	
	1. Points 1 ~ 11 for Air Discharge, but the all points can't be discharged by testing ESD gun. There is no affected after test.	
	2. Point 12 ~ 13 for Contact Discharge.	

Remark: No error occurred.

7. RF FIELD STRENGTH IMMUNITY TEST

7.1. Test Equipment

7.1.1. For 80MHz ~ 1000MHz

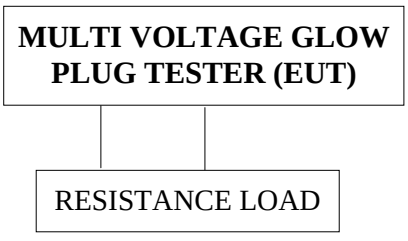
Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Signal Generator	R & S	SML03	103251	2015. 01. 01.	1 Year
2.	Power Amplifier	A/R	250W1000A	0329092	NCR	1 Year
3.	Power Sensor	Agilent	AT1080	13002	NCR	NCR
4.	Power Monitor	Agilent	E9327A	US40441766	2015. 01. 24.	1 Year
5.	Power Antenna	A & R	E4417A	GB41291797	2015. 01. 24.	1 Year
6.	Direction Coupler	A & R	DC6180	19323	2014. 05. 04.	1 Year

7.1.2. For 1GHz ~ 2.7GHz

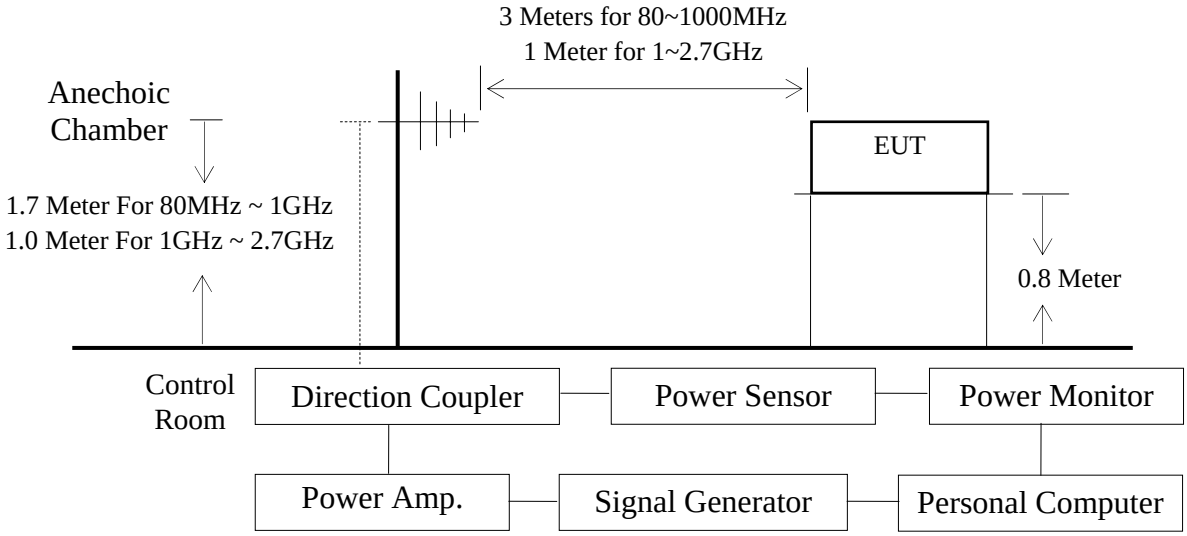
Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Signal Generator	R & S	SML03	103251	2015. 01. 01.	1 Year
2.	Power Amplifier	A & R	120SG3	3039655	NCR	1 Year
3.	Power Antenna	A & R	AT4002A	304290	NCR	NCR
4.	Power Sensor	Agilent	E9327A	US40441766	2015. 01. 24.	1 Year
5.	Power Monitor	Agilent	E4417A	GB41291797	2015. 01. 24.	1 Year
6.	Direction Coupler	A/R	DC7144	304087	2014. 05. 04.	1 Year

7.2. Block Diagram of Test Setup

7.2.1. Block Diagram of connection between EUT and simulators



7.2.2. R/S Test Setup



7.3. Test Standard and Specification and Performance Criteria

EN 61326-1:2013 (Basic Electromagnetic Environment: EN 61000-4-3:2010)	
Test Specification	Performance Criteria
3V/m, 80MHz to 1GHz, 80% AM 3V/m, 1.4GHz to 2GHz, 80% AM 1V/m, 2.0GHz to 2.7GHz, 80% AM	**A**

7.4. Operating Condition of EUT

Same as radiated disturbance measurement which is listed in 5.4 except the test set up replaced by section 7.2.

7.5. Test Procedure

The field sensor is placed on the EUT table (0.8 meter above the ground) which is 3 meters or 1 meter away from the transmitting antenna. Through the signal generator, power amplifier and transmitting antenna to produce a uniformity field strength (3V/m measured by field sensor) around the EUT table from frequency range 80 - 1000 MHz & 1000 - 2500MHz and records the signal generator's output level at the same time for whole measured frequency range. Then, put EUT and its simulators on the EUT turn table and keep them 3 meters away from the transmitting antenna which is mounted on an antenna tower and fixes at 1.7 meter (for 80MHz ~ 1GHz) or 1.0 meter (for 1GHz ~ 2.7GHz) height above the ground. Using the recorded signal generator's output level to measure the EUT from frequency range 80 - 1000 MHz & 1000 - 2500MHz and both horizontal & vertical polarization of antenna must be set and measured. Each of the four sides of EUT must be faced this transmitting antenna and measures individually.

A CCD camera was put inside the chamber and through its display to monitor the EUT operational situation to judge the EUT Compliance criterion during measurement. All the scanning conditions are as follows：

Condition of Test	Remarks
1. Field Strength	3V/m & 1V/m
2. Amplitude Modulated	1kHz, 80%AM
3. Scanning Frequency	80 - 1000 MHz & 1000 - 2700MHz
4. Step Size	1% increments
5. The Rate of Sweep	0.0015 decade/s
6. Dwell Time	3 Sec.

7.6. Test Results

PASSED.

The EUT was measured during this section testing and the test results are listed in next page.

RF Field Strength Immunity Test Results

AUDIX TECHNOLOGY CORPORATION

Applicant： *King Tony Tools Co., Ltd.*	*Test Date：* *2014. 03. 17.*
EUT： *Multi Voltage Glow Plug Tester, M/N 9DM1A1*	*Temperature：* *24* *℃*
Power Supply： *DC 9V (Via Battery)*	*Humidity：* *52* *%*
Working Condition： *See section 5.4.*	*Test Mode：* *Operating*
Engineer： *Jason Chou*	

Frequency Range	*Position (Angle)*	*Polarity (H or V)*	*Field Strength (V/m)*	*Results*
80 ~ 1000 (MHz)	*0°*	*H*	*3V/m+Modulated*	***Pass***
80 ~ 1000 (MHz)	*90°*	*H*	*3V/m+Modulated*	***Pass***
80 ~ 1000 (MHz)	*180°*	*H*	*3V/m+Modulated*	***Pass***
80 ~ 1000 (MHz)	*270°*	*H*	*3V/m+Modulated*	***Pass***
80 ~ 1000 (MHz)	*0°*	*V*	*3V/m+Modulated*	***Pass***
80 ~ 1000 (MHz)	*90°*	*V*	*3V/m+Modulated*	***Pass***
80 ~ 1000 (MHz)	*180°*	*V*	*3V/m+Modulated*	***Pass***
80 ~ 1000 (MHz)	*270°*	*V*	*3V/m+Modulated*	***Pass***
1 ~ 2.0 (GHz)	*0°*	*H*	*3V/m+Modulated*	***Pass***
1 ~ 2.0 (GHz)	*90°*	*H*	*3V/m+Modulated*	***Pass***
1 ~ 2.0 (GHz)	*180°*	*H*	*3V/m+Modulated*	***Pass***
1 ~ 2.0 (GHz)	*270°*	*H*	*3V/m+Modulated*	***Pass***
1 ~ 2.0 (GHz)	*0°*	*V*	*3V/m+Modulated*	***Pass***
1 ~ 2.0 (GHz)	*90°*	*V*	*3V/m+Modulated*	***Pass***
1 ~ 2.0 (GHz)	*180°*	*V*	*3V/m+Modulated*	***Pass***
1 ~ 2.0 (GHz)	*270°*	*V*	*3V/m+Modulated*	***Pass***
2.0 ~ 2.7 (GHz)	*0°*	*H*	*1V/m+Modulated*	***Pass***
2.0 ~ 2.7 (GHz)	*90°*	*H*	*1V/m+Modulated*	***Pass***
2.0 ~ 2.7 (GHz)	*180°*	*H*	*1V/m+Modulated*	***Pass***
2.0 ~ 2.7 (GHz)	*270°*	*H*	*1V/m+Modulated*	***Pass***
2.0 ~ 2.7 (GHz)	*0°*	*V*	*1V/m+Modulated*	***Pass***
2.0 ~ 2.7 (GHz)	*90°*	*V*	*1V/m+Modulated*	***Pass***
2.0 ~ 2.7 (GHz)	*180°*	*V*	*1V/m+Modulated*	***Pass***
2.0 ~ 2.7 (GHz)	*270°*	*V*	*1V/m+Modulated*	***Pass***

Modulated Signal: 1kHz, 80%AM.
Remark: No error occurred.

8. POWER FREQUENCY MAGNETIC FIELD IMMUNITY TEST

8.1. Test Equipment

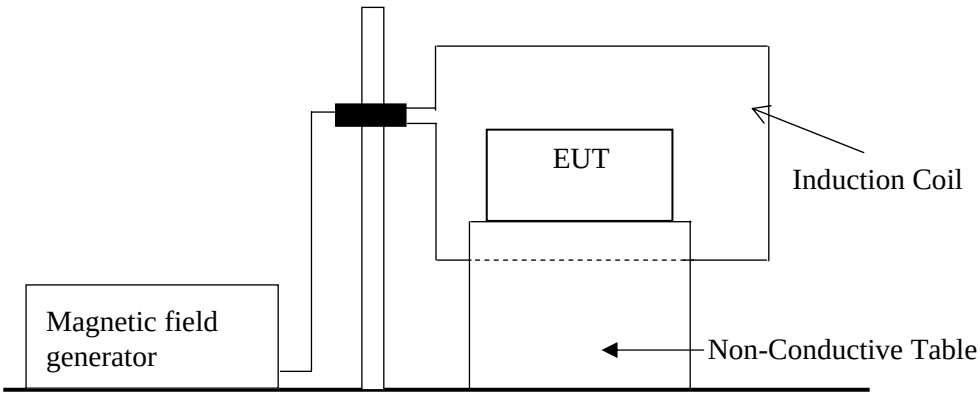
Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Magnetic field generator	Narda S.T.S. / PMM	PMM1008	0100X30101	2014. 12. 16.	1 Year

8.2. Block Diagram of Test Setup

8.2.1. Block Diagram of connection between EUT and simulators.

Same as Section 7.2.1.

8.2.2. Test Setup



8.3. Test Standard and Specification and Performance Criteria

EN 61326-1:2013 (Basic Electromagnetic Environment: EN 61000-4-8:2009)	
Test Specification	Performance Criteria
50/60Hz, 3A/m	**A**

8.4. Operating Condition of EUT

Same as radiated disturbance measurement which is listed in 5.4 except the test set up replaced by section 8.2.

8.5. Test Procedure

The EUT placed on 0.8m high table. And subjected to the test magnetic field by using the induction coil of standard dimensions (1m x 2.6m). The induction coil rotated by 90 degrees in order to expose the EUT to the test field with different orientations. All cables of EUT exposed to magnetic field for 1m of their length.

8.6. Test Results

PASSED.

The EUT was measured during this section testing and the test results are listed in next page.

Power Frequency Magnetic Field Immunity Test Results

AUDIX TECHNOLOGY CORPORATION

Applicant：King Tony Tools Co., Ltd.	*Test Date：2014. 03. 15.*
EUT：Multi Voltage Glow Plug Tester, M/N 9DM1A1	*Temperature：20 ℃*
Power Supply：DC 9V (Via Battery)	*Humidity：50 %*
Working Condition：See section 5.4.	*Test Mode：Operating*
Engineer：Mike Yu	

Power Frequency Magnetic Field	*Testing Duration*	*Coil Orientation*	*Test Result*
50Hz, 3 A/m	*1 Min*	*X-axis*	***Pass***
50Hz, 3 A/m	*1 Min*	*Y-axis*	***Pass***
50Hz, 3 A/m	*1 Min*	*Z-axis*	***Pass***

Remark: No error occurred.

9. PHOTOGRAPHS

9.1. Photos of Radiated Disturbance Measurement at Open Area Test Site

FRONT VIEW OF RADIATED MEASUREMENT

BACK VIEW OF RADIATED MEASUREMENT

9.2. Photos of Electrostatic Discharge Immunity Test

Air & Contact Discharge

HCP & VCP Discharge

Photo of Test Point

Photo of Test Point

9.3. Photos of RF Field Strength Immunity Test

Test Frequency Range：80~1000MHz

Test Frequency Range：Above 1GHz

9.4. Photo of Power Frequency Magnetic Field Immunity Test

APPENDIX

(Photos of EUT)

Total Pages: 3 Pages

Figure 1
General Appearance (Front & Side View)

Figure 2
General Appearance (Back & Side View)

Figure 3
Internal View (Remove the Cover, Main Board / Back View)

Figure 4
Internal View (Main Board / Front View)

Figure 5
Internal View (Remove Battery)