

EMC TEST REPORT
For
CHROMATEQ SARL
DMX Lighting Controller
Model No.: CQSA1024
Additional Model No: CQSA512

Prepared for : CHROMATEQ SARL
Address : 191 Allee de Lauzard – Bat B, Rdc 1, 34980 St Gely du Fesc

Prepared by : Guangzhou LCS Compliance Testing Laboratory Ltd.
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Date of receipt of test sample : September 30, 2018
Number of tested samples : 1
Serial number : Prototype
Date of Test : September 30, 2018 ~ October 12, 2018
Date of Report : October 25, 2018



EMC TEST REPORT**EN 55032: 2015**

Information technology equipment-Radio disturbance characteristics-Limits of measurement

EN 55024: 2010

Information technology equipment-Immunity characteristics-Limits and methods of measurement

Report Reference No.: LCS180930012CE**Date Of Issue: October 25, 2018****Testing Laboratory Name: Guangzhou LCS Compliance Testing Laboratory Ltd.****Address: No 44-1, Qianfeng North Road, Shiqi town, Panyu District, Guangzhou City, China****Testing Location/ Procedure: Full application of Harmonised standards ☒
Partial application of Harmonised standards ☐
Other standard testing method ☐****Applicant's Name.....: CHROMATEQ SARL****Address: 191 Allee de Lauzard – Bat B, Rdc 1, 34980 St Gely du Fesc****Test Specification:****Standard: EN 55032: 2015****EN 55024: 2010****Test Report Form No.: GLCSEMC-1.0****TRF Originator: Guangzhou LCS Compliance Testing Laboratory Ltd.****Master TRF: Dated 2017-08****GUANGZHOU LCS COMPLIANCE TESTING LABORATORY LTD. All rights reserved.**

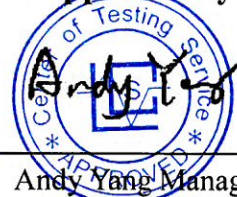
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Test Item Description.....: DMX Lighting Controller**Trade Mark.....: CHROMATEQ****Model/ Type Reference.....: CQSA1024****Ratings: DC5V, 1A****Result: Positive****Compiled by:***Lillian Li*

Lillian Li/ File administrators

Supervised by:*Zilu Jian*

Zilu Jian / Technique principal

Approved by:


Andy Yang Manager

EMC -- TEST REPORT**Test Report No. : LCS180930012CE**October 25, 2018

Date of issue

Type / Model..... : CQSA1024

EUT..... : DMX Lighting Controller

Applicant..... : CHROMATEQ SARL

Address..... : 191 Allee de Lauzard – Bat B, Rdc 1, 34980 St Gely du Fesc

Telephone..... : /

Fax..... : /

Manufacturer..... : CHROMATEQ SARL

Address..... : 191 Allee de Lauzard – Bat B, Rdc 1, 34980 St Gely du Fesc

Telephone..... : /

Fax..... : /

Factory..... : CHROMATEQ SARL

Address..... : 191 Allee de Lauzard – Bat B, Rdc 1, 34980 St Gely du Fesc

Telephone..... : /

Fax..... : /

Test Result according to the standards on page 6: **Positive**

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory

Revision History

Revision	Issue Date	Revisions	Revised By
000	October 25, 2018	Initial Issue	Andy Yang

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1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

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

EMISSION (EN 55032: 2015)			
Description of Test Item	Standard	Limits	Results
Conducted disturbance at mains terminals	EN 55032: 2015	Class B	N/A
Conducted disturbance at telecommunication port	EN 55032: 2015	Class B	N/A
Radiated disturbance	EN 55032: 2015	Class B	PASS
Harmonic current emissions	EN 61000-3-2: 2014	Class A	N/A
Voltage fluctuations & flicker	EN 61000-3-3: 2013	-----	N/A
IMMUNITY(EN 55024: 2010)			
Description of Test Item	Basic Standard	Performance Criteria	Results
Electrostatic discharge (ESD)	EN 61000-4-2: 2009	B	PASS
Radio-frequency, Continuous radiated disturbance	EN 61000-4-3: 2006+A1: 2010	A	PASS
Electrical fast transient (EFT)	EN 61000-4-4: 2012	B	N/A
Surge (Input a.c. power ports)	EN 61000-4-5: 2014	B	N/A
Surge (Telecommunication ports)		B	N/A
Radio-frequency, Continuous conducted disturbance	EN 61000-4-6: 2014	A	N/A
Power frequency magnetic field	EN 61000-4-8: 2010	A	PASS
Voltage dips, >95% reduction	EN 61000-4-11: 2004	B	N/A
Voltage dips, 30% reduction		B	N/A
Voltage interruptions		C	N/A
N/A is an abbreviation for Not Applicable.			

1.2. Description of Performance Criteria

General Performance Criteria

Examples of functions defined by the manufacturer to be evaluated during testing include, but are not limited to, the following:

- essential operational modes and states;
- tests of all peripheral access (hard disks, floppy disks, printers, keyboard, mouse, etc.);
- quality of software execution;
- quality of data display and transmission;
- quality of speech transmission.

1.2.1. Performance criterion A

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 manufacture 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 deliver from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

1.2.2. Performance criterion B

After the test, the equipment 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 manufacture, 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 allowed. However, no change of operation 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 deliver from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

1.2.3. Performance criterion C

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 manufacture's instructions.

Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be loss.

2. GENERAL INFORMATIONAAA

2.1. Description of Device (EUT)

EUT : DMX Lighting Controller

Trade Mark : CHROMATEQ

Model Number : CQSA1024

Power Supply : DC5V, 1A

EUT Clock Frequency : $\leq 108\text{MHz}$

2.2. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the LCS quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

2.3. Measurement Uncertainty

Test	Parameters	Expanded uncertainty (U_{lab})	Expanded uncertainty (U_{cispr})
Conducted Emission	Level accuracy (9kHz to 150kHz) (150kHz to 30MHz)	$\pm 2.63\text{ dB}$ $\pm 2.35\text{ dB}$	$\pm 4.0\text{ dB}$ $\pm 3.6\text{ dB}$
Power disturbance	Level accuracy (30MHz to 300MHz)	$\pm 2.90\text{ dB}$	$\pm 4.5\text{ dB}$
Electromagnetic Radiated Emission (3-loop)	Level accuracy (9kHz to 30MHz)	$\pm 3.60\text{ dB}$	$\pm 2.63\text{ dB}$
Radiated Emission	Level accuracy (9kHz to 30MHz)	$\pm 3.68\text{ dB}$	$\pm 2.63\text{ dB}$
Radiated Emission	Level accuracy (30MHz to 1000MHz)	$\pm 3.48\text{ dB}$	$\pm 2.63\text{ dB}$

Radiated Emission	Level accuracy (above 1000MHz)	± 3.90 dB	N/A
Mains Harmonic	Voltage	$\pm 0.510\%$	N/A
Voltage Fluctuations & Flicker	Voltage	$\pm 0.510\%$	N/A
EMF		$\pm 21.59\%$	N/A

- (1) Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus.
- (2) The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor of $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

3. MEASURING DEVICE AND TEST EQUIPMENT

3.1. Radiated Disturbance (Electric Field)

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	2018-02-03
2	EMI Test Receiver	ROHDE & SCHWARZ	ESR 7	101181	2018-02-03
3	Log per Antenna	SCHWARZBECK	VULB9163	9163-470	2018-07-14
4	EMI Test Software	AUDIX	E3	N/A	2018-02-03
5	Positioning Controller	MF	MF-7082	/	2018-02-03

3.2. Electrostatic Discharge

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	ESD Simulator	SCHLODER	SESD 230	604035	2018-02-03

3.3. RF Field Strength Susceptibility

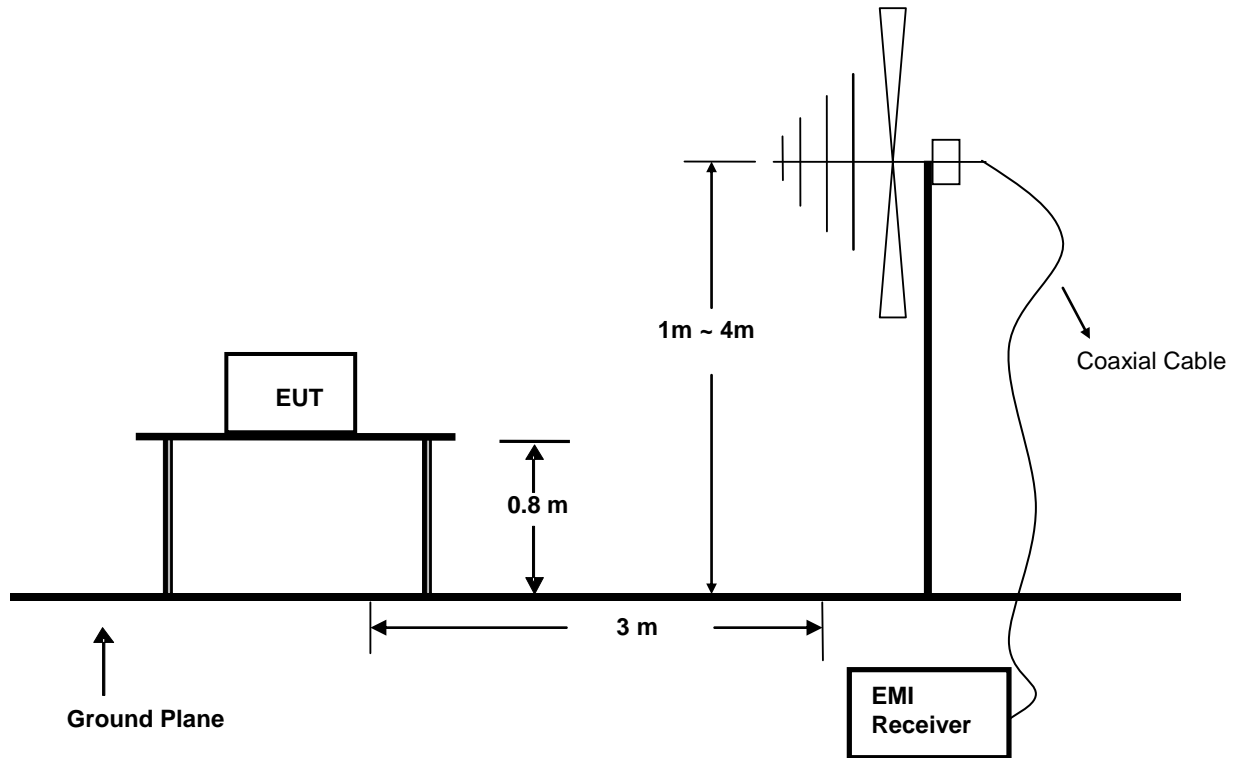
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	SIGNAL GENERATOR	R&S	SMB100A	105942	2017-11-17
2	RF Power Amplifier	BONN Elektronik	BLWA0830-160 /100/40D	128740	NCR
3	Log-periodic Antenna	SCHWARZBECK	STLP9128D	043	NCR
4	Power Meter	R&S	102031	16829	2018-06-17

3.4. Power Frequency Magnetic Field Susceptibility

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Power frequency mag-field generator System	EVERFINE	EMS61000-8K	906003	2018-02-03

4. RADIATED EMISSION MEASUREMENT

4.1. Block Diagram of Test Setup



4.2. Measuring Standard

EN 55032: 2015

4.3. Radiated Emission Limits

EN 55032 Limits:

All emanations from a class B device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMIT (dB μ V/m)
30 ~ 230	3	40
230 ~ 1000	3	47

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 Test

The EN 55032 regulations test method must be used to find the maximum emission during radiated emission measurement.

4.5.Operating Condition of EUT

4.5.1 Turn on the power.

4.5.2 After that, let the EUT work in test mode (ON) 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 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. By-log antenna is used as a receiving antenna. Both horizontal and vertical polarization of the antenna is set on test.

The bandwidth of the Receiver is set at 120kHz.

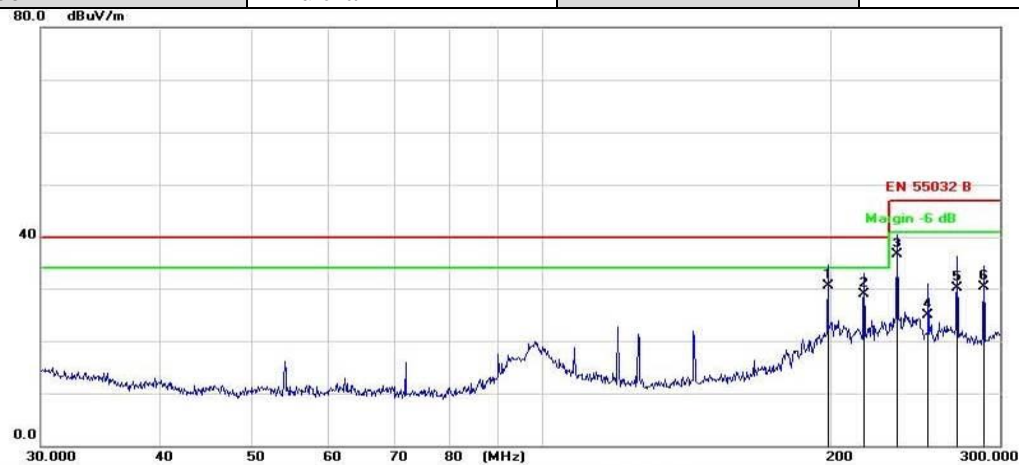
The frequency range from 30MHz to 1000MHz is investigated.

4.7.Test Results

PASS.

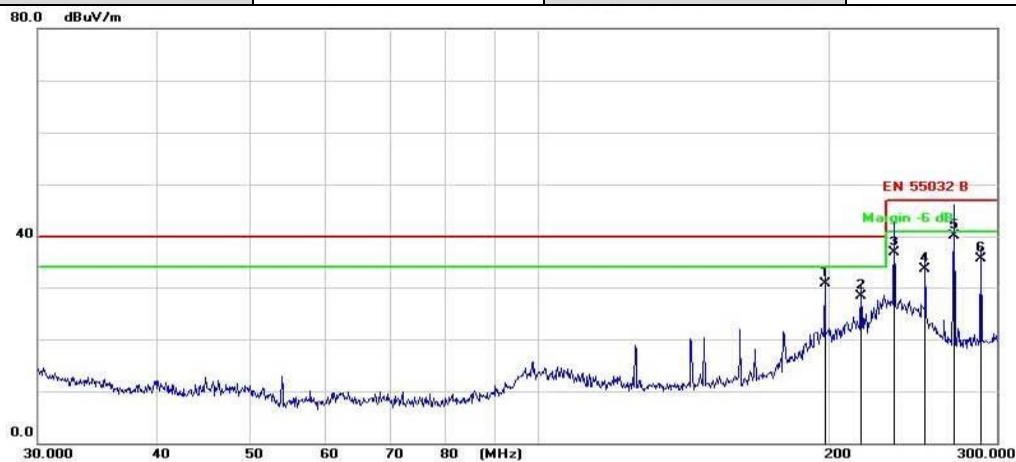
The test result please refer to the next page.

Model No.	CQSA1024	Test Mode	ON
Environmental Conditions	25.1 °C, 50.3% RH	Detector Function	Quasi-peak
Pol	Vertical	Distance	3m
Test Engineer	Zilu Jian		



Site LAB					Polarization: Vertical			Temperature: 25.1			
Limit: EN 55032 B					Power:			Humidity: 50.3 %			
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1	*	198.2080	14.78	15.63	30.41	40.00	-9.59	QP			
2		216.3322	12.40	16.52	28.92	40.00	-11.08	QP			
3		234.4883	19.27	17.27	36.54	47.00	-10.46	QP			
4		252.4185	6.84	18.03	24.87	47.00	-22.13	QP			
5		270.4713	11.31	18.84	30.15	47.00	-16.85	QP			
6		288.4837	10.40	19.94	30.34	47.00	-16.66	QP			

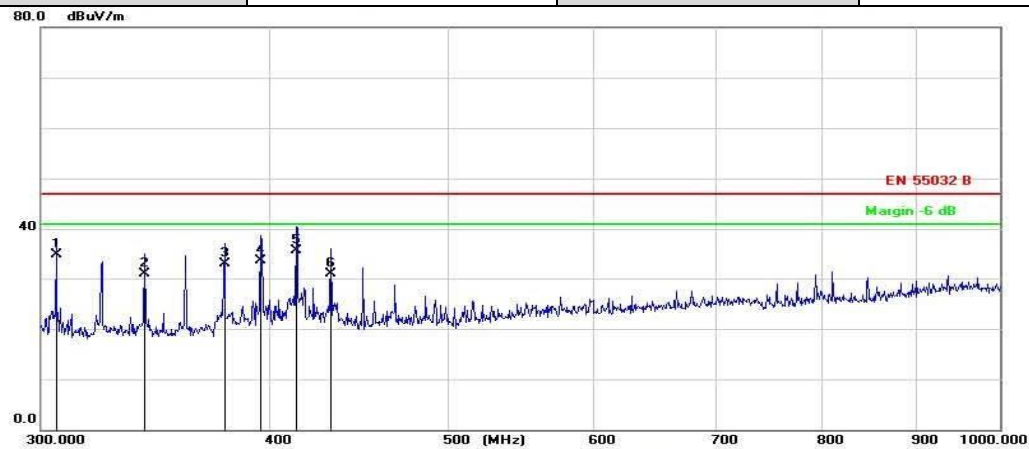
Model No.	CQSA1024	Test Mode	ON
Environmental Conditions	25.1 °C, 50.3% RH	Detector Function	Quasi-peak
Pol	Horizontal	Distance	3m
Test Engineer	Zilu Jian		



Site LAB					Polarization: <i>Horizontal</i>			Temperature: 25.1			
Limit: EN 55032 B					Power:			Humidity: 50.3 %			
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		198.2080	15.11	15.63	30.74	40.00	-9.26	QP			
2		216.3322	11.86	16.52	28.38	40.00	-11.62	QP			
3		234.4883	19.41	17.27	36.68	47.00	-10.32	QP			
4		252.4185	15.39	18.03	33.42	47.00	-13.58	QP			
5	*	270.4713	21.26	18.84	40.10	47.00	-6.90	QP			
6		288.4837	15.49	19.94	35.43	47.00	-11.57	QP			

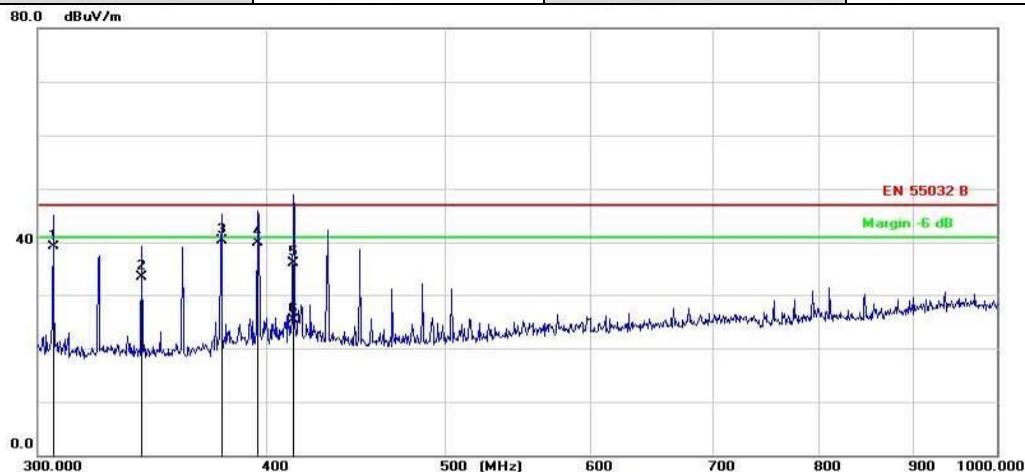
Note: Pre-Scan all mode, Thus record worse case mode result in this report.

Model No.	CQSA1024	Test Mode	ON
Environmental Conditions	25.1 °C, 50.3% RH	Detector Function	Quasi-peak
Pol	Vertical	Distance	3m
Test Engineer	Zilu Jian		



Site LAB					Polarization: Vertical			Temperature: 25.1			
Limit: EN 55032 B					Power:			Humidity: 50.3 %			
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		305.8351	15.61	19.08	34.69	47.00	-12.31	QP			
2		342.0700	11.03	19.78	30.81	47.00	-16.19	QP			
3		378.0192	12.20	20.61	32.81	47.00	-14.19	QP			
4		395.7158	12.57	20.92	33.49	47.00	-13.51	QP			
5	*	413.7422	14.09	21.41	35.50	47.00	-11.50	QP			
6		432.0692	9.06	21.83	30.89	47.00	-16.11	QP			

Model No.	CQSA1024	Test Mode	ON
Environmental Conditions	25.1 °C, 50.3% RH	Detector Function	Quasi-peak
Pol	Horizontal	Distance	3m
Test Engineer	Zilu Jian		

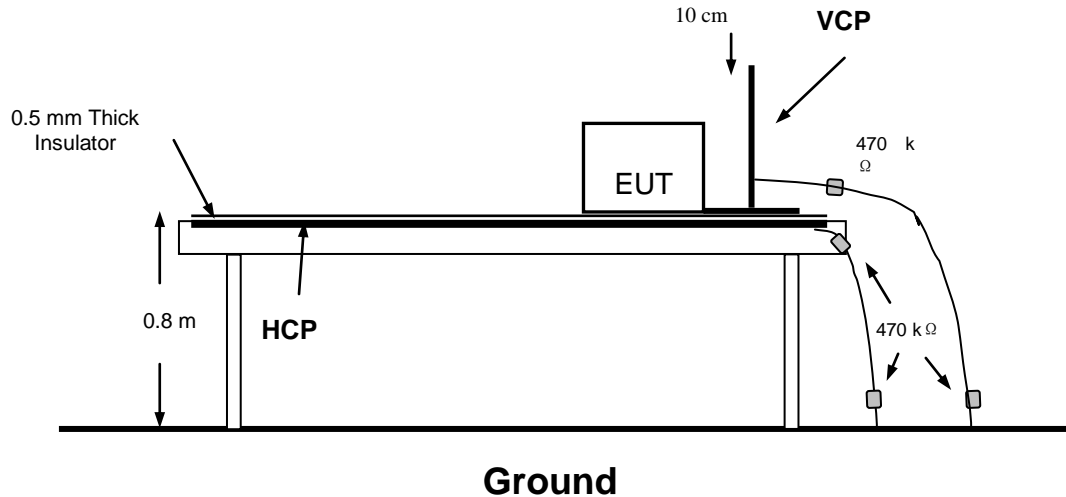


Site LAB					Polarization: <i>Horizontal</i>			Temperature: 25.1			
Limit: EN 55032 B					Power:			Humidity: 50.3 %			
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		305.8351	20.11	19.08	39.19	47.00	-7.81	QP			
2		342.0700	13.53	19.78	33.31	47.00	-13.69	QP			
3	*	378.0192	19.70	20.61	40.31	47.00	-6.69	QP			
4		395.7158	19.07	20.92	39.99	47.00	-7.01	QP			
5		413.7422	14.59	21.41	36.00	47.00	-11.00	QP			
6		413.7422	3.99	21.41	25.40	47.00	-21.60	QP			

Note: Pre-Scan all mode, Thus record worse case mode result in this report.

5. ELECTROSTATIC DISCHARGE IMMUNITY TEST

5.1. Block Diagram of Test Setup



5.2. Test Standard

EN 55024: 2010,

Severity Level: 3 / Air Discharge: $\pm 8\text{KV}$, Level: 2 / Contact Discharge: $\pm 4\text{KV}$)

5.3. Severity Levels and Performance Criterion

5.3.1. 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

5.3.2. Performance Criterion: **B**

5.4. EUT Configuration on Test

The configuration of EUT is listed in Section 2.1.

5.5. Operating Condition of EUT

Same as conducted emission measurement, which is listed in Section 4.5. Except the test set up replaced by Section 5.1.

5.6. Test Procedure

5.6.1. 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

5.6.2. Contact Discharge

All the procedure shall be same as Section 5.6.1. Except that the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

5.6.3. 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.

5.6.4. Indirect Discharge For Vertical Coupling Plane

At least 10 single 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 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.

5.7. Test Results

PASS.

Please refer to the following pages

Electrostatic Discharge Test Results

Standard	<input type="checkbox"/> IEC 61000-4-2 <input checked="" type="checkbox"/> EN 61000-4-2		
Applicant	CHROMATEQ SARL		
EUT	DMX Lighting Controller	Temperature	24.5℃
M/N	CQSA1024	Humidity	52.0%
Criterion	B	Pressure	1021mbar
Test Mode	ON	Test Engineer	Zilu Jian

Air Discharge

Test Points	Test Levels			Results		
	± 2kV	± 4kV	± 8kV	Passed	Fail	Performance Criterion
Front	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Back	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Left	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Right	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Top	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Bottom	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B

Contact Discharge

Test Points	Test Levels		Results		
	± 2 kV	±4 kV	Passed	Fail	Performance Criterion
Front	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Back	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Left	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Right	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Top	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Bottom	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B

Discharge To Horizontal Coupling Plane

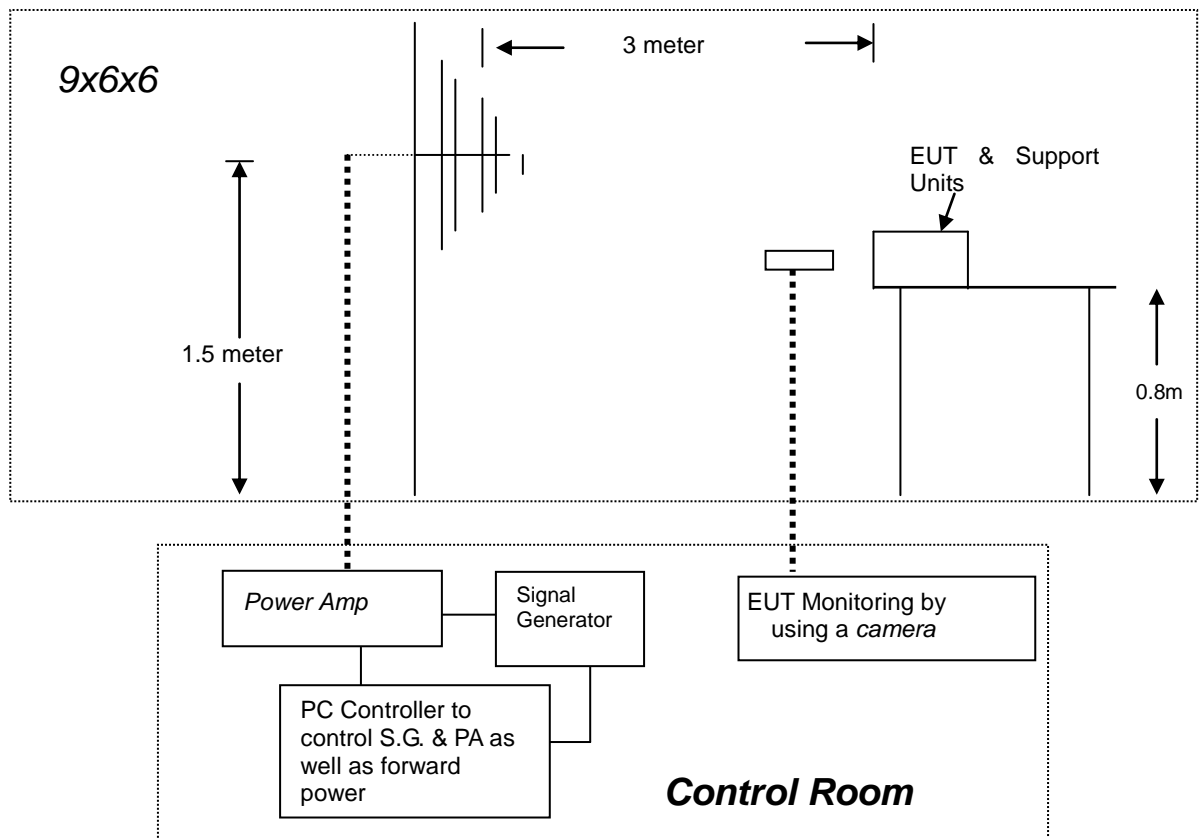
Side of EUT	Test Levels		Results		
	± 2 kV	± 4 kV	Passed	Fail	Performance Criterion
Front	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Back	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Left	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Right	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B

Discharge To Vertical Coupling Plane

Side of EUT	Test Levels		Results		
	± 2 kV	± 4 kV	Passed	Fail	Performance Criterion
Front	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Back	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Left	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Right	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B

6. RF FIELD STRENGTH SUSCEPTIBILITY TEST

6.1. Block Diagram of Test



6.2. Test Standard

EN 55024: 2010,

(EN 61000-4-3: 2006+A1: 2010, Severity Level: 2, 3V / m)

6.3. Severity Levels and Performance Criterion

6.3.1. Severity Levels

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

6.3.2. Performance Criterion: A

6.4.EUT Configuration on Test

The configuration of the EUT is same as Section 2.1.

6.5.Operating Condition of EUT

Same as radiated emission measurement, which is listed in Section 4.5, except the test setup replaced as Section 6.1.

6.6.Test Procedure

The EUT are placed on a table, which is 0.8 meter high above the ground. The EUT is set 3 meters away from the transmitting antenna, which 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 Recording is used to monitor its screen. All the scanning conditions are as following:

Condition of Test	Remark
-----	-----
1. Fielded Strength	3V/m (Severity Level 2)
2. Radiated Signal	Unmodulated
3. Scanning Frequency	80-6000MHz
4. Sweep time of radiated	0.0015 Decade/s
5. Dwell Time	3 Sec.

6.7.Test Results

PASS.

Please refer to the following page.

RF Field Strength Susceptibility Test Results

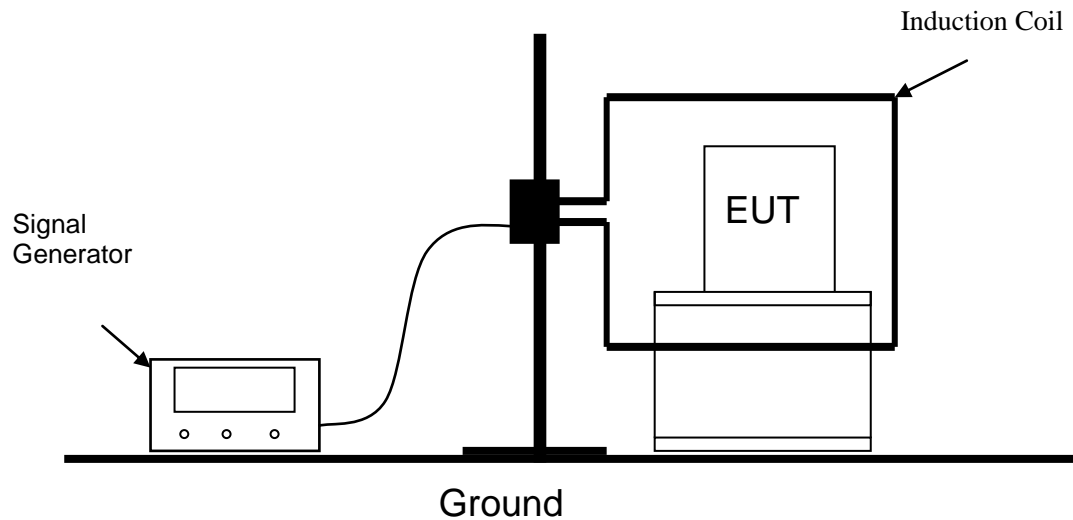
Standard	<input type="checkbox"/> IEC 61000-4-3 <input checked="" type="checkbox"/> EN 61000-4-3		
Applicant	CHROMATEQ SARL		
EUT	DMX Lighting Controller	Temperature	25.1 °C
M/N	CQSA1024	Humidity	50.3%
Field Strength	3 V/m	Criterion	A
Test Mode	ON	Test Engineer	Zilu Jian
Frequency Range	80 MHz to 6000 MHz		
Modulation	<input type="checkbox"/> None <input type="checkbox"/> Pulse <input checked="" type="checkbox"/> AM 1KHz 80%		
Steps	1%		

	Horizontal	Vertical
Front	PASS	PASS
Right	PASS	PASS
Rear	PASS	PASS
Left	PASS	PASS

Note:

7. MAGNETIC FIELD SUSCEPTIBILITY TEST

7.1. Block Diagram of Test Setup



7.2. Test Standard

EN 55024: 2010,

(EN 61000-4-8: 2010, Severity Level: Level 1, 1A / m)

7.3. Severity Levels and Performance Criterion

7.3.1. Severity Levels

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

7.3.2. Performance Criterion: A

7.4. EUT Configuration on Test

The configuration of the EUT is same as Section 2.1.

7.5.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, 0.8 m 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.

7.6.Test Results

PASS.

Please refer to the following page.

Magnetic Field Immunity Test Result

Standard	<input type="checkbox"/> IEC 61000-4-8 <input checked="" type="checkbox"/> EN 61000-4-8		
Applicant	CHROMATEQ SARL		
EUT	DMX Lighting Controller	Temperature	24.0℃
M/N	CQSA1024	Humidity	55.1%
Test Mode	ON	Criterion	A
Test Engineer	Zilu Jian		

Test Level (A/M)	Testing Duration	Coil Orientation	Criterion	Result
1	5 mins	X	A	PASS
1	5 mins	Y	A	PASS
1	5 mins	Z	A	PASS

Note:

8. PHOTOGRAPH

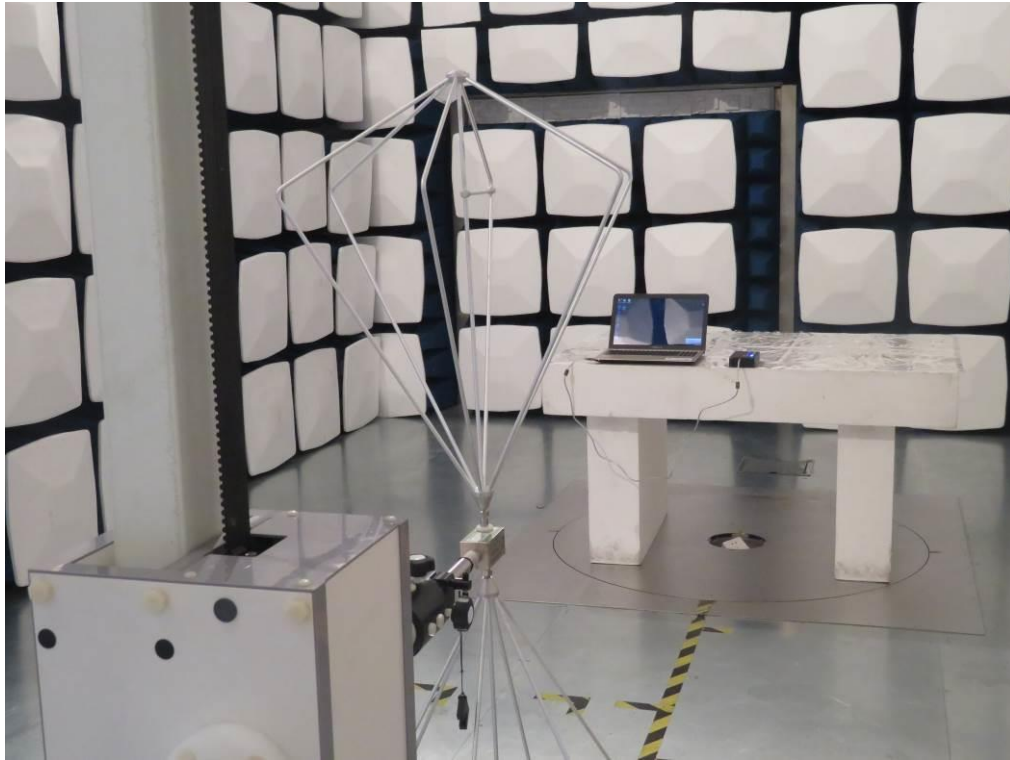


Fig. 1

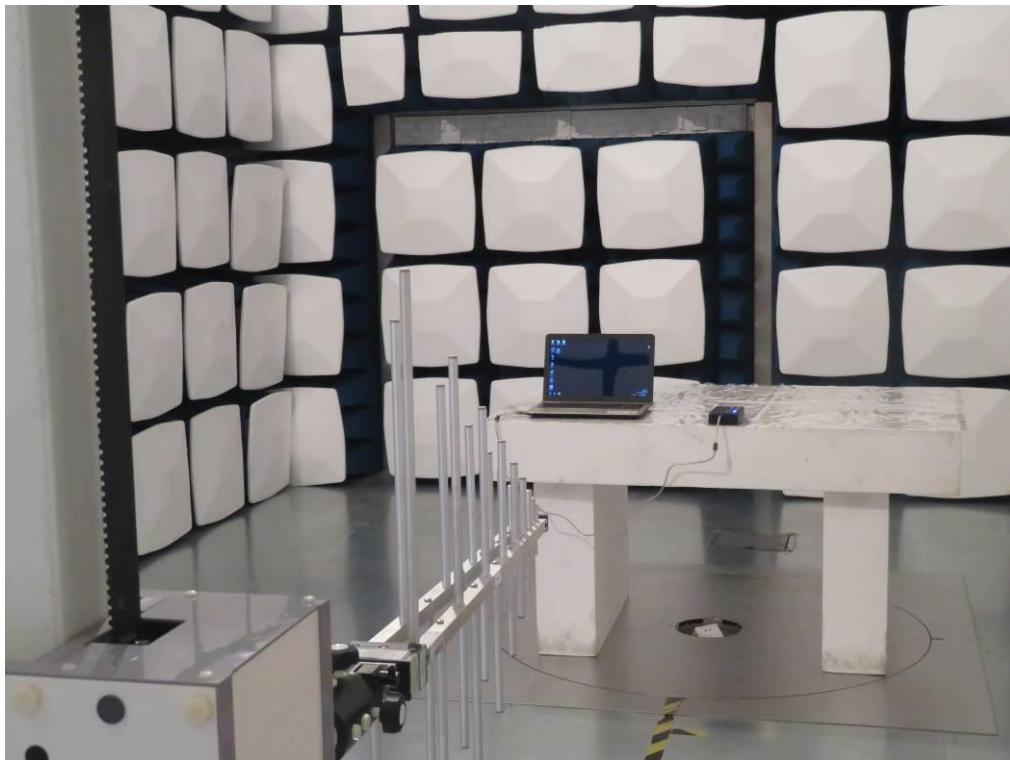


Fig. 2



Fig. 3

9. EXTERNAL AND INTERNAL PHOTOS OF THE EUT



Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig.5



Fig.6



Fig. 7

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