APPLICATION FOR EMC DIRECTIVE

On Behalf of

Guangzhou Cante Technology Co., Ltd.

CAR LED HEADLIGHTS

Trade Name: SENROBO

Model: D1S, D1R, D2S, D2R, D3S, D3R, D4S, D4R, D5S, D8S, H1, H3, H4, H7, H11, H13, 9005, 9006, 9007, 9012, 880, 881, DK1, DK2, DK3, DK4, DK5, DK6, S9, S10, K15, K16, K20, K21, K23, K30, K8-3S

Prepared For	:	**Guangzhou Cante Technology Co., Ltd.** Room 115, 3 Shipai East Street, Kemu Langbei Ping, Fenghuang Street，Guangzhou
Prepared By	:	**BSL Testing Co.,Ltd.** 1/F, Building B, Xinshidai GR Park,Shiyan Street, Bao'an District, Shenzhen,Guangdong, 518052, People’s Republic of China Tel: +86-755- 26649703

Date of Test	:	January 08, 2024-January 11, 2024
Date of Report	:	January 11, 2024
Report Number	:	BSL24010026P01-E01

TABLE OF CONTENTS

TEST REPORT DECLARATION

Applicant	:	Guangzhou Cante Technology Co., Ltd.
Address	:	Room 115, 3 Shipai East Street, Kemu Langbei Ping, Fenghuang Street，Guangzhou
EUT Description	:	CAR LED HEADLIGHTS
Manufacturer	:	Guangzhou Cante Technology Co., Ltd.
Address	:	Room 115, 3 Shipai East Street, Kemu Langbei Ping, Fenghuang Street，Guangzhou
Model Number	:	D1S, D1R, D2S, D2R, D3S, D3R, D4S, D4R, D5S, D8S, H1, H3, H4, H7, H11, H13, 9005, 9006, 9007, 9012, 880, 881, DK1, DK2, DK3, DK4, DK5, DK6, S9, S10, K15, K16, K20, K21, K23, K30, K8-3S

Test Standards:

FCC Part 15, Subpart B, Class B(sDoC), ANSI C 63.4-2014

The EUT described above is tested by US to determine the maximum emission levels emanating from the EUT, the maximum emission levels are compared to the FCC Part 15 Subpart Class B limits.The measurement results are contained in this test report.and BSL Testing Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT is to be technically compliant with the FCC requirements.
This report applies to above tested sample only and shall not be reproduced in part without written approval of BSL Testing Co., Ltd.

Prepared by : Peishuang Wu

Peishuang Wu/Assistant

Approved & Authorized Signer : Vivian Jiang

Vivian Jiang / Manager

1. GENERAL INFORMATION

1.1. Report information

1.1.1. This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that BSL approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that BSL in any way guarantees the later performance of the product/equipment.

1.1.2. The sample/s mentioned in this report is/are supplied by Applicant, BSL therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

1.1.3. Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through BSL, unless the applicant has authorized BSL in writing to do so.

1.2. Measurement Uncertainty

Available upon request.

1.3. Test Uncertainty

Conducted Emission Uncertainty	=	±2.66dB
Radiated Emission Uncertainty	=	±4.26dB

2. PRODUCT DESCRIPTION

2.1. EUT Description

Description	:	CAR LED HEADLIGHTS
Applicant	:	Guangzhou Cante Technology Co., Ltd. Room 115, 3 Shipai East Street, Kemu Langbei Ping, Fenghuang Street， Guangzhou
Manufacturer	:	Guangzhou Cante Technology Co., Ltd. Room 115, 3 Shipai East Street, Kemu Langbei Ping, Fenghuang Street， Guangzhou
Model Number	:	D1S

2.2. Test Conditions

Temperature: 23~25℃

Relative Humidity: 55~63 %

2.3. Support Equipment List

No.	Equipment	Model No.	Serial No.	FCC ID	Trade Name	Data Cable	Power Cord
1	--	--	--	--	--	--	--

3. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	Test Results
Conducted disturbance	N/A
Radiated disturbance	Pass

4. TEST EQUIPMENT USED

4.1. For Conducted Emission Test

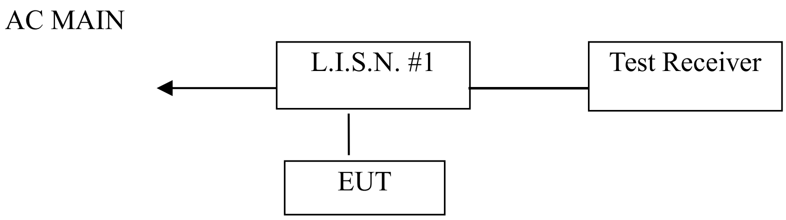
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration time	Recalibration time
1.	Test Receiver	Rohde & Schwarz	ESPI3	101396	Oct.27, 23	Oct.26, 24
2.	L.I.S.N.	Rohde & Schwarz	ENV216	102723	Oct.27, 23	Oct.26, 24
3.	loop antenna	DAZE	ZN30401	19036	Oct.27, 23	Oct.26, 24
4.	Wet and dry thermometer	M&G	ARC92569	N/A	Oct.27, 23	Oct.26, 24
5.	Shielding room	SKET	2021082301	N/A	Aug.23,21	Aug.22,24

4.2. For Radiated Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration time	Recalibration time
1.	Test Receiver	Rohde&Schwarz	ESC17(9kHz-7GHz)	100336	Oct.27, 23	Oct.26, 24
2.	Broadband antenna	Schwarzbeck	VULB9168	01222	Oct.27, 23	Oct.26, 24
3.	Horn antenna	Schwarzbeck	BBHA9120D	02476	Oct.27, 23	Oct.26, 24
4.	Preamplifier	Schwarzbeck	BBV9745	00250	Oct.27, 23	Oct.26, 24
5.	Preamplifier	N/A	TRLA-01018G440B	21081001	Oct.27, 23	Oct.26, 24
6.	3M method semi anechoic chamber	SKET	9m*6m*6m	2021082304	Oct.14,21	Oct.13,24
7.	Pointer hygrometer	M&G	ARC92570	N/A	Oct.27, 23	Oct.26, 24

5. CONDUCTED EMISSION TEST

5.1. Block Diagram of Test Setup



(EUT: CAR LED HEADLIGHTS)

5.2. Test Standard

FCC Part 15, Subpart B, Class B

5.3. Conducted Emission Limit (Class B)

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.

5.4. EUT Configuration on Test

The following equipments are installed on conducted emission test to meet Part 15 requirement and operating in a manner, which tends to maximize its emission characteristics in a normal application.

5.4.1.EUT Information

Model Number**:** D1S

5.5. Operating Condition of EUT

5.5.1.Setup the EUT and simulators as shown in Section 5.1.

5.5.2.Turn on the power of all equipments.

5.5.3.Let the EUT work in test modes (EUT Working) and test it.

5.6. Test Procedure

The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI test receiver (R&S Test Receiver ESCS30) is used to test the emissions form both sides of AC line. The bandwidth of EMI test receiver is set at 9kHz.

The bandwidth of the test receiver (R&S Test Receiver ESHS30) is set at 10KHz. All the test results are listed in Section 5.7

5.7. Test Result

N/A

6. RADIATED EMISSION MEASUREMENT

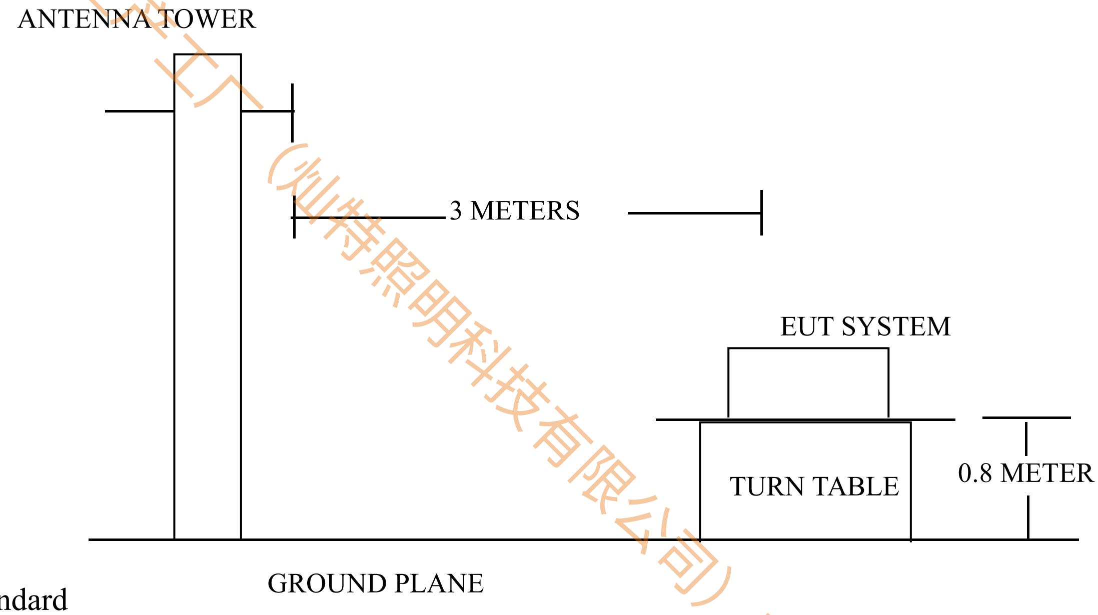
6.1. Block Diagram of EUT Configuration

6.1.1.Block Diagram of connection between the EUT and the simulators

EUT

(EUT: CAR LED HEADLIGHTS)

6.1.2.Anechoic Chamber Test Setup Diagram



6.2. Test Standard

FCC Part 15, Subpart B, Class B

6.3. Radiated Emission Limit (Class B)

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dBμV/m)
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

Note:(1) The smaller limit shall apply 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 EUT or system.

6.4. EUT Configuration on Test

The following equipment are installed on Radiated Emission Measurement to meet the Commission requirements and operating regulations in a manner which tends to maximize Its emission characteristics in normal application.

6.5. Operating Condition of EUT

6.5.1.Setup the EUT as shown on Section 6.1.2

6.5.2.Turn on the power of all equipments.

6.5.3.Let the EUT work in test mode (EUT working) and measure it.

6.6. Test Procedure

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table 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 move up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna (calibrated by dipole antenna) are used as a receiving antenna. Both horizontal and vertical polarization of the antenna are set on measurement.

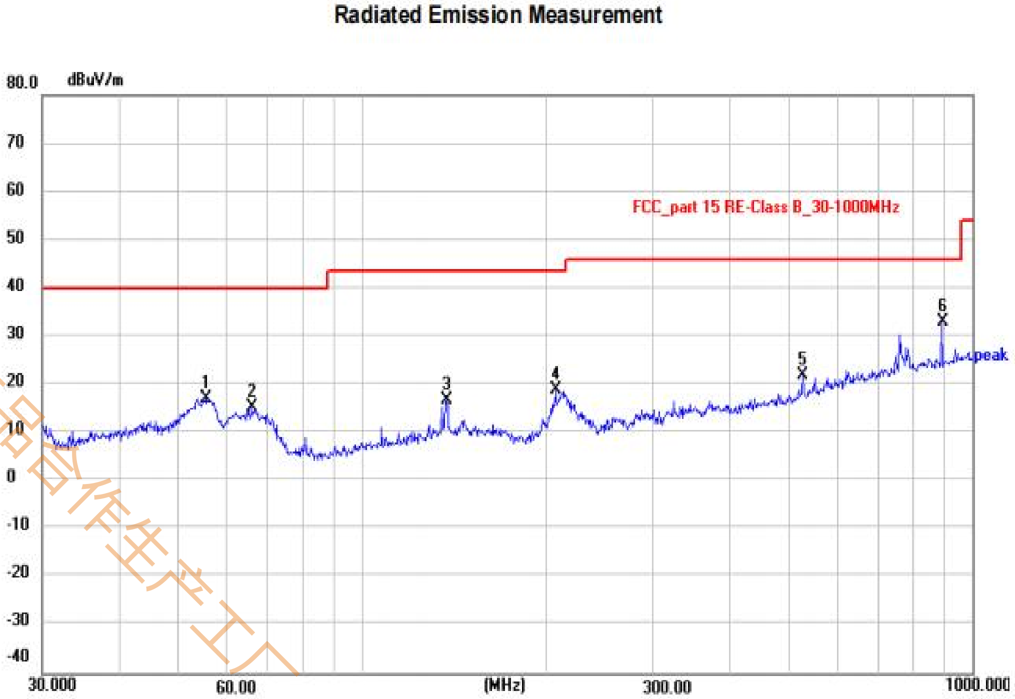
The bandwidth setting on the test receiver (R&S TEST RECEIVER ESCIS28A) is 120 KHz. The EUT is tested in Anechoic Chamber. The frequency range from 30MHz to 1000 MHz is checked. All the test results are listed in Section 6.7. and all the scanning waveform are attached within **Appendix I**

6.7. Test Result

PASS

Test Mode: operating

APPENDIX I

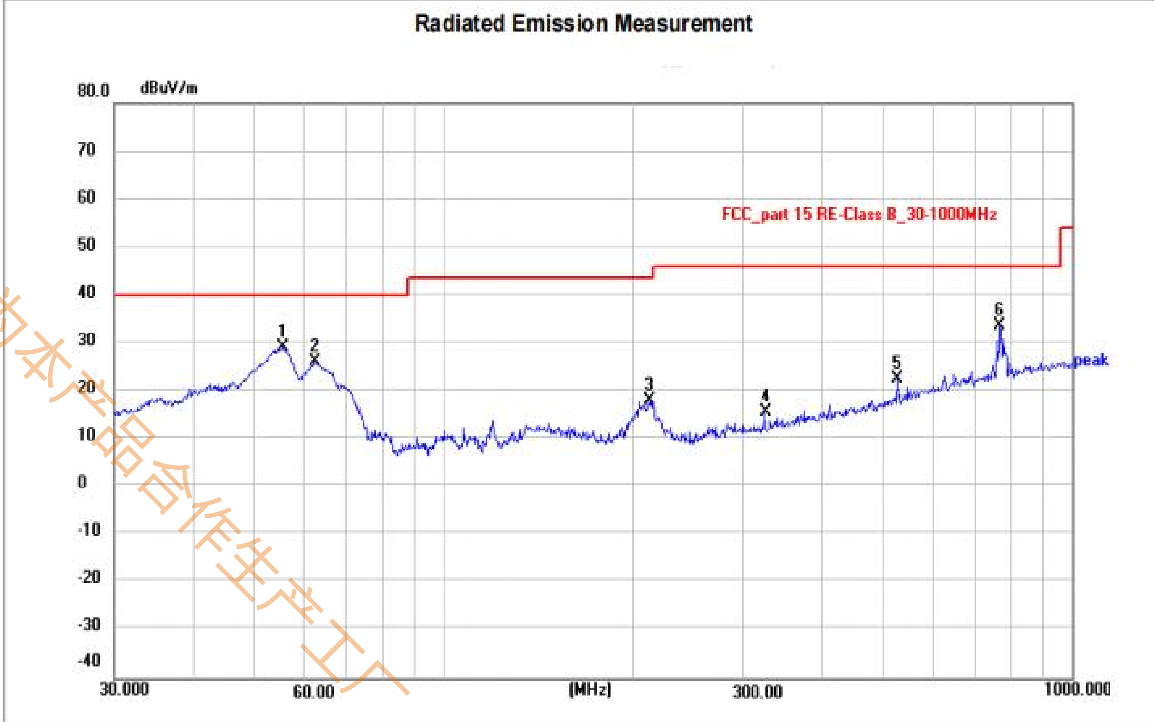


Site LAB
Limit: FCC_part 15 RE-Class B_30-1000MHz

Polarization: ***Horizontal***
Power:

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	55.6094	34.11	-16.87	17.24	40.00	-22.76	peak	100	360	P	
2	66.0342	33.38	-18.01	15.37	40.00	-24.63	peak	100	360	P	
3	137.9028	33.83	-16.87	16.96	43.50	-26.54	peak	100	360	P	
4	207.8501	38.42	-19.33	19.09	43.50	-24.41	peak	100	360	P	
5	528.2458	32.01	-9.91	22.10	46.00	-23.90	peak	100	360	P	
6 *	890.7278	36.83	-3.86	32.97	46.00	-13.03	peak	100	360	P	



Site LAB
Limit: FCC_part 15 RE-Class B_30-1000MHz
Polarization: *Vertical*
Power:
Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	55.6094	46.12	-16.87	29.25	40.00	-10.75	peak	100	0	P	
2	62.4314	43.55	-17.43	26.12	40.00	-13.88	peak	100	0	P	
3	212.2695	37.48	-19.34	18.14	43.50	-25.36	peak	100	0	P	
4	324.4561	30.59	-14.97	15.62	46.00	-30.38	peak	100	0	P	
5	528.2458	32.46	-9.91	22.55	46.00	-23.45	peak	100	0	P	
6	768.7481	38.79	-5.05	33.74	46.00	-12.26	peak	100	0	P	

APPENDIX II

Photo 1 Radiated Emission Test

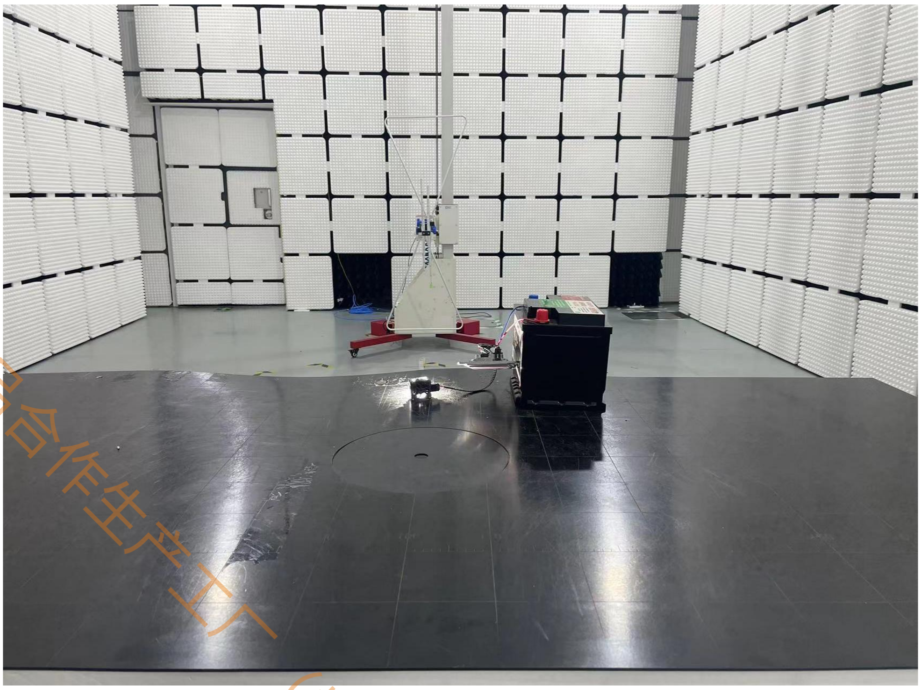


Photo 2 General Appearance of the EUT

Add: 1/F, Building B, Xinshidai GR Park,Shiyan Street, Bao'an District, Shenzhen,Guangdong, 518052, People's Republic of China

Photo 3 General Appearance of the EUT

Photo 4 General Appearance of the EUT

Photo 5 General Appearance of the Additional model

******END OF REPORT******

Add: 1/F, Building B, Xinshidai GR Park,Shiyan Street, Bao'an District, Shenzhen,Guangdong, 518052, People's Republic of China