

FCC PART 15.249

TEST REPORT

For

Dong Guan Bright Yin Huey Lighting Co., Ltd

Dong Guan Township, Humen Town, DaNing Manage District, Da Pan Di Industrial Zone, Dongguan, China.

FCC ID: 2AK53ML2LAUMSV

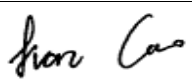
Report Type: Original Report	Product Type: LED Ceiling light
Report Number: RDG200402050-00A	
Report Date: 2020-06-01	
Reviewed By:	Ivan Cao Assistant Manager 
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Dongguan) No.69 Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China Tel: +86-769-86858888 Fax: +86-769-86858891 www.baclcorp.com.cn

TABLE OF CONTENTS

GENERAL INFORMATION.....	3
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	3
OBJECTIVE	3
RELATED SUBMITTAL(S)/GRANT(S).....	3
TEST METHODOLOGY	3
MEASUREMENT UNCERTAINTY.....	4
TEST FACILITY	4
DECLARATIONS.....	4
SYSTEM TEST CONFIGURATION.....	5
JUSTIFICATION	5
EUT EXERCISE SOFTWARE	5
EQUIPMENT MODIFICATIONS	5
BLOCK DIAGRAM OF TEST SETUP	5
SUMMARY OF TEST RESULTS	6
FCC§15.203 - ANTENNA REQUIREMENT.....	7
APPLICABLE STANDARD	7
ANTENNA CONNECTOR CONSTRUCTION	7
FCC §15.207 (A)– AC LINE CONDUCTED EMISSIONS	8
APPLICABLE STANDARD	8
EUT SETUP	8
EMI TEST RECEIVER SETUP.....	8
TEST PROCEDURE	9
CORRECTED AMPLITUDE & MARGIN CALCULATION	9
TEST EQUIPMENT LIST AND DETAILS.....	9
TEST DATA	10
FCC§15.205, §15.209&§15.249- RADIATED EMISSIONS	14
APPLICABLE STANDARD	14
EUT SETUP	14
TEST EQUIPMENT SETUP.....	15
TEST PROCEDURE	16
CORRECTED AMPLITUDE & MARGIN CALCULATION	16
TEST EQUIPMENT LIST AND DETAILS.....	17
TEST DATA	17
FCC §15.215(C) – 20 DB BANDWIDTH TESTING.....	24
APPLICABLE STANDARD	24
TEST PROCEDURE	24
TEST EQUIPMENT LIST AND DETAILS.....	24
TEST DATA	24
DECLARATION LETTER.....	27

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

EUT Name:	LED Ceiling light
EUT Model:	ML2LALABNU249CSEMMSV
Multiple Models:	ML2LALPWHU249CSEMMSV, ML2LASPWHU169CSEMMSV, ML2LASABNU169CSEMMSV, ML2LAMABNU209CSEMMSV, ML2LASPWHU169CSMSV, ML2LAMPWHU209CSMSV, ML2LALPWHU249CSMSV, ML2LAMPWHU209CSEMMSV, ML2LASABNU169CSMSV, ML2LAMABNU209CSMSV, ML2LALABNU249CSMSV
Operation Frequency:	5795MHz, 5801 MHz
Modulation Type:	PWM
Rated Input Voltage:	AC 120-277V
Serial Number:	RDG200402050-RF-S1
EUT Received Date:	2020.04.03
EUT Received Status:	Good

Notes: the models ML2LALPWHU249CSEMMSV, ML2LASPWHU169CSEMMSV, ML2LASABNU169CSEMMSV, ML2LAMABNU209CSEMMSV, ML2LASPWHU169CSMSV, ML2LAMPWHU209CSMSV, ML2LALPWHU249CSMSV, ML2LAMPWHU209CSEMMSV, ML2LASABNU169CSMSV, ML2LAMABNU209CSMSV, ML2LALABNU249CSMSV are electrically identical with Model: ML2LALABNU249CSEMMSV, the detailed information about the difference please refer to the declaration letter which was stated and guaranteed by the manufacturer. We select Model ML2LALABNU249CSEMMSV for test in this report since it is the worst model per part 15B test.

Objective

This type approval report is prepared on behalf of **Dong Guan Bright Yin Huey Lighting Co., Ltd** in accordance with Part 2-Subpart J, and Part 15-Subparts A and C of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Rules Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.249 rules.

Related Submittal(s)/Grant(s)

N/A.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

All emissions measurement was performed and Bay Area Compliance Laboratories Corp. (Dongguan).

Measurement Uncertainty

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	±5 %
Unwanted Emissions, radiated	30M~200MHz: 4.58 dB for Horizontal, 4.59 dB for Vertical 200M~1GHz: 4.83 dB for Horizontal, 5.85 dB for Vertical 1G~6GHz: 4.45 dB, 6G~26.5GHz: 5.23 dB
Temperature	±1℃
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
AC Power Lines Conducted Emission	3.12 dB (150 kHz to 30 MHz)

Note: Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.69 Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 897218, the FCC Designation No. : CN1220.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0022.

Declarations

BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol “△”. Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

This report cannot be reproduced except in full, without prior written approval of the Company.

This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

This report must not be used by the customer to claim product certification, approval, or endorsement by A2LA, or any agency of the U.S. Government.

This report may contain data that are not covered by the accreditation scope and shall be marked with an asterisk “★”.

SYSTEM TEST CONFIGURATION

Justification

The EUT was configured in operating mode for testing which was provided by the manufacturer.

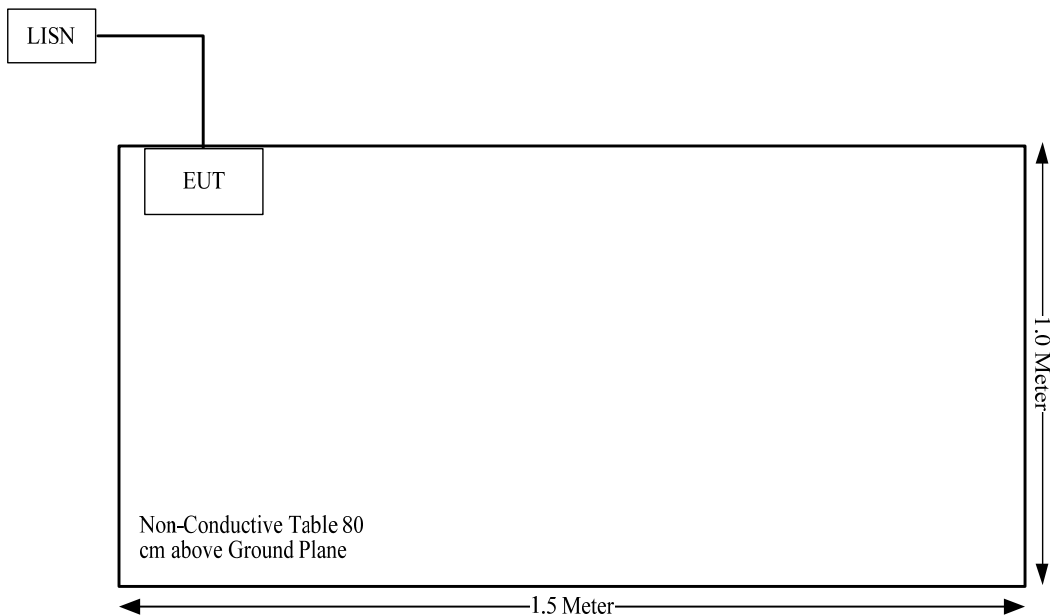
EUT Exercise Software

No software was used in test, the device was configured to engineer mode by manufacturer.

Equipment Modifications

No modifications were made to the EUT.

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliance
§15.207(a)	Conduction Emissions	Compliance
15.205, §15.209, §15.249	Radiated Emissions	Compliance
§15.215 (c)	20 dB Bandwidth	Compliance

FCC§15.203 - ANTENNA REQUIREMENT

Applicable Standard

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.
- c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

Antenna Connector Construction

The EUT has internal Antenna permanently attached to the unit, the antenna gain is 0 dBi, fulfill the requirement of this section. Please refer to the EUT photos.

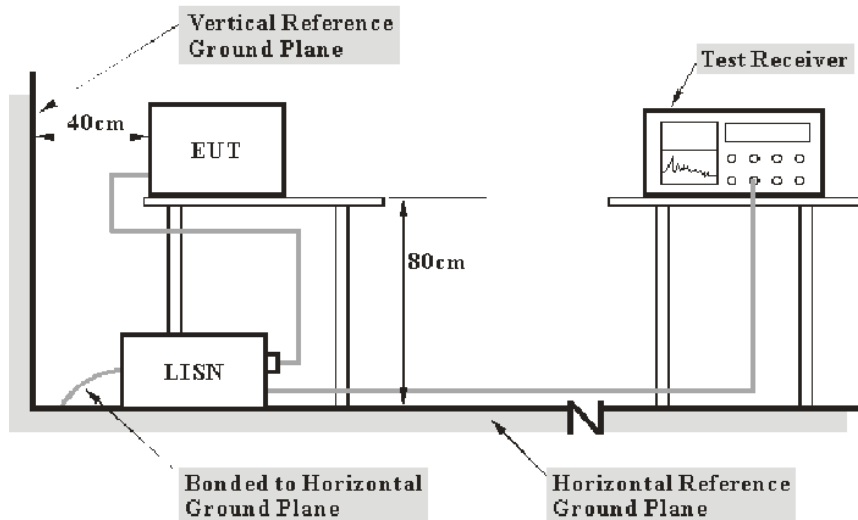
Result: Compliant.

FCC §15.207 (a)– AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC§15.207(a)

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207.

The spacing between the peripherals was 10 cm.

The EUT was connected to the main LISN with a 120 V/60 Hz or 277V/60Hz AC power source.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the EUT was connected to the first LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Corrected Amplitude & Margin Calculation

The basic equation is as follows:

$$V_C = V_R + A_C + VDF$$

$$C_f = A_C + VDF$$

Herein,

V_C (cord. Reading): corrected voltage amplitude

V_R : reading voltage amplitude

A_C : attenuation caused by cable loss

VDF: voltage division factor of AMN

C_f : Correction Factor

The “**Margin**” column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

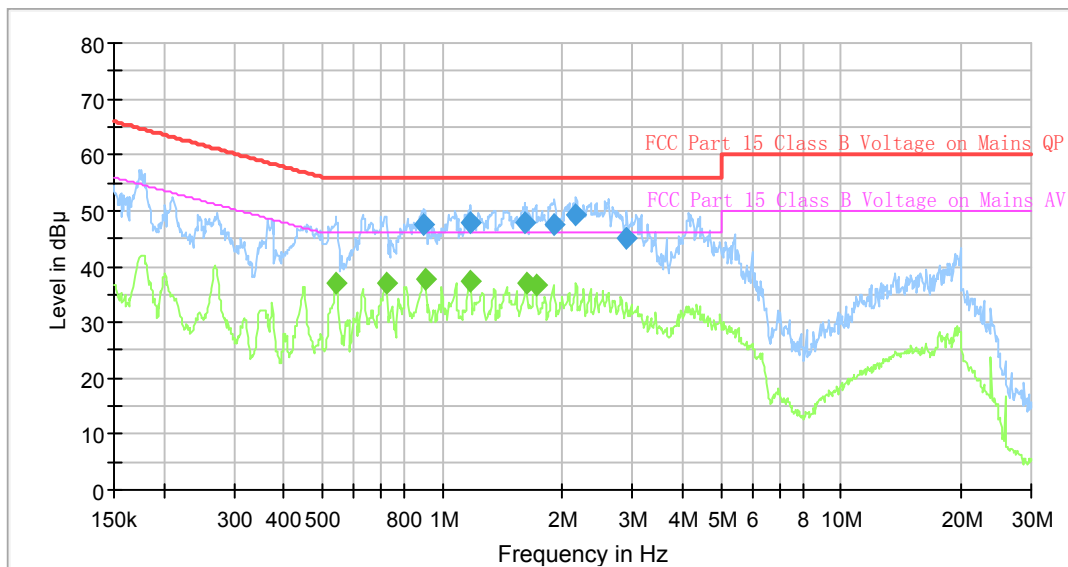
Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Unknown	Coaxial Cable	C-NJNJ-50	C-0200-01	2019-09-05	2020-09-05
R&S	Test Software	EMC32	Version8.53.0	N/A	N/A
COM-POWER	LISN	LI-3P-132	20200003	2019-09-12	2020-09-12
R&S	EMI Test Receiver	ESCI	101121	2020-05-09	2021-05-09

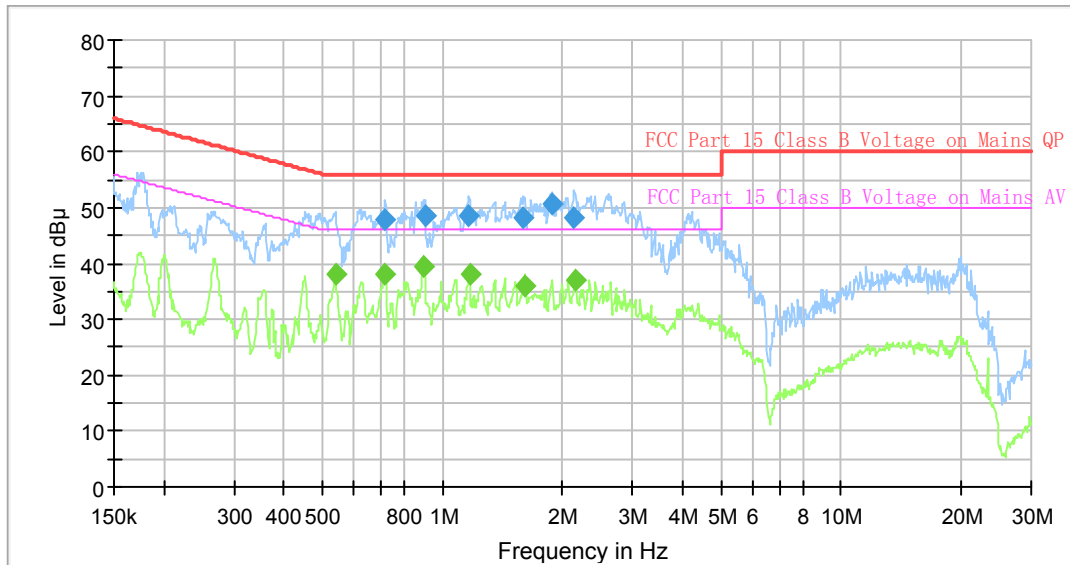
* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data**Environmental Conditions**

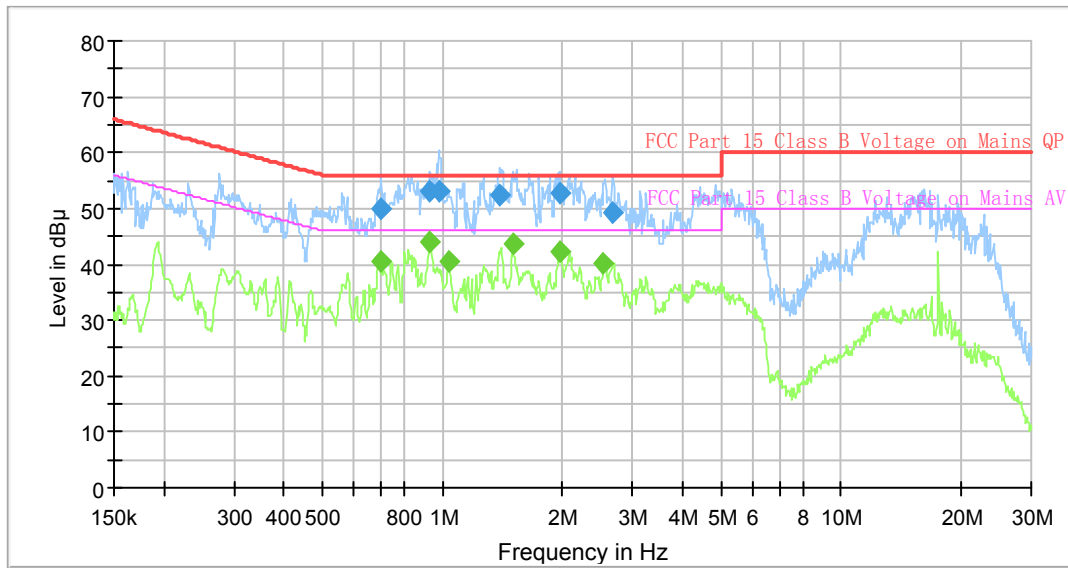
Temperature:	26.3°C
Relative Humidity:	64%
ATM Pressure:	100.6kPa
Tester:	Livesey
Test Date:	2020-05-28

Test Mode: Transmitting**Test Result:** Compliance. Please refer to following table and plots:**AC120 V, 60 Hz, Line:**

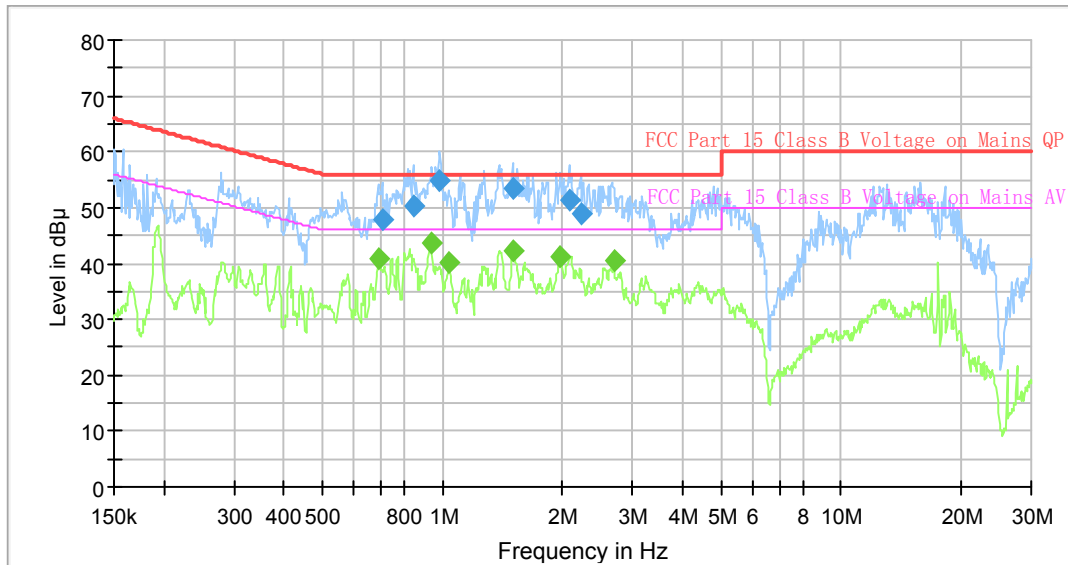
Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.540467	---	37.10	46.00	8.90	9.000	L1	6.5
0.721773	---	37.20	46.00	8.80	9.000	L1	6.5
0.898892	47.62	---	56.00	8.38	9.000	L1	6.5
0.903386	---	37.78	46.00	8.22	9.000	L1	6.5
1.176724	---	37.51	46.00	8.49	9.000	L1	6.5
1.176724	47.93	---	56.00	8.07	9.000	L1	6.5
1.611153	47.96	---	56.00	8.04	9.000	L1	6.5
1.627304	---	37.03	46.00	8.97	9.000	L1	6.5
1.719078	---	36.74	46.00	9.26	9.000	L1	6.5
1.908898	47.63	---	56.00	8.37	9.000	L1	6.5
2.162391	49.16	---	56.00	6.84	9.000	L1	6.5
2.902231	45.04	---	56.00	10.96	9.000	L1	6.6

AC120 V, 60 Hz, Neutral:

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.537778	---	37.94	46.00	8.06	9.000	N	6.4
0.718182	---	38.11	46.00	7.89	9.000	N	6.4
0.718182	47.77	---	56.00	8.23	9.000	N	6.4
0.898892	---	39.57	46.00	6.43	9.000	N	6.4
0.903386	48.58	---	56.00	7.42	9.000	N	6.4
1.165045	48.65	---	56.00	7.35	9.000	N	6.4
1.170870	---	38.04	46.00	7.96	9.000	N	6.4
1.595161	48.31	---	56.00	7.69	9.000	N	6.5
1.619208	---	36.02	46.00	9.98	9.000	N	6.5
1.889951	50.57	---	56.00	5.43	9.000	N	6.5
2.140929	48.05	---	56.00	7.95	9.000	N	6.5
2.162391	---	37.03	46.00	8.97	9.000	N	6.5

AC277 V, 60 Hz, Line:

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.697009	---	40.67	46.00	5.33	9.000	L1	6.5
0.700494	49.87	---	56.00	6.13	9.000	L1	6.5
0.930829	---	44.14	46.00	1.86	9.000	L1	6.5
0.930829	52.97	---	56.00	3.03	9.000	L1	6.5
0.978432	53.18	---	56.00	2.82	9.000	L1	6.5
1.033611	---	40.68	46.00	5.32	9.000	L1	6.5
1.394186	52.53	---	56.00	3.47	9.000	L1	6.5
1.502491	---	43.50	46.00	2.50	9.000	L1	6.5
1.966886	52.68	---	56.00	3.32	9.000	L1	6.5
1.966886	---	42.10	46.00	3.90	9.000	L1	6.5
2.536578	---	40.07	46.00	5.93	9.000	L1	6.6
2.679631	49.40	---	56.00	6.60	9.000	L1	6.6

AC277 V, 60 Hz, Neutral:

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.693541	---	40.83	46.00	5.17	9.000	N	6.4
0.707516	47.99	---	56.00	8.01	9.000	N	6.4
0.846671	50.43	---	56.00	5.57	9.000	N	6.4
0.935483	---	43.51	46.00	2.49	9.000	N	6.4
0.983324	54.95	---	56.00	1.05	9.000	N	6.4
1.038779	---	40.05	46.00	5.95	9.000	N	6.4
1.502491	53.29	---	56.00	2.71	9.000	N	6.5
1.502491	---	42.34	46.00	3.66	9.000	N	6.5
1.966886	---	41.32	46.00	4.68	9.000	N	6.5
2.077810	51.32	---	56.00	4.68	9.000	N	6.5
2.228079	48.78	---	56.00	7.22	9.000	N	6.5
2.693029	---	40.44	46.00	5.56	9.000	N	6.6

FCC§15.205, §15.209&§15.249- RADIATED EMISSIONS**Applicable Standard**

As per FCC§15.249 (a), except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

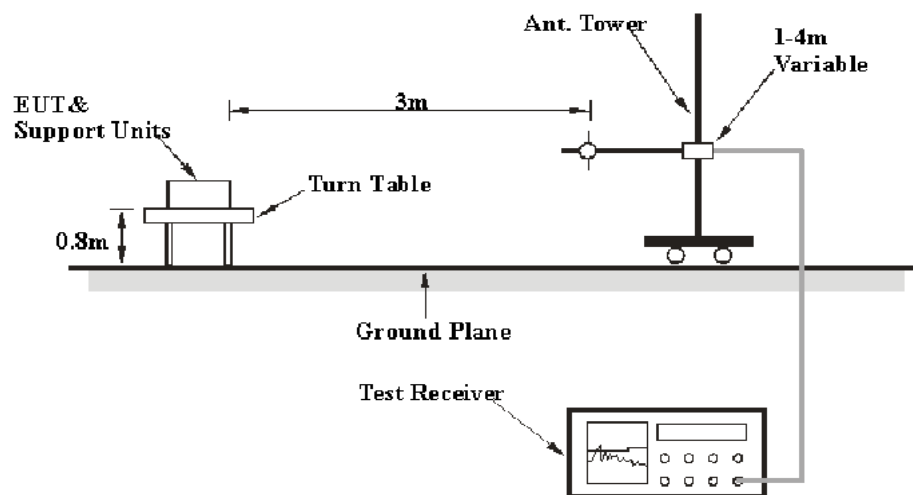
Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0–24.25 GHz	250	2500

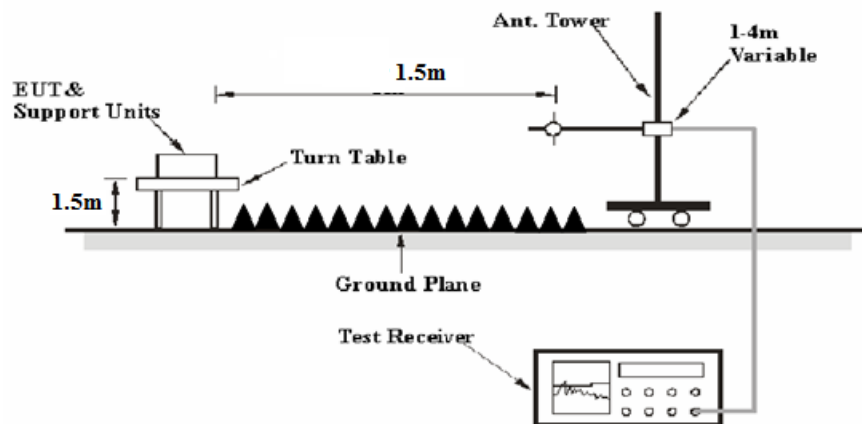
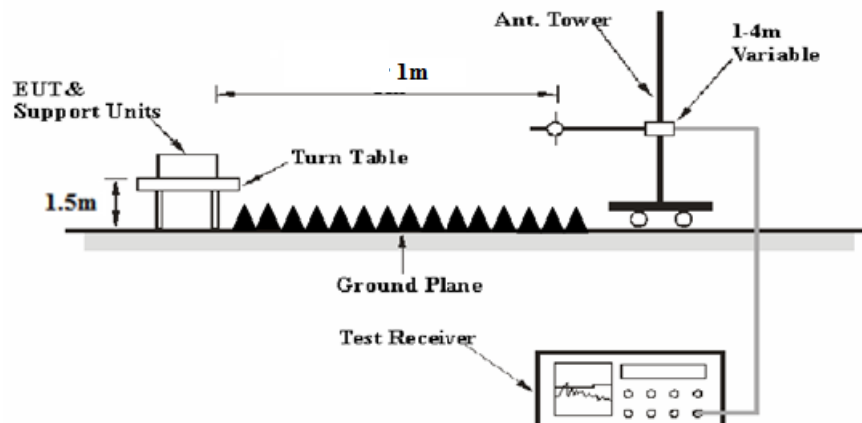
As per FCC§15.249 (c), Field strength limits are specified at a distance of 3 meters.

(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

EUT Setup

Below 1 GHz:



1-26.5 GHz:**26.5-40 GHz:**

The radiated emission below 1GHz tests were performed in the 3 meters chamber test site A, above 1GHz tests were performed in the 3 meters chamber test site B, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, and FCC 15.249 limits.

Test Equipment Setup

The system was investigated from 30 MHz to 40 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
30 MHz – 1000 MHz	120 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1MHz	3 MHz	/	PK
	1MHz	10 Hz	/	AV

If the maximized peak measured value complies with under the QP/Average limit more than 6dB, then it is unnecessary to perform an QP/Average measurement.

Test Procedure

According to C63.10, the above 1G test result shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade from 3m to 1.5m or 1m

Distance extrapolation factor = $20 \log (\text{specific distance [3m]}/\text{test distance [1.5m]})$ dB = 6.02 dB
or

Distance extrapolation factor = $20 \log (\text{specific distance [3m]}/\text{test distance [1m]})$ dB = 9.54 dB

All emissions under the average limit and under the noise floor have not recorded in the report.

Corrected Amplitude & Margin Calculation

For the range 30MHz-1GHz, the Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

For the range 1GHz-40GHz, Test performed at 1.5m, the Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading and the Distance extrapolation factor. The basic equation is as follows:

Extrapolation result

$$= \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain} - \text{Distance extrapolation factor}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Extrapolation result}$$

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Below 1GHz					
R&S	EMI Test Receiver	ESR3	102453	2019-09-12	2020-09-12
Farad	Test Software	EZ-EMC	V1.1.4.2	N/A	N/A
Sunol Sciences	Antenna	JB3	A060611-1	2017-11-10	2020-11-10
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-01	2019-09-05	2020-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0075-01	2019-09-05	2020-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-1400-01	2020-05-06	2021-05-06
HP	Amplifier	8447D	2727A05902	2019-09-05	2020-09-05
Above 1GHz					
Agilent	Spectrum Analyzer	E4440A	SG43360054	2020-05-09	2021-05-09
R&S	Spectrum Analyzer	FSV40	101474	2020-01-09	2021-01-09
Farad	Test Software	EZ-EMC	V1.1.4.2	N/A	N/A
ETS-Lindgren	Horn Antenna	3115	000 527 35	2018-10-12	2021-10-12
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-02 1304	2017-12-06	2020-12-05
Ducommun Technologies	Horn Antenna	ARH-2823-02	1007726-02 1302	2017-12-06	2020-12-05
Unknown	Coaxial Cable	C-SJSJ-50	C-0800-01	2019-09-05	2020-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0200-02	2019-09-05	2020-09-05
Mini-Circuit	Amplifier	ZVA-213-S+	54201245	2019-09-05	2020-09-05
Sinoscite	Bandstop Filters	BSF5150-5850MN-0899-003	0899003	2020-05-06	2021-05-06
Mini Circuits	High Pass Filter	VHF-6010+	31118	2019-06-16	2020-06-16
Quinstar	Amplifier	QLW-18405536-JO	15964001001	2019-06-27	2020-06-27

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

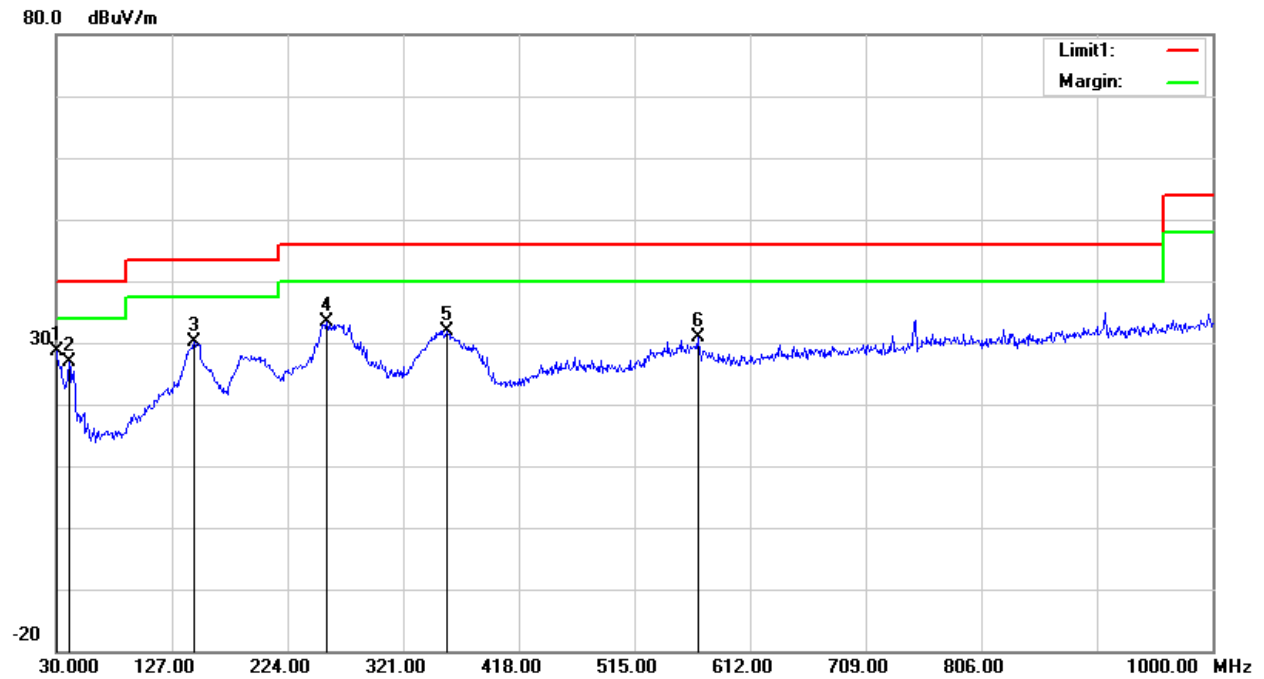
Test Data**Environmental Conditions**

Test Items	Radiation Below 1GHz	Radiation Above 1GHz
Temperature:	26.7 °C	26.7 °C
Relative Humidity:	67	67
ATM Pressure:	100.4kPa	100.4kPa
Tester:	Leo Long	Bond Qin
Test Date:	2020-05-29	2020-05-29

Test Mode: Transmitting(277V/60Hz 5795MHz was the worst)

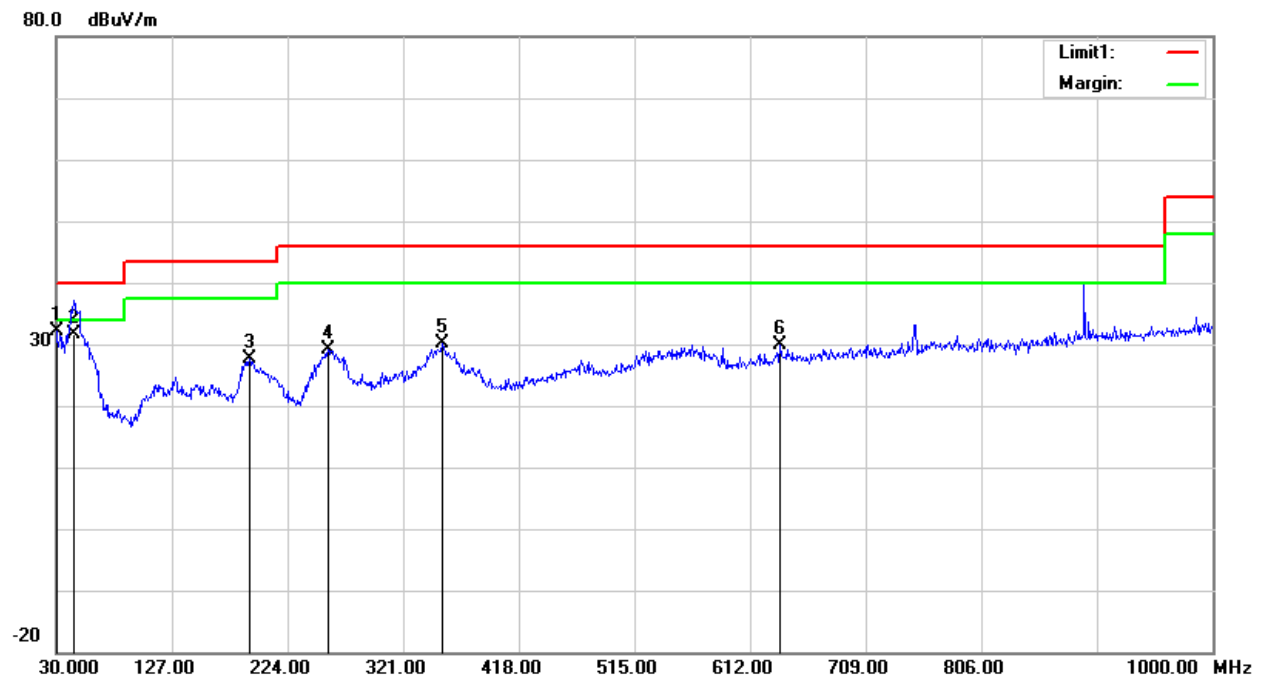
1) 30MHz-1GHz

Horizontal



Frequency (MHz)	Reading (dB μ V)	Detector	Corrected (dB/m)	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
30.0000	26.85	peak	1.72	28.57	40.00	11.43
40.6700	33.21	peak	-6.32	26.89	40.00	13.11
145.4300	36.02	peak	-6.01	30.01	43.50	13.49
256.9800	39.04	peak	-5.75	33.29	46.00	12.71
357.8600	34.80	peak	-2.82	31.98	46.00	14.02
568.3500	29.87	peak	0.97	30.84	46.00	15.16

Vertical:



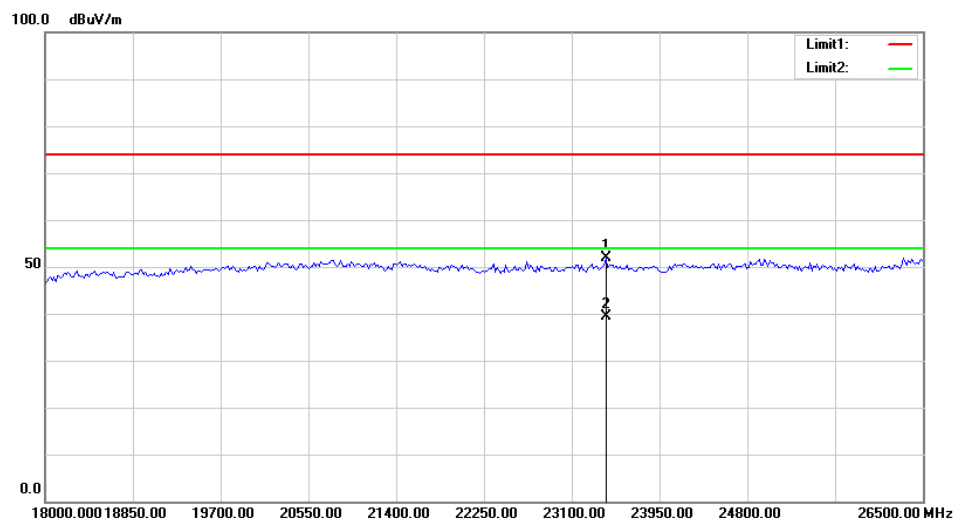
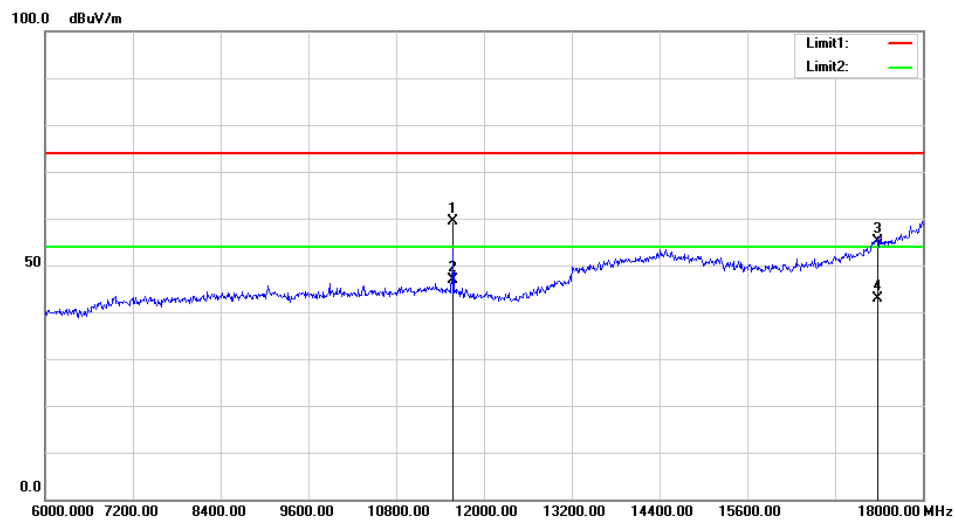
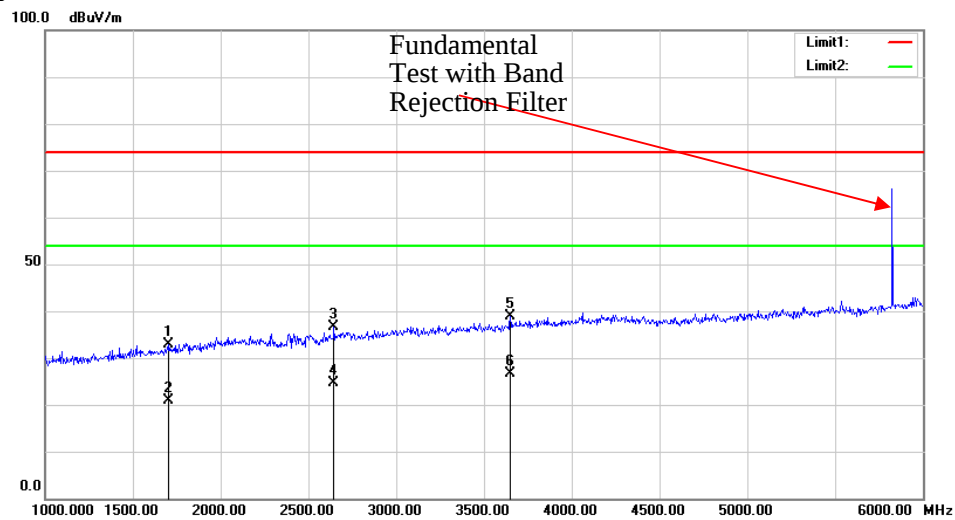
Frequency	Reading	Detector	Corrected	Result	Limit	Margin
(MHz)	(dBμV)		(dB/m)	(dBμV/m)	(dBμV/m)	(dB)
30.0000	30.34	peak	1.72	32.06	40.00	7.94
44.5500	40.60	QP	-8.96	31.64	40.00	8.36
191.9900	34.65	peak	-7.01	27.64	43.50	15.86
257.9500	34.80	peak	-5.61	29.19	46.00	16.81
353.9800	33.06	peak	-2.90	30.16	46.00	15.84
637.2200	27.61	peak	2.20	29.81	46.00	16.19

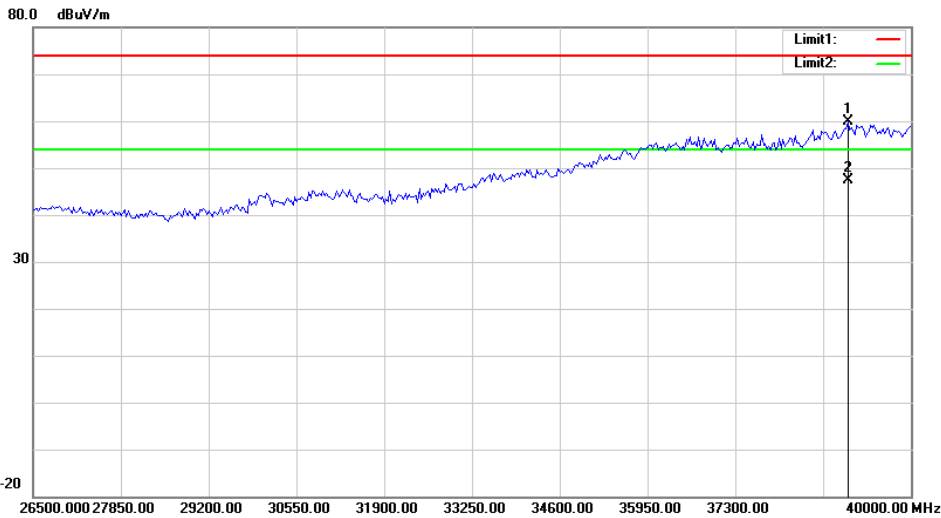
2) 1GHz-40GHz:

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector	Polar (H/V)	Fac vhtor (dB/m)						
5795 MHz										
5795.00	58.62	PK	H	34.22	3.71	0.00	96.55	90.53	113.98	23.45
5795.00	25.90	AV	H	34.22	3.71	0.00	63.83	57.81	93.98	36.17
5795.00	61.06	PK	V	34.22	3.71	0.00	98.99	92.97	113.98	21.01
5795.00	27.78	AV	V	34.22	3.71	0.00	65.71	59.69	93.98	34.29
5725.00	28.72	PK	V	34.19	3.69	0.00	66.60	60.58	74.00	13.42
5725.00	15.63	AV	V	34.19	3.69	0.00	53.51	47.49	54.00	6.51
5875.00	27.68	PK	V	34.25	3.77	0.00	65.70	59.68	74.00	14.32
5875.00	14.87	AV	V	34.25	3.77	0.00	52.89	46.87	54.00	7.13
11590.00	51.11	PK	V	39.00	6.62	25.45	71.28	65.26	74.00	8.74
11590.00	24.97	AV	V	39.00	6.62	25.45	45.14	39.12	54.00	14.88
17385.00	35.15	PK	V	42.43	8.82	23.57	62.83	56.81	74.00	17.19
17385.00	22.12	AV	V	42.43	8.82	23.57	49.80	43.78	54.00	10.22
5801 MHz										
5801.00	47.52	PK	H	34.22	3.71	0.00	85.45	79.43	113.98	34.55
5801.00	18.24	AV	H	34.22	3.71	0.00	56.17	50.15	93.98	43.83
5801.00	53.49	PK	V	34.22	3.71	0.00	91.42	85.4	113.98	28.58
5801.00	21.12	AV	V	34.22	3.71	0.00	59.05	53.03	93.98	40.95
5725.00	28.32	PK	V	34.19	3.69	0.00	66.20	60.18	74.00	13.82
5725.00	14.98	AV	V	34.19	3.69	0.00	52.86	46.84	54.00	7.16
5875.00	28.11	PK	V	34.25	3.77	0.00	66.13	60.11	74.00	13.89
5875.00	14.43	AV	V	34.25	3.77	0.00	52.45	46.43	54.00	7.57
11602.00	34.82	PK	V	39.00	6.62	25.44	55.00	48.98	74.00	25.02
11602.00	22.08	AV	V	39.00	6.62	25.44	42.26	36.24	54.00	17.76
17403.00	35.22	PK	V	42.54	8.82	23.56	63.02	57	74.00	17.00
17403.00	22.28	AV	V	42.54	8.82	23.56	50.08	44.06	54.00	9.94

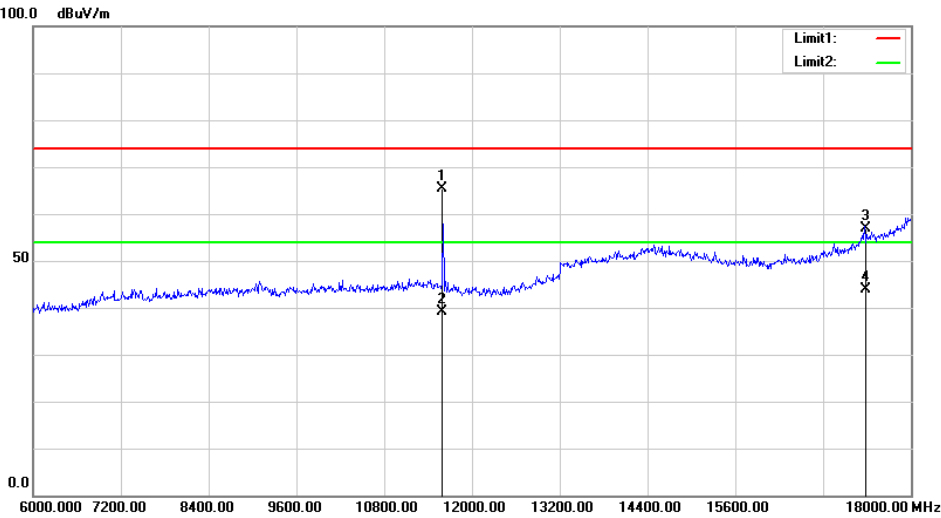
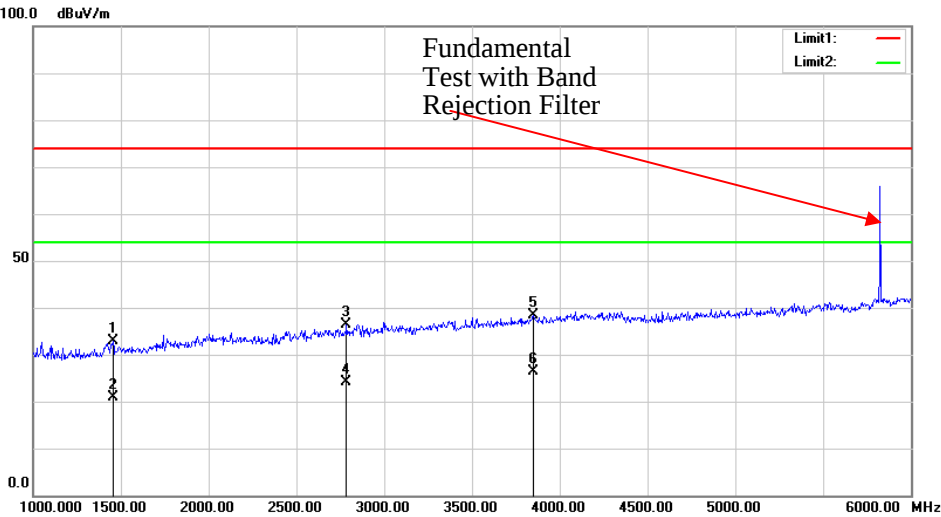
Test plots(Worst channel: 5795 MHz)

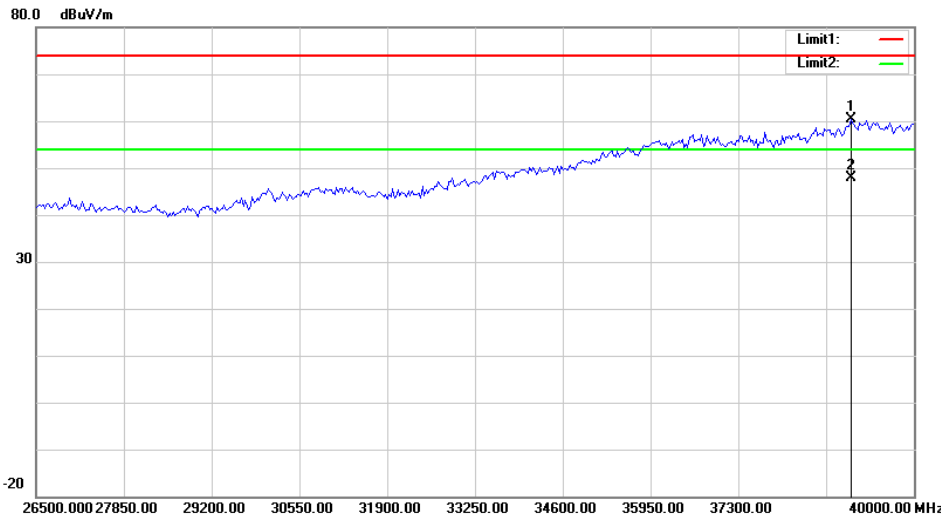
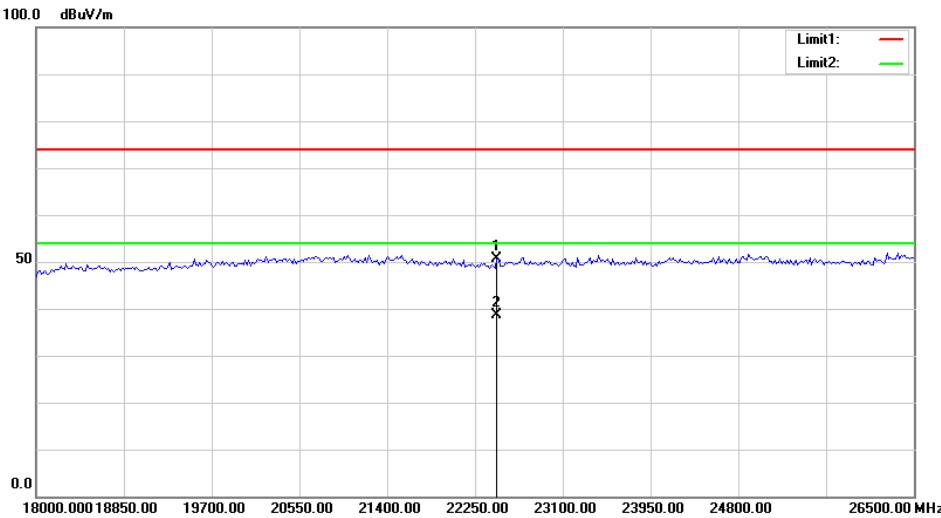
Horizontal





Vertical:





FCC §15.215(c) – 20 dB BANDWIDTH TESTING

Applicable Standard

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
3. Repeat above procedures until all frequencies measured were complete.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	Spectrum Analyzer	E4440A	SG43360054	2019-05-09	2020-05-09
ETS-Lindgren	Horn Antenna	3115	000 527 35	2018-10-12	2021-10-12
Unknown	Coaxial Cable	C-SJSJ-50	C-0800-01	2019-09-05	2020-09-05

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	26.7 °C
Relative Humidity:	61%
ATM Pressure:	100.4kPa
Tester:	Bond Qin
Test Date:	2020-04-30

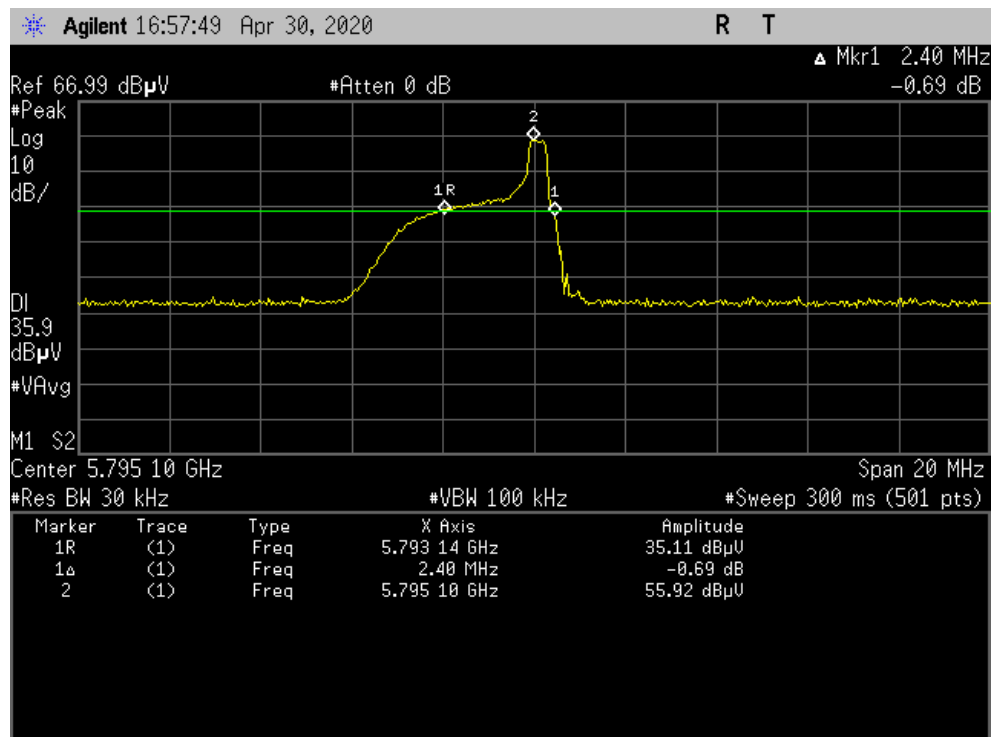
Test Result: Compliant.

Please refer to following tables and plots

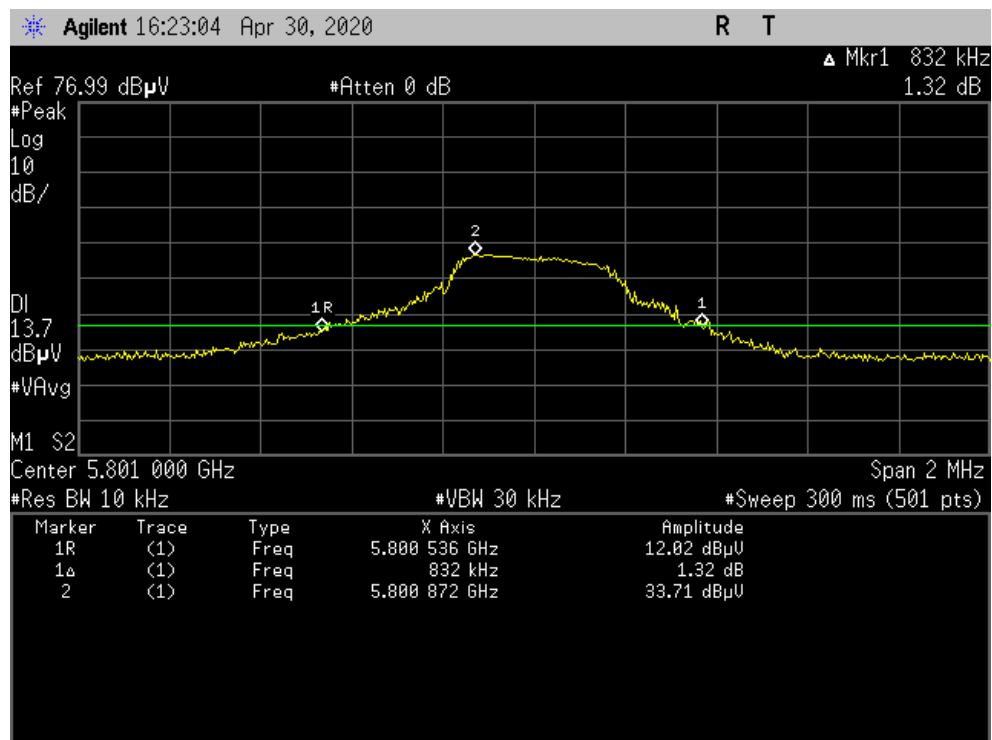
Test Mode: Transmitting

Frequency (MHz)	20 dB Bandwidth (MHz)
5795	2.400
5801	0.832

5795 MHz



5801 MHz



DECLARATION LETTER

Dong Guan Bright Yin Huey Lighting Co., Ltd

Add: Dong Guan Township, Humen Town, DaNing Manage District, Da Pan Di Industrial Zone, Dongguan, China.

Tel: 86-769-89066788 Extension: 539

Fax: 86-769-85551440-539

Email: wubin@big1163sales.com

DECLARATION OF SIMILARITY

Date: 2020-06-05

FEDERAL COMMUNICATIONS COMMISSION

Authorization and Evaluation Division

7435 Oakland Mills Road

Columbia, MD 21046

Dear Sir or Madam:

We, Dong Guan Bright Yin Huey Lighting Co., Ltd., hereby declare that the product: LED Ceiling light,

FCC ID: 2AK53ML2LAUMSV, model: ML2LASABNU169CSMSV, ML2LAMABNU209CSMSV, ML2LALABNU249CSMSV, ML2LASABNU169CEMMSV, ML2LAMABNU209CEMMSV, ML2LAPWHU169CSMSV, ML2LAMPWHU209CSMSV, ML2LALPWHU249CSMSV, ML2LAPWHU169CEMMSV, ML2LAMPWHU209CEMMSV, ML2LALPWHU249CEMMSV is electrically identical with the model: ML2LALABNU249CEMMSV which was tested by BACL with the same electromagnetic emissions and electromagnetic compatibility characteristics.

A description of the differences between those models and that are declared similar are as follows:

They are the same wireless technology of all the models

They have two configuration and the two configuration has been tested.

There are total 3 powers (24W, 20W, 16W) and the tested model is the biggest power and the smallest power and the most complex pattern.

There is the same circuit schematic of all the models

The following is the model comparison between the applicant and OEM.

Applicant model number	OEM model number
ML2LASABNU169CSMSV	KLD3001LS-MSV
ML2LAMABNU209CSMSV	KLD3001L-MSV
ML2LALABNU249CSMSV	KLD3001LL-MSV
ML2LASABNU169CEMMSV	KLD3001LS-EM-MSV
ML2LAMABNU209CEMMSV	KLD3001L-EM-MSV
ML2LALABNU249CEMMSV	KLD3001LL-EM-MSV

ML2LASPWHU169CSMSV	KLE3001LS-MSV
ML2LAMPWHU209CSMSV	KLE3001L-MSV
ML2LALPWHU249CSMSV	KLE3001LL-MSV
ML2LASPWHU169CEMMSV	KLE3001LS-EM-MSV
ML2LAMPWHU209CEMMSV	KLE3001L-EM-MSV
ML2LALPWHU249CEMMSV	KLE3001LL-EM-MSV

Please contact me should there be need for any additional clarification or information.

Best Regards,

Signature: 

Printed Name: Wu Bin

Title: Vice manager

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