

APPLICATION CERTIFICATION FCC Part 15C
On Behalf of

Elec-Tech International Co., Ltd.

LED ceiling lamp

Model No.: 565161## (##=00-99)

FCC ID: XZH-5462032017

Prepared for : Elec-Tech International Co., Ltd.
Address : No.1 Jinfeng Road, Tangjiawan Town, Xiangzhou
District, Zhuhai City, Guangdong Province, P.R. China
519085

Prepared by : Shenzhen Accurate Technology Co., Ltd.
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Report No. : ATE20171126 002
Date of Test : June 18-June 21, 2017
Date of Report Rev. 1 : June 23, 2017
Date of Report Rev. 2 : August 14, 2018

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Test Report Certification

Applicant : Elec-Tech International Co., Ltd.
Manufacturer : ETI Solid State Lighting (Zhuhai) Ltd
EUT Description : LED ceiling lamp
Model No. : 565161## (##=00-99)

(Note: where “##”, which respectively represents different LED source color temperature.)

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247 ANSI C63.10: 2013

The device described above is tested by Shenzhen Accurate Technology Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.247 limits. The measurement results are contained in this test report and Shenzhen Accurate Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Accurate Technology Co., Ltd.

Date of Test :	June 18-June 21, 2017
Date of Report Rev. 1 :	June 23, 2017
Date of Report Rev. 2 :	August 14, 2018

Prepared by : _____
(S. Yang, Engineer)

Approved & Authorized Signer : _____
(Sean Liu, Manager)



1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Model Number	: 565161## (##=00-99) (Note: where “##”, which respectively represents different LED source color temperature, We hereby state that these models are identical in interior structure, electrical circuits and components, Therefore, only model 56516141 is tested for EMC tests.)
Bluetooth version	: BT V4.1 Single mode This report is for BT classic mode
Frequency Range	: 2402MHz-2480MHz
Number of Channels	: 79
Antenna Gain(Max)	: -1.0dBi
Antenna type	: Integral Antenna
Adapter Input Voltage	: AC 120V,60Hz
Modulation mode	: GFSK, $\pi/4$ DQPSK, 8DPSK
Applicant	: Elec-Tech International Co., Ltd.
Address	: No.1 Jinfeng Road, Tangjiawan Town, Xiangzhou District, Zhuhai City, Guangdong Province, P.R. China 519085
Manufacturer	: ETI Solid State Lighting (Zhuhai) Ltd
Address	: No.1 Zhongzhu Road South, Science & Technology Innovation Coast, High Tech District, Zhuhai City, Guangdong Prov., China

1.2. Accessory and Auxiliary Equipment

PC :	Manufacturer: LENOVO M/N: 4290-RT8 S/N: R9-FW93G 11/08
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1.3. Description of Test Facility

EMC Lab	:	Recognition of accreditation by Federal Communications Commission (FCC) The Designation Number is CN1189 The Registration Number is 708358
		Listed by Innovation, Science and Economic Development Canada (ISED) The Registration Number is 5077A-2
		Accredited by China National Accreditation Service for Conformity Assessment (CNAS) The Registration Number is CNAS L3193
		Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 4297.01
Name of Firm	:	Shenzhen Accurate Technology Co., Ltd.
Site Location	:	1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

1.4. Measurement Uncertainty

Conducted Emission Expanded Uncertainty	=	2.23dB, k=2
Radiated emission expanded uncertainty (9kHz-30MHz)	=	3.08dB, k=2
Radiated emission expanded uncertainty (30MHz-1000MHz)	=	4.42dB, k=2
Radiated emission expanded uncertainty (Above 1GHz)	=	4.06dB, k=2

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

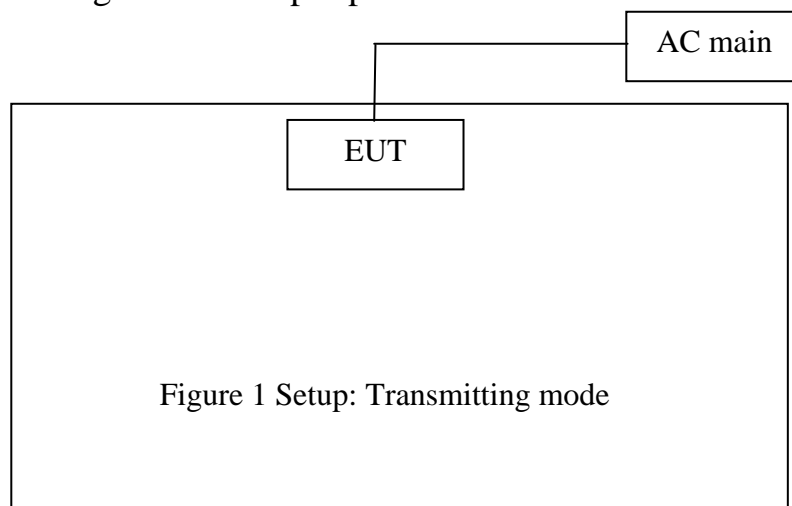
Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 06, 2018	1 Year
EMI Test Receiver	Rohde& Schwarz	ESR	101817	Jan. 06, 2018	1 Year
Spectrum Analyzer	Rohde&Schwarz	FSV-40	101495	Jan. 06, 2018	1 Year
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 06, 2018	1 Year
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 06, 2018	1 Year
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 06, 2018	1 Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 06, 2018	1 Year
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 06, 2018	1 Year
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 06, 2018	1 Year
Highpass Filter	Wainwright Instruments	WHKX3.6/18 G-10SS	N/A	Jan. 06, 2018	1 Year
Band Reject Filter	Wainwright Instruments	WRCG2400/2 485-2375/2510 -60/11SS	N/A	Jan. 06, 2018	1 Year

3. OPERATION OF EUT DURING TESTING

3.1. Operating Mode

The mode is used: Transmitting mode
Low Channel: 2402MHz
Middle Channel: 2441MHz
High Channel: 2480MHz
Hopping

3.2. Configuration and peripherals



4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.207	Conducted Emission Test	Compliant
Section 15.247(a)(1)	20dB Bandwidth Test	refer to the original report
Section 15.247(a)(1)	Carrier Frequency Separation Test	refer to the original report
Section 15.247(a)(1)(iii)	Number Of Hopping Frequency Test	refer to the original report
Section 15.247(a)(1)(iii)	Dwell Time Test	refer to the original report
Section 15.247(b)(1)	Maximum Peak Output Power Test	refer to the original report
Section 15.247(d) Section 15.209	Radiated Emission Test	(Above 1GHz test data) refer to the original report
Section 15.247(d)	Band Edge Compliance Test	refer to the original report
Section 15.203	Antenna Requirement	refer to the original report

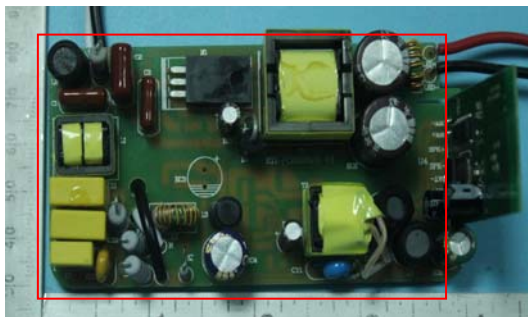
5. DESCRIPTION OF VERSION

Edition No.	Date of Rev.	Summary	Report No.
REV.1	June 23, 2017	Original Report	ATE20171126
REV.2	August 14, 2018	Update power PCB board	ATE20171126 002

Remark for Rev. 2

1. This report is an additional version with original report number ATE20171126. The different with original report please see the above table of REV.2.
2. The product power PCB board and appearance was replaced, No other modification has been made to the RF portion and no changes in the RF parameters, so not affect the Radio portion of the device and the device will remain electrically equivalent to originally certified device.
3. Compared with the original report ATE20171126, conducted Emission and radiated emission (Below 1GHz) is need to retest, other test data and test pictures would refer to original report ATE20171126.
4. This report is based on report of ATE20171126.
5. For testing items not reflected in this report, Please refer to the original report.

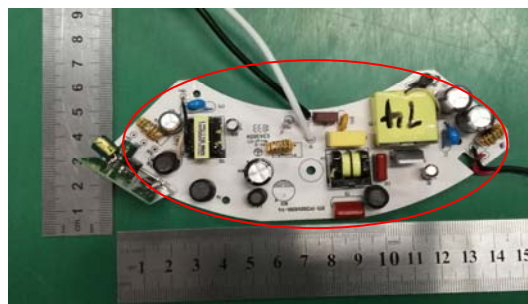
Original power PCB:



Original appearance:



Replace power PCB:



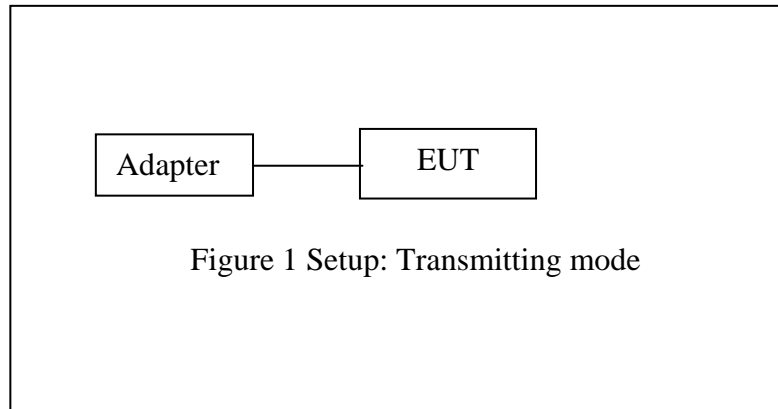
Replace appearance:



6. RADIATED EMISSION TEST

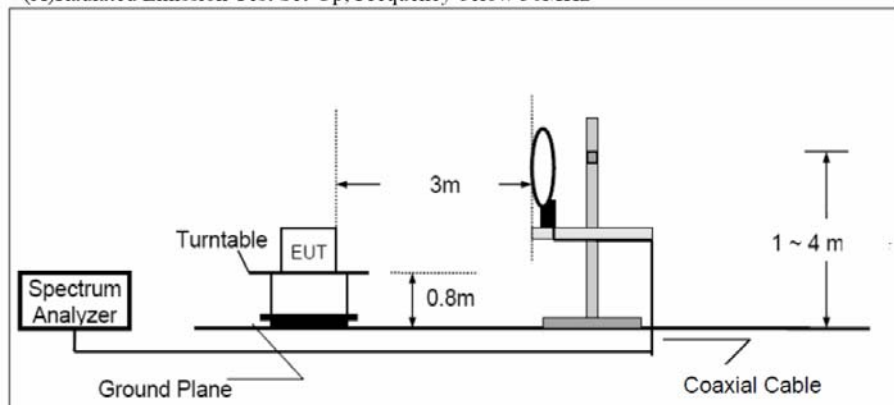
6.1. Block Diagram of Test Setup

6.1.1. Block diagram of connection between the EUT and peripherals

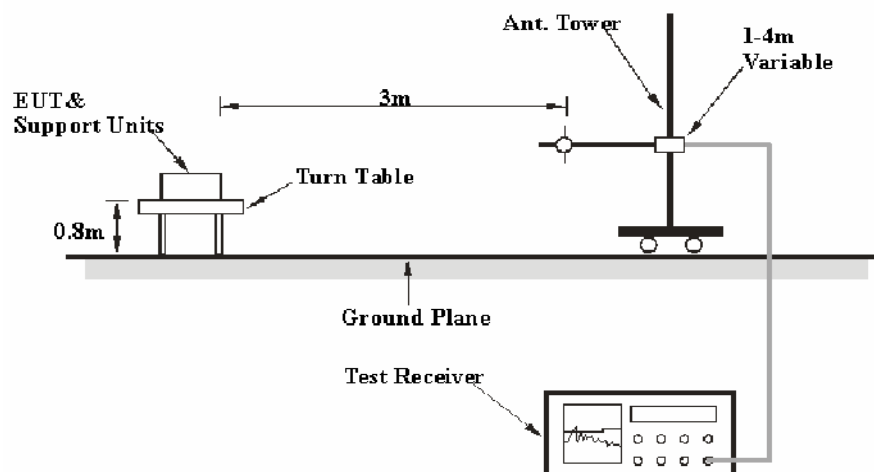


6.1.2. Semi-Anechoic Chamber Test Setup Diagram

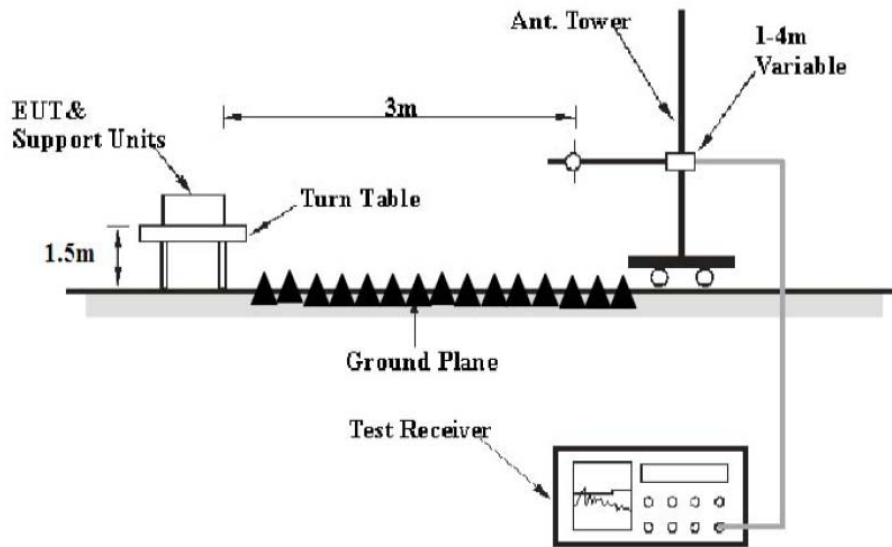
(A) Radiated Emission Test Set-Up, Frequency below 30MHz



(B) Radiated Emission Test Set-Up, Frequency 30-1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1GHz



6.2. The Limit For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

6.3.Restricted bands of operation

6.3.1.FCC Part 15.205 Restricted bands of operation

(a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(²)
13.36-13.41			

¹Until February 1, 1999, this restricted band shall be 0.490-0.510

²Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

6.4.Configuration of EUT on Measurement

The equipment is 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. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground (Below 1GHz). The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground (Above 1GHz). The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

6.6.Data Sample

Frequency (MHz)	Reading (dBμv)	Factor (dB/m)	Result (dBμv/m)	Limit (dBμv/m)	Margin (dB)	Remark
X.XX	48.69	-13.35	35.34	46	-10.66	QP

Frequency(MHz) = Emission frequency in MHz

Reading(dBμv) = Uncorrected Analyzer/Receiver reading

Factor (dB/m) = Antenna factor + Cable Loss – Amplifier gain

Result(dBμv/m) = Reading(dBμv) + Factor(dB/m)

Limit (dBμv/m) = Limit stated in standard

Margin (dB) = Result(dBμv/m) - Limit (dBμv/m)

QP = Quasi-peak Reading

Calculation Formula:

Margin(dB) = Result (dBμV/m)–Limit(dBμV/m)

Result(dBμV/m)= Reading(dBμV)+ Factor(dB/m)

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.

6.7.The Field Strength of Radiation Emission Measurement Results

Note: 1.We tested GFSK mode, Π/4-DQPSK Mode & 8QPSK mode and recorded the worst case data (GFSK mode) for all test mode.

2. The test frequency is from 30MHz to 26.5GHz, The 18-26.5GHz emissions are not reported, because the levels are too low against the limit.

3. Above 1GHz test data please refer to the original report.

Below 1GHz



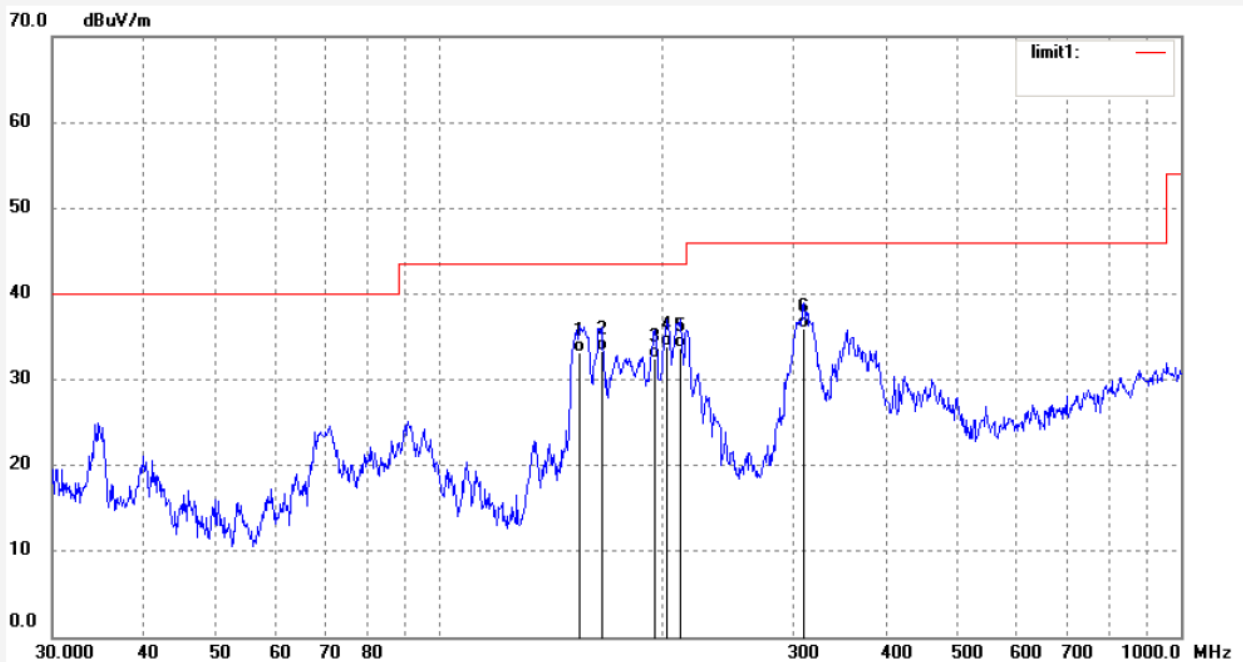
ACCURATE TECHNOLOGY CO., LTD.

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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: frank2017 #2449	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/08/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 8/53/22
EUT: LED ceiling lamp	Engineer Signature: Frank
Mode: TX 2402MHz (GFSK)	Distance:
Model: 56516141	
Manufacturer: ETI Solid State Lighting	

Note: Report NO.:ATE20171126 002



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	154.7856	55.01	-21.91	33.10	43.50	-10.40	QP	200	302	
2	165.4715	54.12	-20.77	33.35	43.50	-10.15	QP	200	154	
3	195.1830	51.45	-18.96	32.49	43.50	-11.01	QP	200	111	
4	202.8745	52.54	-18.60	33.94	43.50	-9.56	QP	200	105	
5	210.8689	52.21	-18.46	33.75	43.50	-9.75	QP	200	48	
6	310.3594	52.01	-16.07	35.94	46.00	-10.06	QP	200	197	



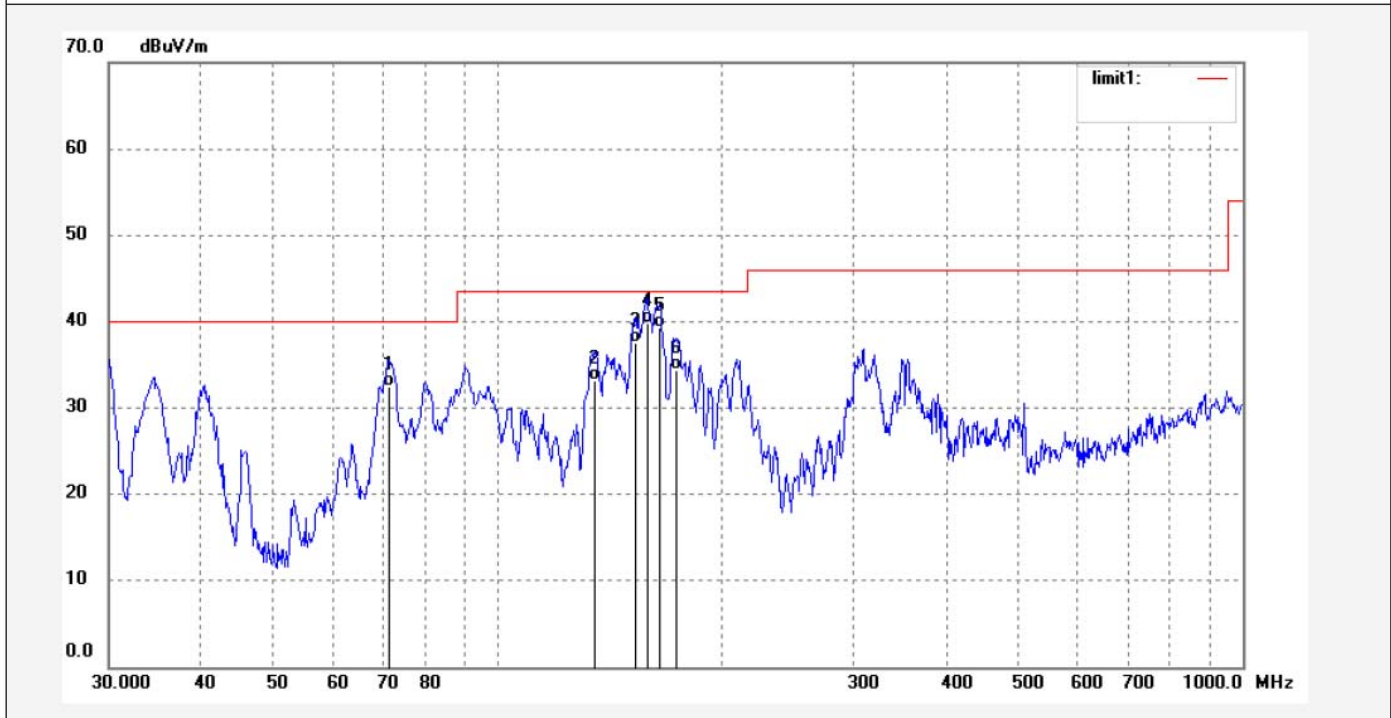
ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: frank2017 #2448	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/08/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 8/52/26
EUT: LED ceiling lamp	Engineer Signature: Frank
Mode: TX 2402MHz (GFSK)	Distance:
Model: 56516141	
Manufacturer: ETI Solid State Lighting	

Note: Report NO.:ATE20171126 002



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	71.4539	55.32	-22.93	32.39	40.00	-7.61	QP	100	103	
2	134.9643	55.12	-21.92	33.20	43.50	-10.30	QP	100	21	
3	153.1627	59.60	-22.04	37.56	43.50	-5.94	QP	100	56	
4	158.6399	61.30	-21.49	39.81	43.50	-3.69	QP	100	154	
5	164.8911	60.12	-20.83	39.29	43.50	-4.21	QP	100	62	
6	173.8146	55.15	-20.69	34.46	43.50	-9.04	QP	100	115	



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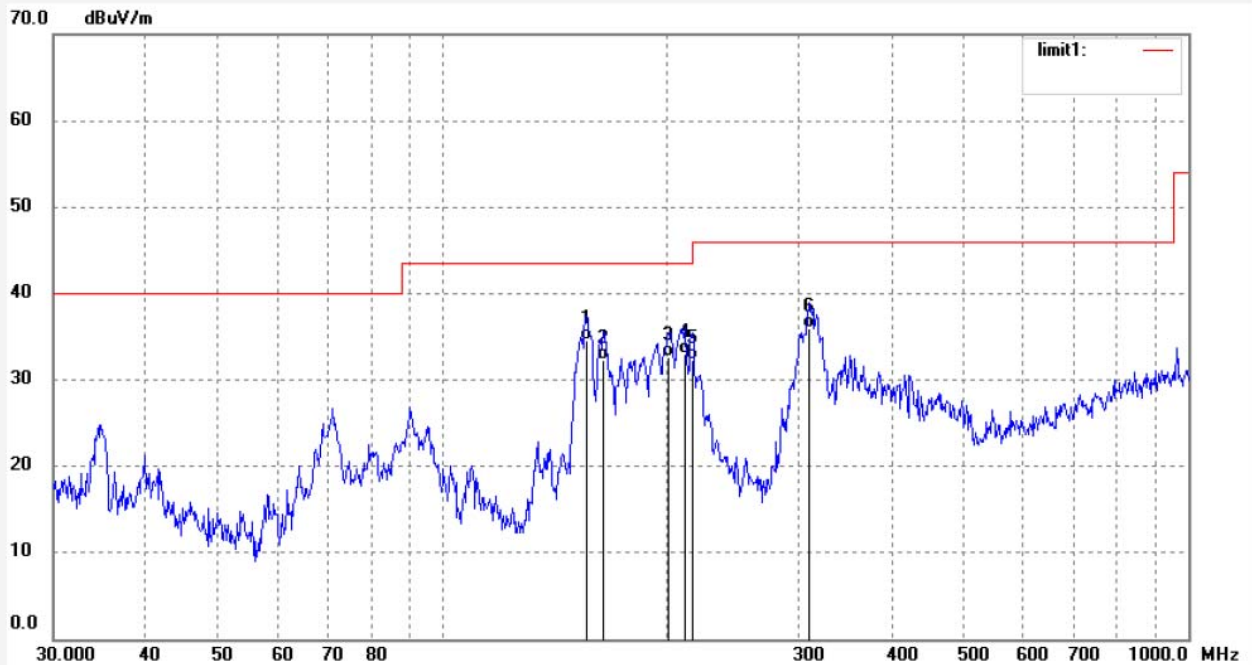
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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: frank2017 #2450
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: LED ceiling lamp
Mode: TX 2441MHz (GFSK)
Model: 56516141
Manufacturer: ETI Solid State Lighting

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 18/08/08/
Time: 8/54/11
Engineer Signature: Frank
Distance:

Note: Report NO.:ATE20171126 002



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	155.8771	56.31	-21.79	34.52	43.50	-8.98	QP	200	162	
2	164.3129	53.15	-20.89	32.26	43.50	-11.24	QP	200	21	
3	200.7472	51.32	-18.68	32.64	43.50	-10.86	QP	200	202	
4	210.8689	51.37	-18.46	32.91	43.50	-10.59	QP	200	33	
5	216.1196	50.64	-18.42	32.22	46.00	-13.78	QP	200	159	
6	310.3594	52.01	-16.07	35.94	46.00	-10.06	QP	200	85	



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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: frank2017 #2451

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: LED ceiling lamp

Mode: TX 2441MHz (GFSK)

Model: 56516141

Manufacturer: ETI Solid State Lighting

Polarization: Vertical

Power Source: AC 120V/60Hz

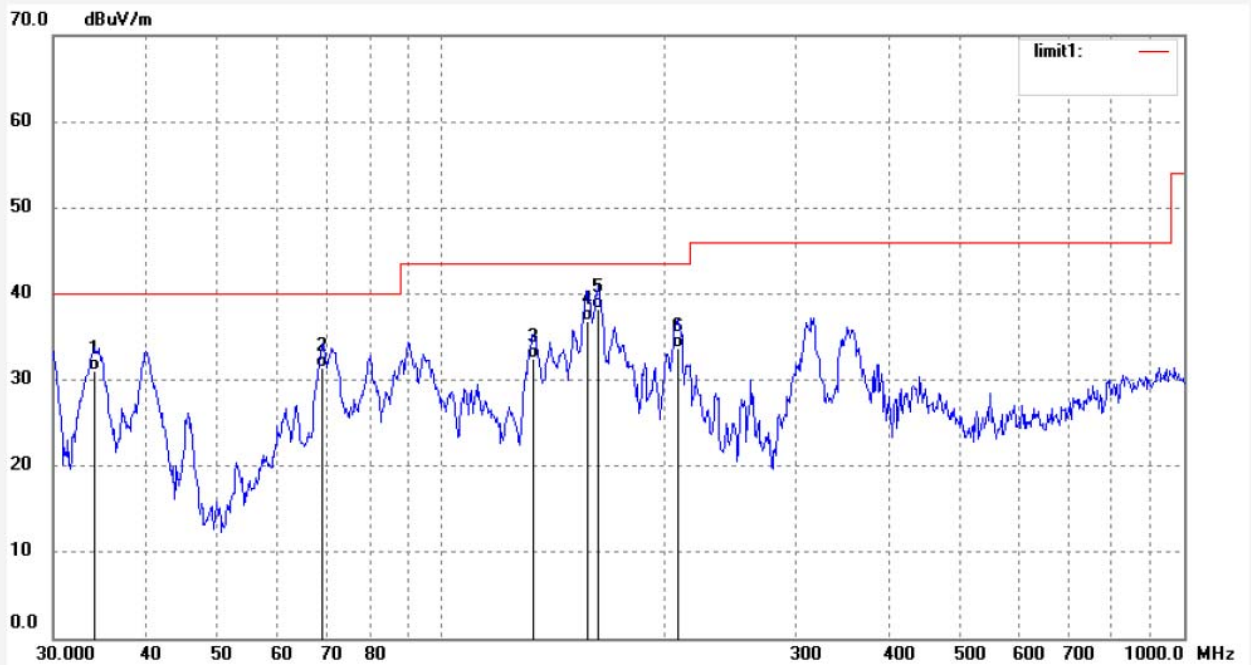
Date: 18/08/08/

Time: 8/54/47

Engineer Signature: Frank

Distance:

Note: Report NO.:ATE20171126 002



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	34.1649	48.45	-17.39	31.06	40.00	-8.94	QP	100	135	
2	69.2296	54.15	-22.82	31.33	40.00	-8.67	QP	100	220	
3	133.0809	54.31	-21.84	32.47	43.50	-11.03	QP	100	45	
4	157.5289	58.45	-21.61	36.84	43.50	-6.66	QP	100	100	
5	162.5900	59.30	-21.07	38.23	43.50	-5.27	QP	100	87	
6	207.9260	52.16	-18.50	33.66	43.50	-9.84	QP	100	144	



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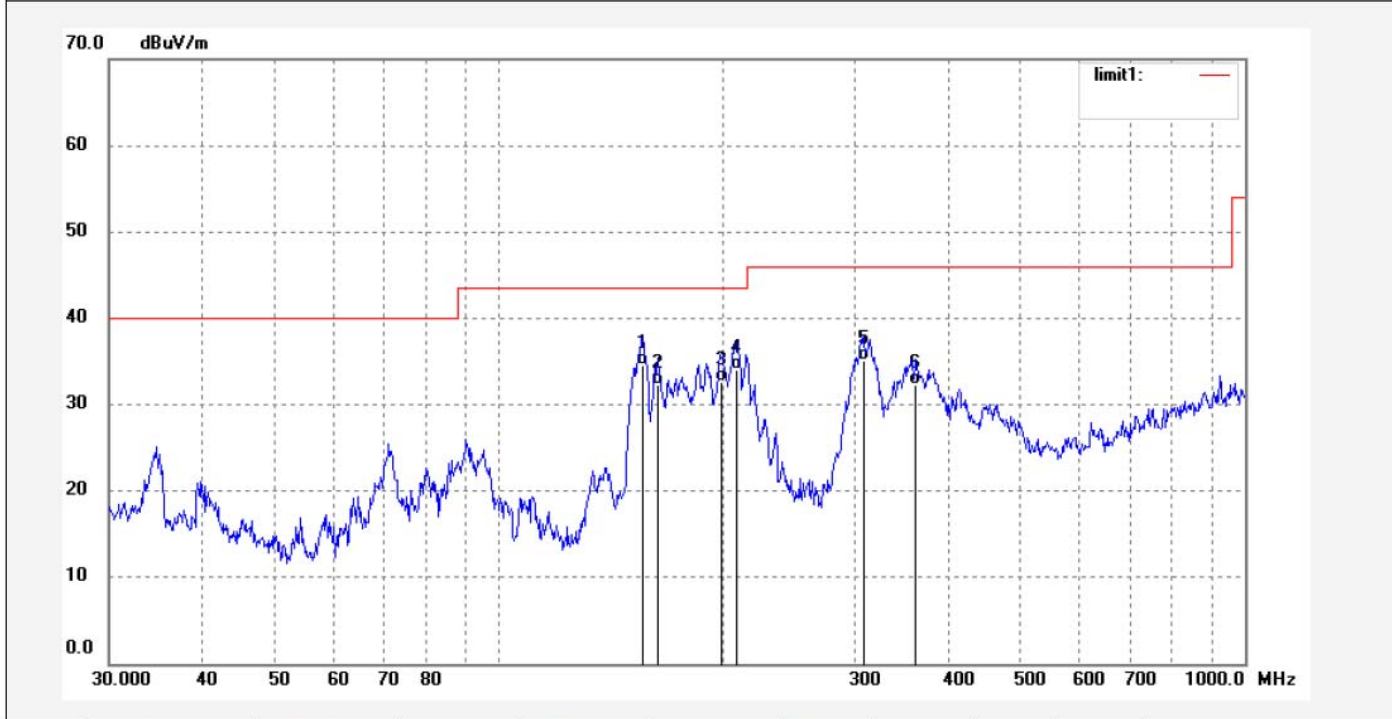
Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: frank2017 #2453	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 18/08/08/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 8/56/55
EUT: LED ceiling lamp	Engineer Signature: Frank
Mode: TX 2480MHz (GFSK)	Distance:
Model: 56516141	
Manufacturer: ETI Solid State Lighting	

Note: Report NO.:ATE20171126 002



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	155.8771	56.35	-21.79	34.56	43.50	-8.94	QP	200	156	
2	163.1622	53.25	-21.01	32.24	43.50	-11.26	QP	200	99	
3	198.6424	51.38	-18.79	32.59	43.50	-10.91	QP	200	18	
4	207.9260	52.54	-18.50	34.04	43.50	-9.46	QP	200	112	
5	308.1860	51.15	-16.11	35.04	46.00	-10.96	QP	200	215	
6	362.2479	46.60	-14.28	32.32	46.00	-13.68	QP	200	305	



ACCURATE TECHNOLOGY CO., LTD.

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Site: 1# Chamber

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Fax:+86-0755-26503396

Job No.: frank2017 #2452

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: LED ceiling lamp

Mode: TX 2480MHz (GFSK)

Model: 56516141

Manufacturer: ETI Solid State Lighting

Polarization: Vertical

Power Source: AC 120V/60Hz

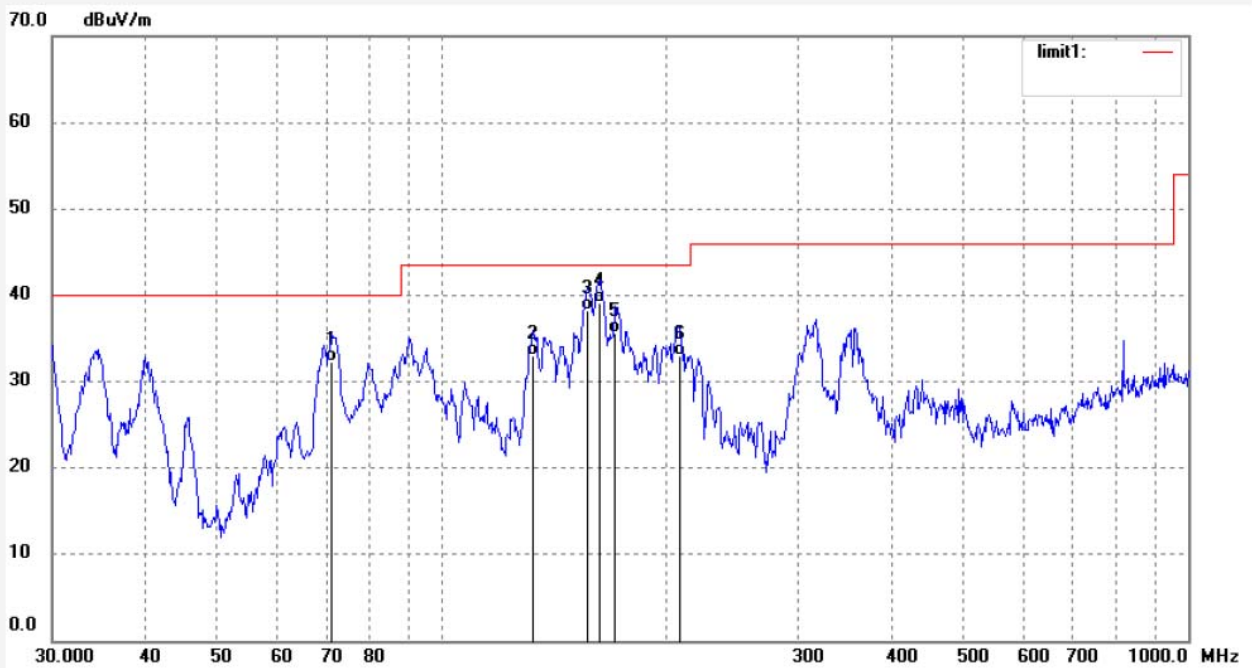
Date: 18/08/08/

Time: 8/55/33

Engineer Signature: Frank

Distance:

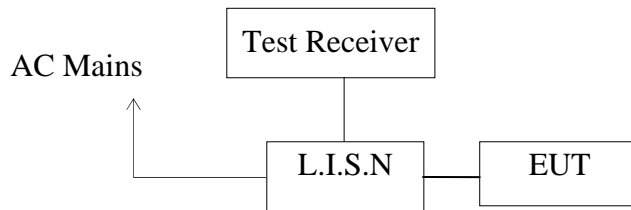
Note: Report NO.:ATE20171126 002



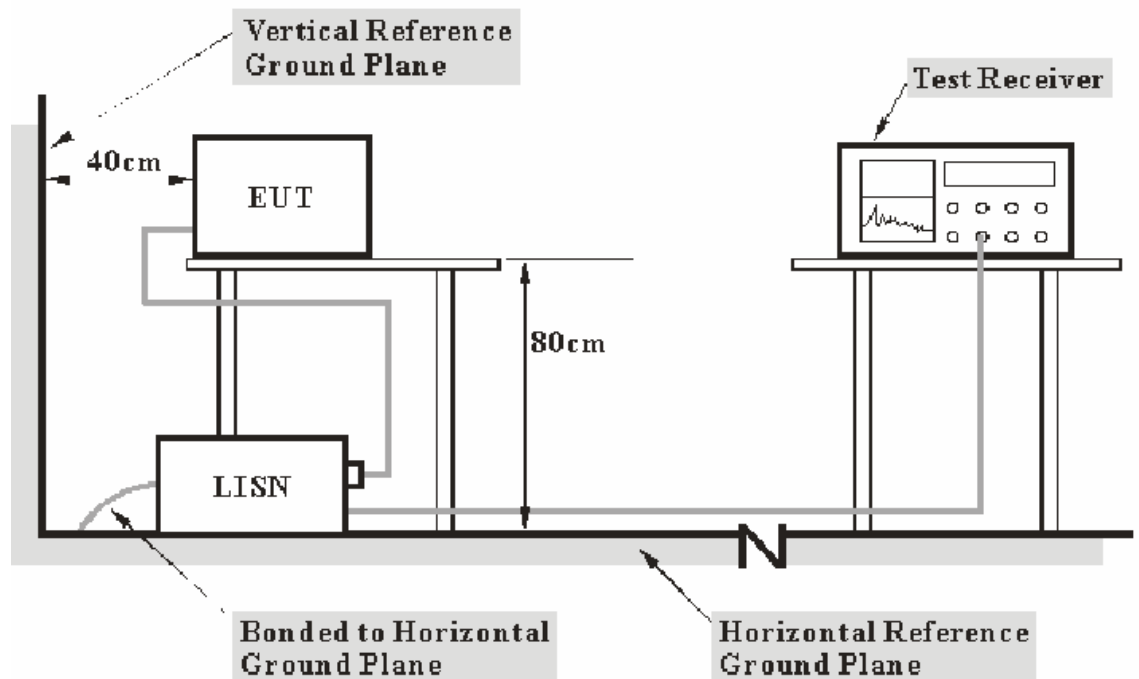
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	71.2032	55.12	-22.92	32.20	40.00	-7.80	QP	100	302	
2	132.1489	54.78	-21.81	32.97	43.50	-10.53	QP	100	151	
3	156.9764	60.00	-21.68	38.32	43.50	-5.18	QP	100	118	
4	162.5900	60.15	-21.07	39.08	43.50	-4.42	QP	100	25	
5	170.7878	56.01	-20.37	35.64	43.50	-7.86	QP	100	167	
6	207.9260	51.48	-18.50	32.98	43.50	-10.52	QP	100	56	

7. AC POWER LINE CONDUCTED EMISSION FOR FCC PART 15 SECTION 15.207(A)

7.1. Block Diagram of Test Setup



7.2. Test System 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.

7.3. Power Line Conducted Emission Measurement Limits

Frequency (MHz)	Limit dB(μV)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

NOTE1: The lower limit shall apply at the transition frequencies.
 NOTE2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

7.4. Configuration of EUT on Measurement

The equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

7.5. Operating Condition of EUT

7.5.1. Setup the EUT and simulator as shown as Section 7.1.

7.5.2. Turn on the power of all equipment.

7.5.3. Let the EUT work in test mode and measure it.

7.6. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2013 on Conducted Emission Measurement. The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

7.7.Data Sample

Frequency (MHz)	Transducer value (dB)	QuasiPeak Level (dBμV)	Average Level (dBμV)	QuasiPeak Limit (dBμV)	Average Limit (dBμV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)
X.XX	10.5	51.1	34.2	56.0	46.0	4.9	11.8	Pass

Frequency(MHz) = Emission frequency in MHz

Transducer value(dB) = Insertion loss of LISN + Cable Loss

Level(dBμV) = Quasi-peak Reading/Average Reading + Transducer value

Limit (dBμV) = Limit stated in standard

Calculation Formula:

Margin = Limit (dBμV) - Level (dBμV)

7.8.Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150kHz to 30MHz is checked.

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

Emissions attenuated more than 20 dB below the permissible value are not reported.

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

The spectral diagrams are attached as below.

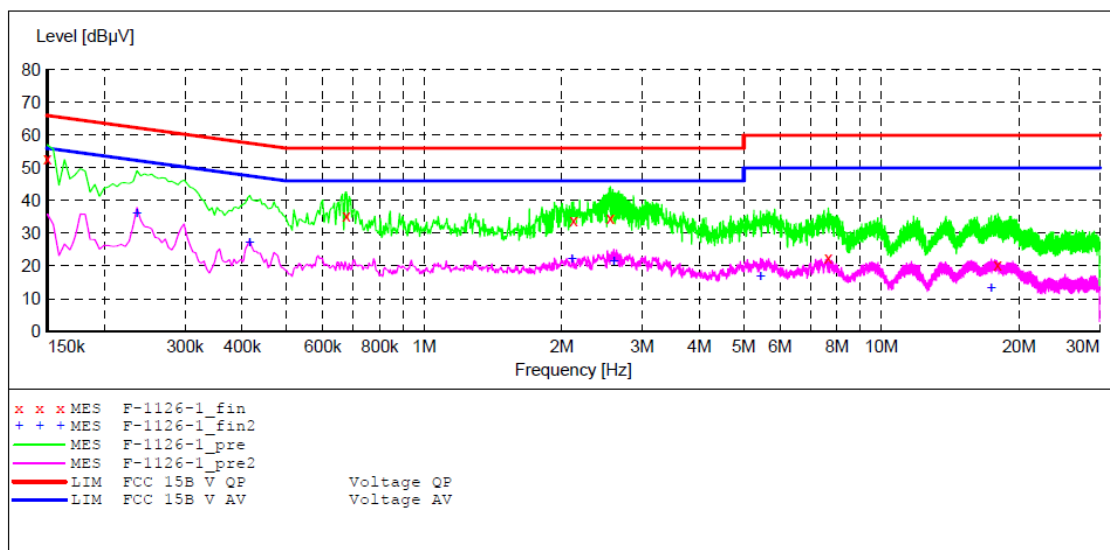
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15C

EUT: LED ceiling lamp M/N:56516141
 Manufacturer: ETI Solid State Lighting
 Operating Condition: ON
 Test Site: 2#Shielding Room
 Operator: Frank
 Test Specification: N 120V/60Hz
 Comment: Report NO.:ATE20171126 002
 Start of Test: 2018-7-27 / 15:53:19

SCAN TABLE: "V 150K-30MHZ fin"

Short Description: _SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "F-1126-1_fin"

2018-7-27 15:58

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	52.90	10.8	66	13.1	QP	N	GND
0.676500	35.50	11.1	56	20.5	QP	N	GND
2.121000	33.90	11.3	56	22.1	QP	N	GND
2.553000	34.80	11.3	56	21.2	QP	N	GND
7.660500	22.70	11.5	60	37.3	QP	N	GND
17.988000	20.50	11.7	60	39.5	QP	N	GND

MEASUREMENT RESULT: "F-1126-1_fin2"

2018-7-27 15:58

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.235500	36.10	10.9	52	16.2	AV	N	GND
0.415500	27.20	11.0	48	20.3	AV	N	GND
2.107500	22.10	11.3	46	23.9	AV	N	GND
2.598000	21.50	11.3	46	24.5	AV	N	GND
5.442000	16.70	11.5	50	33.3	AV	N	GND
17.407500	13.30	11.7	50	36.7	AV	N	GND

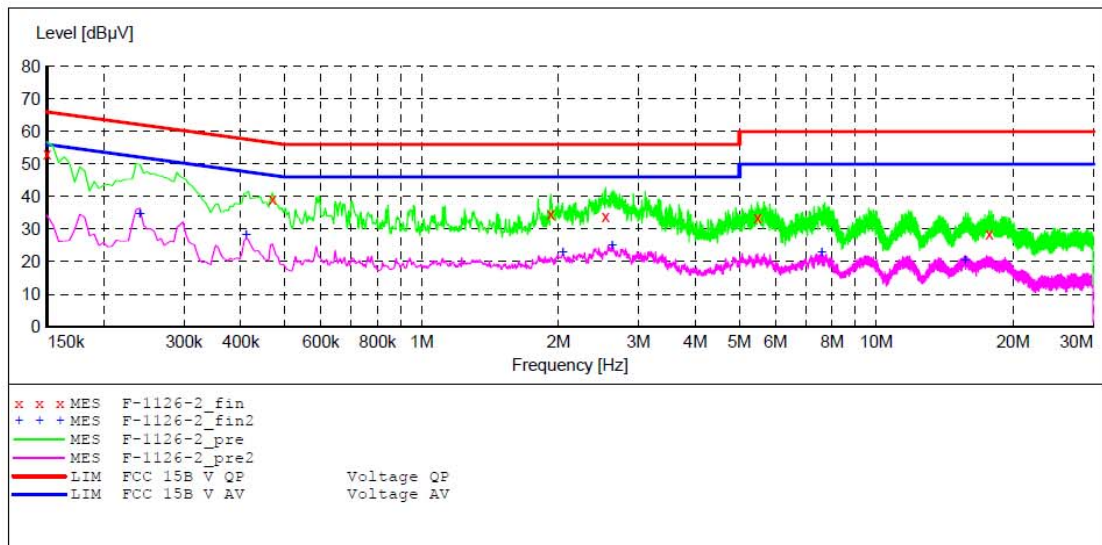
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15C

EUT: LED ceiling lamp M/N:56516141
 Manufacturer: ETI Solid State Lighting
 Operating Condition: ON
 Test Site: 2#Shielding Room
 Operator: Frank
 Test Specification: L 120V/60Hz
 Comment: Report NO.:ATE20171126 002
 Start of Test: 2018-7-27 / 16:00:09

SCAN TABLE: "V 150K-30MHZ fin"

Short Description: _SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "F-1126-2_fin"

2018-7-27 16:02

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.150000	53.30	10.8	66	12.7	QP	L1	GND
0.469500	39.30	11.0	57	17.2	QP	L1	GND
1.923000	34.70	11.3	56	21.3	QP	L1	GND
2.539500	34.10	11.3	56	21.9	QP	L1	GND
5.482500	33.60	11.5	60	26.4	QP	L1	GND
17.736000	28.60	11.7	60	31.4	QP	L1	GND

MEASUREMENT RESULT: "F-1126-2_fin2"

2018-7-27 16:02

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.240000	34.70	10.9	52	17.4	AV	L1	GND
0.411000	28.30	11.0	48	19.3	AV	L1	GND
2.044500	22.90	11.3	46	23.1	AV	L1	GND
2.625000	24.90	11.3	46	21.1	AV	L1	GND
7.584000	22.80	11.5	50	27.2	AV	L1	GND
15.684000	20.40	11.7	50	29.6	AV	L1	GND