



Shanghai Qiangling Electronic Co Ltd

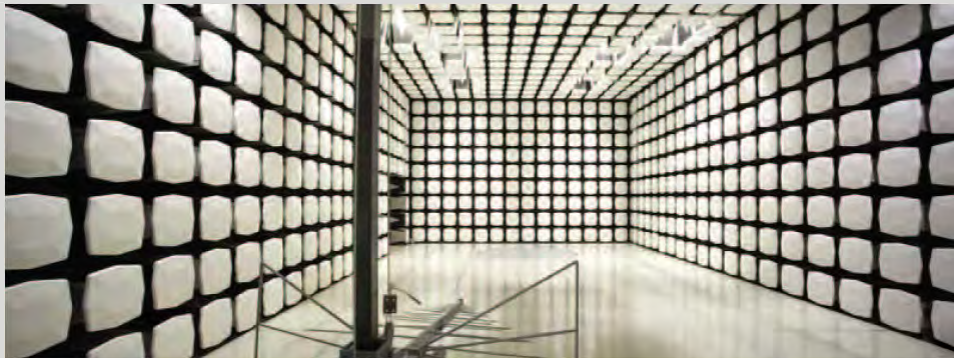
Remote Controlled Downlight LED Lamp Model #: CD611LC

Remote Controlled Downlight LED Lamp Model #: CD411LC

FCC 15.207:2014

FCC 15.247:2014

Report #: GLBC0141



Report Prepared By Northwest EMC Inc.

NORTHWEST EMC – (888) 364-2378 – www.nwemc.com

California – Minnesota – Oregon – New York – Washington

CERTIFICATE OF TEST

Last Date of Test: August 06, 2014

Shanghai Qiangling Electronic Co Ltd

Model: Remote Controlled Downlight LED Lamp Model #: CD611LC

Remote Controlled Downlight LED Lamp Model #: CD411LC

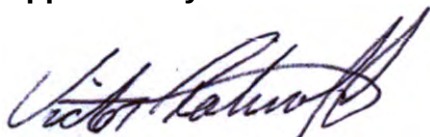
Emissions

Test Description	Specification	Test Method	Pass/Fail
Duty Cycle	FCC 15.247:2014	ANSI C63.10:2009	Pass
Occupied Bandwidth	FCC 15.247:2014	ANSI C63.10:2009	Pass
Output Power	FCC 15.247:2014	ANSI C63.10:2009	Pass
Power Spectral Density	FCC 15.247:2014	ANSI C63.10:2009	Pass
Band Edge Compliance	FCC 15.247:2014	ANSI C63.10:2009	Pass
Spurious Radiated Emissions	FCC 15.247:2014	ANSI C63.10:2009	Pass
AC Powerline Conducted Emissions	FCC 15.207:2014	ANSI C63.10:2009	Pass

Deviations From Test Standards

None

Approved By:



Victor Ratinoff, Operations Manager



NVLAP Lab Code: 200676-0

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America.

Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test.

REVISION HISTORY

Revision Number	Description	Date	Page Number
00	None		

Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

United States

FCC - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

A2LA - Accredited by A2LA to ISO / IEC Guide 65 as a product certifier. This allows Northwest EMC to certify transmitters to FCC and IC specifications.

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

IC - Recognized by Industry Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with IC.

European Union

European Commission – Validated by the European Commission as a Conformity Assessment Body (CAB) under the EMC directive and as a Notified Body under the R&TTE Directive.

Australia/New Zealand

ACMA - Recognized by ACMA as a CAB for the acceptance of test data.

Korea

MSIP / RRA - Recognized by KCC's RRA as a CAB for the acceptance of test data.

Japan

VCCI - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

Taiwan

BSMI – Recognized by BSMI as a CAB for the acceptance of test data.

NCC - Recognized by NCC as a CAB for the acceptance of test data.

Singapore

IDA – Recognized by IDA as a CAB for the acceptance of test data.

Israel

MOC – Recognized by MOC as a CAB for the acceptance of test data.

Hong Kong

OFTA – Recognized by OFTA as a CAB for the acceptance of test data.

Vietnam

MIC – Recognized by MIC as a CAB for the acceptance of test data.

SCOPE

For details on the Scopes of our Accreditations, please visit:

<http://www.nwemc.com/accreditations/>

Measurement Uncertainty

When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

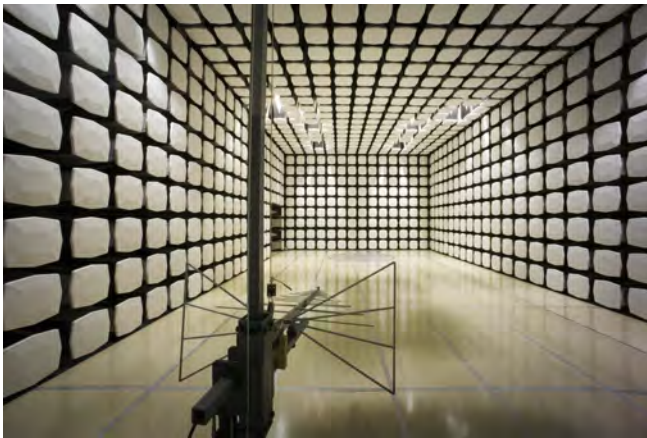
A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) for each test is listed below. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-1 as applicable), and are available upon request.

The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

Test	+ MU	- MU
Frequency Accuracy (Hz)	0.12	-0.01
Amplitude Accuracy (dB)	0.49	-0.49
Conducted Power (dB)	0.41	-0.41
Radiated Power via Substitution (dB)	0.69	-0.68
Temperature (degrees C)	0.81	-0.81
Humidity (% RH)	2.89	-2.89
Field Strength (dB)	3.80	-3.80
AC Powerline Conducted Emissions (dB)	2.94	-2.94



Oregon Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	California Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	New York Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 685-0796	Minnesota Labs MN01-08 9349 W Broadway Ave. Brooklyn Park, MN 55445 (763) 425-2281	Washington Labs NC01-05, SU02, SU07 19201 120 th Ave. NE Bothell, WA 98011 (425) 984-6600
VCCI				
A-0108	A-0029		A-0109	A-0110
Industry Canada				
2834D-1, 2834D-2	2834B-1, 2834B-2, 2834B-3		2834E-1	2834F-1
NVLAP				
NVLAP Lab Code: 200630-0	NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200629-0



Client and Equipment Under Test (EUT) Information

Company Name:	Shanghai Qiangling Electronic Co. Ltd.
Address:	139 Wang Dong Rd.
City, State, Zip:	S SI Jing Song Jiang, Shanghai 201601 China
Test Requested By:	Leon Kogan
Model:	Remote Controlled Downlight LED Lamp Model #: CD411LC Remote Controlled Downlight LED Lamp Model #: CD611LC
First Date of Test:	August 05, 2014
Last Date of Test:	August 06, 2014
Receipt Date of Samples:	August 05, 2014
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):
The PCB layout, electrical schematic, LED driver and radio chipset JN5164 are all the same between models CD411LC and CD611LC. The only difference between the two is their mechanical enclosure, 6" and 4 ". Remote Controlled LED Lamp. 2.4 GHz ISM radio, 802.15.4 compliant with 1 antenna.
Testing Objective:
To demonstrate compliance to FCC 15.247 requirements.

Configuration GLBC0141- 1

Software/Firmware Running during test	
Description	Version
Bulb Evaluation Tool	1.2

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Remote Controlled Downlight LED Lamp	Shanghai Qiangling Electronic Co Ltd	CD611LC	1078-32

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
2.4GHz Antenna	Generic	2.4GHz	None
Light Bulb Fixture	None	None	None

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	Toshiba	PSAA8U-02200U	46170208Q
Laptop PS	Toshiba	SADP-75PB A	PA3469U-1ACA
Evaluation Kit	NXP	JN5148-EK010	None
Evaluation Kit PS	Ktec	KSAS006050100VUD	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Cable	No	1.5m	No	AC Mains	Remote Controlled LED Lamp
Antenna Cable	No	4.5m	No	Antenna	Evaluation Kit
USB Cable	Yes	1.8m	No	Laptop	Evaluation Kit
DC Cable	No	1.5m	No	AC Mains	Evaluation Kit
AC Cable	No	1.8m	No	AC Mains	Laptop PS
DC Cable	No	1.5m	No	Laptop	Laptop PS
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Configuration GLBC0141- 2

Software/Firmware Running during test	
Description	Version
Bulb Evaluation Tool	1.2

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Remote Controlled Downlight LED Lamp	Shanghai Qiangling Electronic Co Ltd	CD411LC	1079-31

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
2.4GHz Antenna	Generic	2.4GHz	None
Light Bulb Fixture	None	None	None

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	Toshiba	PSAA8U-02200U	46170208Q
Laptop PS	Toshiba	SADP-75PB A	PA3469U-1ACA
Evaluation Kit	NXP	JN5148-EK010	None
Evaluation Kit PS	Ktec	KSAS006050100VUD	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Cable	No	1.5m	No	AC Mains	Remote Controlled LED Lamp
Antenna Cable	No	4.5m	No	Antenna	Evaluation Kit
USB Cable	Yes	1.8m	No	Laptop	Evaluation Kit
DC Cable	No	1.5m	No	AC Mains	Evaluation Kit
AC Cable	No	1.8m	No	AC Mains	Laptop PS
DC Cable	No	1.5m	No	Laptop	Laptop PS

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	8/5/2014	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	8/5/2014	Duty Cycle	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	8/5/2014	Occupied Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
4	8/5/2014	Power Spectral Density	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
5	8/5/2014	Band Edge Compliance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
6	8/6/2014	AC Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
7	8/6/2014	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

DUTY CYCLE

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo.)
Antenna, Horn	EMCO	3115	AHB	3/10/2014	24
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/17/2014	12
Spectrum Analyzer	Agilent	E4446A	AAY	2/22/2013	24

TEST DESCRIPTION

The Duty Cycle of the low, mid, and high channels of operation of the radio as controlled by the provided test software was measured.

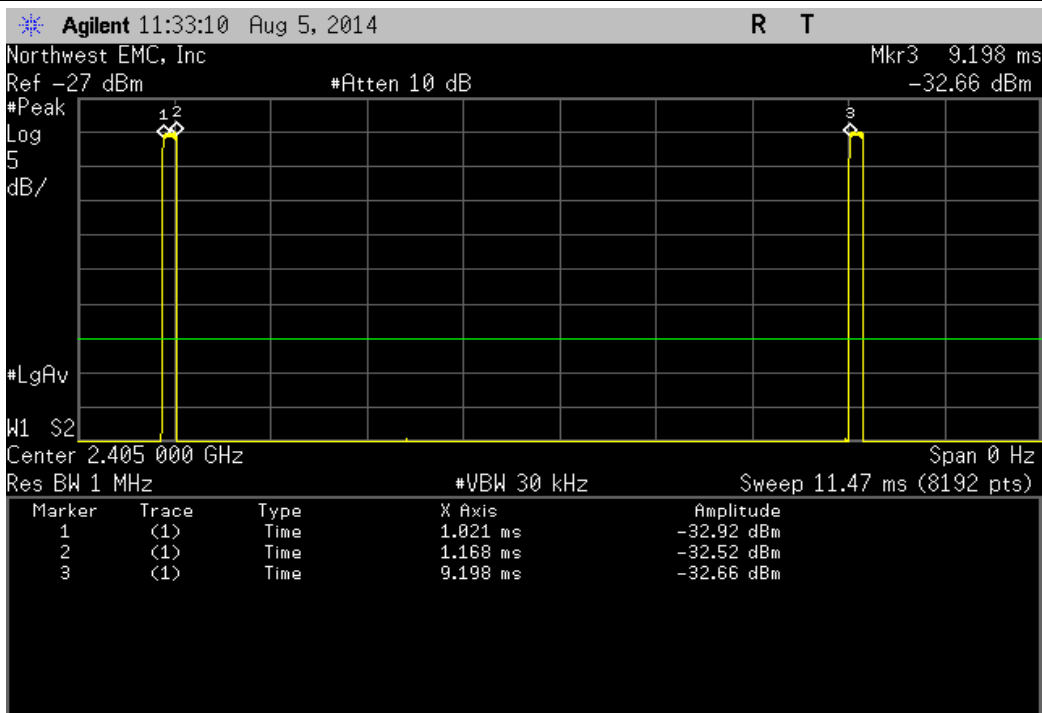
The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. The transmit power was set to its default maximum. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer.

The duty cycle was calculated by dividing the transmission pulse duration (T) by the total period of a single on and total off time.

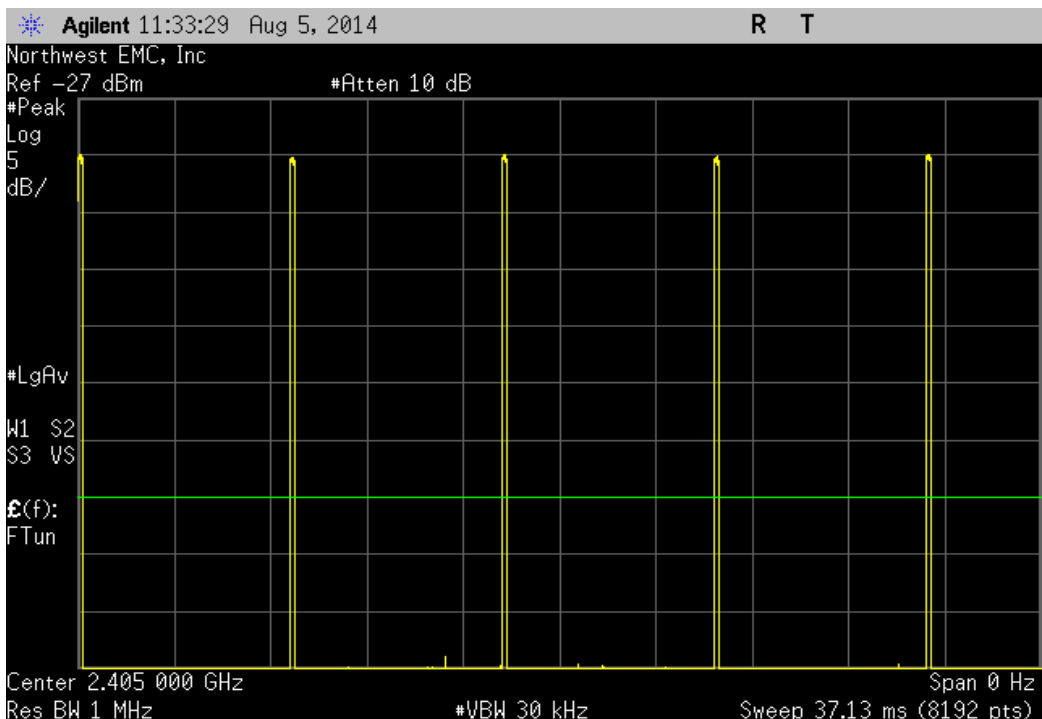
If the transmit duty cycle < 98 percent, burst gating was used during some of the other tests in this report to only measure during the burst duration.

EUT:	Remote Controlled Downlight LED Lamp Model #: CD411LC						Work Order:	GLBC0141	
Serial Number:	1079-31						Date:	08/05/14	
Customer:	Shanghai Qiangling Electronic Co Ltd						Temperature:	26.0°C	
Attendees:	Leon Kogan, Global Certification Technologies, Inc.						Humidity:	41%	
Project:	None						Barometric Pres.:	1015	
Tested by:	Johnny Candelas				Power:	120VAC/60Hz		Job Site:	OC10
TEST SPECIFICATIONS					Test Method				
FCC 15.247:2014					ANSI C63.10:2009				
COMMENTS									
Tested Model #: CD411LC as representative model, had highest Output Power									
DEVIATIONS FROM TEST STANDARD									
None									
Configuration #	2		Signature 						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result			
2400 MHz - 2483.5 MHz Band									
Low Channel 11, 2405 MHz	147 uS	8.177 mS	1	1.8	N/A	N/A			
Low Channel 11, 2405 MHz	N/A	N/A	5	N/A	N/A	N/A			
Mid Channel 18, 2440 MHz	148.4 uS	8.177 mS	1	1.8	N/A	N/A			
Mid Channel 18, 2440 MHz	N/A	N/A	5	N/A	N/A	N/A			
High Channel 26, 2480 MHz	149.8 uS	8.179 mS	1	1.8	N/A	N/A			
High Channel 26, 2480 MHz	N/A	N/A	5	N/A	N/A	N/A			

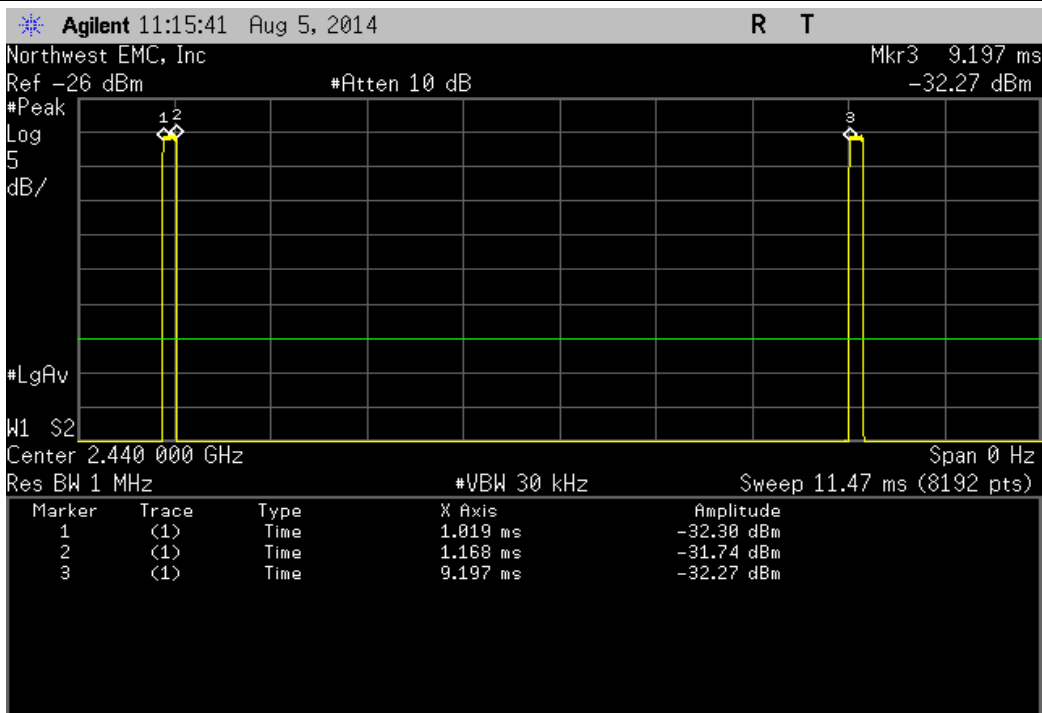
2400 MHz - 2483.5 MHz Band, Low Channel 11, 2405 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	147 uS	8.177 mS	1	1.8	N/A	N/A



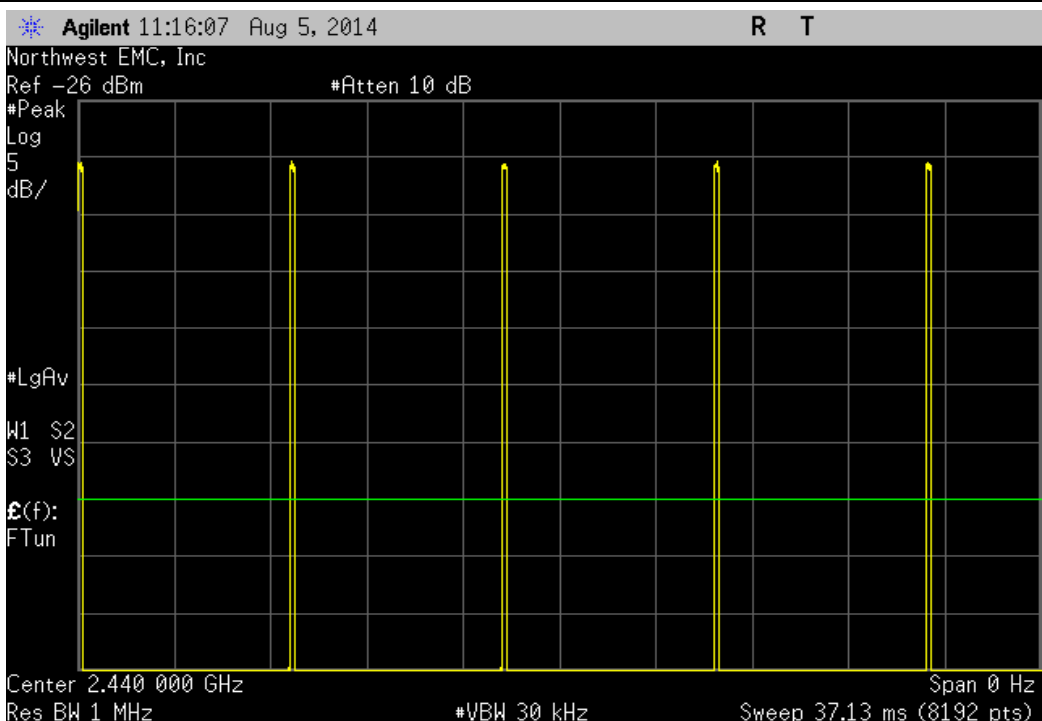
2400 MHz - 2483.5 MHz Band, Low Channel 11, 2405 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



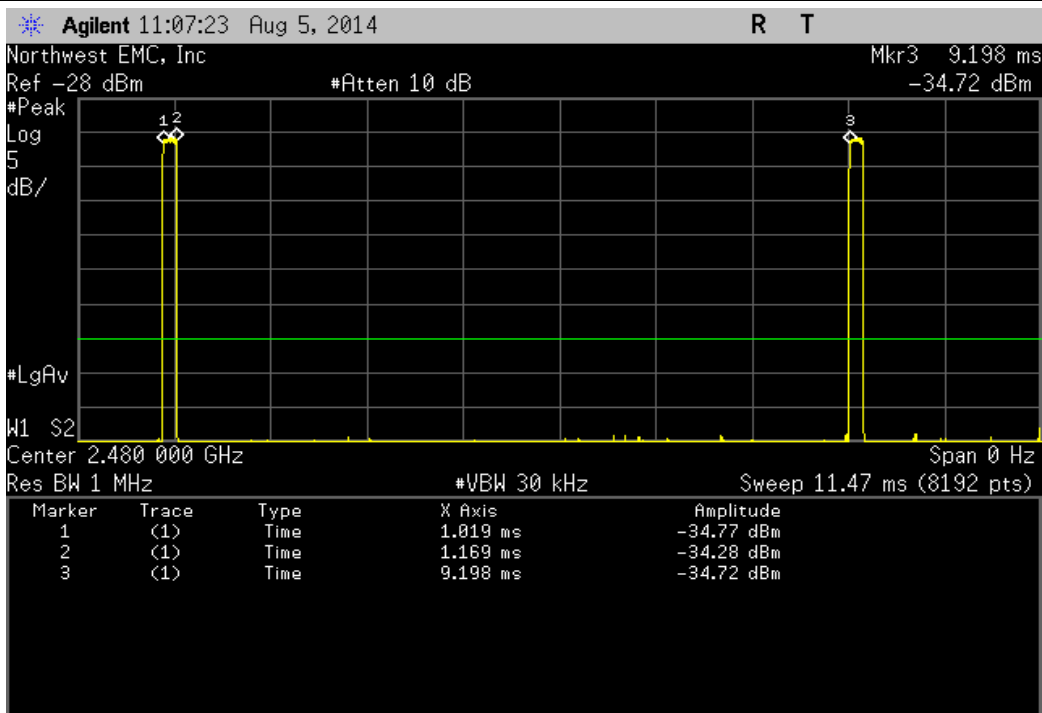
2400 MHz - 2483.5 MHz Band, Mid Channel 18, 2440 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	148.4 uS	8.177 mS	1	1.8	N/A	N/A



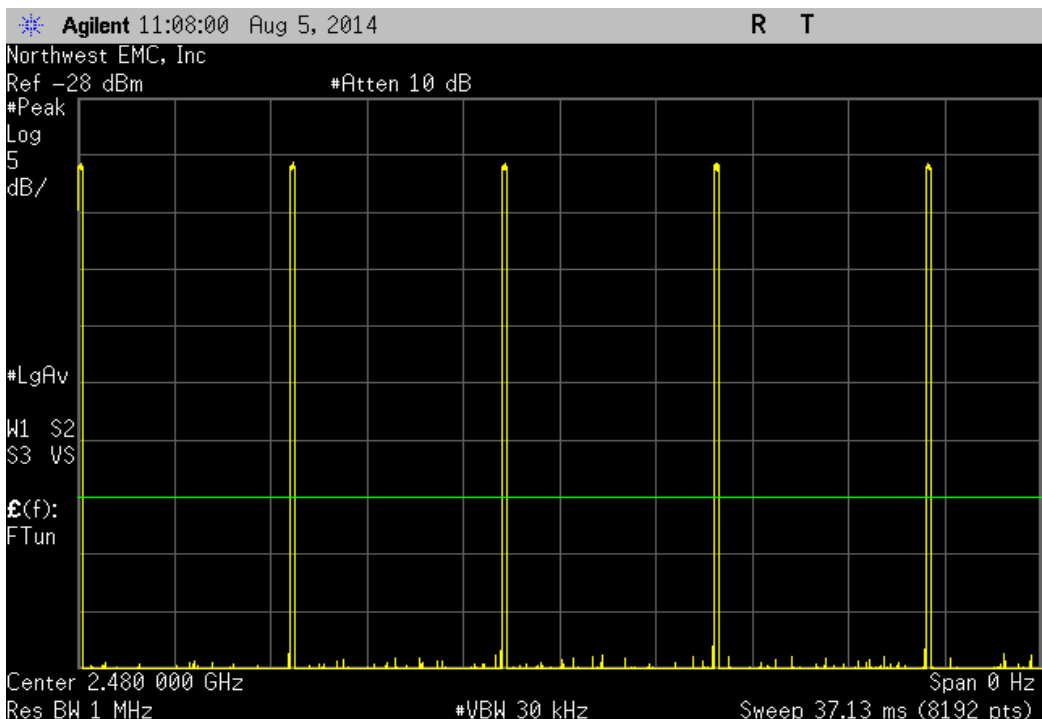
2400 MHz - 2483.5 MHz Band, Mid Channel 18, 2440 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



2400 MHz - 2483.5 MHz Band, High Channel 26, 2480 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	149.8 uS	8.179 mS	1	1.8	N/A	N/A



2400 MHz - 2483.5 MHz Band, High Channel 26, 2480 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



OCCUPIED BANDWIDTH

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo.)
Antenna, Horn	EMCO	3115	AHB	3/10/2014	24
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/17/2014	12
Spectrum Analyzer	Agilent	E4446A	AAY	2/22/2013	24

TEST DESCRIPTION

The 6dB occupied bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The 26 dB (99.9%) emission bandwidth (EBW) was also measured at the same time.

The EUT was set to low, medium and high transmit frequencies. The measurement was made in a radiated configuration in a semi-anechoic chamber with the fundamental of the carrier full maximized for its highest radiated power. The EUT was transmitting at the data rate(s) listed in the datasheet.



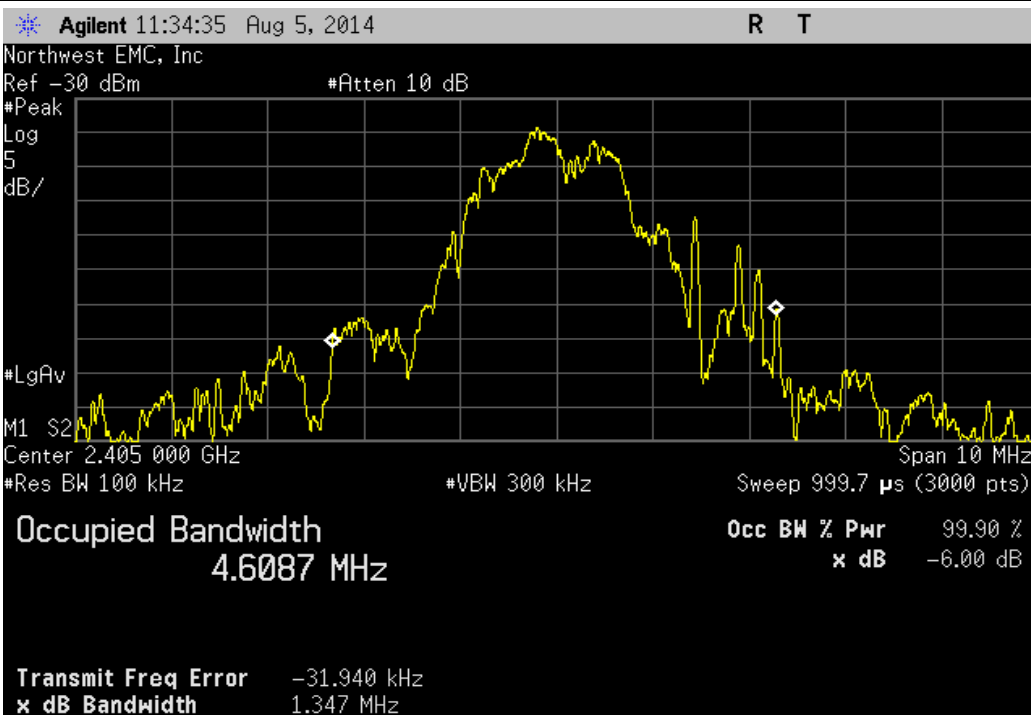
OCCUPIED BANDWIDTH

XMit 2014.02.07
PsaTx 14.04.29.1

EUT: Remote Controlled Downlight LED Lamp Model #: CD411LC		Work Order: GLBC0141	
Serial Number: 1079-31		Date: 08/05/14	
Customer: Shanghai Qiangling Electronic Co Ltd		Temperature: 26.0°C	
Attendees: Leon Kogan, Global Certification Technologies, Inc.		Humidity: 41%	
Project: None		Barometric Pres.: 1015	
Tested by: Johnny Candelas		Power: 120VAC/60Hz	
		Job Site: OC10	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2014		ANSI C63.10:2009	
COMMENTS			
Tested Model #: CD411LC as representative model, had highest Output Power			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature 	
		Value	Limit
2400 MHz - 2483.5 MHz Band			Result
Low Channel 11, 2405 MHz		1.347 MHz	> 500 kHz
Mid Channel 18, 2440 MHz		1.43 MHz	> 500 kHz
High Channel 26, 2480 MHz		1.453 MHz	> 500 kHz

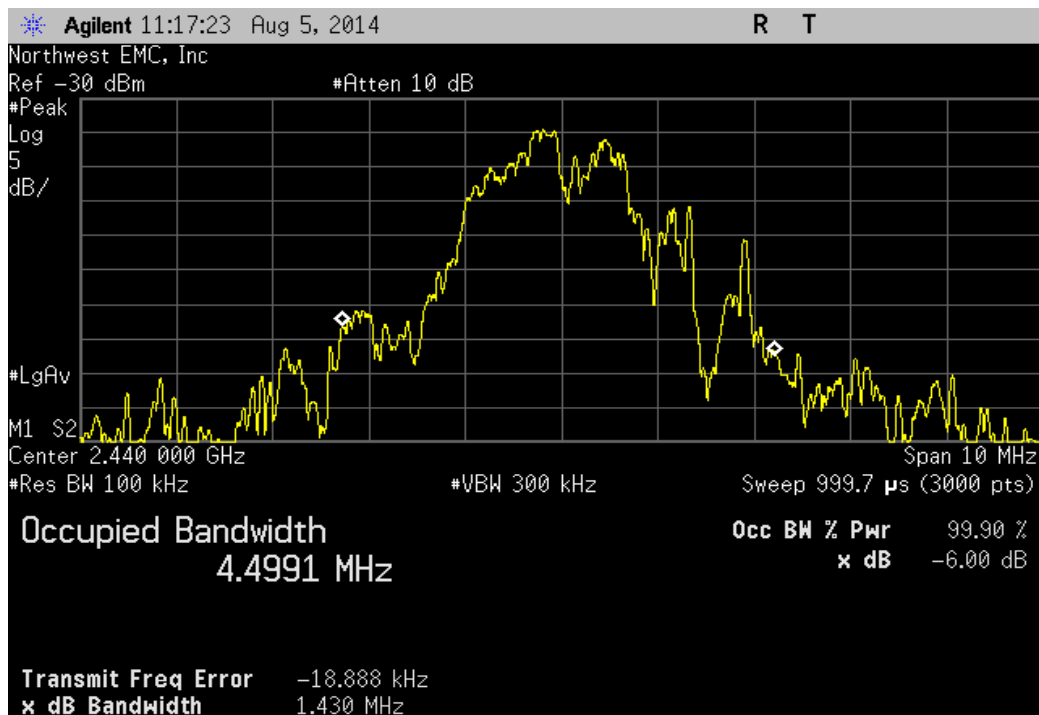
2400 MHz - 2483.5 MHz Band, Low Channel 11, 2405 MHz

Value	Limit	Result
1.347 MHz	> 500 kHz	Pass



2400 MHz - 2483.5 MHz Band, Mid Channel 18, 2440 MHz

Value	Limit	Result
1.43 MHz	> 500 kHz	Pass



2400 MHz - 2483.5 MHz Band, High Channel 26, 2480 MHz						
				Value	Limit	Result
				1.453 MHz	> 500 kHz	Pass





OUTPUT POWER

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Continuously Transmitting, Low Channel 11 - 2405 MHz, Mid Channel - 2440 MHz, & High Channel - 2480 MHz

POWER SETTINGS INVESTIGATED

120VAC/60Hz

CONFIGURATIONS INVESTIGATED

GLBC0141 - 1

GLBC0141 - 2

FREQUENCY RANGE INVESTIGATED

Start Frequency 2400 MHz

Stop Frequency 2483.5 MHz

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo.)
Antenna, Horn	EMCO	3115	AHB	3/10/2014	24 mo
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/17/2014	12 mo
Spectrum Analyzer	Agilent	E4446A	AAY	2/22/2013	24 mo

TEST DESCRIPTION

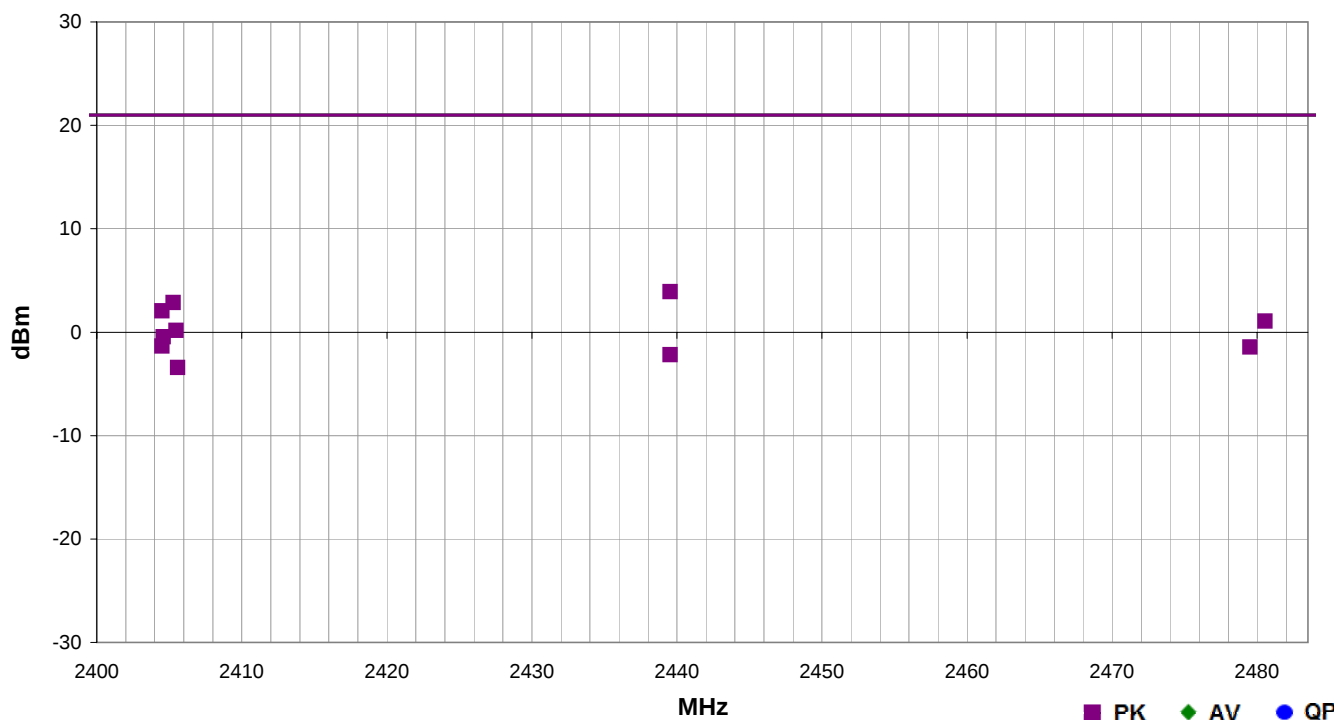
- The antennas to be used with the EUT were tested. The EUT was transmitting and while set at the lowest channel, a middle channel, and the highest channel available. While scanning, emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height and polarization, and manipulating the EUT and EUT antenna in 3 orthogonal planes (per ANSI C63.10:2009).

OUTPUT POWER

Work Order:	GLBC0141	Date:	08/05/14		
Project:	None	Temperature:	24.1 °C		
Job Site:	OC10	Humidity:	48.2% RH		
Serial Number:	1078-32	Barometric Pres.:	1017 mbar	Tested by:	Johnny Candelas
EUT:	Remote Controlled Downlight LED Lamp Model #: CD611LC				
Configuration:	1				
Customer:	Shanghai Qiangling Electronic Co Ltd				
Attendees:	Leon Kogan, Global Certification Technologies, Inc.				
EUT Power:	120VAC/60Hz				
Operating Mode:	Continuously Transmitting, Low Channel 11 - 2405 MHz, Mid Channel 18 - 2440 MHz, & High Channel 26 - 2480 MHz				
Deviations:	None				
Comments:	None				

Test Specifications	Test Method
FCC 15.247:2013	ANSI 63.10:2009

Run #	1	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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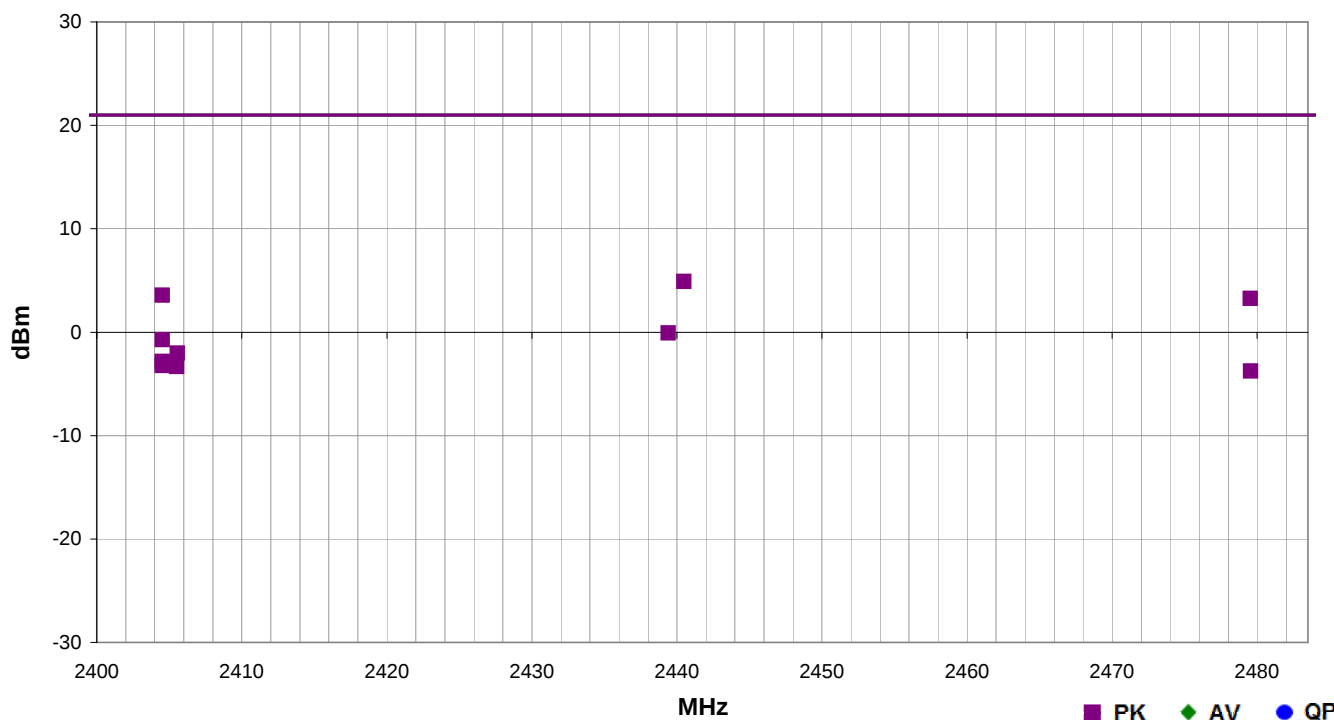
	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	2439.533	1.0	170.0	Vert	PK	2.46E-03	3.9	21.0	-17.1	EUT Horiz, Mid Ch
	2405.283	1.0	175.0	Vert	PK	1.93E-03	2.9	21.0	-18.1	EUT Horiz, Low Ch
	2404.500	1.6	190.0	Horz	PK	1.61E-03	2.1	21.0	-18.9	EUT on Side, Low Ch
	2480.533	1.5	39.0	Horz	PK	1.28E-03	1.1	21.0	-19.9	EUT on Side, High Ch
	2405.467	1.9	38.0	Horz	PK	1.04E-03	0.2	21.0	-20.8	EUT Horiz, Low Ch
	2404.583	1.3	288.0	Vert	PK	9.05E-04	-0.4	21.0	-21.4	EUT Vert, Low Ch
	2404.500	1.0	212.0	Vert	PK	7.35E-04	-1.3	21.0	-22.3	EUT on Side, Low Ch
	2479.517	1.2	354.0	Vert	PK	7.17E-04	-1.4	21.0	-22.4	EUT Horiz, Vert Ch
	2439.533	1.2	23.0	Horz	PK	6.04E-04	-2.2	21.0	-23.2	EUT on Side, Mid Ch
	2405.583	1.0	238.0	Horz	PK	4.54E-04	-3.4	21.0	-24.4	EUT Vert, Low Ch

OUTPUT POWER

Work Order:	GLBC0141	Date:	08/05/14		
Project:	None	Temperature:	24.1 °C		
Job Site:	OC10	Humidity:	48.2% RH		
Serial Number:	1079-31	Barometric Pres.:	1017 mbar	Tested by:	Johnny Candelas
EUT:	Remote Controlled Downlight LED Lamp Model #: CD411LC				
Configuration:	2				
Customer:	Shanghai Qiangling Electronic Co Ltd				
Attendees:	Leon Kogan, Global Certification Technologies, Inc.				
EUT Power:	120VAC/60Hz				
Operating Mode:	Continuously Transmitting, Low Channel 11 - 2405 MHz, Mid Channel 18 - 2440 MHz, & High Channel 26 - 2480 MHz				
Deviations:	None				
Comments:	None				

Test Specifications	Test Method
FCC 15.247:2013	ANSI 63.10:2009

Run #	2	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
2440.483	1.0	173.0	Vert	PK	3.10E-03	4.9	21.0	-16.1	EUT Vert, Mid Ch
2404.533	0.0	176.0	Vert	PK	2.27E-03	3.6	21.0	-17.4	EUT Vert, Low Ch
2479.533	1.2	169.0	Vert	PK	2.12E-03	3.3	21.0	-17.7	EUT Vert, High Ch
2439.400	1.7	277.0	Horz	PK	9.79E-04	-0.1	21.0	-21.1	EUT Horiz, Mid Ch
2404.533	1.0	166.0	Vert	PK	8.44E-04	-0.7	21.0	-21.7	EUT Horiz, Low Ch
2405.550	1.3	191.0	Horz	PK	6.26E-04	-2.0	21.0	-23.0	EUT Horiz, Low Ch
2404.533	1.0	355.0	Vert	PK	5.21E-04	-2.8	21.0	-23.8	EUT on Side, Low Ch
2404.517	1.0	168.0	Horz	PK	4.75E-04	-3.2	21.0	-24.2	EUT Vert, Low Ch
2405.517	1.2	272.0	Horz	PK	4.64E-04	-3.3	21.0	-24.3	EUT on Side, Low Ch
2479.550	1.2	271.0	Horz	PK	4.22E-04	-3.7	21.0	-24.7	EUT Horiz, High Ch

POWER SPECTRAL DENSITY

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo.)
Antenna, Horn	EMCO	3115	AHB	3/10/2014	24
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/17/2014	12
Spectrum Analyzer	Agilent	E4446A	AAY	2/22/2013	24

TEST DESCRIPTION

The maximum power spectral density measurements were measured with the EUT set to the required transmit frequencies in each band. The EUT was transmitting at the lowest, middle, and maximum data rate for each modulation type available.

The measurement was made radiated in a semi-anechoic chamber. The system radiated measurement factor and the use of a 20 dB attenuator are accounted for in the data as a 'Factor' value.

The final data was converted from a field strength to a radiated power value. Equation 5 found in ANSI C63.10:2009, was used to derive this conversion formula:

$$\text{dBm/m (field strength)} + 11.77 = \text{dBm EIRP}$$

Per the procedure outlined in FCC KDB 558074 D01 DTS Measurement Section 5.3.1, the spectrum analyzer was used as follows:

- RBW = 100 kHz
- VBW = 300 kHz
- Detector = Peak (to match method used for power measurement)
- Trace = Max hold

The observed power level is then scaled to an equivalent value in 3 kHz by adding a Bandwidth Correction Factor (BWCF) of where:

$$\text{BWCF} = 10 \cdot \text{LOG} (3 \text{ kHz} / 100 \text{ kHz}) = -15.2 \text{ dB}$$



POWER SPECTRAL DENSITY

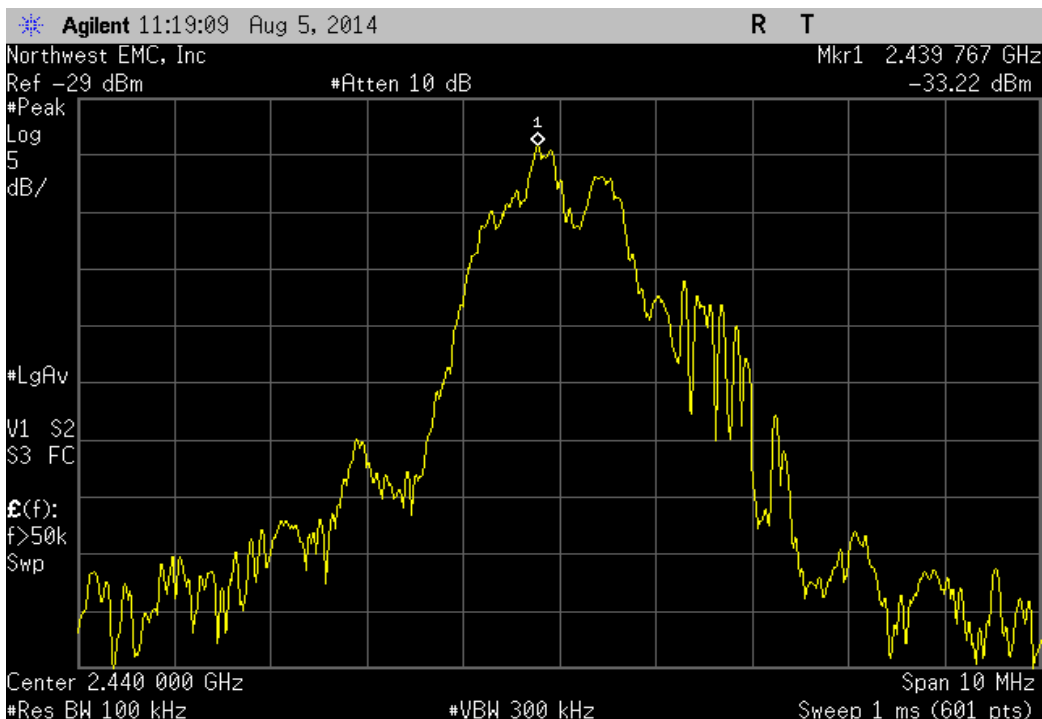
XMit 2014.02.07
PsaTx 14.04.29.1

EUT: Remote Controlled Downlight LED Lamp Model #: CD411LC				Work Order: GLBC0141				
Serial Number: 1079-31				Date: 08/05/14				
Customer: Shanghai Qiangling Electronic Co Ltd				Temperature: 26.0°C				
Attendees: Leon Kogan, Global Certification Technologies, Inc.				Humidity: 41%				
Project: None				Barometric Pres.: 1015				
Tested by: Johnny Candelas				Power: 120VAC/60Hz		Job Site: OC10		
TEST SPECIFICATIONS				Test Method				
FCC 15.247:2014				ANSI C63.10:2009				
COMMENTS								
Tested Model #: CD411LC as representative model, had highest Output Power. The measurement was made in a radiated configuration in a semi-anechoic chamber.								
DEVIATIONS FROM TEST STANDARD								
None								
Configuration #	2	Signature 						
		Factors dB	Field Strength dBm/m/100kHz	Bandwidth Correction	Field Strength dBm/m/3KHz	EIRP dBm/3kHz	Limit dBm/3kHz	Result
2400 MHz - 2483.5 MHz Band								
	Low Channel 11, 2405 MHz	23.1	-10.87	-15.2	-26.1	-14.3	8	Pass
	Mid Channel 18, 2440 MHz	23.1	-10.12	-15.2	-25.3	-13.6	8	Pass
	High Channel 26, 2480 MHz	23.1	-12.66	-15.2	-27.9	-16.1	8	Pass

2400 MHz - 2483.5 MHz Band, Low Channel 11, 2405 MHz						
Factors dB	Field Strength dBm/m/100kHz	Bandwidth Correction	Field Strength dBm/m/3KHz	EIRP dBm/3kHz	Limit dBm/3kHz	Result
23.1	-10.87	-15.2	-26.07	-14.3	8	Pass



2400 MHz - 2483.5 MHz Band, Mid Channel 18, 2440 MHz						
Factors dB	Field Strength dBm/m/100kHz	Bandwidth Correction	Field Strength dBm/m/3KHz	EIRP dBm/3kHz	Limit dBm/3kHz	Result
23.1	-10.12	-15.2	-25.32	-13.55	8	Pass

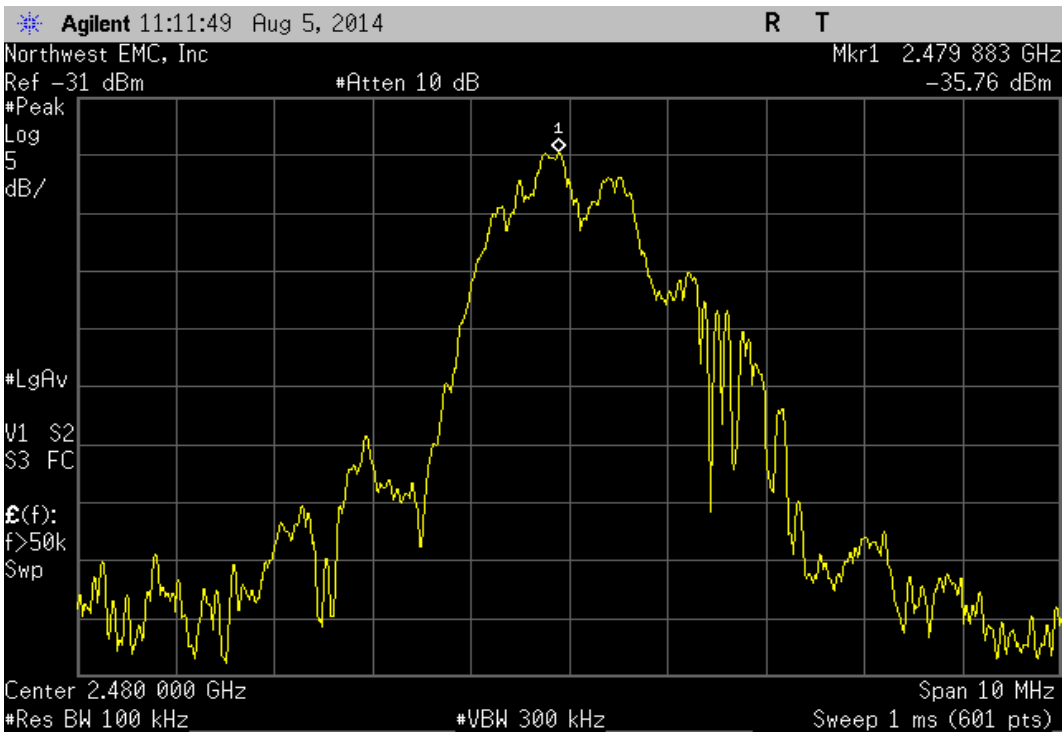




POWER SPECTRAL DENSITY

XMit 2014.02.07
PsaTx 14.04.29.1

2400 MHz - 2483.5 MHz Band, High Channel 26, 2480 MHz						
Factors	Field Strength	Bandwidth	Field Strength	EIRP	Limit	Result
dB	dBm/m/100kHz	Correction	dBm/m/3KHz	dBm/3kHz	dBm/3kHz	
23.1	-12.66	-15.2	-27.86	-16.09	8	Pass



BAND EDGE COMPLIANCE

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo.)
Antenna, Horn	EMCO	3115	AHB	3/10/2014	24
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/17/2014	12
Spectrum Analyzer	Agilent	E4446A	AAY	2/22/2013	24

TEST DESCRIPTION

The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in each available band. The channels closest to the band edges were selected. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet.

The spectrum was scanned below the lower band edge and above the higher band edge.



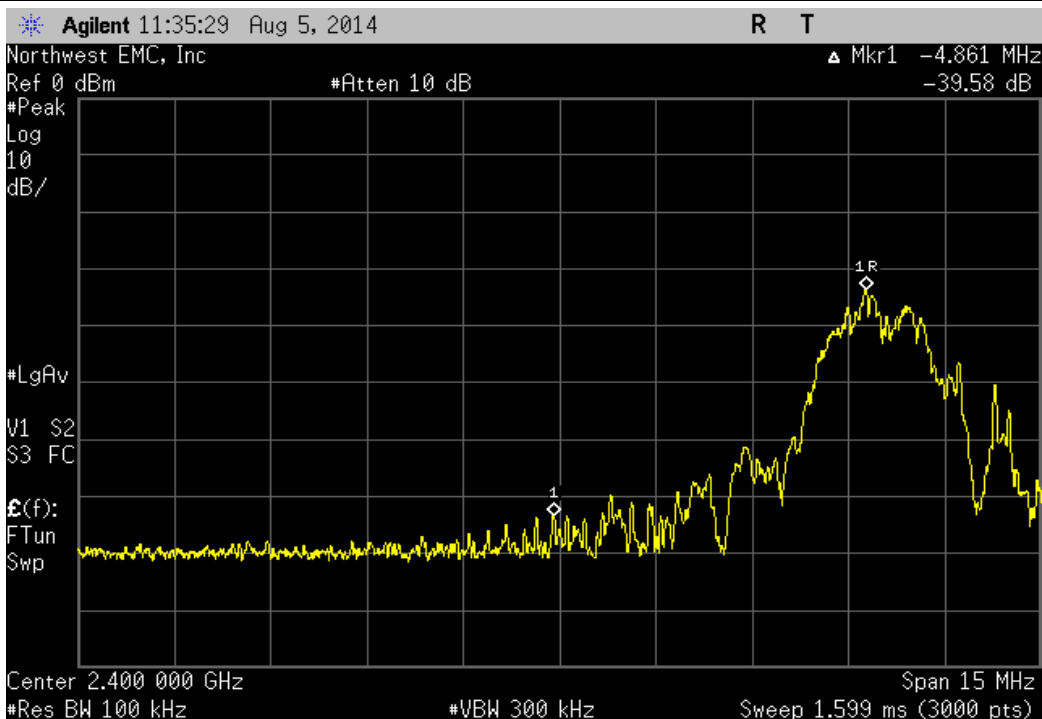
BAND EDGE COMPLIANCE

XMit 2014.02.07
PsaTx 14.04.29.1

EUT: Remote Controlled Downlight LED Lamp Model #: CD411LC		Work Order: GLBC0141	
Serial Number: 1079-31		Date: 08/05/14	
Customer: Shanghai Qiangling Electronic Co Ltd		Temperature: 26.0°C	
Attendees: Leon Kogan, Global Certification Technologies, Inc.		Humidity: 41%	
Project: None		Barometric Pres.: 1015	
Tested by: Johnny Candelas		Power: 120VAC/60Hz	
Job Site: OC10			
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2014		ANSI C63.10:2009	
COMMENTS			
Tested Model #: CD411LC as representative model, had highest Output Power			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature 	
		Value	Limit
2400 MHz - 2483.5 MHz Band			Result
Low Channel 11, 2405 MHz		-39.58 dBc	≤ -20 dBc
High Channel 26, 2480 MHz		-35.57 dBc	≤ -20 dBc
			Pass
			Pass

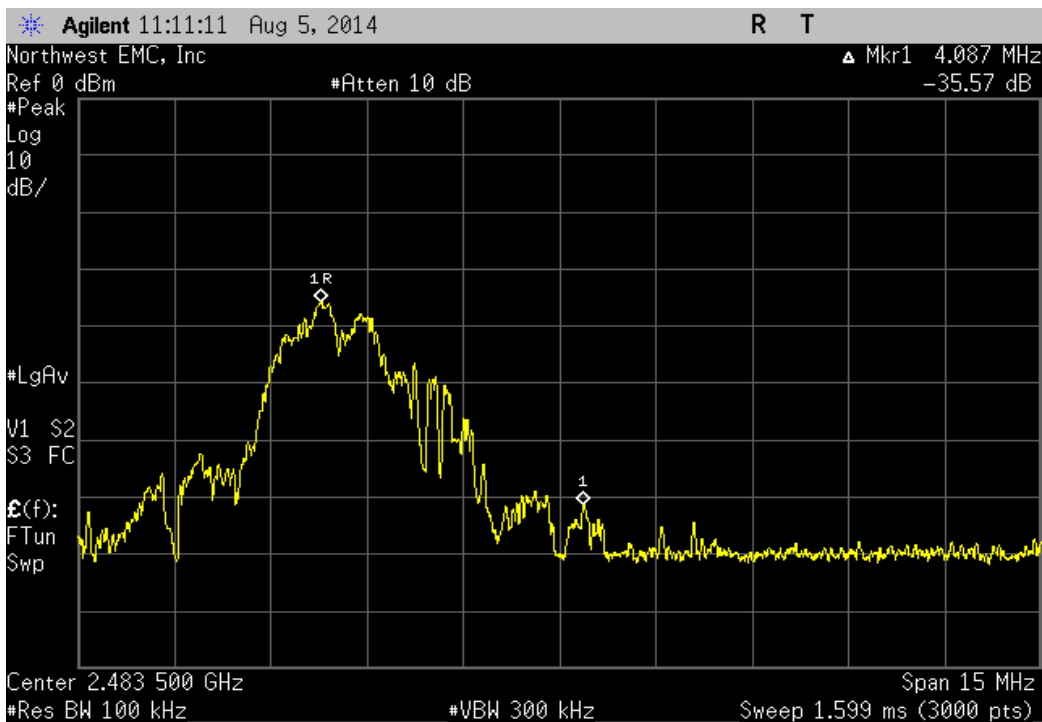
2400 MHz - 2483.5 MHz Band, Low Channel 11, 2405 MHz

				Value	Limit	Result
				-39.58 dBc	≤ -20 dBc	Pass



2400 MHz - 2483.5 MHz Band, High Channel 26, 2480 MHz

				Value	Limit	Result
				-35.57 dBc	≤ -20 dBc	Pass



Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Continuously Transmitting, Low Channel 11 - 2405 MHz

Continuously Transmitting, Mid Channel 18 - 2440 MHz

Continuously Transmitting, High Channel 26 - 2480 MHz

Continuously Transmitting, Low Channel 11 - 2405 MHz & High Channel 26 - 2480 MHz

POWER SETTINGS INVESTIGATED

120VAC/60Hz

CONFIGURATIONS INVESTIGATED

GLBC0141 - 1

GLBC0141 - 2

FREQUENCY RANGE INVESTIGATED

Start Frequency	1 GHz	Stop Frequency	26 GHz
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SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Attenuator	Coaxicom	66702 3910AF-20	TKI	4/28/2014	12 mo
HP Filter	Micro-Tronics	HPM50111	HFM	4/2/2012	36 mo
Pre-Amplifier	Miteq	JSW45-26004000-40-5P	AVQ	1/10/2014	12 mo
Antenna, Horn	ETS	3160-10	AIX	NCR	0 mo
Cable	ESM Cable Corp.	KMKM-72	OC1	1/9/2014	12 mo
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AOI	1/10/2014	12 mo
Antenna, Horn	EMCO	3160-09	AHN	NCR	0 mo
OC floating Cable	N/A	18-26GHz RE Cables	OCK	2/6/2014	12 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOF	10/24/2013	12 mo
Antenna, Horn	ETS	3160-08	AHT	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOE	10/24/2013	12 mo
Antenna, Horn	ETS	3160-07	AHR	NCR	0 mo
OC 10 Cables	N/A	8-18GHz RE Cables	OCO	10/24/2013	12 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	6/17/2014	12 mo
Antenna, Horn	EMCO	3115	AHB	3/10/2014	24 mo
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/17/2014	12 mo
Spectrum Analyzer	Agilent	E4446A	AAY	2/22/2013	24 mo

TEST DESCRIPTION

The highest gain of each type of antenna to be used with the EUT was tested.

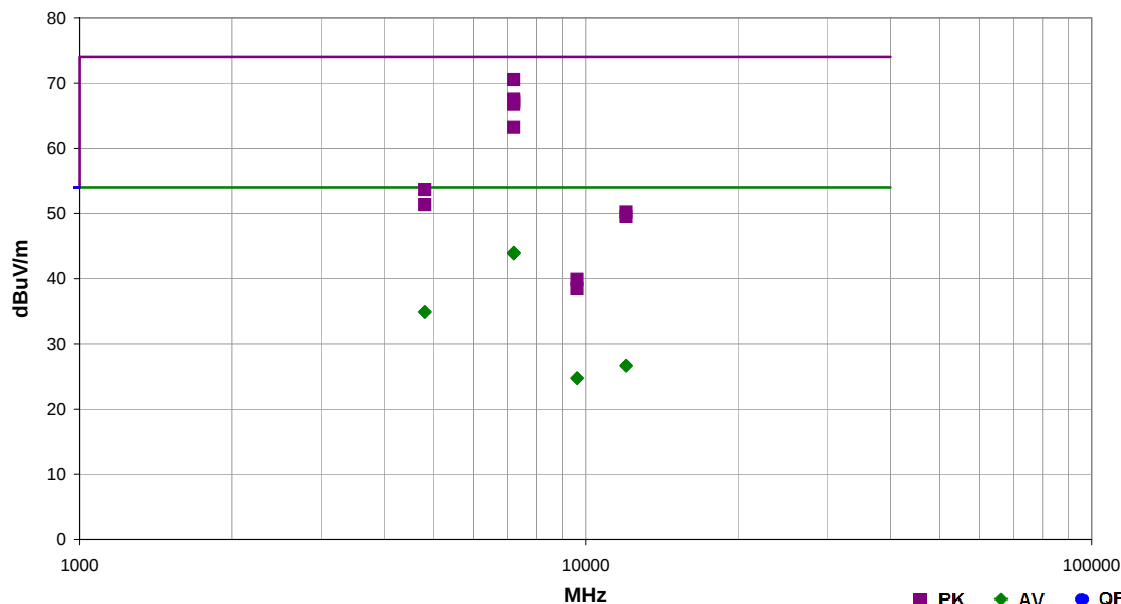
The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify compliance.

While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization. A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

Work Order:	GLBC0141	Date:	08/06/14	
Project:	None	Temperature:	25.6 °C	
Job Site:	OC10	Humidity:	50.8% RH	
Serial Number:	1078-32	Barometric Pres.:	1015 mbar	
		Tested by: Johnny Candelas		
EUT:	Remote Controlled Downlight LED Lamp Model #: CD611LC			
Configuration:	1			
Customer:	Shanghai Qiangling Electronic Co Ltd			
Attendees:	Leon Kogan, Global Certification Technologies, Inc.			
EUT Power:	120VAC/60Hz			
Operating Mode:	Continuously Transmitting, Low Channel 11 - 2405 MHz			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.247:2014	ANSI C63.10:2009

Run #	37	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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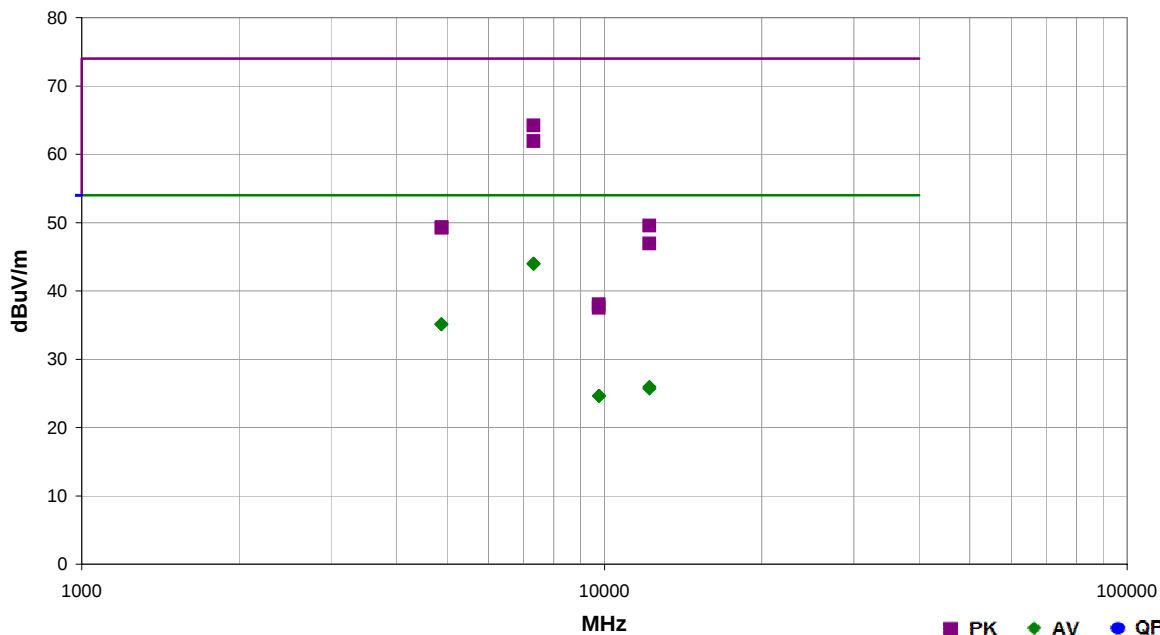
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7213.617	53.2	17.3	1.0	209.0	3.0	0.0	Horz	PK	0.0	70.5	74.0	-3.5	EUT Horiz, Low Ch
7213.583	50.2	17.3	1.0	172.0	3.0	0.0	Vert	PK	0.0	67.5	74.0	-6.5	EUT Horiz, Low Ch
7213.617	49.9	17.3	1.3	27.0	3.0	0.0	Vert	PK	0.0	67.2	74.0	-6.8	EUT on Side, Low Ch
7213.617	49.7	17.3	1.0	205.0	3.0	0.0	Horz	PK	0.0	67.0	74.0	-7.0	EUT on Side, Low Ch
7213.650	49.4	17.3	1.3	118.0	3.0	0.0	Vert	PK	0.0	66.7	74.0	-7.3	EUT Vert, Low Ch
7213.633	26.7	17.3	1.3	118.0	3.0	0.0	Vert	AV	0.0	44.0	54.0	-10.0	EUT Vert, Low Ch
7214.083	26.6	17.3	1.0	205.0	3.0	0.0	Horz	AV	0.0	43.9	54.0	-10.1	EUT on Side, Low Ch
7213.933	26.6	17.3	1.3	27.0	3.0	0.0	Vert	AV	0.0	43.9	54.0	-10.1	EUT on Side, Low Ch
7213.800	26.6	17.3	1.2	250.0	3.0	0.0	Horz	AV	0.0	43.9	54.0	-10.1	EUT Vert, Low Ch
7213.567	26.6	17.3	1.0	209.0	3.0	0.0	Horz	AV	0.0	43.9	54.0	-10.1	EUT Horiz, Low Ch
7213.800	26.5	17.3	1.0	172.0	3.0	0.0	Vert	AV	0.0	43.8	54.0	-10.2	EUT Horiz, Low Ch
7213.733	45.9	17.3	1.2	250.0	3.0	0.0	Horz	PK	0.0	63.2	74.0	-10.8	EUT Vert, Low Ch
4809.100	24.8	10.2	1.2	307.0	3.0	0.0	Horz	AV	0.0	35.0	54.0	-19.0	EUT Horiz, Low Ch
4809.133	24.7	10.2	1.2	134.0	3.0	0.0	Vert	AV	0.0	34.9	54.0	-19.1	EUT Horiz, Low Ch
4809.133	43.5	10.2	1.2	307.0	3.0	0.0	Horz	PK	0.0	53.7	74.0	-20.3	EUT Horiz, Low Ch
4809.250	41.2	10.2	1.2	134.0	3.0	0.0	Vert	PK	0.0	51.4	74.0	-22.6	EUT Horiz, Low Ch
12022.150	59.7	-9.5	1.1	350.0	3.0	0.0	Horz	PK	0.0	50.2	74.0	-23.8	EUT Horiz, Low Ch
12027.350	59.0	-9.5	1.0	341.0	3.0	0.0	Vert	PK	0.0	49.5	74.0	-24.5	EUT Horiz, Low Ch
12022.720	36.2	-9.5	1.1	350.0	3.0	0.0	Horz	AV	0.0	26.7	54.0	-27.3	EUT Horiz, Low Ch
12022.670	36.1	-9.5	1.0	341.0	3.0	0.0	Vert	AV	0.0	26.6	54.0	-27.4	EUT Horiz, Low Ch
9617.667	35.0	-10.2	1.2	337.0	3.0	0.0	Vert	AV	0.0	24.8	54.0	-29.2	EUT Horiz, Low Ch
9617.783	34.9	-10.2	1.2	200.0	3.0	0.0	Horz	AV	0.0	24.7	54.0	-29.3	EUT Horiz, Low Ch
9618.200	50.1	-10.2	1.2	337.0	3.0	0.0	Vert	PK	0.0	39.9	74.0	-34.1	EUT Horiz, Low Ch
9617.467	48.7	-10.2	1.2	200.0	3.0	0.0	Horz	PK	0.0	38.5	74.0	-35.5	EUT Horiz, Low Ch

SPURIOUS RADIATED EMISSIONS

Work Order:	GLBC0141	Date:	08/06/14	
Project:	None	Temperature:	25.6 °C	
Job Site:	OC10	Humidity:	50.8% RH	
Serial Number:	1078-32	Barometric Pres.:	1015 mbar	
		Tested by:		Johnny Candelas
EUT:	Remote Controlled Downlight LED Lamp Model #: CD611LC			
Configuration:	1			
Customer:	Shanghai Qiangling Electronic Co Ltd			
Attendees:	Leon Kogan, Global Certification Technologies, Inc.			
EUT Power:	120VAC/60Hz			
Operating Mode:	Continuously Transmitting, Mid Channel 18 - 2440 MHz			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.247:2014	ANSI C63.10:2009

Run #	39	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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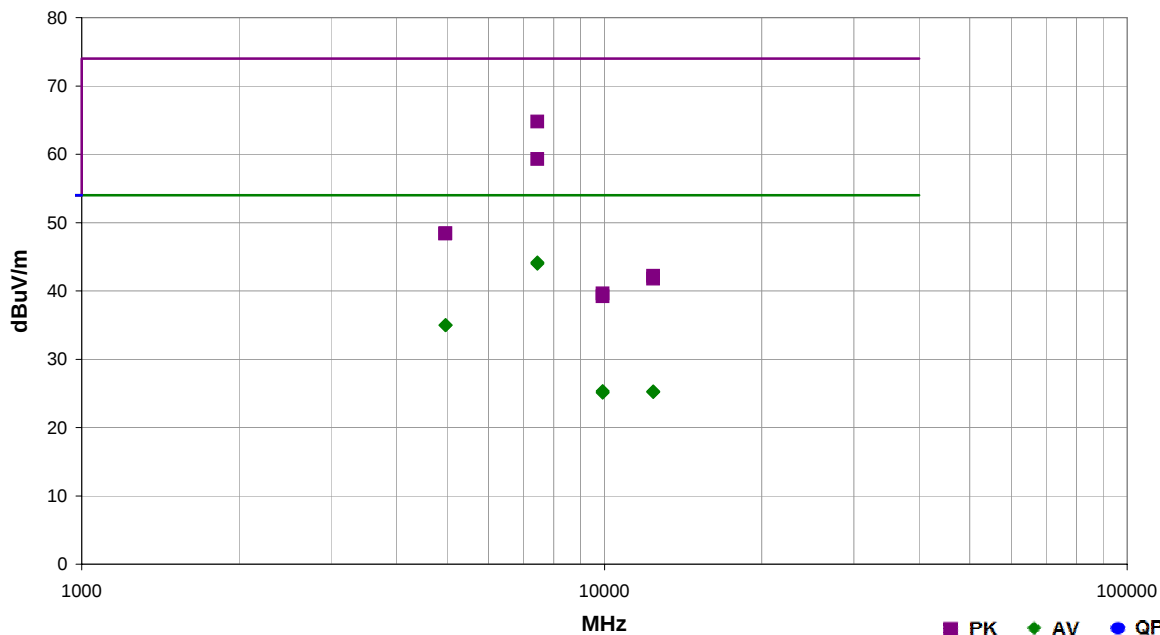
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7318.767	46.3	17.9	1.2	28.0	3.0	0.0	Vert	PK	0.0	64.2	74.0	-9.8	EUT Horiz, Mid Ch
7319.067	26.1	17.9	1.2	201.0	3.0	0.0	Horz	AV	0.0	44.0	54.0	-10.0	EUT Horiz, Mid Ch
7318.733	26.1	17.9	1.2	28.0	3.0	0.0	Vert	AV	0.0	44.0	54.0	-10.0	EUT Horiz, Mid Ch
7321.433	44.0	17.9	1.2	201.0	3.0	0.0	Horz	PK	0.0	61.9	74.0	-12.1	EUT Horiz, Mid Ch
4879.250	24.7	10.4	1.2	299.0	3.0	0.0	Horz	AV	0.0	35.1	54.0	-18.9	EUT Horiz, Mid Ch
4879.133	24.7	10.4	1.2	138.0	3.0	0.0	Vert	AV	0.0	35.1	54.0	-18.9	EUT Horiz, Mid Ch
12197.650	58.8	-9.3	1.0	348.0	3.0	0.0	Horz	PK	0.0	49.5	74.0	-24.5	EUT Horiz, Mid Ch
4881.067	38.9	10.4	1.2	138.0	3.0	0.0	Vert	PK	0.0	49.3	74.0	-24.7	EUT Horiz, Mid Ch
4880.350	38.8	10.4	1.2	299.0	3.0	0.0	Horz	PK	0.0	49.2	74.0	-24.8	EUT Horiz, Mid Ch
12197.800	56.2	-9.3	1.0	342.0	3.0	0.0	Vert	PK	0.0	46.9	74.0	-27.1	EUT Horiz, Mid Ch
12197.580	35.2	-9.3	1.0	348.0	3.0	0.0	Horz	AV	0.0	25.9	54.0	-28.1	EUT Horiz, Mid Ch
12197.420	35.0	-9.3	1.0	342.0	3.0	0.0	Vert	AV	0.0	25.7	54.0	-28.3	EUT Horiz, Mid Ch
9764.533	34.7	-10.1	1.2	170.0	3.0	0.0	Horz	AV	0.0	24.6	54.0	-29.4	EUT Horiz, Mid Ch
9762.167	34.7	-10.1	1.2	360.0	3.0	0.0	Vert	AV	0.0	24.6	54.0	-29.4	EUT Horiz, Mid Ch
9757.500	48.1	-10.1	1.2	170.0	3.0	0.0	Horz	PK	0.0	38.0	74.0	-36.0	EUT Horiz, Mid Ch
9755.283	47.6	-10.1	1.2	360.0	3.0	0.0	Vert	PK	0.0	37.5	74.0	-36.5	EUT Horiz, Mid Ch

SPURIOUS RADIATED EMISSIONS

Work Order:	GLBC0141	Date:	08/06/14	
Project:	None	Temperature:	25.6 °C	
Job Site:	OC10	Humidity:	50.8% RH	
Serial Number:	1078-32	Barometric Pres.:	1015 mbar	
		Tested by:		Johnny Candelas
EUT:	Remote Controlled Downlight LED Lamp Model #: CD611LC			
Configuration:	1			
Customer:	Shanghai Qiangling Electronic Co Ltd			
Attendees:	Leon Kogan, Global Certification Technologies, Inc.			
EUT Power:	120VAC/60Hz			
Operating Mode:	Continuously Transmitting, High Channel 26 - 2480 MHz			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.247:2014	ANSI C63.10:2009

Run #	41	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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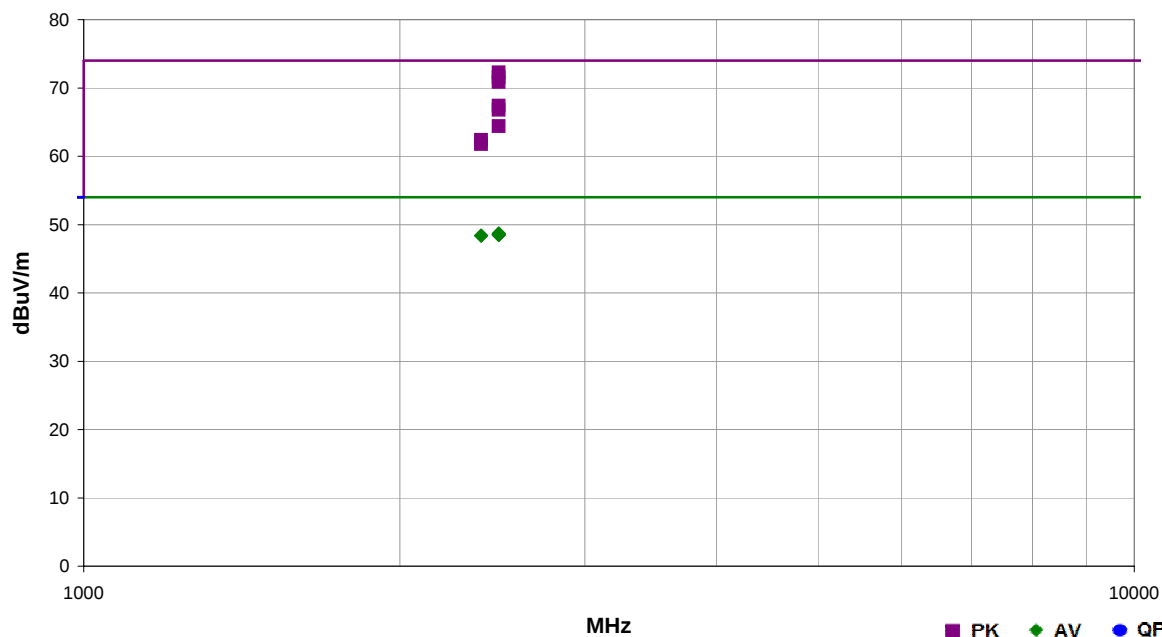
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7441.450	46.7	18.1	1.2	148.0	3.0	0.0	Vert	PK	0.0	64.8	74.0	-9.2	EUT Horiz, High Ch
7438.433	26.1	18.1	1.2	148.0	3.0	0.0	Vert	AV	0.0	44.2	54.0	-9.8	EUT Horiz, High Ch
7438.550	25.9	18.1	1.2	220.0	3.0	0.0	Horz	AV	0.0	44.0	54.0	-10.0	EUT Horiz, High Ch
7438.717	41.2	18.1	1.2	220.0	3.0	0.0	Horz	PK	0.0	59.3	74.0	-14.7	EUT Horiz, High Ch
4964.533	24.3	10.7	1.2	335.0	3.0	0.0	Vert	AV	0.0	35.0	54.0	-19.0	EUT Horiz, High Ch
4963.233	24.3	10.7	1.2	187.0	3.0	0.0	Horz	AV	0.0	35.0	54.0	-19.0	EUT Horiz, High Ch
4963.883	37.7	10.7	1.2	187.0	3.0	0.0	Horz	PK	0.0	48.4	74.0	-25.6	EUT Horiz, High Ch
4960.150	37.7	10.7	1.2	335.0	3.0	0.0	Vert	PK	0.0	48.4	74.0	-25.6	EUT Horiz, High Ch
9917.933	35.1	-9.8	1.0	146.0	3.0	0.0	Horz	AV	0.0	25.3	54.0	-28.7	EUT Horiz, High Ch
12397.490	34.3	-9.0	1.0	205.0	3.0	0.0	Horz	AV	0.0	25.3	54.0	-28.7	EUT Horiz, High Ch
12397.760	34.2	-9.0	1.2	349.0	3.0	0.0	Vert	AV	0.0	25.2	54.0	-28.8	EUT Horiz, High Ch
9918.267	34.9	-9.8	1.2	133.0	3.0	0.0	Vert	AV	0.0	25.1	54.0	-28.9	EUT Horiz, High Ch
12397.400	51.2	-9.0	1.0	205.0	3.0	0.0	Horz	PK	0.0	42.2	74.0	-31.8	EUT Horiz, High Ch
12397.830	50.8	-9.0	1.2	349.0	3.0	0.0	Vert	PK	0.0	41.8	74.0	-32.2	EUT Horiz, High Ch
9916.500	49.4	-9.8	1.0	146.0	3.0	0.0	Horz	PK	0.0	39.6	74.0	-34.4	EUT Horiz, High Ch
9917.650	49.0	-9.8	1.2	133.0	3.0	0.0	Vert	PK	0.0	39.2	74.0	-34.8	EUT Horiz, High Ch

SPURIOUS RADIATED EMISSIONS

Work Order:	GLBC0141	Date:	08/06/14	
Project:	None	Temperature:	25.6 °C	
Job Site:	OC10	Humidity:	50.8% RH	
Serial Number:	1078-32	Barometric Pres.:	1015 mbar	
		Tested by:	Johnny Candelas	
EUT:	Remote Controlled Downlight LED Lamp Model #: CD611LC			
Configuration:	1			
Customer:	Shanghai Qiangling Electronic Co Ltd			
Attendees:	Leon Kogan, Global Certification Technologies, Inc.			
EUT Power:	120VAC/60Hz			
Operating Mode:	Continuously Transmitting, Low Channel 11 - 2405 MHz & High Channel 26 - 2480 MHz			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.247:2014	ANSI C63.10:2009

Run #	43	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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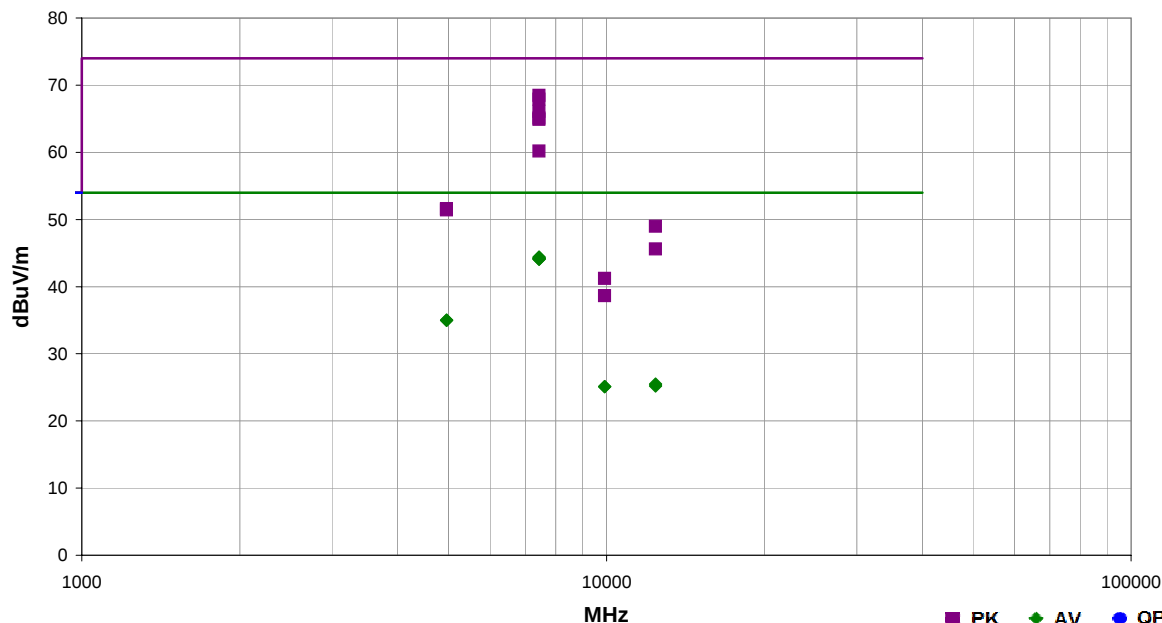


Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2483.500	49.1	3.2	2.1	171.0	3.0	20.0	Horz	PK	0.0	72.3	74.0	-1.7	EUT Horiz, High Ch
2483.504	48.4	3.2	2.0	25.0	3.0	20.0	Horz	PK	0.0	71.6	74.0	-2.4	EUT on Side, High Ch
2483.502	47.7	3.2	1.2	151.0	3.0	20.0	Vert	PK	0.0	70.9	74.0	-3.1	EUT Vert, High Ch
2483.498	25.5	3.2	2.1	171.0	3.0	20.0	Horz	AV	0.0	48.7	54.0	-5.3	EUT Horiz, High Ch
2483.496	25.4	3.2	2.0	25.0	3.0	20.0	Horz	AV	0.0	48.6	54.0	-5.4	EUT on Side, High Ch
2483.496	25.4	3.2	1.3	198.0	3.0	20.0	Vert	AV	0.0	48.6	54.0	-5.4	EUT on Side, High Ch
2483.496	25.4	3.2	1.2	151.0	3.0	20.0	Vert	AV	0.0	48.6	54.0	-5.4	EUT Vert, High Ch
2483.502	25.3	3.2	1.2	111.0	3.0	20.0	Vert	AV	0.0	48.5	54.0	-5.5	EUT Horiz, High Ch
2483.495	25.3	3.2	1.3	101.0	3.0	20.0	Horz	AV	0.0	48.5	54.0	-5.5	EUT Vert, High Ch
2389.996	25.3	3.1	1.2	342.0	3.0	20.0	Horz	AV	0.0	48.4	54.0	-5.6	EUT Horiz, Low Ch
2390.004	25.3	3.1	1.2	312.0	3.0	20.0	Vert	AV	0.0	48.4	54.0	-5.6	EUT Vert, Low Ch
2483.497	44.2	3.2	1.3	198.0	3.0	20.0	Vert	PK	0.0	67.4	74.0	-6.6	EUT on Side, High Ch
2483.496	43.6	3.2	1.3	101.0	3.0	20.0	Horz	PK	0.0	66.8	74.0	-7.2	EUT Vert, High Ch
2483.495	41.2	3.2	1.2	111.0	3.0	20.0	Vert	PK	0.0	64.4	74.0	-9.6	EUT Horiz, High Ch
2390.003	39.3	3.1	1.2	312.0	3.0	20.0	Vert	PK	0.0	62.4	74.0	-11.6	EUT Vert, Low Ch
2389.999	38.7	3.1	1.2	342.0	3.0	20.0	Horz	PK	0.0	61.8	74.0	-12.2	EUT Horiz, Low Ch

Work Order:	GLBC0141	Date:	08/05/14	
Project:	None	Temperature:	24.1 °C	
Job Site:	OC10	Humidity:	48.2% RH	
Serial Number:	1079-31	Barometric Pres.:	1017 mbar	
EUT:		Remote Controlled Downlight LED Lamp Model #: CD411LC		
Configuration: 2				
Customer: Shanghai Qiangling Electronic Co Ltd				
Attendees: Leon Kogan, Global Certification Technologies, Inc.				
EUT Power: 120VAC/60Hz				
Operating Mode:		Continuously Transmitting, High Channel 26 - 2480 MHz		
Deviations:		None		
Comments:		None		

Test Specifications	Test Method
FCC 15.247:2014	ANSI C63.10:2009

Run #	15	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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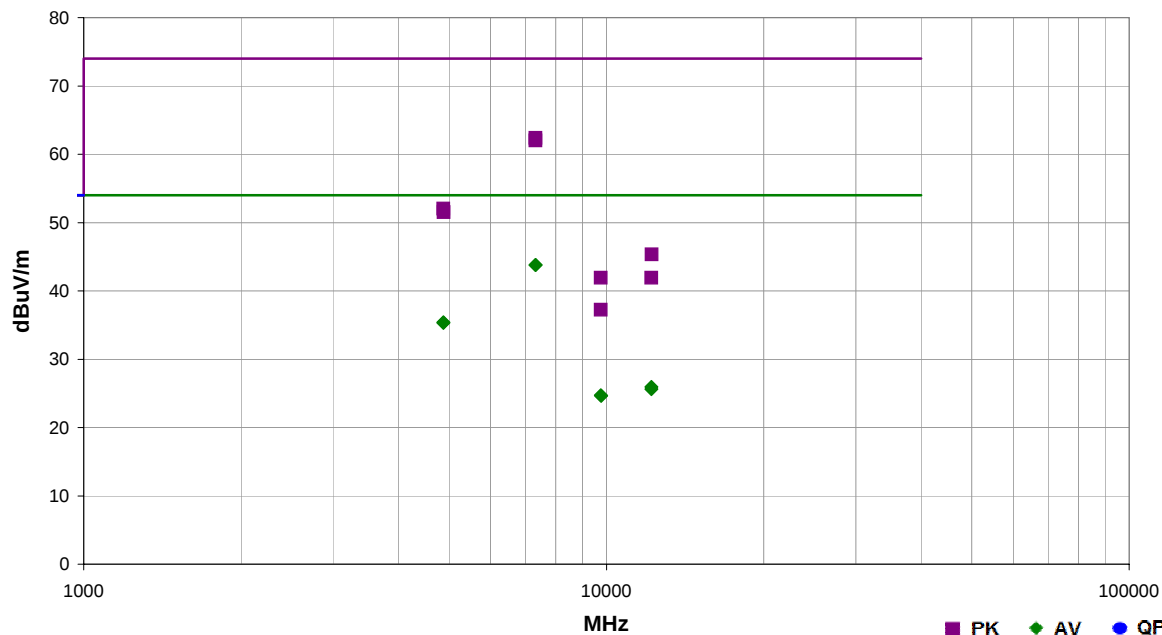
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7438.583	50.4	18.1	1.0	339.0	3.0	0.0	Horz	PK	0.0	68.5	74.0	-5.5	EUT Horiz, High Ch
7438.300	49.8	18.1	1.2	36.0	3.0	0.0	Vert	PK	0.0	67.9	74.0	-6.1	EUT Horiz, High Ch
7441.658	48.0	18.1	1.4	356.0	3.0	0.0	Horz	PK	0.0	66.1	74.0	-7.9	EUT on Side, High Ch
7441.617	47.0	18.1	1.2	307.0	3.0	0.0	Vert	PK	0.0	65.1	74.0	-8.9	EUT Vert, High Ch
7441.333	46.8	18.1	1.2	130.0	3.0	0.0	Vert	PK	0.0	64.9	74.0	-9.1	EUT on Side, High Ch
7438.633	26.3	18.1	1.0	339.0	3.0	0.0	Horz	AV	0.0	44.4	54.0	-9.6	EUT Horiz, High Ch
7438.558	26.2	18.1	1.2	307.0	3.0	0.0	Vert	AV	0.0	44.3	54.0	-9.7	EUT Vert, High Ch
7438.592	26.1	18.1	1.4	356.0	3.0	0.0	Horz	AV	0.0	44.2	54.0	-9.8	EUT on Side, High Ch
7438.733	26.1	18.1	1.2	130.0	3.0	0.0	Vert	AV	0.0	44.2	54.0	-9.8	EUT on Side, High Ch
7438.592	26.0	18.1	1.2	232.0	3.0	0.0	Horz	AV	0.0	44.1	54.0	-9.9	EUT Horiz, High Ch
7438.642	26.0	18.1	1.2	36.0	3.0	0.0	Vert	AV	0.0	44.1	54.0	-9.9	EUT Horiz, High Ch
7438.317	42.1	18.1	1.2	232.0	3.0	0.0	Horz	PK	0.0	60.2	74.0	-13.8	EUT Vert, High Ch
4960.600	24.3	10.7	1.2	161.0	3.0	0.0	Horz	AV	0.0	35.0	54.0	-19.0	EUT Horiz, High Ch
4959.817	24.3	10.7	1.2	346.0	3.0	0.0	Vert	AV	0.0	35.0	54.0	-19.0	EUT Horiz, High Ch
4960.917	40.9	10.7	1.2	161.0	3.0	0.0	Horz	PK	0.0	51.6	74.0	-22.4	EUT Horiz, High Ch
4960.708	40.7	10.7	1.2	346.0	3.0	0.0	Vert	PK	0.0	51.4	74.0	-22.6	EUT Horiz, High Ch
12397.590	58.0	-9.0	1.0	313.0	3.0	0.0	Horz	PK	0.0	49.0	74.0	-25.0	EUT Horiz, High Ch
12397.630	54.6	-9.0	1.1	315.0	3.0	0.0	Vert	PK	0.0	45.6	74.0	-28.4	EUT Horiz, High Ch
12397.520	34.5	-9.0	1.0	313.0	3.0	0.0	Horz	AV	0.0	25.5	54.0	-28.5	EUT Horiz, High Ch
12397.450	34.2	-9.0	1.1	315.0	3.0	0.0	Vert	AV	0.0	25.2	54.0	-28.8	EUT Horiz, High Ch
9918.133	34.9	-9.8	1.3	103.0	3.0	0.0	Vert	AV	0.0	25.1	54.0	-28.9	EUT Horiz, High Ch
9917.950	34.9	-9.8	1.3	78.0	3.0	0.0	Horz	AV	0.0	25.1	54.0	-28.9	EUT Horiz, High Ch
9919.517	51.0	-9.8	1.3	78.0	3.0	0.0	Horz	PK	0.0	41.2	74.0	-32.8	EUT Horiz, High Ch
9921.617	48.4	-9.8	1.3	103.0	3.0	0.0	Vert	PK	0.0	38.6	74.0	-35.4	EUT Horiz, High Ch

SPURIOUS RADIATED EMISSIONS

Work Order:	GLBC0141	Date:	08/05/14	
Project:	None	Temperature:	24.1 °C	
Job Site:	OC10	Humidity:	48.2% RH	
Serial Number:	1079-31	Barometric Pres.:	1017 mbar	
		Tested by:		Johnny Candelas
EUT:	Remote Controlled Downlight LED Lamp Model #: CD411LC			
Configuration:	2			
Customer:	Shanghai Qiangling Electronic Co Ltd			
Attendees:	Leon Kogan, Global Certification Technologies, Inc.			
EUT Power:	120VAC/60Hz			
Operating Mode:	Continuously Transmitting, Mid Channel 18 - 2440 MHz			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.247:2014	ANSI C63.10:2009

Run #	17	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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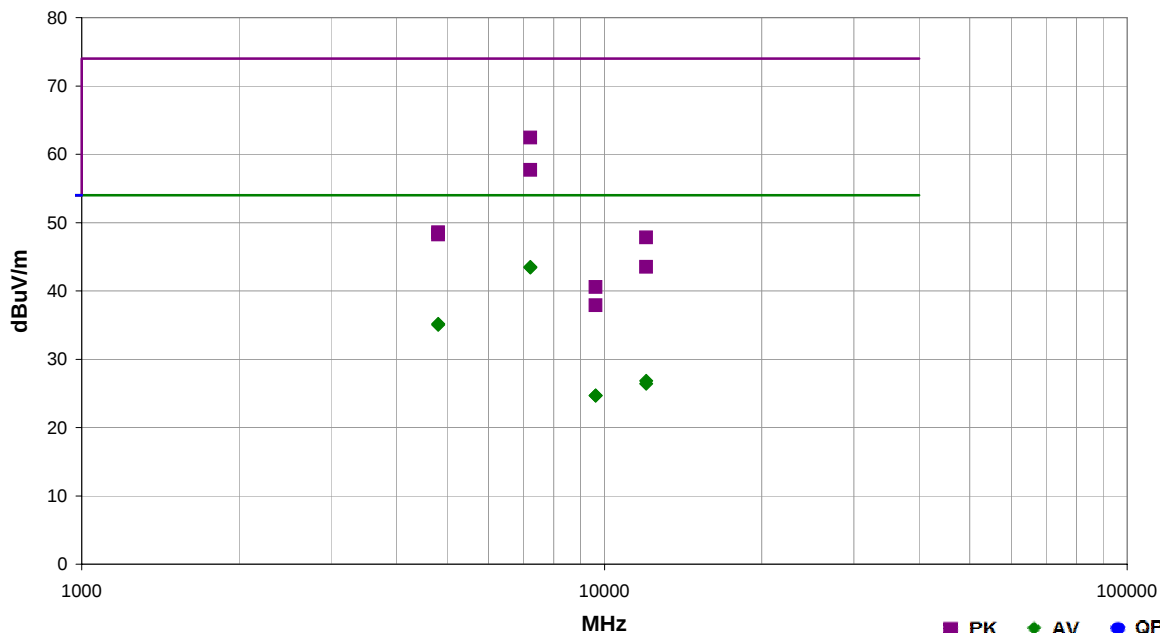
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7321.333	25.9	17.9	1.2	312.0	3.0	0.0	Vert	AV	0.0	43.8	54.0	-10.2	EUT Horiz, Mid Ch
7318.950	25.9	17.9	1.2	172.0	3.0	0.0	Horz	AV	0.0	43.8	54.0	-10.2	EUT Horiz, Mid Ch
7321.267	44.5	17.9	1.2	312.0	3.0	0.0	Vert	PK	0.0	62.4	74.0	-11.6	EUT Horiz, Mid Ch
7321.617	44.1	17.9	1.2	172.0	3.0	0.0	Horz	PK	0.0	62.0	74.0	-12.0	EUT Horiz, Mid Ch
4879.367	25.0	10.4	1.2	134.0	3.0	0.0	Vert	AV	0.0	35.4	54.0	-18.6	EUT Horiz, Mid Ch
4879.050	24.9	10.4	1.5	314.0	3.0	0.0	Horz	AV	0.0	35.3	54.0	-18.7	EUT Horiz, Mid Ch
4878.750	41.6	10.4	1.2	134.0	3.0	0.0	Vert	PK	0.0	52.0	74.0	-22.0	EUT Horiz, Mid Ch
4881.083	41.1	10.4	1.5	314.0	3.0	0.0	Horz	PK	0.0	51.5	74.0	-22.5	EUT Horiz, Mid Ch
12197.920	35.2	-9.3	1.0	297.0	3.0	0.0	Horz	AV	0.0	25.9	54.0	-28.1	EUT Horiz, Mid Ch
12197.650	34.9	-9.3	1.2	338.0	3.0	0.0	Vert	AV	0.0	25.6	54.0	-28.4	EUT Horiz, Mid Ch
12202.530	54.6	-9.3	1.0	297.0	3.0	0.0	Horz	PK	0.0	45.3	74.0	-28.7	EUT Horiz, Mid Ch
9761.500	34.8	-10.1	1.2	81.0	3.0	0.0	Horz	AV	0.0	24.7	54.0	-29.3	EUT Horiz, Mid Ch
9764.783	34.7	-10.1	1.2	177.0	3.0	0.0	Vert	AV	0.0	24.6	54.0	-29.4	EUT Horiz, Mid Ch
12197.570	51.2	-9.3	1.2	338.0	3.0	0.0	Vert	PK	0.0	41.9	74.0	-32.1	EUT Horiz, Mid Ch
9759.900	52.0	-10.1	1.2	81.0	3.0	0.0	Horz	PK	0.0	41.9	74.0	-32.1	EUT Horiz, Mid Ch
9757.767	47.3	-10.1	1.2	177.0	3.0	0.0	Vert	PK	0.0	37.2	74.0	-36.8	EUT Horiz, Mid Ch

SPURIOUS RADIATED EMISSIONS

Work Order:	GLBC0141	Date:	08/05/14	
Project:	None	Temperature:	24.1 °C	
Job Site:	OC10	Humidity:	48.2% RH	
Serial Number:	1079-31	Barometric Pres.:	1017 mbar	
		Tested by:		Johnny Candelas
EUT:	Remote Controlled Downlight LED Lamp Model #: CD411LC			
Configuration:	2			
Customer:	Shanghai Qiangling Electronic Co Ltd			
Attendees:	Leon Kogan, Global Certification Technologies, Inc.			
EUT Power:	120VAC/60Hz			
Operating Mode:	Continuously Transmitting, Low Channel 11 - 2405 MHz			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.247:2014	ANSI C63.10:2009

Run #	19	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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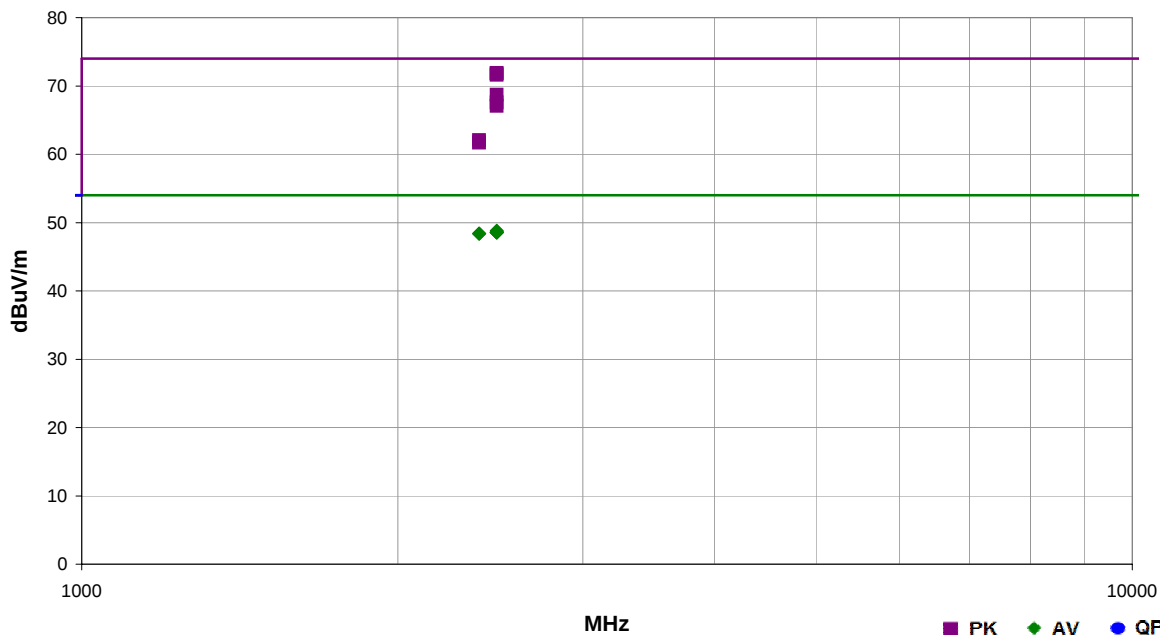
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7213.600	26.2	17.3	1.2	229.0	3.0	0.0	Horz	AV	0.0	43.5	54.0	-10.5	EUT Horiz, Low Ch
7213.800	26.1	17.3	1.2	189.0	3.0	0.0	Vert	AV	0.0	43.4	54.0	-10.6	EUT Horiz, Low Ch
7213.350	45.1	17.3	1.2	229.0	3.0	0.0	Horz	PK	0.0	62.4	74.0	-11.6	EUT Horiz, Low Ch
7213.350	40.4	17.3	1.2	189.0	3.0	0.0	Vert	PK	0.0	57.7	74.0	-16.3	EUT Horiz, Low Ch
4809.233	25.0	10.2	1.2	329.0	3.0	0.0	Horz	AV	0.0	35.2	54.0	-18.8	EUT Horiz, Low Ch
4805.500	24.9	10.1	1.2	350.0	3.0	0.0	Vert	AV	0.0	35.0	54.0	-19.0	EUT Horiz, Low Ch
4809.367	38.4	10.2	1.2	329.0	3.0	0.0	Horz	PK	0.0	48.6	74.0	-25.4	EUT Horiz, Low Ch
4810.050	38.1	10.2	1.2	350.0	3.0	0.0	Vert	PK	0.0	48.3	74.0	-25.7	EUT Horiz, Low Ch
12027.700	57.3	-9.5	1.0	303.0	3.0	0.0	Horz	PK	0.0	47.8	74.0	-26.2	EUT Horiz, Low Ch
12027.670	36.3	-9.5	1.0	303.0	3.0	0.0	Horz	AV	0.0	26.8	54.0	-27.2	EUT Horiz, Low Ch
12027.200	35.9	-9.5	1.2	308.0	3.0	0.0	Vert	AV	0.0	26.4	54.0	-27.6	EUT Horiz, Low Ch
9621.650	34.9	-10.2	1.5	100.0	3.0	0.0	Vert	AV	0.0	24.7	54.0	-29.3	EUT Horiz, Low Ch
9618.117	34.9	-10.2	1.4	116.0	3.0	0.0	Horz	AV	0.0	24.7	54.0	-29.3	EUT Horiz, Low Ch
12027.220	53.0	-9.5	1.2	308.0	3.0	0.0	Vert	PK	0.0	43.5	74.0	-30.5	EUT Horiz, Low Ch
9618.483	50.8	-10.2	1.4	116.0	3.0	0.0	Horz	PK	0.0	40.6	74.0	-33.4	EUT Horiz, Low Ch
9623.867	48.1	-10.2	1.5	100.0	3.0	0.0	Vert	PK	0.0	37.9	74.0	-36.1	EUT Horiz, Low Ch

SPURIOUS RADIATED EMISSIONS

Work Order:	GLBC0141	Date:	08/05/14	
Project:	None	Temperature:	24.1 °C	
Job Site:	OC10	Humidity:	48.2% RH	
Serial Number:	1079-31	Barometric Pres.:	1017 mbar	
		Tested by:		Johnny Candelas
EUT:	Remote Controlled Downlight LED Lamp Model #: CD411LC			
Configuration:	2			
Customer:	Shanghai Qiangling Electronic Co Ltd			
Attendees:	Leon Kogan, Global Certification Technologies, Inc.			
EUT Power:	120VAC/60Hz			
Operating Mode:	Continuously Transmitting, Low Channel 11 - 2405 MHz & High Channel 26 - 2480 MHz			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.247:2014	ANSI C63.10:2009

Run #	21	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Evaluation
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2483.500	48.7	3.2	1.0	169.0	3.0	20.0	Vert	PK	0.0	71.9	74.0	-2.1	EUT Vert, High Ch
2483.504	48.6	3.2	1.1	278.0	3.0	20.0	Horz	PK	0.0	71.8	74.0	-2.2	EUT Horiz, High Ch
2483.503	48.4	3.2	1.2	170.0	3.0	20.0	Vert	PK	0.0	71.6	74.0	-2.4	EUT on Side, High Ch
2483.500	25.6	3.2	1.0	169.0	3.0	20.0	Vert	AV	0.0	48.8	54.0	-5.2	EUT Vert, High Ch
2483.500	45.5	3.2	1.0	274.0	3.0	20.0	Vert	PK	0.0	68.7	74.0	-5.3	EUT Horiz, High Ch
2483.501	25.4	3.2	1.0	274.0	3.0	20.0	Vert	AV	0.0	48.6	54.0	-5.4	EUT Horiz, High Ch
2483.504	25.4	3.2	1.2	144.0	3.0	20.0	Horz	AV	0.0	48.6	54.0	-5.4	EUT Vert, High Ch
2483.500	25.4	3.2	1.1	278.0	3.0	20.0	Horz	AV	0.0	48.6	54.0	-5.4	EUT Horiz, High Ch
2483.501	25.4	3.2	1.2	57.0	3.0	20.0	Horz	AV	0.0	48.6	54.0	-5.4	EUT on Side, High Ch
2483.500	25.4	3.2	1.2	170.0	3.0	20.0	Vert	AV	0.0	48.6	54.0	-5.4	EUT on Side, High Ch
2389.995	25.3	3.1	1.5	59.0	3.0	20.0	Horz	AV	0.0	48.4	54.0	-5.6	EUT Horiz, Low Ch
2389.995	25.3	3.1	1.2	88.0	3.0	20.0	Vert	AV	0.0	48.4	54.0	-5.6	EUT Vert, High Ch
2483.502	44.4	3.2	1.2	57.0	3.0	20.0	Horz	PK	0.0	67.6	74.0	-6.4	EUT on Side, High Ch
2483.505	43.9	3.2	1.2	144.0	3.0	20.0	Horz	PK	0.0	67.1	74.0	-6.9	EUT Vert, High Ch
2390.000	39.0	3.1	1.2	88.0	3.0	20.0	Vert	PK	0.0	62.1	74.0	-11.9	EUT Vert, Low Ch
2389.997	38.6	3.1	1.5	59.0	3.0	20.0	Horz	PK	0.0	61.7	74.0	-12.3	EUT Horiz, Low Ch

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

MODES OF OPERATION

Continuously Transmitting, Low Channel 11 - 2405 MHz

Continuously Transmitting, Mid Channel 18 - 2440 MHz

Continuously Transmitting, High Channel 26 - 2480 MHz

POWER SETTINGS INVESTIGATED

120VAC/60Hz

CONFIGURATIONS INVESTIGATED

GLBC0141 - 2

SAMPLE CALCULATIONS

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo)
LISN	Solar	9252-50-24-BNC	LIA	4/22/2014	12 mo
Attenuator	Pasternack	6N10W-20	AWC	1/3/2014	12 mo
HP Filter	TTE	H97-100K-50-720B	HFP	3/1/2012	36 mo
OC06 Cables	N/A	Telecom Cables	OCP	10/8/2013	12 mo
Receiver	Rohde & Schwarz	ESCI	ARG	5/13/2014	12 mo

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	BW (kHz)
0.15 - 30.0	1.0
30.0 - 400.0	10.0
400.0 - 1000.0	100.0
1000.0 - 6000.0	1000.0

TEST DESCRIPTION

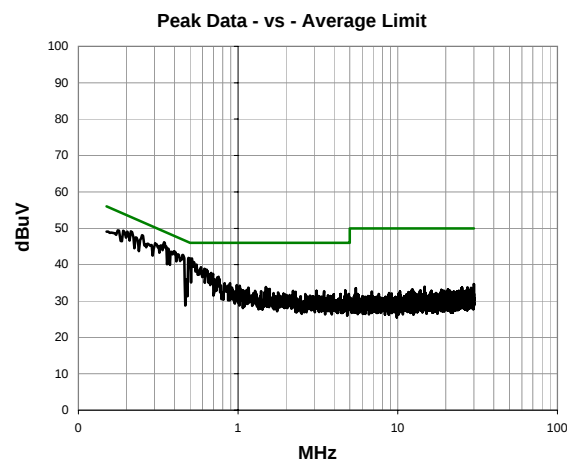
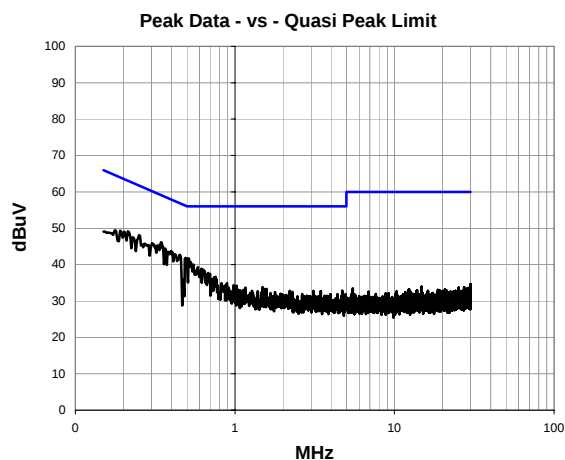
The EUT will be powered indirectly from the AC power line while operating in a host device. Therefore, conducted emissions measurements were made on the DC input of the EUT, or on the DC input of the device used to power the EUT. The AC power line conducted emissions were measured on a linear power supply providing DC power to the module while providing no filtering of the power inputs to the module.

The AC power line conducted emissions were measured with the EUT operating at the lowest, the highest, and a middle channel in the operational band or bands. The EUT was transmitting in the mode which has the highest output power for the band. For each mode, the spectrum was scanned from 150 kHz to 30 MHz. The test setup and procedures were in accordance with ANSI C63.10-2009.

Work Order:	GLBC0141	Date:	08/06/14	
Project:	None	Temperature:	24.4 °C	
Job Site:	OC06	Humidity:	46.4% RH	
Serial Number:	1079-31	Barometric Pres.:	1017 mbar	
		Tested by:		Johnny Candelas
EUT:	Remote Controlled Downlight LED Lamp Model #: CD411LC			
Configuration:	2			
Customer:	Shanghai Qiangling Electronic Co Ltd			
Attendees:	Leon Kogan, Global Certification Technologies, Inc.			
EUT Power:	120VAC/60Hz			
Operating Mode:	Continuously Transmitting, Low Channel 11 - 2405 MHz			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.207:2014	ANSI C63.10:2009

Run #	11	Line:	High Line	Ext. Attenuation:	20	Results	Pass
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Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.344	26.1	20.1	46.2	59.1	-12.9
0.251	28.0	20.1	48.1	61.7	-13.6
0.400	23.6	20.1	43.7	57.9	-14.2
0.366	24.3	20.1	44.4	58.6	-14.2
0.490	21.8	20.1	41.9	56.2	-14.3
0.512	21.6	20.1	41.7	56.0	-14.3
0.176	29.3	20.1	49.4	64.7	-15.3
0.631	18.5	20.1	38.6	56.0	-17.4
0.680	17.6	20.1	37.7	56.0	-18.3
0.754	16.6	20.1	36.7	56.0	-19.3
0.713	15.8	20.1	35.9	56.0	-20.1
0.475	15.9	20.1	36.0	56.4	-20.4
0.825	14.8	20.1	34.9	56.0	-21.1
0.892	14.8	20.1	34.9	56.0	-21.1
0.982	14.3	20.1	34.4	56.0	-21.6
1.023	14.1	20.1	34.2	56.0	-21.8
1.493	13.8	20.1	33.9	56.0	-22.1
0.915	13.6	20.1	33.7	56.0	-22.3
1.161	13.6	20.1	33.7	56.0	-22.3
1.530	13.2	20.1	33.3	56.0	-22.7

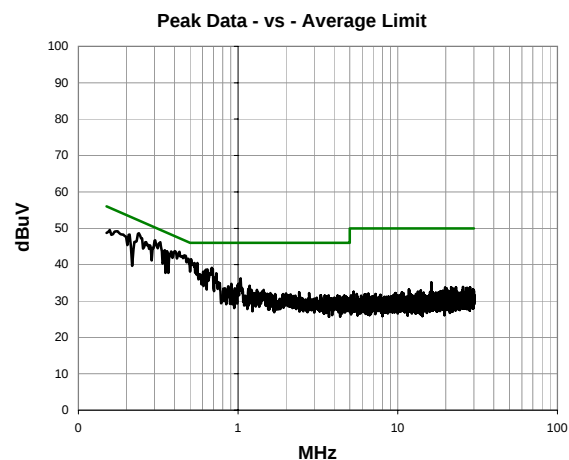
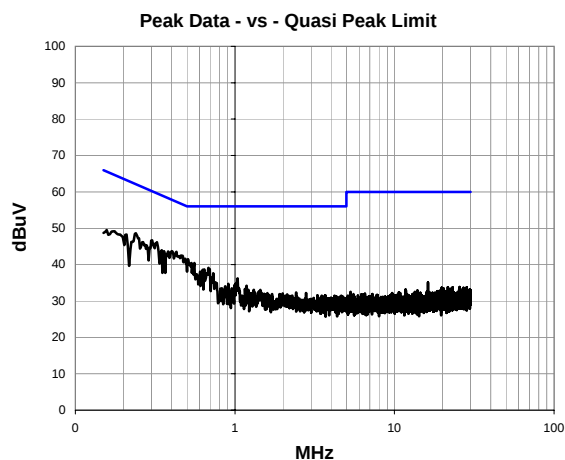
Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.344	26.1	20.1	46.2	49.1	-2.9
0.251	28.0	20.1	48.1	51.7	-3.6
0.400	23.6	20.1	43.7	47.9	-4.2
0.366	24.3	20.1	44.4	48.6	-4.2
0.490	21.8	20.1	41.9	46.2	-4.3
0.512	21.6	20.1	41.7	46.0	-4.3
0.176	29.3	20.1	49.4	54.7	-5.3
0.631	18.5	20.1	38.6	46.0	-7.4
0.680	17.6	20.1	37.7	46.0	-8.3
0.754	16.6	20.1	36.7	46.0	-9.3
0.713	15.8	20.1	35.9	46.0	-10.1
0.475	15.9	20.1	36.0	46.4	-10.4
0.825	14.8	20.1	34.9	46.0	-11.1
0.892	14.8	20.1	34.9	46.0	-11.1
0.982	14.3	20.1	34.4	46.0	-11.6
1.023	14.1	20.1	34.2	46.0	-11.8
1.493	13.8	20.1	33.9	46.0	-12.1
0.915	13.6	20.1	33.7	46.0	-12.3
1.161	13.6	20.1	33.7	46.0	-12.3
1.530	13.2	20.1	33.3	46.0	-12.7

Work Order:	GLBC0141	Date:	08/06/14	
Project:	None	Temperature:	24.4 °C	
Job Site:	OC06	Humidity:	46.4% RH	
Serial Number:	1079-31	Barometric Pres.:	1017 mbar	
EUT:	Remote Controlled Downlight LED Lamp Model #: CD411LC			Tested by: Johnny Candelas
Configuration:	2			
Customer:	Shanghai Qiangling Electronic Co Ltd			
Attendees:	Leon Kogan, Global Certification Technologies, Inc.			
EUT Power:	120VAC/60Hz			
Operating Mode:	Continuously Transmitting, Low Channel 11 - 2405 MHz			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.207:2014	ANSI C63.10:2009

Run #	12	Line:	Neutral	Ext. Attenuation:	20	Results	Pass
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Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.303	26.6	20.1	46.7	60.2	-13.5
0.240	28.5	20.1	48.6	62.1	-13.5
0.404	23.6	20.1	43.7	57.8	-14.1
0.508	21.4	20.1	41.5	56.0	-14.5
0.348	23.9	20.1	44.0	59.0	-15.0
0.359	23.6	20.1	43.7	58.8	-15.1
0.557	20.4	20.1	40.5	56.0	-15.5
0.157	29.4	20.1	49.5	65.6	-16.1
0.684	19.0	20.1	39.1	56.0	-16.9
0.642	18.6	20.1	38.7	56.0	-17.3
0.628	18.5	20.1	38.6	56.0	-17.4
0.605	18.0	20.1	38.1	56.0	-17.9
0.732	17.5	20.1	37.6	56.0	-18.4
1.038	16.1	20.1	36.2	56.0	-19.8
0.907	14.6	20.1	34.7	56.0	-21.3
1.004	14.6	20.1	34.7	56.0	-21.3
1.183	14.1	20.1	34.2	56.0	-21.8
0.866	13.9	20.1	34.0	56.0	-22.0
0.829	13.4	20.1	33.5	56.0	-22.5
0.956	13.4	20.1	33.5	56.0	-22.5

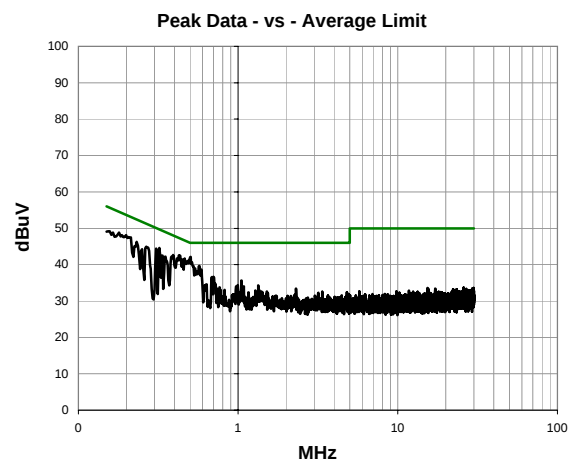
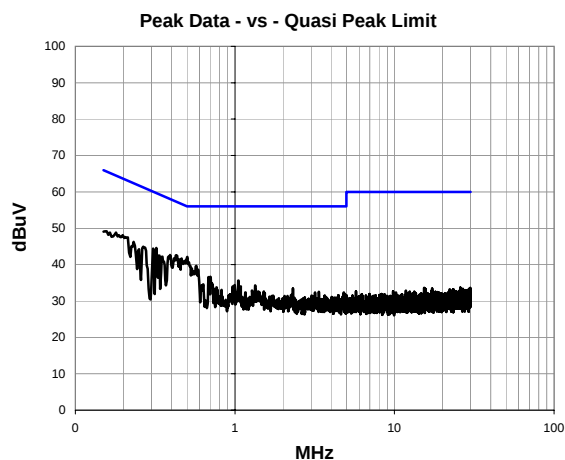
Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.303	26.6	20.1	46.7	50.2	-3.5
0.240	28.5	20.1	48.6	52.1	-3.5
0.404	23.6	20.1	43.7	47.8	-4.1
0.508	21.4	20.1	41.5	46.0	-4.5
0.348	23.9	20.1	44.0	49.0	-5.0
0.359	23.6	20.1	43.7	48.8	-5.1
0.557	20.4	20.1	40.5	46.0	-5.5
0.157	29.4	20.1	49.5	55.6	-6.1
0.684	19.0	20.1	39.1	46.0	-6.9
0.642	18.6	20.1	38.7	46.0	-7.3
0.628	18.5	20.1	38.6	46.0	-7.4
0.605	18.0	20.1	38.1	46.0	-7.9
0.732	17.5	20.1	37.6	46.0	-8.4
1.038	16.1	20.1	36.2	46.0	-9.8
0.907	14.6	20.1	34.7	46.0	-11.3
1.004	14.6	20.1	34.7	46.0	-11.3
1.183	14.1	20.1	34.2	46.0	-11.8
0.866	13.9	20.1	34.0	46.0	-12.0
0.829	13.4	20.1	33.5	46.0	-12.5
0.956	13.4	20.1	33.5	46.0	-12.5

Work Order:	GLBC0141	Date:	08/06/14	
Project:	None	Temperature:	24.4 °C	
Job Site:	OC06	Humidity:	46.4% RH	
Serial Number:	1079-31	Barometric Pres.:	1017 mbar	
EUT:	Remote Controlled Downlight LED Lamp Model #: CD411LC			Tested by: Johnny Candelas
Configuration:	2			
Customer:	Shanghai Qiangling Electronic Co Ltd			
Attendees:	Leon Kogan, Global Certification Technologies, Inc.			
EUT Power:	120VAC/60Hz			
Operating Mode:	Continuously Transmitting, Mid Channel 18 - 2440 MHz			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.207:2014	ANSI C63.10:2009

Run #	13	Line:	High Line	Ext. Attenuation:	20	Results	Pass
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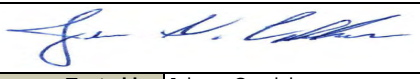


Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.504	22.0	20.1	42.1	56.0	-13.9
0.426	22.5	20.1	42.6	57.3	-14.7
0.322	24.5	20.1	44.6	59.7	-15.1
0.393	22.6	20.1	42.7	58.0	-15.3
0.307	24.3	20.1	44.4	60.1	-15.7
0.232	26.2	20.1	46.3	62.4	-16.1
0.266	24.8	20.1	44.9	61.3	-16.4
0.154	29.1	20.1	49.2	65.8	-16.6
0.351	22.1	20.1	42.2	58.9	-16.7
0.333	22.4	20.1	42.5	59.4	-16.9
0.251	24.1	20.1	44.2	61.7	-17.5
0.702	16.6	20.1	36.7	56.0	-19.3
0.684	16.5	20.1	36.6	56.0	-19.4
1.049	15.5	20.1	35.6	56.0	-20.4
0.631	14.5	20.1	34.6	56.0	-21.4
0.997	14.3	20.1	34.4	56.0	-21.6
1.340	14.2	20.1	34.3	56.0	-21.7
0.971	13.9	20.1	34.0	56.0	-22.0
1.086	13.9	20.1	34.0	56.0	-22.0
1.064	13.8	20.1	33.9	56.0	-22.1

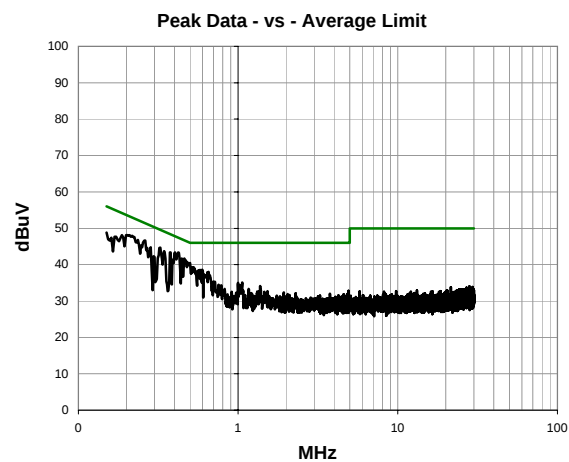
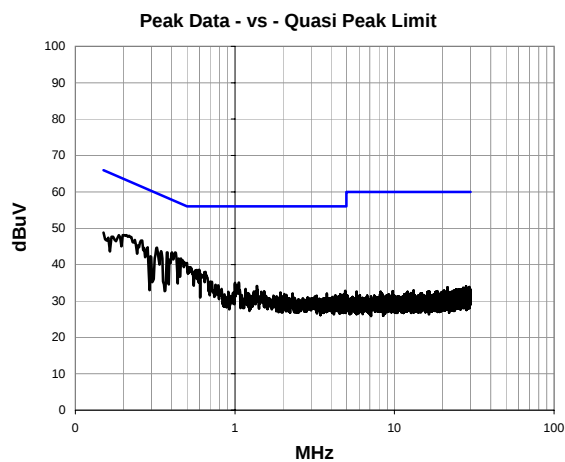
Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.504	22.0	20.1	42.1	46.0	-3.9
0.426	22.5	20.1	42.6	47.3	-4.7
0.322	24.5	20.1	44.6	49.7	-5.1
0.393	22.6	20.1	42.7	48.0	-5.3
0.307	24.3	20.1	44.4	50.1	-5.7
0.232	26.2	20.1	46.3	52.4	-6.1
0.266	24.8	20.1	44.9	51.3	-6.4
0.154	29.1	20.1	49.2	55.8	-6.6
0.351	22.1	20.1	42.2	48.9	-6.7
0.333	22.4	20.1	42.5	49.4	-6.9
0.251	24.1	20.1	44.2	51.7	-7.5
0.702	16.6	20.1	36.7	46.0	-9.3
0.684	16.5	20.1	36.6	46.0	-9.4
1.049	15.5	20.1	35.6	46.0	-10.4
0.631	14.5	20.1	34.6	46.0	-11.4
0.997	14.3	20.1	34.4	46.0	-11.6
1.340	14.2	20.1	34.3	46.0	-11.7
0.971	13.9	20.1	34.0	46.0	-12.0
1.086	13.9	20.1	34.0	46.0	-12.0
1.064	13.8	20.1	33.9	46.0	-12.1

Work Order:	GLBC0141	Date:	08/06/14	
Project:	None	Temperature:	24.4 °C	
Job Site:	OC06	Humidity:	46.4% RH	
Serial Number:	1079-31	Barometric Pres.:	1017 mbar	
EUT:	Remote Controlled Downlight LED Lamp Model #: CD411LC			Tested by: Johnny Candelas
Configuration:	2			
Customer:	Shanghai Qiangling Electronic Co Ltd			
Attendees:	Leon Kogan, Global Certification Technologies, Inc.			
EUT Power:	120VAC/60Hz			
Operating Mode:	Continuously Transmitting, Mid Channel 18 - 2440 MHz			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.207:2014	ANSI C63.10:2009

Run #	14	Line:	Neutral	Ext. Attenuation:	20	Results	Pass
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Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.404	23.3	20.1	43.4	57.8	-14.4
0.325	24.6	20.1	44.7	59.6	-14.9
0.258	26.5	20.1	46.6	61.5	-14.9
0.460	21.6	20.1	41.7	56.7	-15.0
0.374	23.3	20.1	43.4	58.4	-15.0
0.445	21.6	20.1	41.7	57.0	-15.3
0.344	23.6	20.1	43.7	59.1	-15.4
0.199	28.0	20.1	48.1	63.7	-15.6
0.187	28.0	20.1	48.1	64.2	-16.1
0.150	28.7	20.1	48.8	66.0	-17.2
0.598	18.5	20.1	38.6	56.0	-17.4
0.575	18.4	20.1	38.5	56.0	-17.5
0.650	17.9	20.1	38.0	56.0	-18.0
0.296	22.2	20.1	42.3	60.4	-18.1
0.702	15.3	20.1	35.4	56.0	-20.6
1.060	15.0	20.1	35.1	56.0	-20.9
1.001	14.9	20.1	35.0	56.0	-21.0
0.754	14.4	20.1	34.5	56.0	-21.5
1.374	14.0	20.1	34.1	56.0	-21.9
1.165	13.2	20.1	33.3	56.0	-22.7

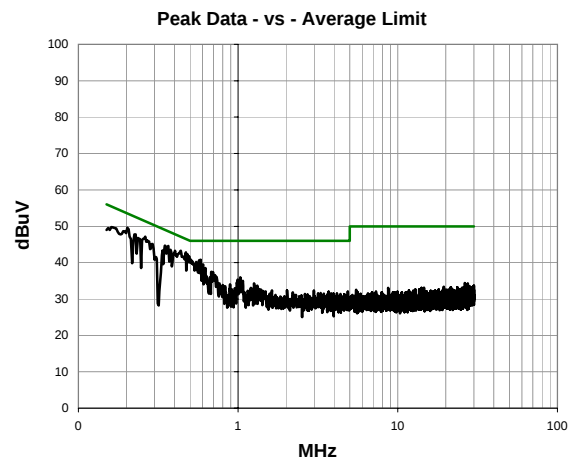
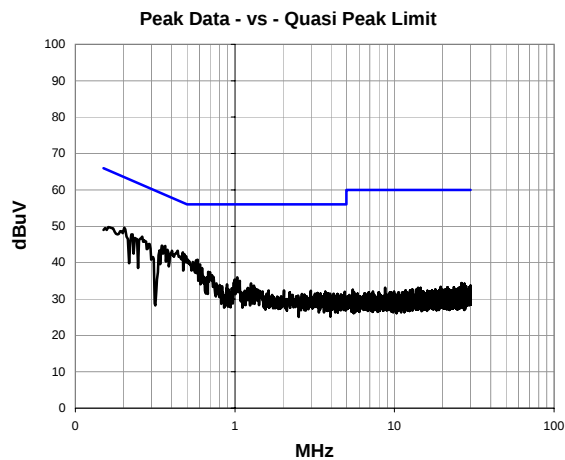
Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.404	23.3	20.1	43.4	47.8	-4.4
0.325	24.6	20.1	44.7	49.6	-4.9
0.258	26.5	20.1	46.6	51.5	-4.9
0.460	21.6	20.1	41.7	46.7	-5.0
0.374	23.3	20.1	43.4	48.4	-5.0
0.445	21.6	20.1	41.7	47.0	-5.3
0.344	23.6	20.1	43.7	49.1	-5.4
0.199	28.0	20.1	48.1	53.7	-5.6
0.187	28.0	20.1	48.1	54.2	-6.1
0.150	28.7	20.1	48.8	56.0	-7.2
0.598	18.5	20.1	38.6	46.0	-7.4
0.575	18.4	20.1	38.5	46.0	-7.5
0.650	17.9	20.1	38.0	46.0	-8.0
0.296	22.2	20.1	42.3	50.4	-8.1
0.702	15.3	20.1	35.4	46.0	-10.6
1.060	15.0	20.1	35.1	46.0	-10.9
1.001	14.9	20.1	35.0	46.0	-11.0
0.754	14.4	20.1	34.5	46.0	-11.5
1.374	14.0	20.1	34.1	46.0	-11.9
1.165	13.2	20.1	33.3	46.0	-12.7

Work Order:	GLBC0141	Date:	08/06/14	
Project:	None	Temperature:	24.4 °C	
Job Site:	OC06	Humidity:	46.4% RH	
Serial Number:	1079-31	Barometric Pres.:	1017 mbar	
EUT:	Remote Controlled Downlight LED Lamp Model #: CD411LC			Tested by: Johnny Candelas
Configuration:	2			
Customer:	Shanghai Qiangling Electronic Co Ltd			
Attendees:	Leon Kogan, Global Certification Technologies, Inc.			
EUT Power:	120VAC/60Hz			
Operating Mode:	Continuously Transmitting, High Channel 26 - 2480 MHz			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.207:2014	ANSI C63.10:2009

Run #	15	Line:	High Line	Ext. Attenuation:	20	Results	Pass
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Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.482	22.2	20.1	42.3	56.3	-14.0
0.262	27.0	20.1	47.1	61.4	-14.3
0.348	24.6	20.1	44.7	59.0	-14.3
0.404	23.2	20.1	43.3	57.8	-14.5
0.378	23.4	20.1	43.5	58.3	-14.8
0.225	27.7	20.1	47.8	62.6	-14.8
0.583	20.7	20.1	40.8	56.0	-15.2
0.572	20.6	20.1	40.7	56.0	-15.3
0.236	26.7	20.1	46.8	62.2	-15.4
0.161	29.7	20.1	49.8	65.4	-15.6
0.337	23.3	20.1	43.4	59.3	-15.9
0.601	19.4	20.1	39.5	56.0	-16.5
0.624	18.4	20.1	38.5	56.0	-17.5
0.680	17.4	20.1	37.5	56.0	-18.5
0.665	15.9	20.1	36.0	56.0	-20.0
1.034	15.9	20.1	36.0	56.0	-20.0
0.997	15.3	20.1	35.4	56.0	-20.6
1.008	14.9	20.1	35.0	56.0	-21.0
1.072	14.9	20.1	35.0	56.0	-21.0
0.766	14.2	20.1	34.3	56.0	-21.7

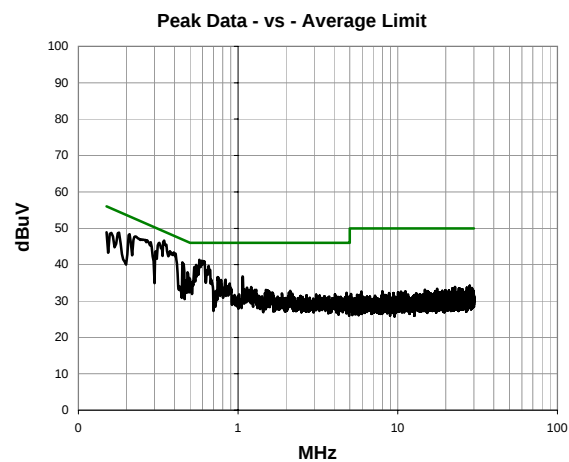
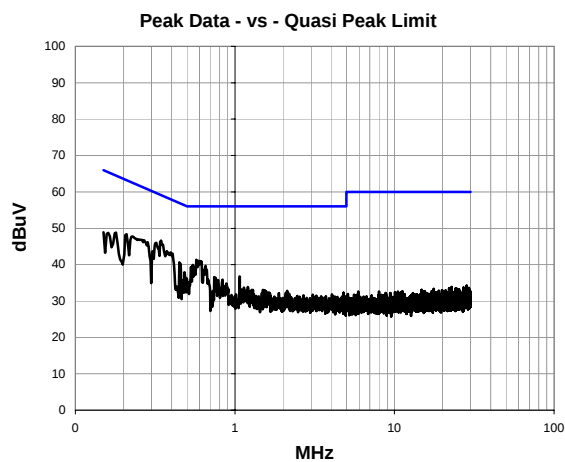
Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.482	22.2	20.1	42.3	46.3	-4.0
0.262	27.0	20.1	47.1	51.4	-4.3
0.348	24.6	20.1	44.7	49.0	-4.3
0.404	23.2	20.1	43.3	47.8	-4.5
0.378	23.4	20.1	43.5	48.3	-4.8
0.225	27.7	20.1	47.8	52.6	-4.8
0.583	20.7	20.1	40.8	46.0	-5.2
0.572	20.6	20.1	40.7	46.0	-5.3
0.236	26.7	20.1	46.8	52.2	-5.4
0.161	29.7	20.1	49.8	55.4	-5.6
0.337	23.3	20.1	43.4	49.3	-5.9
0.601	19.4	20.1	39.5	46.0	-6.5
0.624	18.4	20.1	38.5	46.0	-7.5
0.680	17.4	20.1	37.5	46.0	-8.5
0.665	15.9	20.1	36.0	46.0	-10.0
1.034	15.9	20.1	36.0	46.0	-10.0
0.997	15.3	20.1	35.4	46.0	-10.6
1.008	14.9	20.1	35.0	46.0	-11.0
1.072	14.9	20.1	35.0	46.0	-11.0
0.766	14.2	20.1	34.3	46.0	-11.7

Work Order:	GLBC0141	Date:	08/06/14	
Project:	None	Temperature:	24.4 °C	
Job Site:	OC06	Humidity:	46.4% RH	
Serial Number:	1079-31	Barometric Pres.:	1017 mbar	
EUT:	Remote Controlled Downlight LED Lamp Model #: CD411LC			Tested by: Johnny Candelas
Configuration:	2			
Customer:	Shanghai Qiangling Electronic Co Ltd			
Attendees:	Leon Kogan, Global Certification Technologies, Inc.			
EUT Power:	120VAC/60Hz			
Operating Mode:	Continuously Transmitting, High Channel 26 - 2480 MHz			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.207:2014	ANSI C63.10:2009

Run #	16	Line:	Neutral	Ext. Attenuation:	20	Results	Pass
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Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.344	26.5	20.1	46.6	59.1	-12.5
0.322	25.9	20.1	46.0	59.7	-13.7
0.572	21.2	20.1	41.3	56.0	-14.7
0.228	27.7	20.1	47.8	62.5	-14.7
0.210	28.3	20.1	48.4	63.2	-14.8
0.180	28.7	20.1	48.8	64.5	-15.7
0.545	19.8	20.1	39.9	56.0	-16.1
0.654	19.6	20.1	39.7	56.0	-16.3
0.448	20.5	20.1	40.6	56.9	-16.3
0.531	19.2	20.1	39.3	56.0	-16.7
0.161	28.6	20.1	48.7	65.4	-16.7
0.150	28.8	20.1	48.9	66.0	-17.1
0.482	17.8	20.1	37.9	56.3	-18.4
1.068	16.7	20.1	36.8	56.0	-19.2
0.743	16.5	20.1	36.6	56.0	-19.4
0.497	16.2	20.1	36.3	56.1	-19.8
0.836	15.8	20.1	35.9	56.0	-20.1
0.784	15.7	20.1	35.8	56.0	-20.2
0.467	15.6	20.1	35.7	56.6	-20.9
0.885	14.7	20.1	34.8	56.0	-21.2

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.344	26.5	20.1	46.6	49.1	-2.5
0.322	25.9	20.1	46.0	49.7	-3.7
0.572	21.2	20.1	41.3	46.0	-4.7
0.228	27.7	20.1	47.8	52.5	-4.7
0.210	28.3	20.1	48.4	53.2	-4.8
0.180	28.7	20.1	48.8	54.5	-5.7
0.545	19.8	20.1	39.9	46.0	-6.1
0.654	19.6	20.1	39.7	46.0	-6.3
0.448	20.5	20.1	40.6	46.9	-6.3
0.531	19.2	20.1	39.3	46.0	-6.7
0.161	28.6	20.1	48.7	55.4	-6.7
0.150	28.8	20.1	48.9	56.0	-7.1
0.482	17.8	20.1	37.9	46.3	-8.4
1.068	16.7	20.1	36.8	46.0	-9.2
0.743	16.5	20.1	36.6	46.0	-9.4
0.497	16.2	20.1	36.3	46.1	-9.8
0.836	15.8	20.1	35.9	46.0	-10.1
0.784	15.7	20.1	35.8	46.0	-10.2
0.467	15.6	20.1	35.7	46.6	-10.9
0.885	14.7	20.1	34.8	46.0	-11.2