APPLICATION FOR CERTIFICATION

On Behalf of Philips (China) Investment Co., Ltd. LED Lamp

Model No. : 9290002619

Brand : Philips

FCC ID : O3M9290002619X

Prepared for

Philips (China) Investment Co., Ltd.

No. 9, Lane 888, Tian Lin Road, 200233, Shanghai, China

Prepared by

Audix Technology (Wujiang) Co., Ltd. EMC Dept.

No. 1289 Jiangxing East Road, the Part of Wujiang Economic Development Zone Jiangsu China 215200

> Tel: +86-512-63403993 Fax: +86-512-63403339

Report Number : ACWE-F1308005

Date of Test : Mar.12~13, 2014

Date of Report : Mar.14, 2014

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TEST REPORT CERTIFICATION

Applicant : Philips (China) Investment Co., Ltd.

Manufacturer #1 : Changan Win Channel Electronics Company Limited

Manufacturer #2 : Arts Electronics Co., Ltd.

EUT Description : LED Lamp

FCC ID : O3M9290002619X

(A) Model No. : 9290002619

(B) Brand : Philips

(C) Power Supply : AC 110-130V; 50/60Hz; 6.5W

(D) Test Voltage : AC 120V, 60Hz

Applicable Standards:

FCC RULES AND REGULATIONS PART 15 SUBPART C, Oct. 2012 ANSI C63.4-2003

KDB 558074 D01 DTS Meas Guidance v03

The device described above was tested by Audix Technology (Wujiang) Co., Ltd. EMC Dept. to determine the maximum emission levels emanating from the device. The maximum emission levels were compared to the FCC Part 15 subpart C section 15.207, 15.205, 15.209&15.247 limits.

The measurement results are contained in this test report and Audix Technology (Wujiang) Co., Ltd. EMC Dept. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the FCC limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Wujiang) Co., Ltd. EMC Dept.

Date of Test: Mar.12~13, 2014 Date of Report: Mar.14, 2014

Prepared by : /mma / U

(Emma Hu/Assistant Administrator)

Reviewer : (Jingo Lin/Section Manager)

Approved & Authorized Signer : (Ken Lu/Assistant General Manager)

1. SUMMARY OF MEASUREMENTS AND RESULTS

The EUT has been tested according to the applicable standards and test results are referred as below.

Description of Test Item	Standard	Results
CONDUCTED EMISSION	FCC 47 CFR Part 15 Subpart C/ Section 15.207 And ANSI C63.4-2003 And KDB 558074 D01 DTS Meas Guidance v03	PASS
RADIATED EMISSION	FCC 47 CFR Part 15 Subpart C/ Section 15.209& Section 15.205 And ANSI C63.4-2003 And KDB 558074 D01 DTS Meas Guidance v03	PASS
6 dB BANDWIDTH	FCC 47 CFR Part 15 Subpart C/ Section 15.247(a)(2) And ANSI C63.4-2003 And KDB 558074 D01 DTS Meas Guidance v03	PASS
MAXIMUM PEAK OUTPUT POWER	FCC 47 CFR Part 15 Subpart C/ Section 15.247(b)(3) And ANSI C63.4-2003 And KDB 558074 D01 DTS Meas Guidance v03	PASS
BAND EDGES	FCC 47 CFR Part 15 Subpart C/ Section 15.247(d) And ANSI C63.4-2003 And KDB 558074 D01 DTS Meas Guidance v03	PASS
POWER SPECTRAL DENSITY	FCC 47 CFR Part 15 Subpart C/ Section 15.247(e) And ANSI C63.4-2003 And KDB 558074 D01 DTS Meas Guidance v03	PASS
EMISSION LIMITATIONS	FCC 47 CFR Part 15 Subpart C/ Section 15.247(d) And ANSI C63.4-2003 And KDB 558074 D01 DTS Meas Guidance v03	PASS

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Description LED Lamp

Model No. 9290002619 :

FCC ID O3M9290002619X

Brand Philips :

Applicant Philips (China) Investment Co., Ltd.

No. 9, Lane 888, Tian Lin Road, 200233, Shanghai, China

Manufacturer #1 Changan Win Channel Electronics Company Limited

No.85, Tong Gu Xia Lu, Shangjiao Community, Changan

Town, Dongguan City, Guangdong Province, China

Manufacturer #2 Arts Electronics Co., Ltd.

Shangxing Lu, Shangjiao Community, Changan Town,

Dongguan Guangdong523000 China

Radio Technology IEEE 802.15.4 (ZigBee®)

Antenna Gain -10dBi

Fundamental Range 2405 MHz -2480MHz :

Tested Frequency 2405MHz (CH11) :

> 2450MHz (CH20) 2480MHz (CH26)

Highest Working 2.4GHz

Frequency

PWM Modulation type

Date of Receipt of Sample Mar.12, 2014 :

Date of Test Mar.12~13, 2014

2.2. Description of Test Facility

Name of Firm . Audix Technology (Wujiang) Co., Ltd. EMC Dept.

Site Location . No. 1289 Jiangxing East Road, the Eastern Part of

Wujiang Economic Development Zone

Jiangsu China 215200

Test Facilities . No.1 Conducted Shielding Enclosure

No.1 3m Semi-anechoic Chamber Date of Validity: May. 23, 2015 FCC Registration No.: 897661 IC Registration No.:5183D-2

RF Fully Chamber

NVLAP Lab Code . 200786-0

(NVLAP is a NATA accredited body under Mutual

Recognition Agreement) Valid until on Sep.30, 2014

2.3. Measurement Uncertainty

Test Item	Range Frequency	Uncertainty
Conducted Disturbance Measurement	0.15MHz ~ 30MHz	± 2.48dB
Radiated Disturbance Measurement (At 3m Chamber)	30MHz ~ 1000MHz	± 3.42dB
Radiated Disturbance Measurement (At 3m Chamber)	Above 1GHz	± 4.49dB

Remark: Uncertainty = $ku_c(y)$

Test Item	Uncertainty
6 dB Bandwidth	±82.6 kHz
Maximum Peak Output Power	± 0.88dB
Band Edges	± 0.72dB
Power Spectral Density	± 0.72dB
Emission Limitations	± 0.74dB

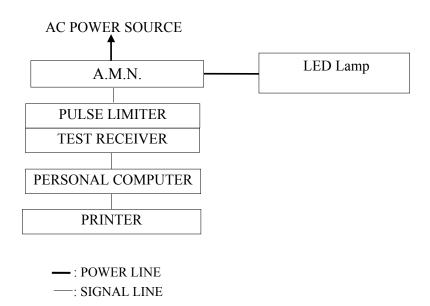
Remark: Uncertainty = $ku_c(y)$

3. CONDUCTED EMISSION MEASUREMET

3.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R & S	ESCI	100839	2014-01-05	2015-01-04
2.	A.M.N.	R & S	ESH2-Z5	100153	2013-05-17	2014-05-16
3.	L.I.S.N	Kyoritsu	KNW-407	8-1793-3	2013-08-06	2014-08-05
4.	Pulse Limiter	R&S	ESH3-Z2	100605	2013-08-06	2014-08-05
5.	RF Cable	Harbour Industries	RG400	003	2013-03-24	2014-03-23

3.2. Block Diagram of Test Setup



3.3. Power line Conducted Emission Limit

3.3.1. Power line Conducted Emission Limit (FCC Part 15, Section 15.207, Class B)

Frequency	Maximum RF Line Voltage		
	Quasi-Peak Level	Average Level	
150kHz ~ 500kHz	$66 \sim 56 \text{ dB}\mu\text{V}$	$56 \sim 46 \; dB \mu V$	
500kHz ~ 5MHz	56 dBμV	46 dBμV	
5MHz ~ 30MHz	60 dBμV	50 dBμV	

Remark1: If the average limit is met when using a Quasi-Peak detector, the EUT shall be deemed to meet both limits and measurement with the average detector is unnecessary.

2: The lower limit applies at the band edges.

3.4. Test Procedure

The measuring process is according to ANSI C63.4-2003 and laboratory internal procedure TKC-301-015. (For FCC Part15 Subpart C)

In the conducted emission measurement, the EUT and all peripheral devices were set up on a non-metallic table which was 0.8 meters height above the ground plane, and 0.4 meters far away from the vertical plane. The EUT (installed in PC system) was powered by AC mains through Artificial Mains Network (A.M.N), other peripheral devices were powered by AC mains through the second Line Impedance Stabilization Network (L.I.S.N). For the measurement, the A.M.N measuring port was terminated by a 50Ω measuring equipment and the second L.I.S.N measuring port was terminated by a 50Ω resistive load. All measurements were done on the phase and neutral line of the EUT's power cord. All cables or wires placement were verified to find out the maximum emission.

The bandwidth of measuring receiver was set at 9 kHz.

The required frequency band (0.15 MHz \sim 30 MHz) was pre-scanned with peak detector, the final measurement was measured with quasi-peak detector and average detector. (If the average limit is met when using a quasi-peak detector, the average detector is necessary).

The emission level is calculated automatically by the test system which uses the following equation:

Emission level ($dB\mu V$) = Meter-Reading ($dB\mu V$) + A.M.N factor (dB) + Cable loss (dB). (Cable loss include pulse limiter loss)

3.5. Conducted Emission Measurement Results

3.5.1. Conducted Emission Measurement Results (For FCC Part15 Subpart C)

PASSED.

(All the emissions not reported below are too low against the prescribed limits.)

EUT was performed during this section testing and all the test results are attached in next pages.

Test Date: Mar.13, 2014 Temperature: 18.9°C Humidity: 47%

Mode	Test Condition	Reference Test Data No.			
	Test Condition	Neutral	Line		
1	CH 11	# 5	# 6		
2	CH 20	%#7	#8		
3	СН 26	# 9	# 10		

NOTE 1- 'X' means the worst test mode.

NOTE 2- The worst emission is detected at 0.38 MHz with emission level of 42.35 dB (μ V) and with QP detector (Limit is 58.28 dB (μ V)), when the Neutral of the EUT is connected to AMN.



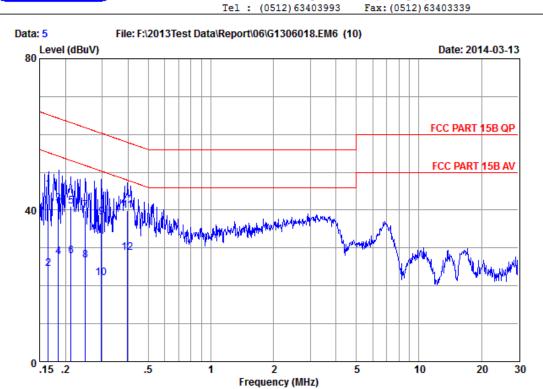
Audix Technology (Wu Jiang) Co., Ltd No.1289, Jiang Xing East Road, The Eastern Part of WuJiang Economic Development Zone, JiangSu, China

Data no.

Phase

NEUTRAL

Engineer : KM Tong



No.1 Conducted shielding Enclosure ESH2-Z5-1305 FCC PART 15B QP 18.9*C&47%/ESCI LED Lamp 9290002619 Site no. AMN/LISN

Limit Env. / Ins. EUT

M/N Power Rating : 120Vac/60Hz Test mode CH11

	Freq.	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.17	0.18	9.86	35.40	45.44	65.21	19.77	QP
2	0.17	0.18	9.86	14.50	24.54	55.21	30.67	Average
3	0.19	0.18	9.87	31.60	41.65	64.26	22.61	QP
4	0.19	0.18	9.87	17.60	27.65	54.26	26.61	Average
5	0.21	0.18	9.87	30.90	40.95	63.13	22.18	QP -
6	0.21	0.18	9.87	17.90	27.95	53.13	25.18	Äverage
7	0.25	0.18	9.86	29.81	39.85	61.79	21.94	OP
8	0.25	0.18	9.86	16.71	26.75	51.79	25.04	Äverage
9	0.30	0.18	9.86	28.00	38.04	60.33	22.29	OP
10	0.30	0.18	9.86	12.00	22.04	50.33	28.29	Äverage
11	0.40	0.19	9.87	29.89	39.95	57.92	17.97	QP
12	0.40	0.19	9.87	18.79	28.85	47.92	19.07	Äverage

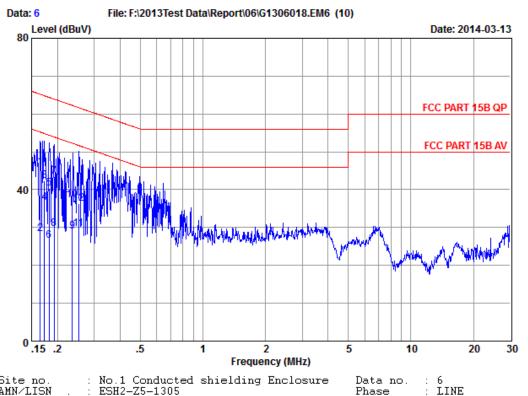
^{1.}Emission Level= AMN Factor + Cable Loss + Reading.

^{2.} If the average limit is met when useing a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



> Data no. Phase

Engineer : KM Tong



No.1 Conducted shielding Enclosure ESH2-Z5-1305 FCC PART 15B QP 18.9*C&47%/ESCI Site no. AMN/LISN Limit Env. / Ins. LED Lamp 9290002619 EUT M/N

Power Rating : 120Vac/60Hz Test mode CH11 Memo

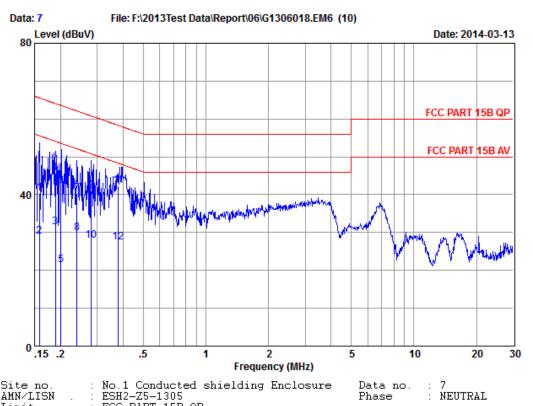
	Freq.	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.17	0.23	9.86	35.81	45.90	65.21	19.31	QP
2 3	0.17 0.17	0.23 0.23	9.86 9.87	18.31 32.30	28.40 42.40	55.21 64.82	26.81 22.42	Average OP
4	0.17	0.23	9.87	26.50	36.60	54.82	18.22	Qr Average
5	0.18	0.24	9.87	30.19	40.30	64.39	24.09	OP
Ğ.	0.18	0.24	9.87	16.49	26.60	54.39	27.79	Average
7	0.19	0.24	9.87	33.40	43.51	63.91	20.40	QP
8	0.19	0.24	9.87	19.60	29.71	53.91	24.20	Average
9	0.24	0.25	9.87	18.90	29.02	52.24	23.22	Average
10	0.24	0.25	9.87	27.00	37.12	62.24	25.12	QP
11	0.25	0.26	9.86	19.60	29.72	51.66	21.94	Average
12	0.25	0.26	9.86	26.20	36.32	61.66	25.34	QP

^{1.}Emission Level= AMN Factor + Cable Loss + Reading.
2.If the average limit is met when useing a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



Phase

Engineer : KM Tong



No.1 Conducted shielding Enclosure ESH2-Z5-1305 FCC PART 15B QP 18.9*C&47%/ESCI Site no. AMN/LISN . Limit Env. / Ins. LED Lamp 9290002619 EUT M/N

Power Rating : 120Vac/60Hz

Test mode CH20 Memo

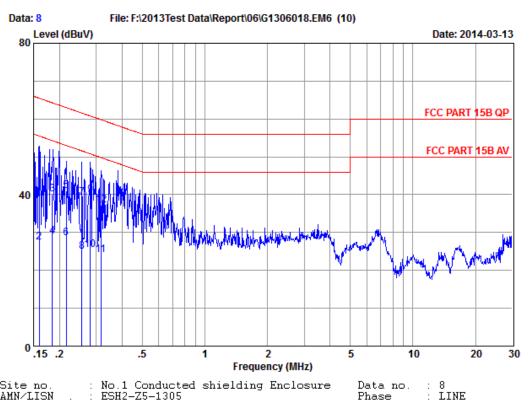
	Freq.	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1 2 3 4 5 6 7 8 9	0.16 0.19 0.19 0.20 0.20 0.24 0.24 0.28	0.18 0.18 0.18 0.18 0.18 0.18 0.18 0.18	9.86 9.87 9.87 9.87 9.87 9.87 9.87 9.86	30.20 18.90 21.30 35.60 11.30 32.20 30.30 19.90 30.91	40.24 28.94 31.35 45.65 21.35 42.25 40.35 29.95 40.95 27.75	65.57 55.57 54.08 64.08 53.57 62.10 52.10 60.82 50.82	25.33 26.63 22.73 18.43 32.22 21.32 21.75 22.15 19.87 23.07	QP Average Average QP Average QP QP Average QP Average QP Average
11 12	0.38 0.38	0.19 0.19	9.86 9.86	32.30 17.30	42.35 27.35	58.28 48.28	15.93 20.93	QP Average

^{1.}Emission Level= AMN Factor + Cable Loss + Reading.
2.If the average limit is met when useing a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



> Data no. Phase

Engineer : KM Tong



No.1 Conducted shielding Enclosure ESH2-Z5-1305 FCC PART 15B QP 18.9*C&47%/ESCI Site no. AMN/LISN Limit Env. / Ins. LED Lamp 9290002619 EUT

M/N Power Rating : 120Vac/60Hz Test mode CH20 Memo

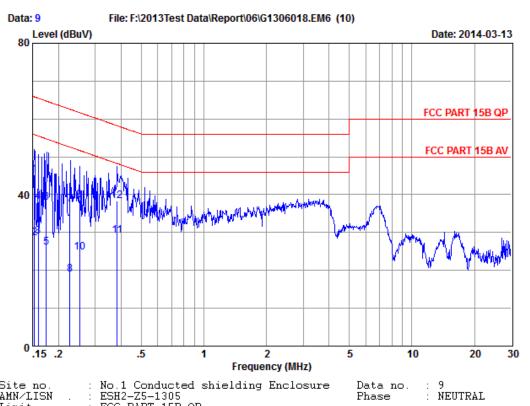
	Freq.	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1 2 3 4 5 6 7 8 9 10 11	0.16 0.19 0.19 0.22 0.22 0.26 0.28 0.28 0.32 0.32	0.23 0.23 0.24 0.24 0.24 0.26 0.26 0.26 0.27	9.86 9.87 9.87 9.87 9.87 9.86 9.86 9.86 9.86	28.70 17.30 29.89 18.79 30.80 18.40 29.20 14.80 29.80 15.20 14.00 27.00	38.79 27.39 40.00 28.90 40.91 28.51 39.32 24.92 25.32 24.13 37.13	65.46 64.26 64.26 63.01 61.56 51.56 60.79 49.81 59.81	26.67 28.07 24.26 25.36 22.10 24.50 22.24 26.64 20.87 25.47 25.68 22.68	QP Average QP Average QP Average QP Average QP Average QP Average Average

^{1.}Emission Level= AMN Factor + Cable Loss + Reading.
2.If the average limit is met when useing a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



> Data no. Phase

Engineer : KM Tong



No.1 Conducted shielding Enclosure ESH2-Z5-1305 FCC PART 15B QP 18.9*C&47%/ESCI Site no. AMN/LISN Limit Env. / Ins. LED Lamp 9290002619 EUT

M/N Power Rating : 120Vac/60Hz

Test mode CH26 Memo

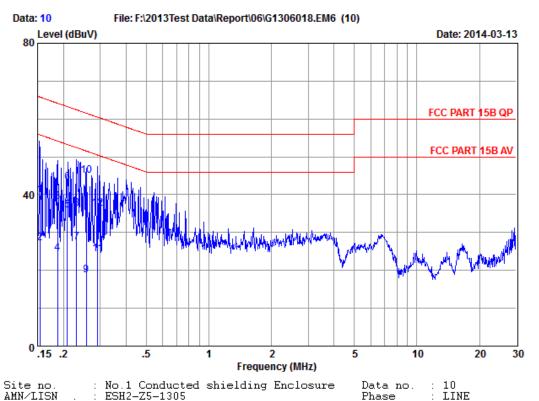
	Freq.	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1 2 3	0.15 0.15 0.16	0.18 0.18 0.18	9.86 9.86 9.86	35.10 18.40 19.00	45.14 28.44 29.04	65.84 55.84 55.46	20.70 27.40 26.42	QP Average Average
4	0.16 0.18	0.18 0.18	9.86 9.87	28.10 16.10	38.14 26.15	65.46 54.72	27.32 28.57	QP Average
6	0.18	0.18 0.18	9.87 9.87	27.90	37.95 37.45	64.72	26.77 25.11	QP
8	0.23	0.18	9.87	27.40 8.90	18.95	62.56 52.56	33.61	QP Average
9 10 11	0.25 0.25 0.38	0.18 0.18 0.19	9.86 9.86 9.86	28.41 14.81 19.10	38.45 24.85 29.15	61.69 51.69 48.21	23.24 26.84 19.06	QP Average Average
12	0.38	0.19	9.86	28.20	38.25	58.21	19.96	QP

^{1.}Emission Level= AMN Factor + Cable Loss + Reading.
2.If the average limit is met when useing a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



> Data no. Phase

Engineer : KM Tong



No.1 Conducted shielding Enclosure ESH2-Z5-1305 FCC PART 15B QP 18.9*C&47%/ESCI Site no. AMN/LISN Limit Env. / Ins. LED Lamp 9290002619 EUT M/N

Power Rating : 120Vac/60Hz Test mode CH26

Memo

	Freq.	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1 2 3 4 5 6 7 8	0.15 0.15 0.19 0.19 0.21 0.21 0.23 0.23	0.23 0.23 0.24 0.24 0.24 0.24 0.25	9.86 9.86 9.87 9.87 9.87 9.87 9.87	29.70 17.00 28.00 14.40 25.70 33.20 17.20 26.10	39.79 27.09 38.11 24.51 35.81 43.31 27.32 36.22	65.78 55.78 64.17 54.17 53.24 63.24 52.41 62.41	25.99 28.69 26.06 29.66 17.43 19.93 25.09 26.19	QP Average QP Average Average QP Average QP
9 10 11 12	0.26 0.26 0.29 0.29	0.26 0.26 0.26 0.26	9.86 9.86 9.86 9.86	8.60 34.80 14.11 26.11	18.72 44.92 24.23 36.23	51.53 61.53 50.47 60.47	32.81 16.61 26.24 24.24	Average QP Average QP

^{1.}Emission Level= AMN Factor + Cable Loss + Reading.
2.If the average limit is met when useing a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

4. RADIATED EMISSION MEASUREMENT

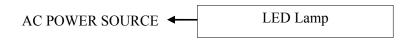
4.1. Test Equipment

The following test equipment was used during the radiated emission measurement: At 3m Semi-Anechoic Chamber

Item	Туре	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Preamplifier	Agilent	8449B	2944A10921	2013-08-14	2014-08-13
2.	Preamplifier	Agilent	8447D	2944A10921	2013-08-14	2014-08-13
3.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2013-06-24	2014-06-23
4.	Bi-log Antenna	Schaffner	CBL6112D	22253	2013-05-30	2014-05-29
5.	Horn Antenna	EMCO	3115	00062593	2013-05-28	2014-05-27
6.	Test Receiver	R&S	ESCI	100361	2014-01-05	2015-01-04
7.	RF Cable #1	Yuhang CSYH	cable-3m	001(0.5m)	2013-08-13	2014-08-12
8.	RF Cable #2	Yuhang CSYH	cable-3m	002(0.5m)	2013-08-13	2014-08-12
9.	RF Cable #3	Yuhang CSYH	cable-3m	003(3.0m)	2013-08-13	2014-08-12

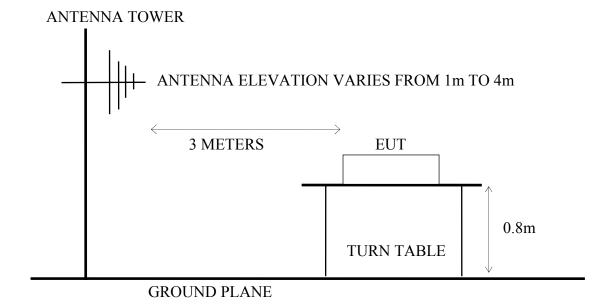
4.2. Block Diagram of Test Setup

4.2.1. Block Diagram of Test Setup between EUT and simulators

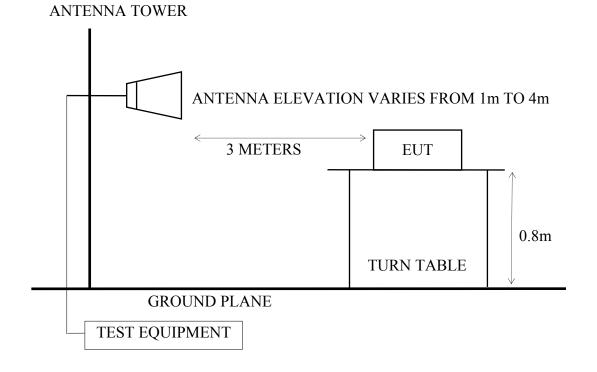


-: POWER LINE

4.2.2. No. 1 3m Semi-Anechoic Chamber Setup Diagram (Test distance:3m) for 30-1000MHz



4.2.3. No. 1 3m Semi-Anechoic Chamber Setup Diagram (Test distance: 3m) for above 1GHz



4.3. Radiated Emission Limits

Radiated Emission Limits	(FCC Part15 C, section 1	5.209, CISPR22)
--------------------------	--------------------------	-----------------

Frequency	Distance Meters	Field Strengths Limits			
MHz	Distance Meters	dBμV/m			
30 ~ 230	10	30.0			
230 ~ 1000	10	37.0			
Above 1000	2	74.0 dBμV/m (Peak)			
Above 1000	3	54.0 dBμV/m (Average)			

Remark: (1) Emission level ($dB\mu V/m$) = 20 log Emission level ($\mu V/m$)

(2) The tighter limit applies at the edge between two frequency bands.

4.4. Test Procedure

The measuring process is according to ANSI C63.4-2003 and laboratory internal procedure TKC-301-024. (For FCC Part15 Subpart C)

In the radiated disturbance measurement, the EUT and all simulators were set up on a non-metallic turn table which was 0.8 meters above the ground plane. Measurement distance between EUT and receiving antennas was set at 10 meters at 30MHz~1000MHz and 3 meters at above 1GHz. The specified distance is the distance between the antennas and the closest periphery of EUT. During the radiated measurement, the EUT was rotated 360° and receiving antennas were moved from 1 ~ 4 meters for finding maximum emission. Two receiving antennas were used for both horizontal and vertical polarization detection for 30MHz~1GHz, One receiving antennas was used for both horizontal and vertical polarization detection for above 1GHz (the absorbing material was added when testing of above 1GHz was done). All cables or wires placement were verified to find out the maximum emission.

The bandwidth of measuring receiver (or spectrum analyzer) was set to:

RBW (120 kHz), VBW (300 kHz) for QP detector below 1GHz RBW (1 MHz), VBW (1MHz) for Peak detector above 1GHz RBW (1 MHz), VBW (10 Hz) for AV detector above 1GHz

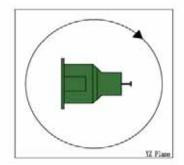
The required frequency band (30 MHz \sim 12000 MHz) was pre-scanned with peak detector; all final measurements were measured with quasi-peak detector below 1GHz, measured with average detector and peak detector above 1GHz.

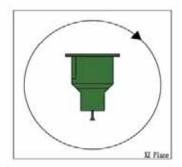
The emission level is calculated automatically by the test system which uses the following equation:

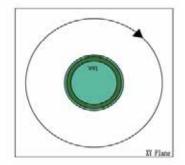
- 1. For 30-1000MHz measurement: Emission Level (dB μ V/m) = Meter-Reading (dB μ V)+Antenna Factor (dB/m)+Cable Loss (dB)
- 2. For Above 1GHz measurement: Emission Level ($dB\mu V/m$) = Meter-Reading ($dB\mu V$)+Antenna Factor (dB/m)+Cable Loss(dB)
 -Pre-amplifier factor (dB)

4.5. Assessment In All Three Orthogonal Planes

The position of EUT relative to in all three orthogonal plans in the radiated test, as below







After assessment in all three orthogonal planes, when choosing Channel11 test in the radiation, found that XY plan is the worst mode, so in the test of radiation, all with XY plan model test, refer to the following specific data.

Test Mode:XY Plan

	Етадианах	Reading	Antenna	Cable	Preamp	Emission	Limits	Marain	
Polarization	Frequency (MHz)	dB	Factor	Loss	Factor	Level dB	dB	Margin	Remark
		(µV)	(dB/m)	(dB)	(dB)	$(\mu V/m)$	$(\mu V/m)$	(dB)	
Horizontal	2404.55	96.27	28.21	5.92	35.07	95.33	74.00	-21.33	Peak
Vertical	2404.61	94.83	28.21	5.92	35.07	93.89	74.00	-19.89	Peak

Test Mode:XZ Plan

	Frequency (MHz)	Reading	Antenna	Cable	Preamp	Emission	Limits	Morgin	
Polarization		dB	Factor	Loss	Factor	Level dB	dB	Margin (dB)	Remark
		(µV)	(dB/m)	(dB)	(dB)	$(\mu V/m)$	$(\mu V/m)$	(ub)	
Horizontal	2405.54	95.15	28.21	5.92	35.07	94.21	74.00	-20.21	Peak
Vertical	2404.58	94.15	28.21	5.92	35.07	93.21	74.00	-19.21	Peak

Test Mode:YZ Plan

	Frequency	Reading	Antenna	Cable	Preamp	Emission	Limits	Margin	
Polarization	(MHz)	dB	Factor	Loss	Factor	Level dB	dB	(dB)	Remark
		(µV)	(dB/m)	(dB)	(dB)	$(\mu V/m)$	$(\mu V/m)$	(ub)	
Horizontal	2404.58	95.16	28.21	5.92	35.07	94.22	74.00	-20.22	Peak
Vertical	2404.55	94.16	28.21	5.92	35.07	93.22	74.00	-19.22	Peak

4.6. Measurement Results

PASSED

(All the emissions not reported below are too low against the prescribed limits.)

4.6.1. For Restricted Bands:

The EUT was tested in restricted bands and all the test results are listed in section 4.6 & 4.7. (The restricted bands defined in part 15.205(a))

For Frequency range: below 1GHz

No	Tast Mada a	Test Mode and Frequency			
No.	rest wrode a	nd Frequency	Horizontal	Vertical	
1.		2405MHz (Channel 11)	# 5	# 6	
2.	Transmitting	2450MHz (Channel 20)	# 7	# 8	
3.		2480MHz (Channel 26)	# 9	# 10	
4.	Receiving		# 11	# 12	

For Frequency range: above 1GHz

Ma	Test Mede a	Test Mode and Frequency				
No.	Test Mode a	nd Frequency	Horizontal	Vertical		
1.		2405MHz (Channel 11)	# 13	# 14		
2.	Transmitting	2450MHz (Channel 20)	# 15	# 16		
3.		2480MHz (Channel 26)	# 17	# 18		
4.	Receiving		# 19	# 20		

4.6.2. For Band Edge Emission

The EUT was tested in restricted bands and all the test results are listed in section 4.8. The restricted bands defined in part 15.205(a))

No.	T4 M- 1	Reference Test Data No.		
	Test Mode a	Horizontal	Vertical	
1.		2405MHz (Channel 11)	# 21# 23	# 22# 24
2.	Transmitting	2480MHz (Channel 26)	# 25 # 27	# 26 # 28

4.7. Restricted Bands Measurement Results (For Below 1GHz)



Audix Technology (Wujiang) Co., Ltd.

No.1289, Jiang King East Road, The Eastern Part of Wu Jiang

Economic Development Zone, JiangSu, China

Tel: (0512) 63403993 Fax: (0512) 63403993

: 3m Semi-Anechoic Chamber Site NO.

Data NO. : 5 Ant. pol. : HORIZONTAL Dis. / Ant. : 3m 6112D(22253)-1305-3M Limit : FCC PART 15 CLASS B Env. / Ins. : 17.6*C&39%/ESCI Engineer : boqiang_li

EUT : LED Lamp : 9290002619 M/N Power Rating: 120Vac/60Hz Test Mode : TX CH11 2405MHz

Memo

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)		on Limits (dBuV/m)	Margin (dB)	Remark
1 2 3 4 5	133.79 145.60 218.18 296.75 369.50	12.50 11.40 10.70 13.90 15.70	0.75 0.81 1.06 1.33 1.42	49.90 49.20 46.68 49.80 44.91	26.90 26.84 26.52 26.38 26.78	36.25 34.57 31.92 38.65 35.25	43.50 43.50 46.00 46.00 46.00	7.25 8.93 14.08 7.35 10.75	QP QP QP QP QP
6	451.95	17.30	1.42	44.91	26.78	35.25	46.00 46.00	14.22	QP QP

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.

2. The emission levels that are 20dB below the official limit are not reported.



Audix Technology (Wujiang) Co., Ltd.

No.1289, Jiang Xing East Road, The Eastern Part of Wu Jiang Economic Development Zone, JiangSu, China

Tel: (0512) 63403993 Fax: (0512) 63403993

Data NO. : 6 Site NO. : 3m Semi-Anechoic Chamber

Dis. / Ant. : 3m 6112D(22253)-1305-3M Limit : FCC PART 15 CLASS B Ant. pol. : VERTICAL Env. / Ins. : 17.6*C&39%/ESCI Engineer : boqiang_li

: LED Lamp EUT : 9290002619 M/N Power Rating: 120Vac/60Hz Test Mode : TX CH11 2405MHz

Memo

Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)		on Limits (dBuV/m)	Margin (dB)	Remark
1 44.86	10.70	0.42	50.15	27.42	33.85	40.00	6.15	QP
2 129.91	12.80	0.75	47.58	26.92	34.21	43.50	9.29	QP
3 144.46	11.60	0.81	50.00	26.85	35.56	43.50	7.94	QP
4 187.14	9.80	1.02	48.55	26.63	32.74	43.50	10.76	QP
5 300.63	14.00	1.32	46.91	26.40	35.83	46.00	10.17	QP
6 385.02	16.10	1.53	45.14	26.89	35.88	46.00	10.12	OP

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor. 2. The emission levels that are 20dB below the official



Audix Technology(Wujiang)Co.,Ltd.

No.1289, Jiang Xing East Road, The Eastern Part of Wu Jiang

Economic Development Zone, JiangSu, China

Tel: (0512) 63403993 Fax: (0512) 63403993

: 3m Semi-Anechoic Chamber

Data NO. : 7 Ant. pol. : HORIZONTAL Dis. / Ant. : 3m 6112D(22253)-1305-3M
Limit : FCC PART 15 CLASS B
Env. / Ins. : 17.6*C&39%/ESCI
EUT : LED Lamp
M/N : 9290002619 Engineer : boqiang_li

Power Rating: 120Vac/60Hz
Twest Mode: TX CH20 2450MHz

Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)		on Limits (dBuV/m)	Margin (dB)	Remark
1 105.66	12.00	0.57	44.46	27.04	29.99	43.50	13.51	QP
2 130.68	12.80	0.74	49.80	26.92	36.42	43.50	7.08	QP
3 146.28	11.40	0.82	48.80	26.84	34.18	43.50	9.32	QP
4 233.70	11.50	1.06	45.40	26.48	31.48	46.00	14.52	QP
5 288.99	13.70	1.26	49.16	26.34	37.78	46.00	8.22	QP
6 381.14	15.90	1.40	44.38	26.86	34.82	46.00	11.18	OP

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.

2. The emission levels that are 20dB below the official

limit are not reported.



Audix Technology(Wujiang)Co.,Ltd.

No.1289, Jiang King East Road, The Eastern Part of Wu Jiang

Economic Development Zone, JiangSu, China Tel: (0512) 63403993 Fax: (0512) 63403993

: 3m Semi-Anechoic Chamber Site NO.

Data NO. : 8 Ant. pol. : VERTICAL Dis. / Ant. : 3m 6112D(22253)-1305-3M Limit : FCC PART 15 CLASS B Env. / Ins. : 17.6*C&39%/ESCI EUT : LED Lamp Engineer : boqiang_li

: LED Lamp : 9290002619 M/N Power Rating: 120Vac/60Hz Test Mode : TX CH20 2450MHz

Memo

Freq (MHz)	Ant. Factor		Reading (dBuV)	Preamp Factor (dB)		on Limits (dBuV/m)	Margin (dB)	Remark
1 44. 2 128. 3 145. 4 184. 5 303. 6 381.	94 12.90 43 11.40 23 9.80 54 14.07	0.75 0.81 1.05 1.32	49.39 46.53 49.19 48.22 45.75 45.33	27.42 26.93 26.84 26.65 26.41 26.86	33.99 33.25 34.56 32.42 34.73 35.77	40.00 43.50 43.50 43.50 46.00 46.00	6.01 10.25 8.94 11.08 11.27 10.23	QP QP QP QP QP OP

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor. 2. The emission levels that are 20dB below the official



Audix Technology(Wujiang)Co.,Ltd.

No.1289, Jiang Xing East Road, The Eastern Part of Wu Jiang

Economic Development Zone, JiangSu, China

Fax: (0512) 63403993 Tel: (0512) 63403993

: 3m Semi-Anechoic Chamber

Data NO. : 9 Ant. pol. : HORIZONTAL Dis. / Ant. : 3m 6112D(22253)-1305-3M Limit : FCC PART 15 CLASS B Env. / Ins. : 17.6*C&39%/ESCI Engineer : boqiang_li

: LED Lamp : 9290002619 EUT M/N Power Rating: 120Vac/60Hz Test Mode : TX CH26 2480MHz

_	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)		n Limits (dBuV/m)	Margin (dB)	Remark
1 2 3 4 5 6	40.67 106.63 130.64 144.46 215.27 295.78	13.90 12.20 12.80 11.60 10.40 13.90	0.32 0.59 0.74 0.81 0.99 1.34	39.43 44.42 49.90 52.30 46.64 49.72	27.45 27.04 26.92 26.85 26.53 26.37	26.20 30.17 36.52 37.86 31.50 38.59	40.00 43.50 43.50 43.50 43.50 46.00	13.80 13.33 6.98 5.64 12.00 7.41	QP QP QP QP QP QP
7	385.02	16.10	1.53	44.73	26.89	35.47	46.00	10.53	QP

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.

2. The emission levels that are 20dB below the official

limit are not reported.



Audix Technology(Wujiang)Co.,Ltd. No.1289, Jiang Xing East Road, The Eastern Part of Wu Jiang Economic Development Zone, JiangSu, China

Tel: (0512) 63403993 Fax: (0512) 63403993

Data NO. : 10 Ant. pol. : VERTICAL : 3m Semi-Anechoic Chamber

Dis. / Ant. : 3m 6112D(22253)-1305-3M Limit : FCC PART 15 CLASS B Env. / Ins. : 17.6*C&39%/ESCI Engineer : boqiang_li

EUT : LED Lamp : 9290002619 M/N Power Rating: 120Vac/60Hz Test Mode : TX CH26 2480MHz

Memo

_	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)			Margin (dB)	Remark
1 2 3 4 5	44.10 129.91 145.43 184.23 292.87	11.60 12.80 11.40 9.80 13.80	0.42 0.75 0.81 1.05 1.33	49.79 46.70 48.71 47.69 46.02	27.42 26.92 26.84 26.65 26.36	34.39 33.33 34.08 31.89 34.79	40.00 43.50 43.50 43.50 46.00	5.61 10.17 9.42 11.61 11.21	QP QP QP QP QP
6	381.14	15.90	1.40	44.41	26.86	34.85	46.00	11.15	QP

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor. 2. The emission levels that are 20dB below the official

Data NO. : 11 Ant. pol. : HORIZONTAL

Engineer : boqiang_li



Audix Technology(Wujiang)Co.,Ltd.

No.1289, Jiang Xing East Road, The Eastern Part of Wu Jiang

Economic Development Zone, JiangSu, China

Fax: (0512) 63403993 Tel: (0512) 63403993

: 3m Semi-Anechoic Chamber

Dis. / Ant. : 3m 6112D(22253)-1305-3M Limit : FCC PART 15 CLASS B Env. / Ins. : 17.6*C&39%/ESCI

: LED Lamp EUT : 9290002619 M/N Power Rating: 120Vac/60Hz Test Mode : RX

Memo

Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)		on Limits (dBuV/m)	Margin (dB)	Remark
1 109.54		0.67	44.15	27.02	30.20	43.50	13.30	QP
2 130.82		0.74	50.10	26.92	36.72	43.50	6.78	QP
3 144.46		0.81	52.48	26.85	38.04	43.50	5.46	QP
4 215.27		0.99	46.44	26.53	31.30	43.50	12.20	QP
5 288.99		1.26	49.83	26.34	38.45	46.00	7.55	QP
6 385.99		1.55	44.14	26.90	34.96	46.00	11.04	QP

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.

2. The emission levels that are 20dB below the official

limit are not reported.



Audix Technology(Wujiang)Co.,Ltd.

No.1289, Jiang Xing East Road, The Eastern Part of Wu Jiang

Data NO. : 12 Ant. pol. : VERTICAL

Engineer : boqiang_li

Economic Development Zone, JiangSu, China Tel: (0512) 63403993 Fax: (0512) 63403993

Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 6112D(22253)-1305-3M
Limit : FCC PART 15 CLASS B
Env. / Ins. : 17.6*C&39%/ESCI
EUT : LED Lamp EUT

: LED Lamp : 9290002619 M/N Power Rating: 120Vac/60Hz

Test Mode : RX Memo

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)		on Limits (dBuV∕m)	Margin (dB)	Remark
1 2	44.98 128.94	10.70 12.90	0.42 0.75	50.29 46.71	27.42 26.93	33.99 33.43	40.00 43.50	6.01 10.07	QP QP
3	145.43	11.40	0.81	48.79	26.84	34.16	43.50	9.34	QP
4	187.14	9.80	1.02	48.17	26.63	32.36	43.50	11.14	QP
5 6	304.51 374.35	14.07 15.80	1.30 1.43	46.35 45.70	26.42 26.81	35.30 36.12	46.00 46.00	10.70 9.88	QP QP

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.

2. The emission levels that are 20dB below the official limit are not reported.

4.8. Restricted Bands Measurement Results (For Above 1GHz)



Audix Technology (Wujiang) Co., Ltd. No.1289, Jiang Xing East Road, The Eastern Part of Wu Jiang Economic Development Zone, JiangSu, China

Engineer : boqiang_li

Tel: (0512) 63403993 Fax: (0512) 63403993

Site NO. : 3m Semi-Anechoic Chamber

Data NO. : 13 Ant. pol. : HORIZONTAL t. : 3m 3115-62593-130528 : FCC PART 15 C PK Dis. / Ant. : 3m Limit : FCC

Env. / Ins. : 17.6*C&39%/N9030A EUT : LED Lamp

M/N : 9290002619 Power Rating: 120Vac/60Hz : TX CH11 2405MHz Test Mode

Memo

(MHz) (dB) (dBuV) (dB) (dBuV/m (dBuV/m) (dB)	
2 4809.34 32.86 9.10 40.59 34.52 48.03 54.00 5.97 3 3 7215.00 36.00 11.36 33.93 34.63 46.66 74.00 27.34 8 4 7916.00 37.03 12.04 34.04 34.65 48.46 74.00 25.54 8 5 9620.00 37.77 13.53 27.95 34.42 44.83 74.00 29.17 8 6 12025.00 39.40 14.83 27.89 34.09 48.03 74.00 25.97 8	eak Verage eak eak eak eak

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.

2. The emission levels that are 20dB below the official

limit are not reported.



Audix Technology (Wujiang) Co., Ltd. No.1289, Jiang Xing East Road, The Eastern Part of Wu Jiang Economic Development Zone, JiangSu, China Tel: (0512) 63403993 Fax: (0512) 63403993

Data NO. : 14 Ant. pol. : VERTICAL Site NO. : 3m Semi-Anechoic Chamber Dis. / Ant. : 3m 3115-62593-130528 Limit : FCC PART 15 C PK Limit Engineer : boqiang_li

Env. / Ins. : 17.6*C&39%/N9030A EUT : LED Lamp M/N: 9290002619 Power Rating: 120Vac/60Hz : TX CH11 2405MHz Test Mode

Memo

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)		on Limits (dBuV/m)	Margin (dB)	Remark
_	4809.34 7215.00 7888.00	32.86 32.86 36.00 37.01 37.77 39.40 39.95	9.10 9.10 11.36 11.81 13.53 14.83 15.53	48.20 40.92 34.38 33.01 29.52 28.07 27.55	34.52 34.52 34.63 34.65 34.42 34.09 32.64	55.64 48.36 47.11 47.18 46.40 48.21 50.39	74.00 54.00 74.00 74.00 74.00 74.00 74.00	18.36 5.64 26.89 26.82 27.60 25.79 23.61	Peak Average Peak Peak Peak Peak Peak

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.

2. The emission levels that are 20dB below the official limit are not reported.



Audix Technology (Wujiang) Co., Ltd.

No.1289, Jiang Xing East Road, The Eastern Part of Wu Jiang

Economic Development Zone, JiangSu, China

Tel: (0512) 63403993 Fax: (0512) 63403993

: 3m Semi-Anechoic Chamber

Data NO. : 15 Ant. pol. : HORIZONTAL Dis. / Ant.: 3m 3115-62593-130528 Limit : FCC PART 15 C PK Env. / Ins.: 17.6*C&39%/N9030A EUT : LED Lamp Engineer : boqiang_li

: 9290002619 M/N Power Rating: 120Vac/60Hz Test Mode : TX CH20 2450MHz

Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)		on Limits (dBuV/m)	Margin (dB)	Remark
1 4899.49 2 4906.00 3 7350.00 4 9092.00 5 9800.00 6 12250.00 7 12830.00	33.03 33.03 36.28 37.78 37.88 39.25	9.19 9.19 11.33 12.68 13.90 14.80 15.45	36.02 42.49 34.51 35.73 32.26 27.21 29.28	34.49 34.63 34.56 34.37 33.69 32.69	43.75 50.22 47.49 51.63 49.67 47.57 51.90	54.00 74.00 74.00 74.00 74.00 74.00 74.00	10.25 23.78 26.51 22.37 24.33 26.43 22.10	Average Peak Peak Peak Peak Peak Peak

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.

2. The emission levels that are 20dB below the official

limit are not reported.



Audix Technology (Wujiang) Co., Ltd.

No.1289, Jiang Xing East Road, The Eastern Part of Wu Jiang Economic Development Zone, JiangSu, China

Fax: (0512) 63403993 Tel: (0512)63403993

Data NO. : 16 Ant. pol. : VERTICAL Site NO. : 3m Semi-Anechoic Chamber Dis. / Ant. : 3m 3115-62593-130528 Limit : FCC PART 15 C PK Env. / Ins. : 17.6*C&39%/N9030A Engineer : boqiang_li

: LED Lamp EUT : 9290002619 M/N Power Rating: 120Vac/60Hz
Twest Mode: TX CH20 2450MHz

	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)		on Limits (dBuV/m)	Margin (dB)	Remark
_	4906.00 7350.00 9148.00	33.03 33.03 36.28 37.77 37.88 39.25 39.61	9.19 9.19 11.33 12.71 13.90 14.80 15.34	40.43 44.57 34.95 33.87 31.97 27.95 29.22	34.49 34.49 34.63 34.54 34.37 33.69 32.86	48.16 52.30 47.93 49.81 49.38 48.31 51.31	54.00 74.00 74.00 74.00 74.00 74.00 74.00	5.84 21.70 26.07 24.19 24.62 25.69 22.69	Average Peak Peak Peak Peak Peak Peak

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.

2. The emission levels that are 20dB below the official



Audix Technology (Wujiang) Co., Ltd.

No.1289, Jiang Xing East Road, The Eastern Part of Wu Jiang Economic Development Zone, JiangSu, China

Tel: (0512) 63403993 Fax: (0512) 63403993

: 3m Semi-Anechoic Chamber

Data NO. : 17 Ant. pol. : HORIZONTAL Engineer : boqiang_li

Power Rating: 120Vac/60Hz
Test Mode: TX CH26 2480MHz

(MHz) (dB) (dB) (dBuV) (dB) (dBuV/m (dBuV/m) (dB)	rk
1 4959.57 33.13 9.21 37.17 34.48 45.03 54.00 8.97 Aver 2 4962.00 33.13 9.21 41.92 34.48 49.78 74.00 24.22 Peak 3 7440.00 36.46 11.38 34.62 34.63 47.83 74.00 26.17 Peak 4 8896.00 37.72 12.50 34.64 34.59 50.27 74.00 23.73 Peak 5 9920.00 37.95 13.48 31.27 34.34 48.36 74.00 25.64 Peak 6 12400.00 39.16 14.83 28.96 33.43 49.52 74.00 24.48 Peak 7 12816.00 39.78 15.37 29.01 32.73 51.43 74.00 22.57 Peak	ak ak ak ak

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.

2. The emission levels that are 20dB below the official

limit are not reported.



Audix Technology(Wujiang)Co.,Ltd.

No.1289, Jiang King East Road, The Eastern Part of Wu Jiang

Engineer : boqiang_li

Economic Development Zone, JiangSu, China Tel: (0512) 63403993 Fax: (0512) 63403993

Site NO. : 3m Semi-Anechoic Chamber Dis. / Ant. : 3m 3115-62593-130528 Limit : FCC PART 15 C PK Data NO. : 18 Ant. pol. : VERTICAL

: FCC PART 15 C PK
Env. / Ins. : 17.6*C&39%/N9030A
EUT : FD ---EUT : LED Lamp
M/N : 9290002619 Power Rating: 120Vac/60Hz

Memo

Test Mode : TX CH26 2480MHz

Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)		on Limits (dBuV/m)	Margin (dB)	Remark
4959.60 4962.00 7440.00 8364.00 9920.00 11150.00 12400.00	33.13 33.13 36.46 37.33 37.95 38.48 39.16	9.21 9.21 11.38 12.19 13.48 14.33	39.14 43.98 34.62 35.20 30.81 29.78 27.81	34.48 34.63 34.62 34.34 34.24 33.43	47.00 51.84 47.83 50.10 47.90 48.35 48.37	54.00 74.00 74.00 74.00 74.00 74.00 74.00	7.00 22.16 26.17 23.90 26.10 25.65 25.63	Average Peak Peak Peak Peak Peak Peak

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.

2. The emission levels that are 20dB below the official



Audix Technology (Wujiang) Co., Ltd.

No.1289, Jiang Xing East Road, The Eastern Part of Wu Jiang Economic Development Zone, JiangSu, China

Tel: (0512) 63403993 Fax: (0512) 63403993

Site NO. : 3m Semi-Anechoic Chamber

Data NO. : 19 Ant. pol. : HORIZONTAL Dis. / Ant.: 3m 3115-62593-130528 Limit : FCC PART 15 C PK Env. / Ins.: 17.6*C&39%/N9030A EUT : LED Lamp Engineer : boqiang_li

: 9290002619 M/N Power Rating: 120Vac/60Hz

Test Mode : RX

Memo

_	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)		on Limits (dBuV/m)	Margin (dB)	Remark
_	0200.00	33.56 37.27 37.74 37.83 38.39 39.61	9.51 12.03 12.71 13.87 14.15 15.34	37.69 36.39 34.83 33.44 31.00 29.37	34.47 34.63 34.59 34.39 34.26 32.86	46.29 51.06 50.69 50.75 49.28 51.46	74.00 74.00 74.00 74.00 74.00 74.00	27.71 22.94 23.31 23.25 24.72 22.54	Peak Peak Peak Peak Peak Peak

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.

2. The emission levels that are 20dB below the official $\,$ limit are not reported.



Audix Technology (Wujiang) Co., Ltd.

No.1289, Jiang King East Road, The Eastern Part of Wu Jiang

Peak

Economic Development Zone, JiangSu, China

Fax: (0512) 63403993 Tel: (0512)63403993

Data NO. : 20 Ant. pol. : VERTICAL Site NO. : 3m Semi-Anechoic Chamber Dis. / Ant.: 3m 3115-62593-130528 Limit : FCC PART 15 C PK Env. / Ins.: 17.6*C&39%/N9030A Engineer : boqiang_li

: LED Lamp EUT : 9290002619 M/N Power Rating: 120Vac/60Hz

Test Mode : RX Memo : Memo

Ant. Freq. Factor Limits Margin Remark (MHz) (dB) 3814.00 32.17 8.06 40.35 34.77 45.81 74.00 28.19 5158.00 33.47 9.39 38.10 34.47 46.49 74.00 27.51 Peak 23.89 22.82 37.33 37.90 39.19 74.00 34.62 34.37 33.52 3 8378.00 12.19 13.99 35.21 33.66 50.11 Peak 74.00 51.18 9834.00 Peak 5 14.82 24.53 12354.00 28.98 49.47 74.00 Peak 32.56 12914.00 40.03 15.44 29.06 51.97 74.00 22.03

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.

2. The emission levels that are 20dB below the official

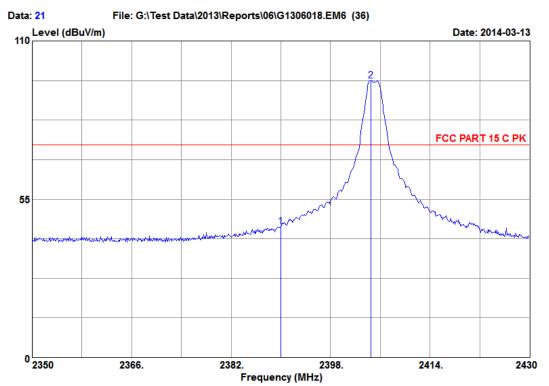
4.9. Spurious Emission Measurement Results in Band Edge Emission (FCC Part 15, 15.205)



Audix Technology(Wujiang)Co.,Ltd.
No.1289,Jiang Xing East Road,The Eastern Part of Wu Jiang Economic Development Zone,JiangSu,China
Tel:(0512)63403993 Fax:(0512)63403993

Data NO. : 21 Ant. pol. : HORIZONTAL

Engineer : boqiang_li



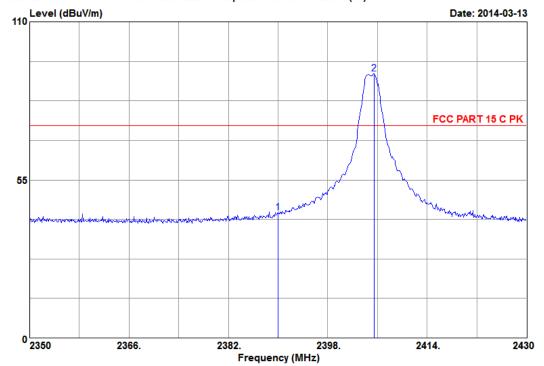
Site NO. : 3m Semi-Anechoic Chamber Dis. / Ant. : 3m 3115-62593-130528 Limit : FCC PART 15 C PK Env. / Ins. : 17.6*C&39%/N9030A

EUT : LED Lamp
M/N : 9290002619
Power Rating: 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

	_	Factor	Loss		Factor	Level	on Limits (dBuV/m)		Remark
_	2390.00 2404.50			46.09 96.73		45.59 96.27	74.00 74.00	28.41 -22.27	Peak Peak







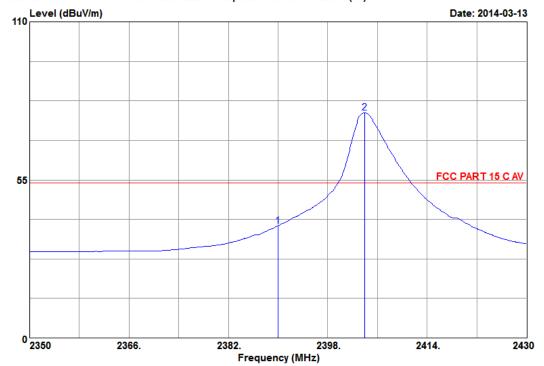
Site NO. : 3m Semi-Anechoic Chamber Data NO. : 22
Dis. / Ant. : 3m 3115-62593-130528 Ant. pol. : VERTICAL
Limit : FCC PART 15 C PK
Env. / Ins. : 17.6*C&39%/N9030A Engineer : boqiang_li

EUT : LED Lamp
M/N : 9290002619
Power Rating: 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

	Freq. (MHz)		Reading	Factor		on Limits (dBuV/m)	Margin (dB)	Remark
_	2390.00 2405.50	28.17 28.21	 44.16 92.35		43.66 91.89	74.00 74.00	30.34 -17.89	Peak Peak







Site NO. : 3m Semi-Anechoic Chamber Data NO. : 23
Dis. / Ant. : 3m 3115-62593-130528 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 C AV
Env. / Ins. : 17.6*C&39*/N9030A Engineer : boqiang_li

EUT : LED Lamp
M/N : 9290002619
Power Rating: 120Vac/60Hz
Test Mode : TX CH11 2405MHz
Memo :

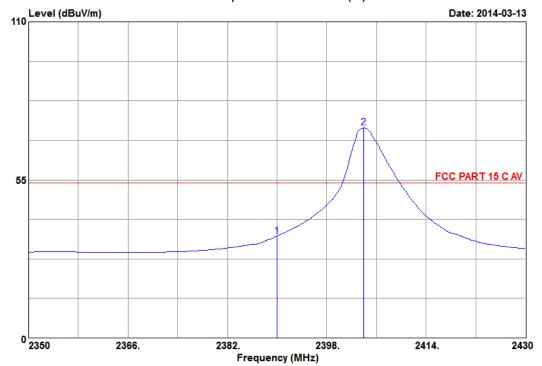
	Freq. (MHz)	Ant. Factor (dB)		Reading	Factor	Emissio Level (dBuV/m	Limits	Margin (dB)	Remark
_	2390.00	28.17	6.40	39.55	35.07	39.05	54.00	14.95	Average
	2404.00	28.20	6.40	78.77	35.07	78.30	54.00	-24.30	Average



Data NO. : 24 Ant. pol. : VERTICAL

Engineer : boqiang_li





Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62593-130528
Limit : FCC PART 15 C AV
Env. / Ins. : 17.6*C&39%/N9030A

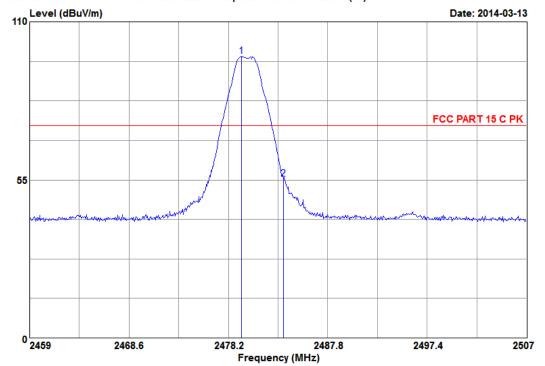
EUT : LED Lamp
M/N : 9290002619
Power Rating: 120Vac/60Hz
Test Mode : TX CH11 2405MHz

Memo :

	Freq. (MHz)	Ant. Factor (dB)		Reading		Emissio Level (dBuV/m		Margin (dB)	Remark
_	2390.00	28.17	6.40	35.99	35.07	35.49	54.00	18.51	Average
	2404.00	28.20	6.40	73.55	35.07	73.08	54.00	-19.08	Average







Site NO. : 3m Semi-Anechoic Chamber Data NO. : 25
Dis. / Ant. : 3m 3115-62593-130528 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 C PK
Env. / Ins. : 17.6*C&39%/N9030A Engineer : boqiang_li

EUT : LED Lamp
M/N : 9290002619
Power Rating: 120Vac/60Hz
Test Mode : TX CH26 2480MHz
Memo :

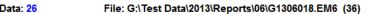
	Freq.	Ant. Factor (dB)	Reading	Factor		on Limits (dBuV∕m)	Margin (dB)	Remark
_	2479.45 2483.50	28.36	 98.20 55.67	35.06	97.94 55.42	74.00 74.00		Peak Peak

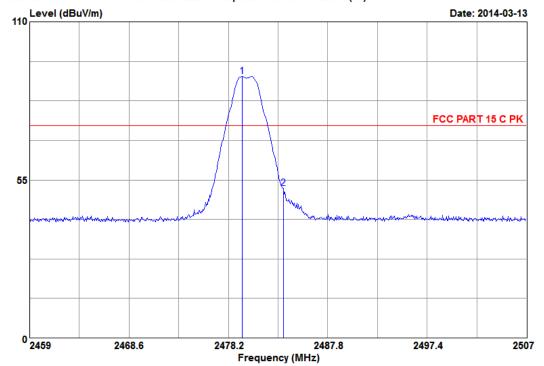
2 2483.50 28.37 6.44 55.67 35.06 55.42 74.00 18.58 Peak

Remarks: 1. Emission Level= Ant.Factor + Cable Loss + Reading - Preamp.Factor.

2. The emission levels that are 20dB below the official limit are not reported.







Site NO. : 3m Semi-Anechoic Chamber Dis. / Ant. : 3m 3115-62593-130528 Limit : FCC PART 15 C PK Env. / Ins. : 17.6*C&39%/N9030A Data NO. : 26 Ant. pol. : VERTICAL Engineer : boqiang_li

: LED Lamp : 9290002619 EUT M/N Power Rating: 120Vac/60Hz Test Mode : TX CH26 2480MHz

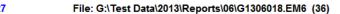
Memo

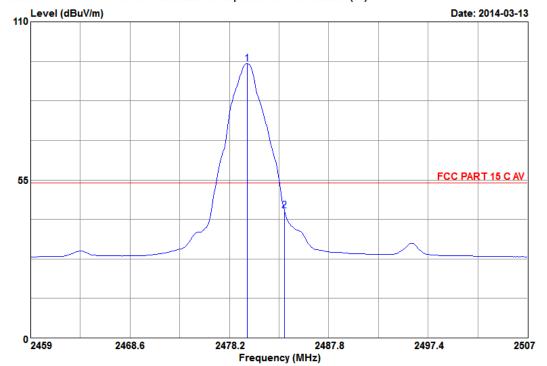
	Freq.		Reading	Factor		on Limits (dBuV/m)	Margin (dB)	Remark
_	2479.52 2483.50	28.36 28.37	 91.21 52.24	35.06 35.06	90.95 51.99	74.00 74.00	-16.95 22.01	Peak Peak



Data NO. : 27 Ant. pol. : HORIZONTAL

Engineer : boqiang_li





Site NO. : 3m Semi-Anechoic Chamber Dis. / Ant. : 3m 3115-62593-130528 Limit : FCC PART 15 C AV Env. / Ins. : 17.6*C&39%/N9030A

: LED Lamp : 9290002619 EUT M/N Power Rating: 120Vac/60Hz Test Mode : TX CH26 2480MHz

Memo

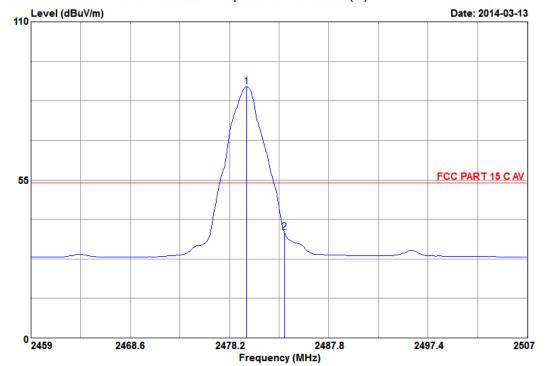
	Freq.	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Level	on Limits (dBuV/m)	Margin (dB)	Remark
_	2479.95	28.36	6.44	95.75	35.06	95.49	54.00	-41.49	Average
	2483.50	28.37	6.44	44.53	35.06	44.28	54.00	9.72	Average



Data NO. : 28 Ant. pol. : VERTICAL

Engineer : boqiang_li

File: G:\Test Data\2013\Reports\06\G1306018.EM6 (36)



Site NO. : 3m Semi-Anechoic Chamber
Dis. / Ant. : 3m 3115-62593-130528
Limit : FCC PART 15 C AV
Env. / Ins. : 17.6*C&39%/N9030A

: LED Lamp : 9290002619 EUT M/N Power Rating: 120Vac/60Hz Test Mode : TX CH26 2480MHz

Memo

	Freq.	Ant. Factor (dB)			Factor	Emissio Level (dBuV/m	on Limits (dBuV/m)	Margin (dB)	Remark
_	2479.87	28.36	6.44	87.66	35.06	87.40	54.00	-33.40	Average
	2483.50	28.37	6.44	37.08	35.06	36.83	54.00	17.17	Average

5. 6 dB BANDWIDTH MEASUREMENT

5.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2013-06-24	2014-06-23

5.2. Block Diagram of Test Setup



---: SIGNAL LINE

5.3. Specification Limits ($\S15.247(a)(2)$)

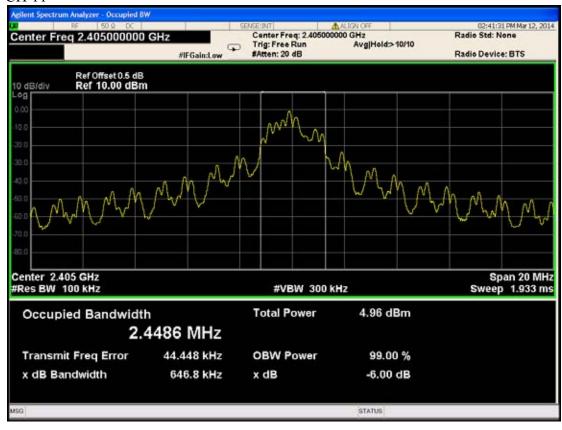
Systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500kHz.

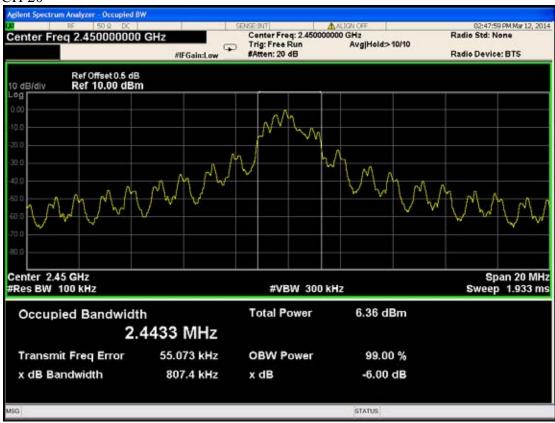
5.4. Test Procedure

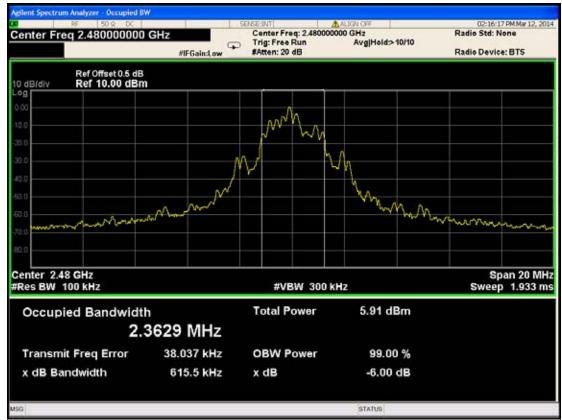
The transmitter output was connected to the test receiver / spectrum analyzer. The bandwidth of the fundamental frequency was measure by spectrum analyzer. The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB. The measurement guideline was according to KDB558074 v03:2013.

PASSED. All the test results are attached in next pages.

Chamal	Test Frequency	6dB Bandwidth
Channel	(MHz)	(kHz)
11	2405	646.8
20	2450	807.4
26	2480	615.5







6. MAXIMUM PEAK OUTPUT POWER MEASUREMENT

6.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Power Meter	Agilent	N1911A	MY45100361	2014-01-05	2015-01-04
2.	Power Sensor	Agilent	N1921A	MY45240521	2014-01-05	2015-01-04

6.2. Block Diagram of Test Setup



---: SIGNAL LINE

6.3. Specification Limits (§15.247(b)(3))

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

6.4. Test Procedure

This is an RF conducted test. Use a direct connection between the antenna port of the transmitter and the power meter, through suitable attenuation. The transmitter output was connected to the power meter that was designed to detect peak value automatically.

Note: The bandwidth of the power meter is 20MHz.

PASSED. All the test results are attached in next pages.

Channel	Frequency	Power(dBm)	Limit(dBm)
11	2405	4.891	30
20	2450	5.563	30
26	2480	5.905	30

7. BAND EDGES MEASUREMENT

7.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2013-06-24	2014-06-23

7.2. Block Diagram of Test Setup

The same as section 5.2.

7.3. Specification Limits (§15.247(d))

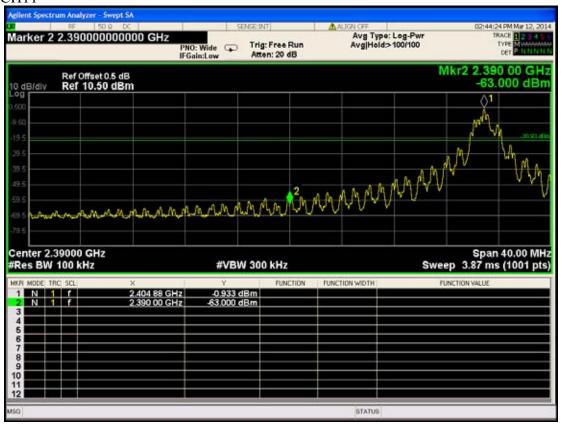
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the 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) (see Section 15.205(c)).

7.4. Test Procedure

The transmitter output was connected to the test receiver / spectrum analyzer. Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz with suitable frequency span including 100kHz bandwidth from band edge.

7.5. Test Results

PASSED. The testing data was attached in the next pages.





8. POWER SPECTRAL DENSITY MEASUREMENT

8.1. Test Equipment

Item	Туре	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2013-06-24	2014-06-23

8.2. Block Diagram of Test Setup

The same as section 5.2.

8.3. Specification Limits (§15.247(e))

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

8.4. Test Procedure

The transmitter output was connected to the test receiver / spectrum analyzer. The test receiver / spectrum analyzer was set as RBW \geq 3kHz, VBW \geq 3 x RBW, span = 1.5 times the DTS channel bandwidth. The measurement guideline was according to KDB558074 v03:2013.

PASSED. All the test results are attached in next page.

		1 0
Channel	Frequency(GHz)	Value(dBm)
11	2.404880	-1.030
20	2.449888	-0.502
26	2.479896	0.364







9. EMISSION LIMITATIONS MEASUREMENT

9.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2013-06-24	2014-06-23

9.2. Block Diagram of Test Setup

The same as section 5.2.

9.3. Specification Limits (§15.247(d))

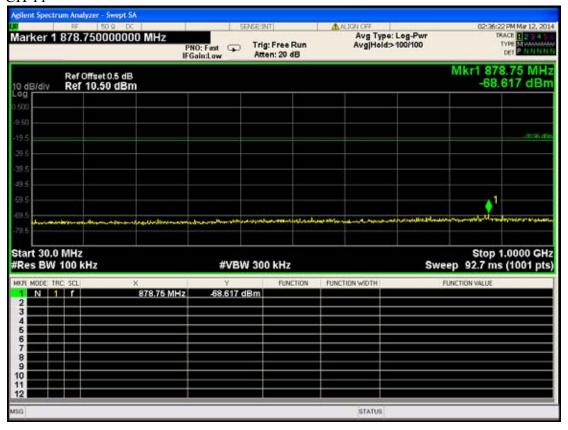
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the 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) (see Section 15.205(c)).

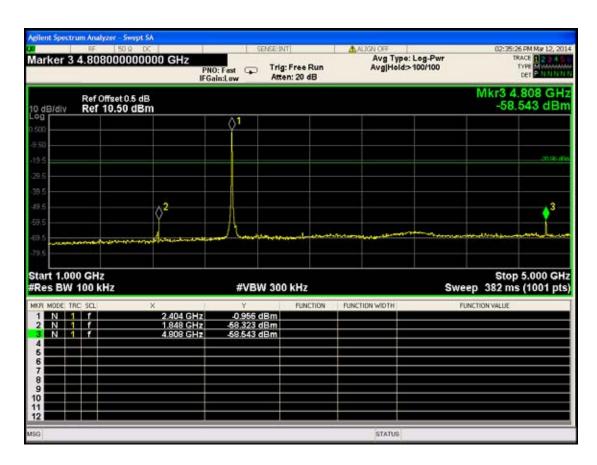
9.4. Test Procedure

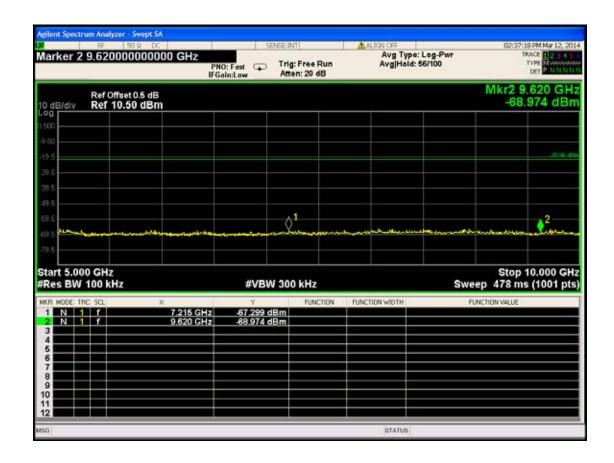
The transmitter output was connected to the spectrum analyzer. Set RBW = 100 kHz, VBW $\geq 300 \text{kHz}$, scan up through 10 th harmonic. All harmonics/spurs must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW. The measurement guideline was according to KDB558074 v03:2013.

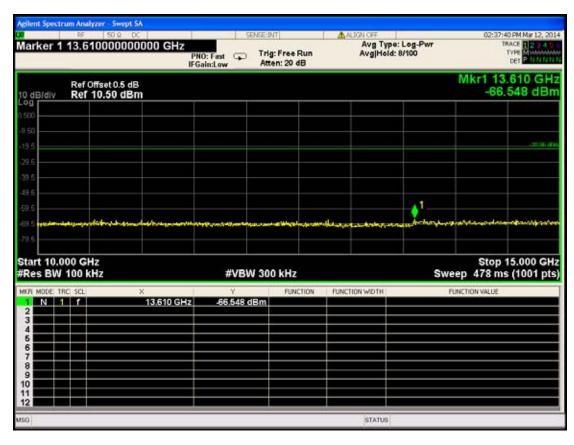
PASSED. All the test results are attached in next pages.

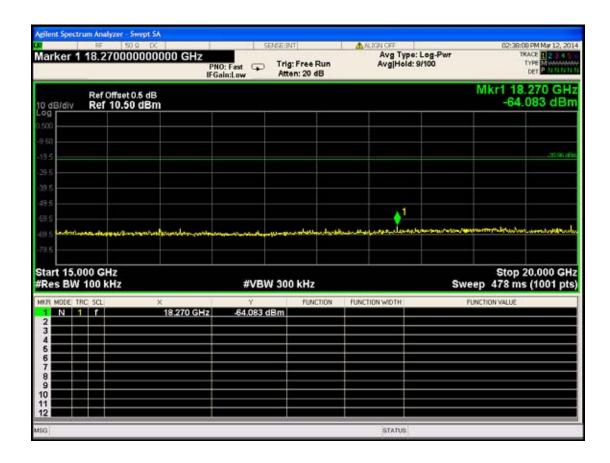
Channel	Frequency(MHz)	Amplitude(dBm)	
	878.75	-68.617	
	2404	-0.956	
	1848	-58.323	
	4808	-58.543	
11	7215	-67.299	
	9620	-68.974	
	13610	-66.548	
	18270	-64.083	
	23785	-63.949	
	775.93	-71.589	
	2448	-0.503	
	1848	-57.866	
	4900	-61.436	
20	7350	-67.226	
	9800	-67.900	
	13665	-66.836	
	19400	-64.657	
	24955	-63.263	
	877.78	-67.187	
	2480	0.318	
	4960	-62.350	
	1848	-58.426	
26	7440	-62.437	
	9920	-68.939	
	13705	-66.328	
	19470	-64.935	
	24100	-63.589	

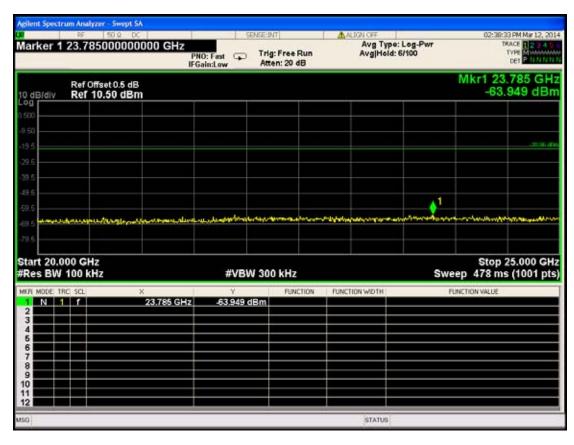


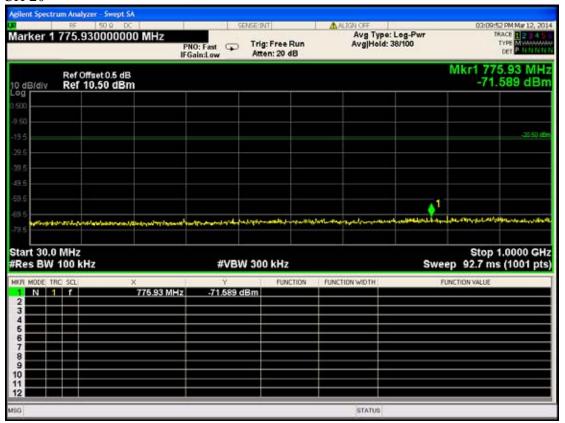


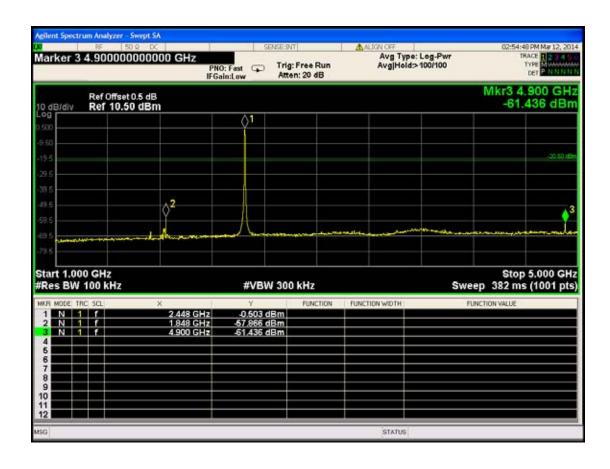


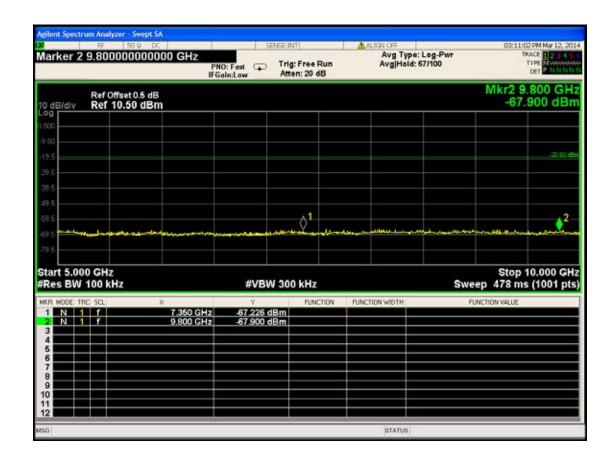


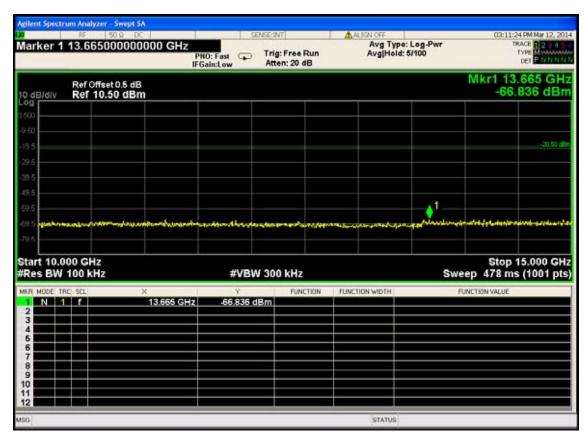


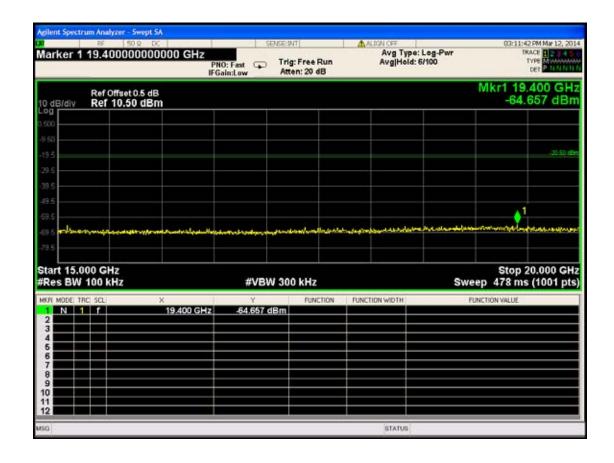


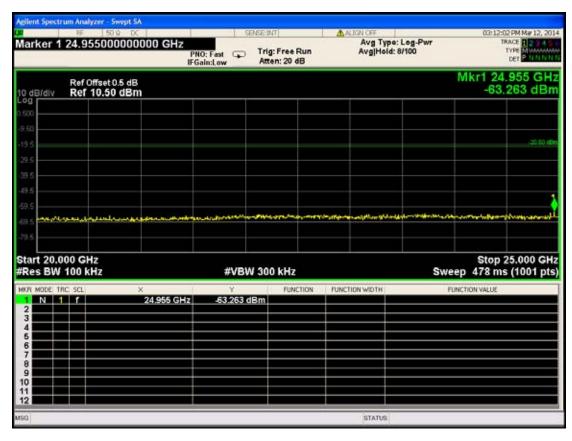


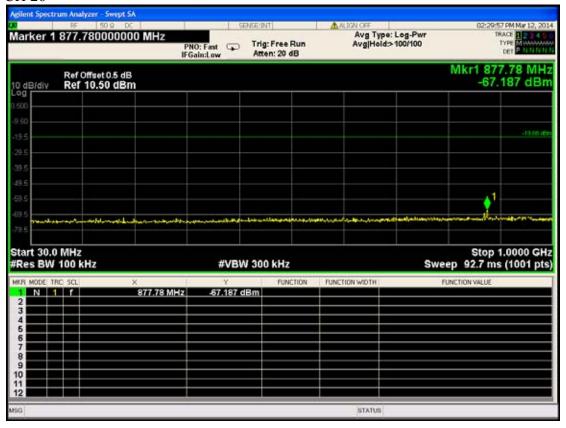


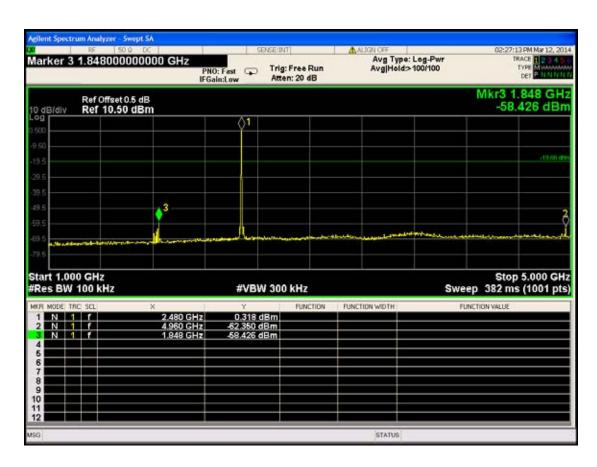


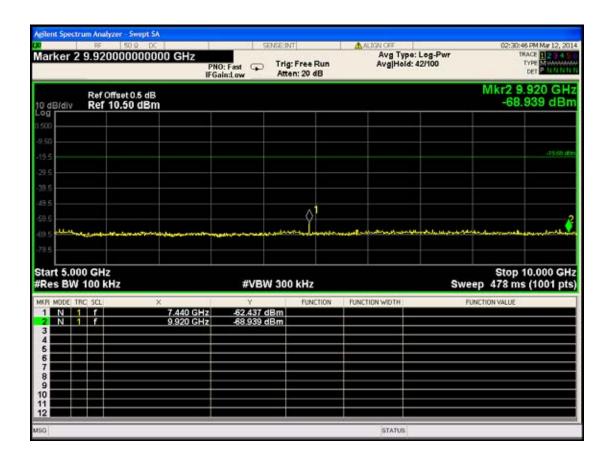


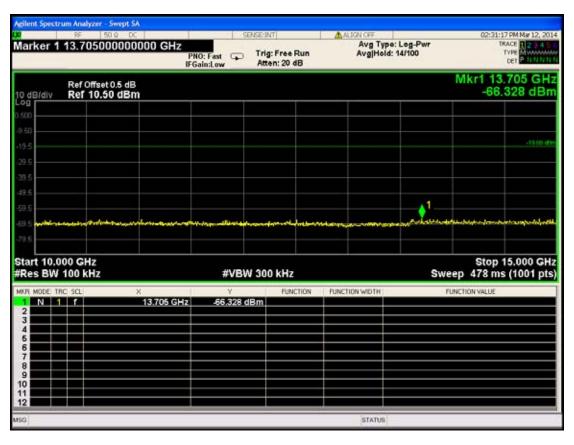


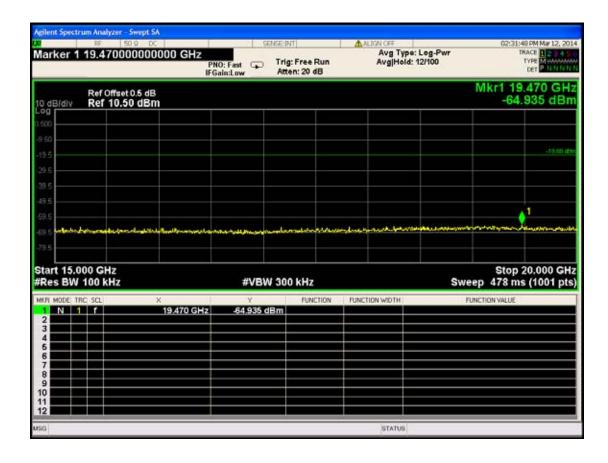


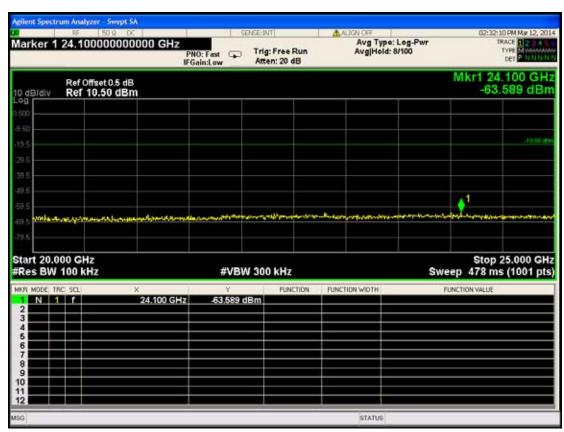












10.DUTY CYCLE

10.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	PXA Signal Analyzer	Agilent	N9030A	MY53120367	2013-06-24	2014-06-23

10.2. Test Results

The measurement of duty cycle is 100%.







11.DEVIATION TO TEST SPECIFICATIONS

NONE