TEST REPORT FOR FCC
Class II PERMISSIVE CHANGE
On Behalf of
Chungear Industrial Co., Ltd.
Fan/Light Remote Control Transmitter
Model No.：JY610B-L
FCC ID：KUJCE9201

Prepared for : Chungear Industrial Co., Ltd.
106 Kanho Rd., Taichung, Taiwan.

Prepared By : AUDIX Technology Corporation
EMC Department
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File Number	：	EM982506
Report Number	：	EM-F980989
Date of Test	：	Dec. 24, 2009
Date of Report	：	Dec. 30, 2009

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TEST REPORT CERTIFICATION
(Class II Permissive Change)

Applicant	:	Chungear Industrial Co., Ltd.
Manufacturer #1	:	Chungear Industrial Co., Ltd.
Manufacturer #2	:	Satellite Electronic (Zhongshan) Ltd.
Manufacturer #3	:	Zhongshan Amity Electronic Ltd.
EUT Description	:	Fan/Light Remote Control Transmitter
FCC ID	:	KUJCE9201
	(A) MODEL NO.	: JY610B-L
	(B) SERIAL NO.	: N/A
	(C) POWER SUPPLY	: DC 9V (Battery)
	(D) TEST VOLTAGE	: DC 9V

Measurement Procedure Used:
FCC RULES AND REGULATIONS PART 15 SUBPART C, July 2008
AND ANSI C63.4/2003

(FCC CFR 47 Part 15C, §15.207, §15.209 and §15.231)

The device described above was tested by AUDIX Technology Corporation to determine the maximum emission levels emanating from the device. The maximum emission levels were compared to the FCC Part 15 subpart C limits both radiated and conducted emissions.

The measurement results are contained in this test report and AUDIX Technology Corporation 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 official limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX Technology Corporation.

This report is based on report of TTEMC-F92098.

Date of Test: Dec. 24, 2009 Date of Report: Dec. 30, 2009

Date of Test of Original: May 19 ~ 20, 2003 Date of Original: May 27, 2003

Producer : _____
(Nita Lee/Administrator)

Review: _____
(Henning Chang/Supervisor)

Signatory: _____
(Ben Cheng/Manager)

1. DESCRIPTION OF VERSION

Edition No.	Date of Rev.	Summary	Report No.
Rev. 0	May 27, 2003	Original Report.	TTEMC-F92098
Rev. 1	Dec. 30, 2009	1. To add a new model number “JY610B-L” for different PCB layout. (module is same as original). 2. To add a manufacturer “Zhongshan Amity Electronic Ltd.” 3. Supplementary test data are recorded in test report.	EM-F980989

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Description	:	Fan/Light Remote Control Transmitter
Model Number	:	JY610B-L
FCC ID	:	KUJCE9201
Applicant	:	Chungear Industrial Co., Ltd. 160 Kanho Rd., Taichung, Taiwan, R.O.C.
Manufacturer #1	:	Chungear Industrial Co., Ltd. 160 Kanho Rd., Taichung, Taiwan, R.O.C.
Manufacturer #2	:	Satellite Electronic (Zhongshan) Ltd. No. 15, Torch Hi-Tech Industrial Development Zone, Zhongshan City Guangdong Province China.
Manufacturer #3	:	Zhongshan Amity Electronic Ltd. 2F. No. 16, Torch Hi-Tech Industrial Development Zone, Zhongshan City Guangdong Province China.
Fundamental Frequency	:	304MHz
Power Supply	:	DC 9V (Battery)
Date of Receipt of Sample	:	Dec. 07, 2009
Date of Test	:	Dec. 24, 2009

* Fan/Light Remote Control Transmitter - Receiver
(1)Model No.: JY199, FCC by DoC
(2)Model No.: JY326B, FCC by DoC
(3)Model No.: JY326D, FCC by DoC
(4)Model No.: MR36T, FCC by DoC
(5)Model No.: MR36R, FCC by DoC

Remark:

Antenna requirement: This EUT's transmitter antenna is designed to be soldered on a printed circuit board, comply with §15.203 and inform to user that any change and modify is prohibited.

Information for Class II Permissive Change:

1. This EUT is additional version with original FCC ID KUJCE9201.
2. The purpose of this report are (1)to add a new model number "JY610B-L" for different PCB layout. (module is same as original) (2)to add a manufacturer "Zhongshan Amity Electronic Ltd."
3. This report is based on report of TTEMC-F92098.

2.2. Description of Test Facility

Name of Firm	:	**AUDIX Technology Corporation** **EMC Department** No. 53-11, Tin-Fu Tsun, Lin-Kou Hsiang, Taipei Hsien, Taiwan.
Test Facility & Location	:	**Semi-Anechoic Chamber** No. 53-11, Tin-Fu Tsun, Lin-Kou Hsiang, Taipei Hsien, Taiwan. May 16, 2006 Renewal on Federal Communication Commission Registration Number: 90993
NVLAP Lab. Code	:	200077-0
TAF Accreditation No	:	1724

2.3. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty (dB)
Radiation Test (Distance: 3m)	30MHz~300MHz	± 2.91dB
	300MHz~1000MHz	± 2.94dB

Remark：Uncertainty = $ku_c(y)$

3. CONDUCTED EMISSION MEASUREMENT

【The EUT only employs battery power for operation, no conductive emission limits are required according to FCC Part 15 Section §15.207】

4. RADIATED EMISSION MEASUREMENT

4.1.Test Equipment

The following test equipment was used during the radiated emission tests：

4.1.1. For Frequency Range 30MHz~1000MHz (Semi-Anechoic Chamber)

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	HP	8593EM	3826A00272	Jun. 26, 09’	Jun. 25, 10’
2.	Test Receiver	R & S	ESCS30	100265	Aug. 28, 09’	Aug. 27, 10’
3.	Pre-Amplifier	HP	8447D	2944A06305	Feb. 04, 09’	Feb. 03, 10’
4.	Biconical Antenna	CHASE	VBA6106A	1264	Mar. 20, 09’	Mar. 19, 10’
5.	Log Periodic Antenna	Schwarzbeck	UHALP9108-A	0810	Mar. 20, 09’	Mar. 19, 10’
6.	Coaxial Switch	Anritsu	MP59B	6100226512	Feb. 20, 09’	Feb. 19, 10’

4.1.2. For Frequency Range Above 1GHz (Semi-Anechoic Chamber)

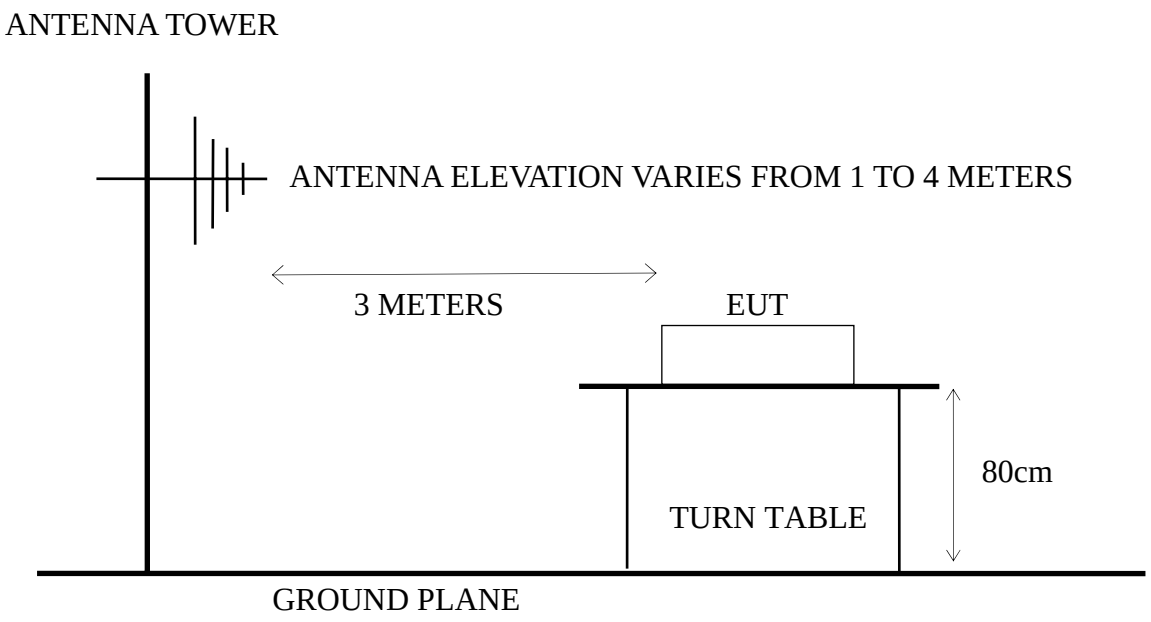
Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	HP	8593EM	3826A00272	Jun. 26, 09’	Jun. 25, 10’
2.	Amplifier	HP	8449B	3008A00529	Dec. 31, 08’	Dec. 30, 09’
3.	Horn Antenna	EMCO	3115	9112-3775	May 15, 09’	May 14, 10’

4.2.Test Setup

4.2.1. Block Diagram of connection between EUT and simulators

FAN/LIGHT REMOTE CONTROL TRANSMITTER (EUT)

4.2.2. Semi-Anechoic Chamber (3m) Setup Diagram



4.3.Radiation Emission Limits (§15.209 & 15.231)

4.3.1. Spurious Emission Limit (§15.209)

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMITS	
		μV/m	dBμV/m
30 - 88	3	100	40.00
88 - 216	3	150	43.50
216 - 960	3	200	46.00
Above 960	3	500	54.00

Remarks： (1) Emission level (dBμV/m) = 20 log Emission level (μV/m)
(2) The tighter limit applies at the edge between two frequency bands.
(3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

4.3.2. Fundamental Frequency Emission Limit (§15.231)

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMITS	
		μV/m	dBμV/m
Fundamental Frequency	3	5595.3	74.95 (Quasi-Peak)

Remarks： (1) Emission level (dBμV/m) = 20 log Emission level (μV/m)
(2) The tighter limit applies at the edge between two frequency bands.
(3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
(4) Where limit of Fundamental Freq. is calculated by:
41.6667x304.287-7083.3333= 5595.3μV/m = 74.95 dBμV/m
(5) The limits in this table are based on CFR 47 Part 15.231(b).

4.4. Operating Condition of EUT

4.4.1. Set up the EUT and simulator as shown on 3.2.

4.4.2. To turn on the power of all equipment.

4.4.3. The EUT [Fan/Light Remote Control Transmitter] emitted the fundamental frequency with data code at the stand, side and lying conditions. (worst mode is side condition)

4.4.4. The EUT was operated on maximum transmitting status during all testing (side condition).

4.5. Test Procedure

The EUT and was placed on a turn table which was 0.8 meter above the ground. The turn table rotated 360 degrees to determine the position of the maximum emission level. EUT was set to 3 meters away from the receiving antenna which was mounted on an antenna tower. The antenna moved up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna such as calibrated biconical and log- periodical antenna or horn antenna was used as a receiving antenna. Both horizontal and vertical polarization of the antenna were set on measurement. In order to find the maximum emission, all of the interface cables were manipulated according to FCC ANSI C63.4-2003 regulation.

The bandwidth of test receiver was set at 120kHz for frequencies below 1GHz and resolution bandwidth of spectrum analyzer was set at 1MHz for frequencies above 1GHz.

The frequency range from 30MHz to 1000MHz was measured with Quasi-Peak detector.

The frequency range from 1GHz to 4GHz was pre-scanned with Peak detector.

EUT with worst positions (side) was tested during radiated measurement and all the test results are listed in section 4.6.

4.6. Radiated Emission Measurement Results

4.6.1. Frequency Range 30MHz to 1GHz Measurement Results: **PASSED.**

All the emissions not reported below are too low against the FCC part 15 Subpart C limit.

Date of Test：	Dec. 24. 2009	Temperature：	24℃
EUT：	Fan/Light Remote Control Transmitter	Humidity：	48%
Test Mode：	Operating (Side)		

	Emission Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Horizontal dBμV	Emission Level Horizontal dBμV/m	Limits dBμV/m	Margin dB
Fundamental Freq. (Quasi-Peak Value)							
	304.000	14.94	3.90	43.67	62.51	74.95	12.44
Spurious / Harmonic Freq. (Quasi-Peak Value)							
	350.100	15.44	4.30	0.34	20.08	46.00	25.92
	398.600	17.67	4.80	-1.13	21.34	46.00	24.66
	521.790	19.91	6.90	-0.73	26.09	46.00	19.91
*	609.090	21.45	6.20	3.23	30.89	46.00	15.11
	828.310	24.62	7.10	0.02	31.74	46.00	14.26

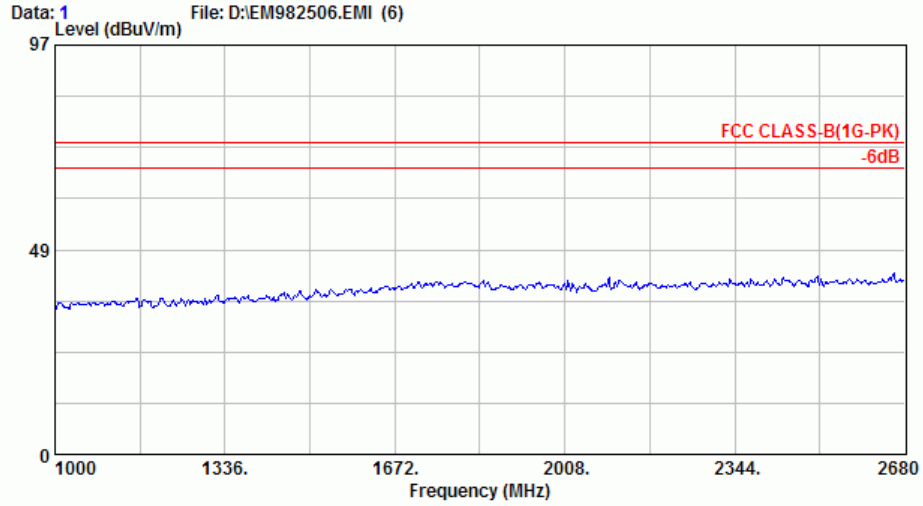
	Emission Frequency MHz	Antenna Factor dB/m	Cable Loss dB	Meter Reading Vertical dBμV	Emission Level Vertical dBμV/m	Limits dBμV/m	Margin dB
Fundamental Freq. (Quasi-Peak Value)							
	304.000	14.94	3.90	36.01	54.85	74.95	20.10
Spurious / Harmonic Freq. (Quasi-Peak Value)							
	140.580	20.22	2.50	1.98	24.71	43.50	18.79
	515.970	19.98	6.80	-1.08	25.70	46.00	20.30
*	609.090	21.45	6.20	2.59	30.25	46.00	15.75
	835.100	24.90	7.10	-0.46	31.54	46.00	14.46
*	966.050	26.89	7.70	-1.16	33.43	54.00	20.57

Remarks： 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading.
2. Measurement was up to 10th harmonics (~4.5GHz), but the emission levels were too low against the official limit and not report.
3. "*" The field strength of emission appearing within Part 15.205(a) shall not exceed the limits shown in section 15.209.

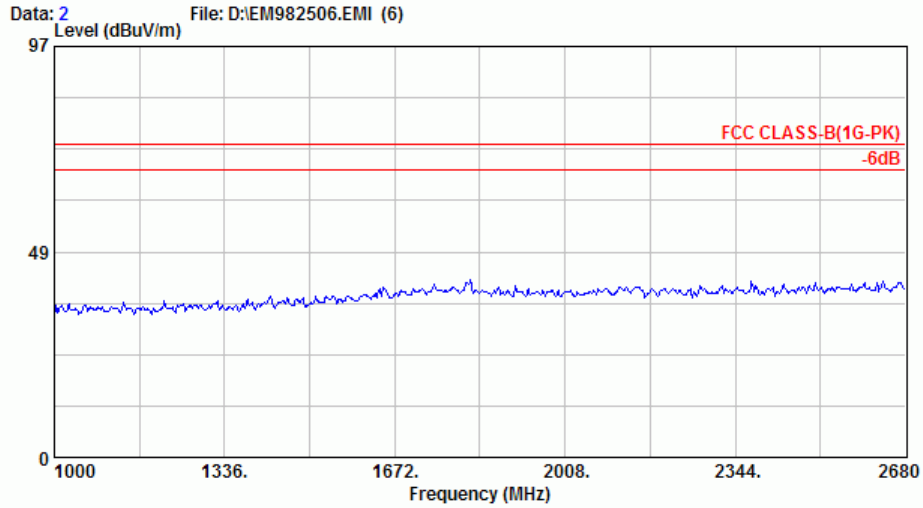
4.6.2. Frequency Range 1GHz to 4GHz Measurement Results: **PASSED.**

The frequency spectrum from 1GHz to 4GHz (up to 10th harmonics) was investigated. All the emissions not reported below are too low against the FCC part 15 Subpart C limit.

Date of Test：	Dec. 24. 2009	Temperature：	24℃
EUT：	Fan/Light Remote Control Transmitter	Humidity：	48%
Test Mode：	Operating (Side)		




```
Site no.      : @AC Chamber                Data no.   : 1
Dis. / Ant.   : 3m   3115(3775)            Ant. pol.  : HORIZONTAL
Limit         : FCC CLASS-B(1G-PK)
Env. / Ins.   : 8593EM 24*C/48%            Engineer   : Jarwei Wang
EUT           : Fan/Light Remote Control Transmitter
Power Rating  : DC 9V M/N:JY610B-L
Test Mode     : operating(Side)
```




```
Site no.      : @AC Chamber                Data no.   : 2
Dis. / Ant.   : 3m   3115(3775)            Ant. pol.  : VERTICAL
Limit         : FCC CLASS-B(1G-PK)
Env. / Ins.   : 8593EM 24*C/48%            Engineer   : Jarwei Wang
EUT           : Fan/Light Remote Control Transmitter
Power Rating  : DC 9V M/N:JY610B-L
Test Mode     : operating(Side)
```

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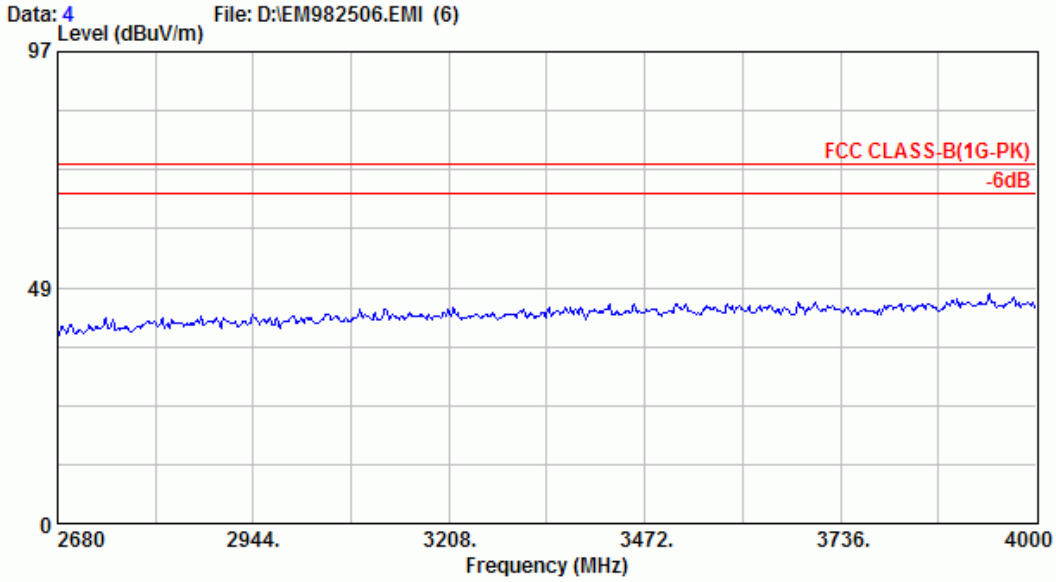
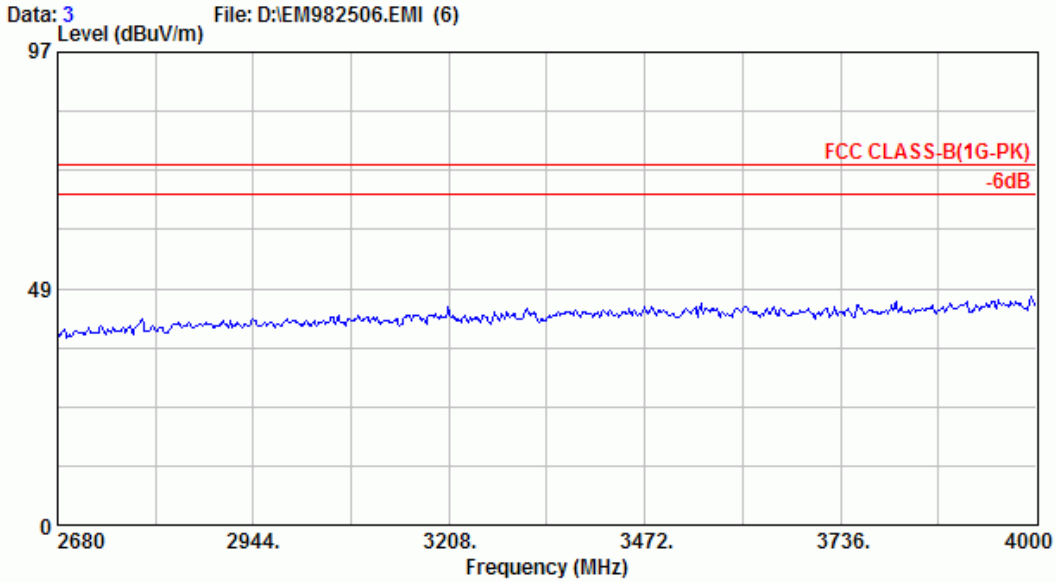



```
Site no.      : @AC Chamber                Data no.   : 4
Dis. / Ant.   : 3m   3115(3775)            Ant. pol.  : HORIZONTAL
Limit         : FCC CLASS-B(1G-PK)
Env. / Ins.   : 8593EM 24*C/48%            Engineer   : Jarwei Wang
EUT           : Fan/Light Remote Control Transmitter
Power Rating  : DC 9V M/N:JY610B-L
Test Mode     : operating(Side)
```




```
Site no.      : @AC Chamber                Data no.   : 3
Dis. / Ant.   : 3m   3115(3775)            Ant. pol.  : VERTICAL
Limit         : FCC CLASS-B(1G-PK)
Env. / Ins.   : 8593EM 24*C/48%            Engineer   : Jarwei Wang
EUT           : Fan/Light Remote Control Transmitter
Power Rating  : DC 9V M/N:JY610B-L
Test Mode     : operating(Side)
```

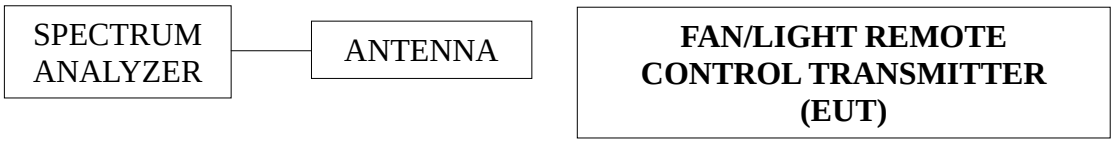
5. EMISSION BANDWIDTH MEASUREMENT

5.1.Test Equipment

The following test equipment was used during the Emission Bandwidth Test：

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	Jul. 23, 09’	Jul. 22, 10’
2.	Wide Band Antenna	Diamond	RH799	2944A06305	N/A	N/A

5.2.Block Diagram of Test Setup



5.3.Specification Limits (§15.231-(c))

The bandwidth of emission shall be no wider than 0.25% of the center frequency for device operating above 70MHz and below 900MHz. Bandwidth is determined at the points 20dB down from the modulated carrier.

5.4.Emission Bandwidth Measurement Results

PASS.

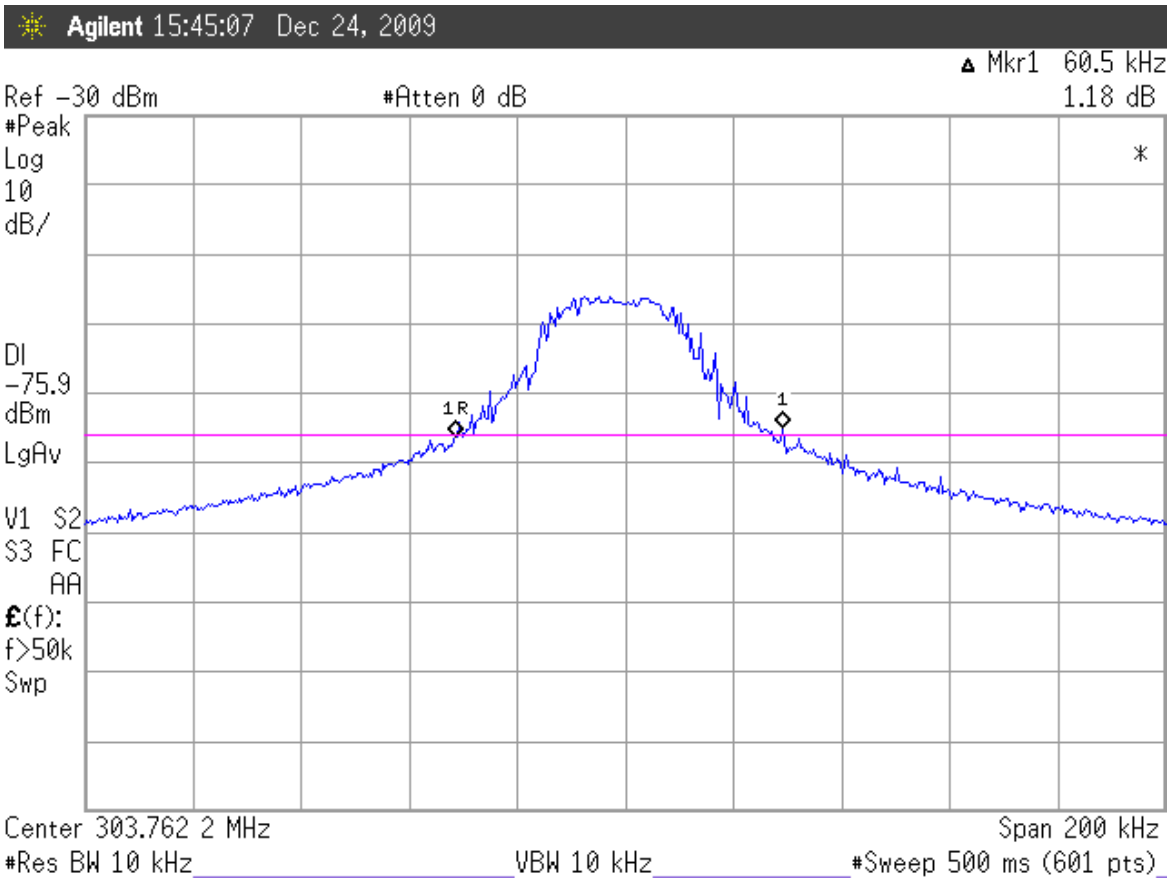
Fundamental Frequency: 304MHz

Test Date: Dec. 24, 2009 Temperature: 24℃ Humidity: 48%

No.	Center Frequency	**Bandwidth**	**Tolerance (%)**
1.	303.7622MHz	**60.5kHz**	**0.0199%**

The bandwidth of emission was measured at the point 20dB down from the center frequency of modulated carrier.

Graph of Bandwidth Measurement



Note: "◊" The line is 20dB from the modulated carrier.

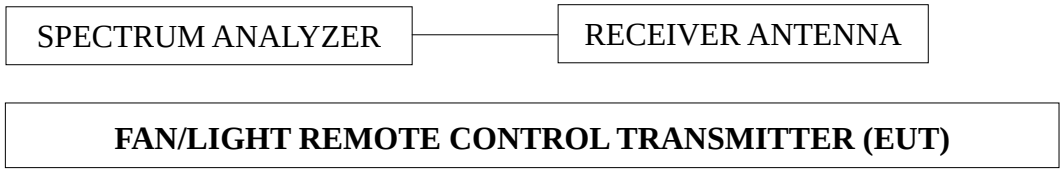
6. PERIODIC OPERATED MEASUREMENT

6.1.Test Equipment

The following test equipment was used during the periodic operated test：

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	Jul. 23, 09’	Jul. 22, 10’
2.	Wide Band Antenna	Diamond	RH799	2944A06305	N/A	N/A

6.2.Block Diagram of Test Setup



6.3.Specification Limits [§15.231-(a)-(1)]

The operation of this device is manually operated transmitter that is automatically deactivated the transmitter within not more than 5 seconds of being released, Compliance with §15.231 (a)- (1).

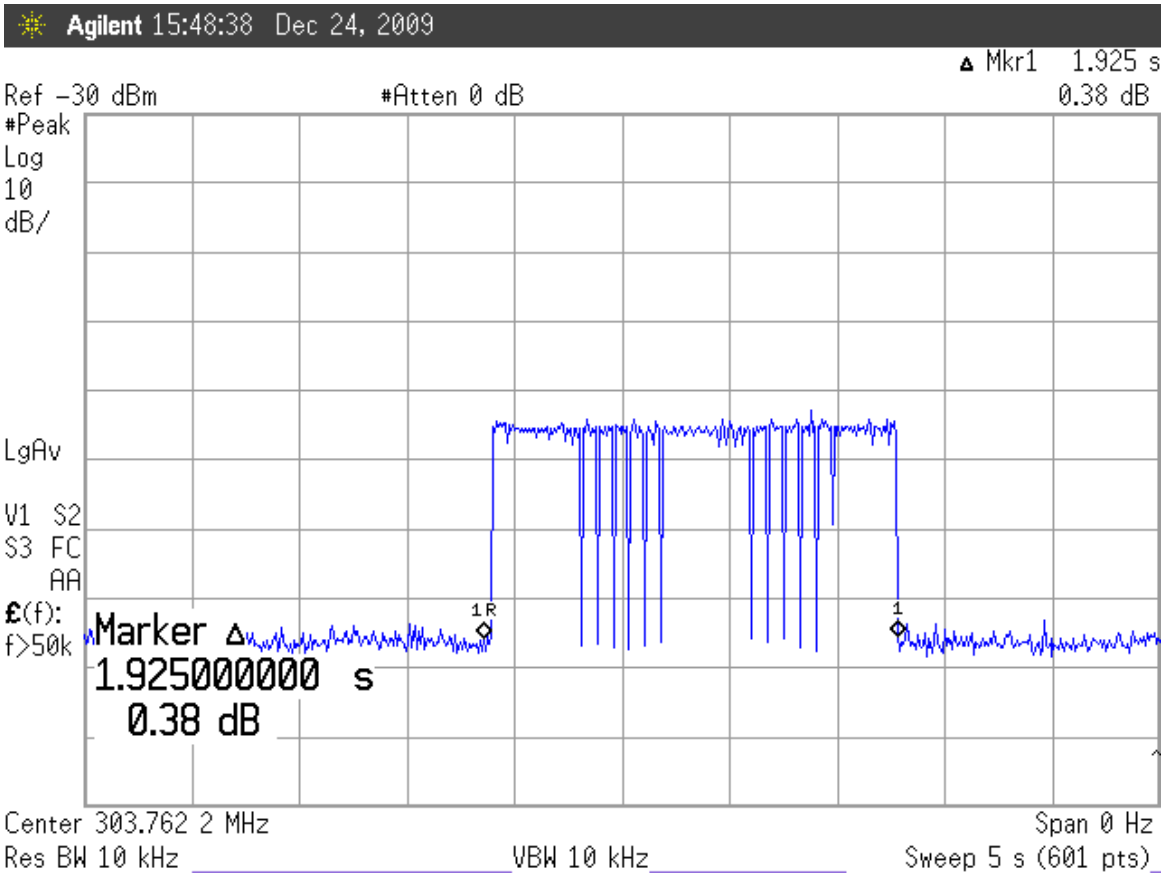
6.4.Periodic Operated Measurement Results

PASS. T = 1.925sec. (< 5sec.)

Test Date: Dec. 24, 2009 Temperature: 24℃ Humidity: 48%

The graph of testing is attached in next page.

Graph of Periodic Operated Measurement



7. DEVIATION TO TEST SPECIFICATIONS

【NONE】