# **TEST REPORT**

FCC ID: 2BF55-MINI-2

**Report No.** : SSP24110167-1E

**Applicant**: Anshan Xupu Trading Co., Ltd

**Product Name** : LED BULB

Model Name : mini-2

**Test Standard** : FCC Part 15 Subpart B

**Date of Issue** : 2024-11-26



#### Shenzhen CCUT Quality Technology Co., Ltd.

1F, Building 35, Changxing Technology Industrial Park, Yutang Street, Guangming District, Shenzhen, Guangdong, China; (Tel.:+86-755-23406590 website: www.ccuttest.com)

This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen CCUT Quality Technology Co., Ltd.

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### **Test Report Basic Information**

Anshan Xupu Trading Co., Ltd Applicant....: 46, Floor 4,128 B, Jiefang East Road, Tiedong, Anshan, Liaoning Address of Applicant....: Anshan Xupu Trading Co., Ltd Manufacturer....: 46, Floor 4,128 B, Jiefang East Road, Tiedong, Anshan, Liaoning Address of Manufacturer.....: Product Name..... LED BULB Brand Name....: **PIBAOGU** Main Model....: mini-2 AP-1, AP-2, AP-3, AP-4, AP-5, AP-6, leida-1, leida-8, leida-2, leida-3, leida-4, leida-5, leida-6, leida-7, FJ-2, JG-1, JG-2, JG-3, mi4-1, mini-3, mini-5, mini-4, Series Models..... FCC Part 15 Subpart B **Test Standard**...... ANSI C63.4-2014 **Date of Test** ...... 2024-11-13 to 2024-11-26 Test Result...... PASS 

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Revision	Issue Date	Description	Revised By
V1.0	2024-11-26	Initial Release	Lahm Peng

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## 1. General Information

### 1.1 Product Information

Product Name:	LED BULB
Trade Name:	PIBAOGU
Main Model:	mini-2
	AP-1, AP-2, AP-3, AP-4, AP-5, AP-6, leida-1, leida-8, leida-2, leida-3, leida-4,
Series Models:	leida-5, leida-6, leida-7, FJ-2, JG-1, JG-2, JG-3, mi4-1, mini-3, mini-5, mini-4,
	HW-6
Class of Equipment:	☐ Class A ☐ Class B
Highest Internal Frequency:	<108MHz
Rated Voltage:	Input: AC 120V/60Hz

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Note 1: The test data is gathered from a production sample, provided by the manufacturer.

Note 2: The color of appearance and model name of series models listed are different from the main model, but the circuit and the electronic construction are the same, declared by the manufacturer.

## 1.2 Test Setup Information

List of Test Mo	odes								
Test Mode	De	escription		Remark					
TM1	7	Working		AC 120V/6	0Hz				
List and Details of Auxiliary Cable									
Descrip	otion	Length (cm)		Shielded/Unshielded	With/Without Ferrite				
		-		-	-				
-				-	-				
-		-		-	-				
List and Detai	ls of Auxiliary	/ Equipment							
Descrip	otion	Manufacture	r	Model	Serial Number				
			-	-					
-	-			-	-				
-		-		-	-				

The equipment under test (EUT) was configured to measure its highest possible emission and immunity level. The test modes were adapted according to the operation manual for use.

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# 1.3 Compliance Standards

Compliance Standards						
ECC Dart 15 Cubrant D	FEDERAL COMMUNICATIONS COMMISSION, RADIO FREQUENCY DEVICES,					
FCC Part 15 Subpart B	Unintentional Radiators					
All measurements contained in this	report were conducted with all above standards					
According to standards for test	methodology					
ECC Don't 15 Cubmont D	FEDERAL COMMUNICATIONS COMMISSION, RADIO FREQUENCY DEVICES,					
FCC Part 15 Subpart B	Unintentional Radiators					
	American National Standard for Methods of Measurement of Radio-Noise Emissions					
ANSI C63.4-2014	from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40					
	GHz.					
Maintenance of compliance is the responsibility of the manufacturer or applicant. Any modification of the product, which						
result is lowering the emission, sho	uld be checked to ensure compliance has been maintained.					

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### 1.4 Test Facilities

Shenzhen CCUT Quality Technology Co., Ltd.							
1F, Building 35, Changxing Technology Industrial Park, Yutang Street,							
Guangming District, Shenzhen, Guangdong, China							
L18863							
6893.01							
583813							
CN0164							

All measurement facilities used to collect the measurement data are located at 1F, Building 35, Changxing Technology Industrial Park, Yutang Street, Guangming District, Shenzhen, Guangdong, China.

## 1.5 Measurement Uncertainty

Test Item	Conditions	Uncertainty		
Conducted Disturbance	9kHz~30MHz	±1.64 dB		
Radiated Disturbance	30MHz ~ 1GHz	±3.32 dB		
Radiated Disturbance	1GHz ~ 18GHz	±3.50 dB		

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## 1.6 List of Test and Measurement Instruments

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date					
		Conducted Emissi	ons							
AMN	ROHDE&SCHWARZ	ENV216	101097	2024-08-07	2025-08-06					
EMI Test Receiver	ROHDE&SCHWARZ	ESPI	100242	2024-08-07	2025-08-06					
EMI Test Software	FARA	EZ-EMC	EMEC-3A1+	N/A	N/A					
	Radiated Emissions									
EMI Test Receiver	ROHDE&SCHWARZ	100154	2024-08-07	2025-08-06						
Spectrum Analyzer	KEYSIGHT	N9020A	MY48030972	2024-08-07	2025-08-06					
Amplifier	SCHWARZBECK	BBV 9743B	00251	2024-08-07	2025-08-06					
Amplifier	HUABO	YXL0518-2.5-45		2024-08-07	2025-08-06					
Loop Antenna	DAZE	ZN30900C	21104	2024-08-03	2025-08-02					
Broadband Antenna	SCHWARZBECK	VULB 9168	01320	2024-08-03	2025-08-02					
Horn Antenna	SCHWARZBECK	BBHA 9120D	02553	2024-08-03	2025-08-02					
EMI Test Software	FARA	EZ-EMC	FA-03A2 RE+	N/A	N/A					

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# 2. Summary of Test Results

FCC Rule	Description of Test Item	Result
FCC Part 15.107	Conducted Emissions	Passed
FCC Part 15.109	Radiated Emissions	Passed

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Passed: The EUT complies with the essential requirements in the standard

Failed: The EUT does not comply with the essential requirements in the standard

N/A: Not applicable

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## 3. Conducted Emissions

#### 3.1 Standard and Limit

According to the rule FCC Part 15.107, Conducted limit, the limit for a class A and class B device as below:

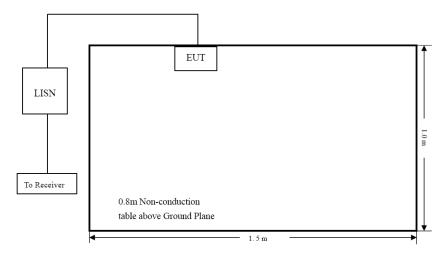
Frequency of Emission	Class A	(dBuV)	Class B (dBuV)			
(MHz)	Quasi-peak	Average	Quasi-peak	Average		
0.15-0.5	79 66		66 to 56	56 to 46		
0.5-5	73 60		56	46		
5-30	73	60	60	50		

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Note 1: Decreases with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz

#### 3.2 Test Procedure

Test is conducting under the description of ANSI C63.4-2014 American National Standard for Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.



Test Setup Block Diagram

#### 3.3 Test Data and Results

Based on all tested data, the EUT complied with the FCC Part 15.107 standard limit for a Class B device, and with the worst case as below:

Remark: Level = Reading + Factor, Margin = Level - Limit

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Note 2: The lower limit applies at the band edges

Test P	Test Plots and Data of Conducted Emissions									
Tested	d Model:	mini	-2							
Tested	d Mode:	TM1								
Test V	oltage:	AC 1	C120V/60Hz							
Test P	ower Line:	Neut	eutral							
Rema	rk:									
90.0	90.0 dBuV									
80										
70										
70									EGC D. HE CE CI. D. GD	
60	many	Sharekin.						+	FCC Part15 CE-Class B_QP	-
50	- 1		on the state of th	. 11					FCC Part15 CE-Class B_AVe	<b>-</b>
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0									A CONTRACTOR OF THE PROPERTY O	
-10										
0.1	50	0.5	00		(MHz)		5.0	100	30	0.000
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark	
1 *	0.2040	49.84	9.22	59.06	63.45	-4.39	QP	Р		
2	0.2040	32.66	9.22	41.88	53.45	-11.57	AVG	Р		
3	0.3225	42.69	9.40	52.09	59.64	-7.55	QP	Р		
4	0.3251	32.27	9.40	41.67	49.58	-7.91	AVG	Р		
5 6	0.3279 0.3345	42.36 30.65	9.39 9.39	51.75 40.04	59.50 49.34	-7.75 -9.30	QP AVG	P		
7	0.3343	41.51	9.38	50.89	57.92	-7.03	QP	Р		
8	0.4020	27.55	9.38	36.93	47.81	-10.88	AVG	Р Р		——
9	0.5100	25.81	9.39	35.20	46.00	-10.80	AVG	P		
10	0.5136	39.56	9.39	48.95	56.00	-7.05	QP	Р		
11	1.1174	35.29	9.43	44.72	56.00	-11.28	QP	Р		
12	1.1174	19.49	9.43	28.92	46.00	-17.08	AVG	Р		

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Test F	Plots and Data	of Conduc	ted Emissi	ons								
Teste	d Model:	mini	-2									
Teste	d Mode:	TM1										
Test V	oltage:	AC 1	120V/60Hz									
Test F	ower Line:	Live										
Rema	rk:											
90.0	dBuV											
[												]
80												-
70												
"										45.05.01		
60	May way	1000							FUC P	art15 CE-Cla	ss B_UP	1
50	*	V 13 7 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3/14 <sub>30</sub> / <sub>11</sub>						FCC P	art15 CE-Cla	ss B_AVe	
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10						The state of the s	White specialist the	The second second			and the same	AVG
0												
-10												
	150	0.5	00		(MHz)		5.0	00			30.0	] 00
		- I			l							
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Rem	nark		
1	0.2940	30.41	9.58	39.99	50.41	-10.42	AVG	Р				
2	0.2943	43.25	9.58	52.83	60.40	-7.57	QP	Р				
3	0.3605	42.05	9.58	51.63	58.72	-7.09	QP	Р				
4	0.3615	29.71	9.58	39.29	48.69	-9.40	AVG	Р				
5 6	0.4137 0.4200	41.03 30.03	9.57 9.57	50.60 39.60	57.57 47.45	-6.97 -7.85	QP AVG	P				
7	0.4200	26.74	9.57	36.32	46.13	-9.81	AVG	P				
8 *		39.88	9.58	49.46	56.01	-6.55	QP	Р				
9	0.5637	38.74	9.57	48.31	56.00	-7.69	QP	Р				
10	0.5685	28.53	9.57	38.10	46.00	-7.90	AVG	Р				
11	0.6315	25.68	9.56	35.24	46.00	-10.76	AVG	Р				
12	0.6367	37.71	9.56	47.27	56.00	-8.73	QP	Р				

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## 4. Radiated Disturbance

#### 4.1 Standard and Limit

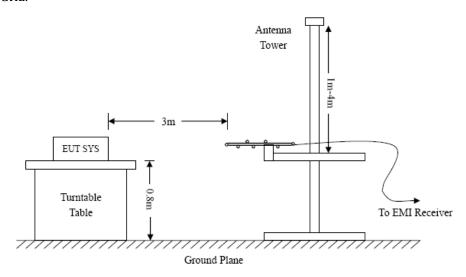
According to the rule FCC Part 15.109, Radiated emission limit for a class A and class B device as below:

Eraquancy of Emission (MHz)	Class A (3m)	Class B (3m)				
Frequency of Emission (MHz)	Quasi-peak (dBuV/m)	Quasi-peak (dBuV/m)				
30-88	50	40				
88-216	54.0	43.5				
216-960	57.0	46				
Above 960	54					
Note: The more stringent limit app	lies at transition frequencies.					

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#### **4.2 Test Procedure**

Test is conducting under the description of ANSI C63.4-2014 American National Standard for Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.



Test Setup Block Diagram

## 4.3 Test Data and Results

Based on all tested data, the EUT complied with the FCC Part 15.109 standard limit for a Class B device, and with the worst case as below:

Remark: Level = Reading + Factor, Margin = Level - Limit

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Test I	Plots	and	Data	of Rac	liate	d Em	issio	ns									
Teste	d Mo	del:				mini-2											
Teste	d Mo	de:				TM1											
Test \	Volta	ge:				AC 120V/60Hz											
Test A	Anter	nna l	Polariz	zation	1:	Horizontal											
Rema	ırk:																
80.0	dB	uV/m	ı														
70																	
60											FC	C Part15 F	RE-Class	B_30-10	DOOMHz		
50											Ma	rgin -6 dB					
40																	
30													5	المعمديد بارس	MAN AND STREET	way water	
	Apropadora	ANNAN	1 	homenance	2	<sup>ph</sup> laphyd <sub>ycho</sub>	handbulg M	W WAR WAR WAR WAR WAR WAR WAR WAR WAR WA	WALLAND OF THE STATE OF THE STA	val <sub>no</sub> mingerheeld	harafagatir	Marie alupaturan de	harry of the state	total trace a			
10																	
0.0 30	).000			6	0.00				(MHz)		30	0.00				1000.0	)00
No.	Fı	requ (MF	ency łz)	Read (dBt			ictor 3/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimut (deg.)		Rem	nark	
1	4	46.83	303	26.4	46	-8	.31	18.15	40.00	-21.85	QP	100	246	Р			
2		64.6		25.			).78	15.06	40.00	-24.94	QP	100	102				
3		58.1		26.			.84	18.49	43.50	-25.01	QP	100	163				
5		95.1 77.1		27. 27.			.29	18.88 23.90	46.00 46.00	-27.12 -22.10	QP QP	100	307 143				
6 *		77. 1 750.1		26.9			.04 87	27.79	46.00	-18.21	QP QP	100	21	P			
		- 2.1			_								1				

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Test	Plot	s and	Data	of Rac	liate	d En	nissio	ons								
Teste	ed M	Iodel:				mini-2										
Teste	ed M	lode:				TM1										
Test	Volt	age:				AC 120V/60Hz										
Test.	Anto	enna l	Polari	zation	1:	Vertical										
Rema	ark:															
80.0		ßuV/m	ı													
70																
60											FC	C Part15 F	RE-Class B	30-1	000MHz	
50											M-a	<del>irgin -6 dB</del>				
40																
30													5 **	anghibanos oh	6 	y de de la constitución de la co
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0.0	0.000	)		6	0.00				(MHz)		30	0.00				1000.000
No.		Frequ (MF		Read (dBt	_		actor 3/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Rema	ırk
1		44.43	308	26.	78	-8	3.25	18.53	40.00	-21.47	QP	100	11	Р		
2		67.9		27.			1.34	15.72	40.00	-24.28	QP	100	112	Р		
3		146.8		25.			.88	17.53	43.50	-25.97	QP	100	335	P		
4	$\perp$	314.3		26.			'.48	18.52	46.00	-27.48	QP	100	82	P		
5		506.4		27.			3.18	24.16	46.00	-21.84	QP	100	246	P		
6 '	*	750.1	083	27.:	25	0	.87	28.12	46.00	-17.88	QP	100	41	P		

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