

# TEST REPORT

Applicant Name: Dongguan Weisheng Communication Technology Co., Ltd  
Address: Room 601, Building 1, No. 8 Qingfeng South Road, Tangxia Town, Dongguan City, Guangdong Province, China  
Report Number: 2501R35764E-EM-00  
FCC ID: 2BGMW-XPA125B

## Test Standard (s)

FCC Part 15, Subpart B (Class B)

## Sample Description

Product Type: Power Amplifier  
Model No.: XPA125B  
Multiple Model(s) No.: N/A  
Trade Mark: XIEGU  
Date Received: 2025/03/24  
Issue Date: 2025/05/13

Test Result:	Pass▲
--------------	-------

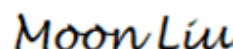
▲ In the configuration tested, the EUT complied with the standards above.

## Prepared and Checked By:



Haiguo Li  
EMC Engineer

## Approved By:



Moon Liu  
EMC Supervisor

Note: The information marked # is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.

This report cannot be reproduced except in full, without prior written approval of the Company. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.

This report may contain data that are not covered by the NVLAP accreditation and are marked with an asterisk "▼".

## Bay Area Compliance Laboratories Corp. (Shenzhen)

5F(B-West), 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China

Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn

## **TABLE OF CONTENTS**

<b>DOCUMENT REVISION HISTORY .....</b>	<b>3</b>
<b>GENERAL INFORMATION.....</b>	<b>4</b>
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT) .....	4
OBJECTIVE .....	4
TEST METHODOLOGY .....	4
MEASUREMENT UNCERTAINTY.....	5
TEST FACILITY .....	5
<b>SYSTEM TEST CONFIGURATION.....</b>	<b>6</b>
DESCRIPTION OF TEST CONFIGURATION .....	6
EUT EXERCISE SOFTWARE .....	6
EQUIPMENT MODIFICATIONS .....	6
SUPPORT EQUIPMENT LIST AND DETAILS .....	6
EXTERNAL I/O CABLE.....	7
BLOCK DIAGRAM OF TEST SETUP .....	7
<b>SUMMARY OF TEST RESULTS.....</b>	<b>8</b>
<b>TEST EQUIPMENT LIST .....</b>	<b>9</b>
<b>FCC §15.109 - RADIATED EMISSIONS .....</b>	<b>10</b>
APPLICABLE STANDARD .....	10
EUT SETUP .....	10
EMI TEST RECEIVER AND SPECTRUM ANALYZER SETUP .....	11
TEST PROCEDURE .....	11
LEVEL & OVER LIMIT CALCULATION .....	11
TEST DATA .....	11
<b>EUT PHOTOGRAPHS.....</b>	<b>14</b>
<b>TEST SETUP PHOTOGRAPHS .....</b>	<b>15</b>

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	2501R35764E-EM-00	Original Report	2025/05/13

## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

Product	Power Amplifier
Tested Model	XPA125B
Multiple Model(s)	N/A
Voltage Range	DC 12V-15V
Highest operating frequency <sup>#</sup>	54 MHz (Provided by the applicant)
Equipment Class	Class B
Sample number	306N-1 (Assigned by BACL, Shenzhen)
Sample/EUT Status	Good condition
Adapter Information	N/A

### Objective

This test report is in accordance with Part 2-Subpart J, Part 15B Subparts A and B of the Federal Communication Commissions rules.

The objective of the manufacturer is to determine the compliance of the EUT with FCC Part 15B.

### Test Methodology

All measurements contained in this report were conducted with 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.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters. Each test item follows test standards and with no deviation.

**Measurement Uncertainty**

Item	Frequency Range		Expanded Measurement uncertainty
Conducted Emissions	AC Mains	150 kHz ~30MHz	3.66dB(k=2, 95% level of confidence)
Radiated Disturbance	30MHz~200MHz	Horizontal	5.32dB(k=2, 95% level of confidence)
	30MHz~200MHz	Vertical	5.43dB(k=2, 95% level of confidence)
	200MHz~1000MHz	Horizontal	5.77dB(k=2, 95% level of confidence)
	200MHz~1000MHz	Vertical	5.73dB(k=2, 95% level of confidence)
	1GHz~6GHz	/	5.34dB(k=2, 95% level of confidence)
	6GHz~18GHz	/	5.40dB(k=2, 95% level of confidence)
	18GHz~40GHz	/	5.64dB(k=2, 95% level of confidence)

*Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.*

**Test Facility**

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West) , 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 715558, the FCC Designation No. : CN5045.

Each test item follows test standards and with no deviation.

## SYSTEM TEST CONFIGURATION

### Description of Test Configuration

The system was configured for testing in worst case condition.

Test Mode: Amplifying signal (1.8MHz, DC 15V)

Note 1: For DC power supply, pre-scan DC 12V-15V, only the worst-case data was shown in the test report, and the worst case is DC 15V.

Note 2: Pre-scan 1.8MHz~29.7MHz, 50MHz~54MHz, only the worst-case data was shown in the test report, and the worst case is 1.8MHz.

### EUT exercise software

No exercise software was used.

### Equipment Modifications

No modification was made to the EUT tested.

### Support Equipment List and Details

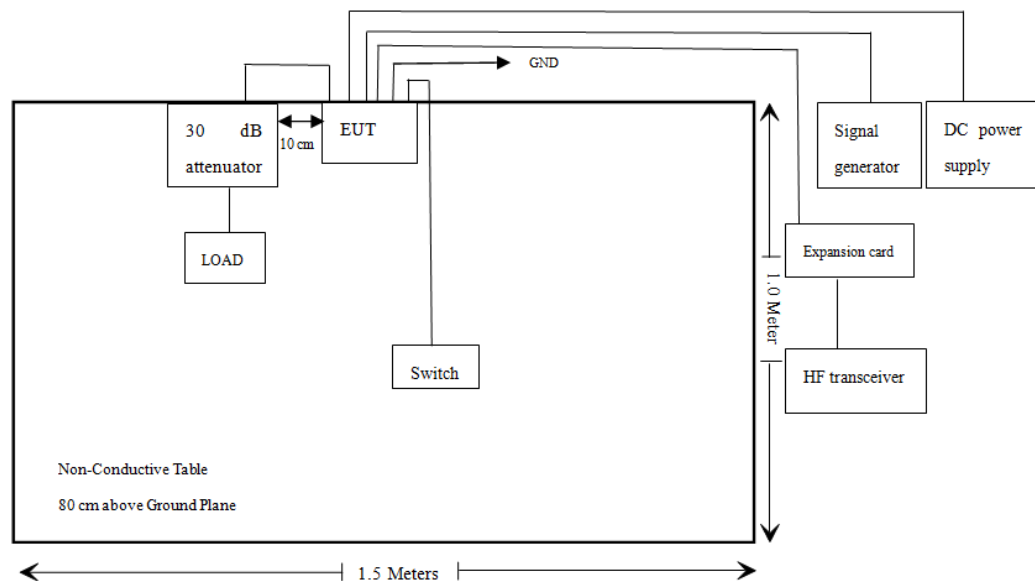
Manufacturer	Description	Model	Serial Number
GUWEI	DC power supply	GPS-3030DD	EM832096
Keysight	Signal Generator	N5182B	MY53052129
WEINSCHEL	30 dB attenuator	58-30-33	PS509
N/A	LOAD	N/A	/
Weisheng	Expansion card	CE-19	/
Weisheng	HF transceiver	G90	/
N/A	switch	N/A	/

**External I/O Cable**

Cable Description	Length (m)	From/Port	To
Un-shielding Detachable DC Cable	8.0	DC power supply	EUT
Un-shielding Detachablecoaxial Cable	8.0	Signal generator	EUT
Un-shielding Detachablecoaxial Cable	2.0	EUT	30 dB attenuator
Un-shielding Detachable Cable	0.1	30 dB attenuator	LOAD
Un-shielding un-Detachable Cable	1.5	EUT	switch
Un-shielding un-Detachable Cable	1.5	EUT	Expansion card
Un-shielding un-Detachable DC Cable	1.5	EUT	GND

**Block Diagram of Test Setup**

Radiation emission



**SUMMARY OF TEST RESULTS**

FCC Rules	Description of Test	Results
§15.107	AC Line Conducted Emissions	Not Applicable
§15.109	Radiated Emissions	Compliant

Not Applicable: The EUT only powered by DC and does not support AC power supply.



TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESR3	102455	2024/12/04	2025/12/03
Sonoma instrument	Pre-amplifier	310 N	186238	2024/05/21	2025/05/20
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2023/07/20	2026/07/19
Unknown	Cable	Chamber A Cable 1	N/A	2024/06/18	2025/06/17
Unknown	Cable	XH500C	J-10M-A	2024/06/18	2025/06/17
Audix	EMI Test software	E3	19821b(V9)	NCR	NCR

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

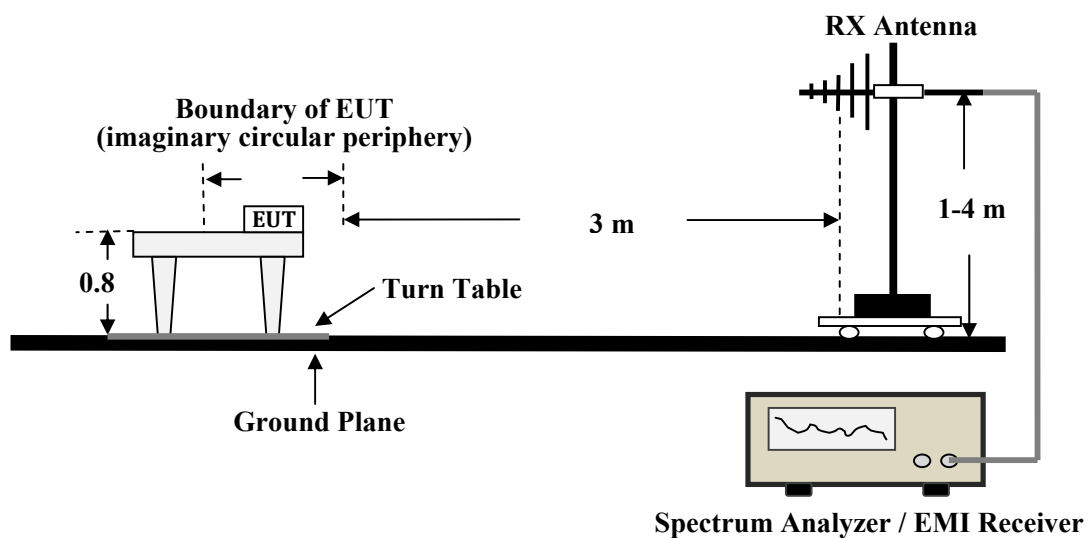
## FCC §15.109 - RADIATED EMISSIONS

### Applicable Standard

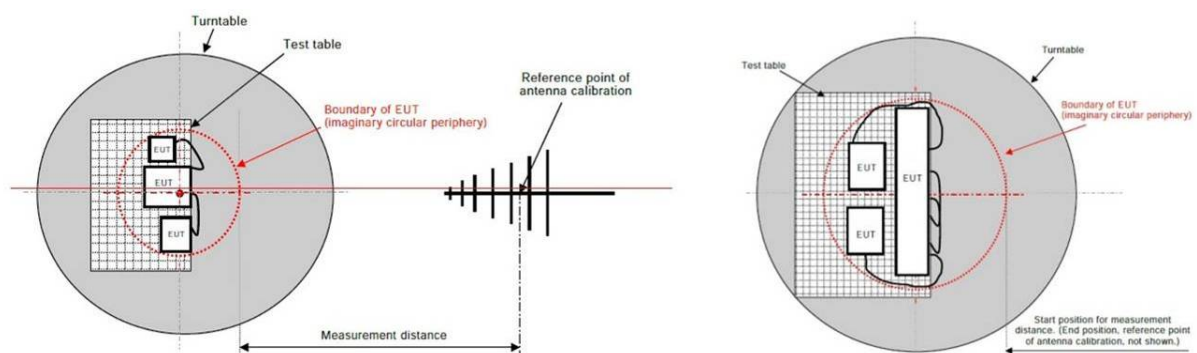
FCC §15.109

### EUT Setup

Below 1GHz for Radiated Emissions



### Radiated Emissions Setup Configuration



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.4-2014. The related limit was specified in FCC Part 15B.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

## EMI Test Receiver and Spectrum analyzer Setup

During the radiated emission test, the EMI test receiver and spectrum analyzer setup was set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP

## Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

If emission level of the EUT in Peak measurement mode is 20dB lower than peak limit line (that means the emission level in Peak measurement mode complies with both Peak and average limit lines) then only Peak measurement result is reported .Otherwise, Emission in average measurement mode shall be measured, and reported for frequency range above 1GHz.

## Level & Over Limit Calculation

The Level is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Read Level. The basic equation is as follows:

$$\text{Factor} = \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

$$\text{Level} = \text{Read Level} + \text{Factor}$$

The “Over limit” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over limit of -6 dB means the emission is 6dB below the limit for Class B. The equation for Over Limit calculation is as follows:

$$\text{Over limit} = \text{Level} - \text{Limit}$$

## Test Data

### Environmental Conditions

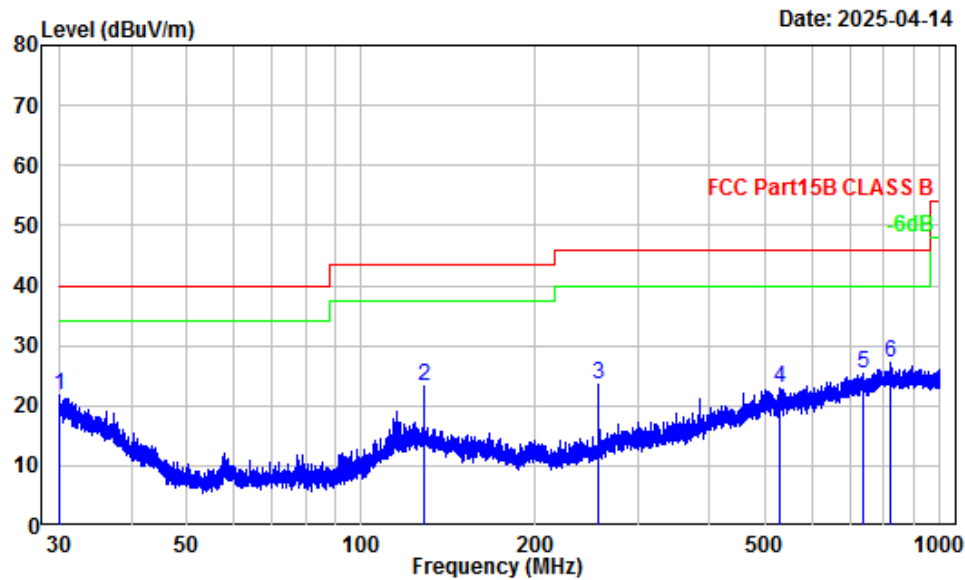
Temperature:	25.9 °C
Relative Humidity:	42 %
ATM Pressure:	101.3 kPa

*The testing was performed by Alex Yan on 2025-04-14 for below 1GHz.*

Test Mode: Amplifying signal (1.8MHz, DC 15V)

30 MHz~1 GHz

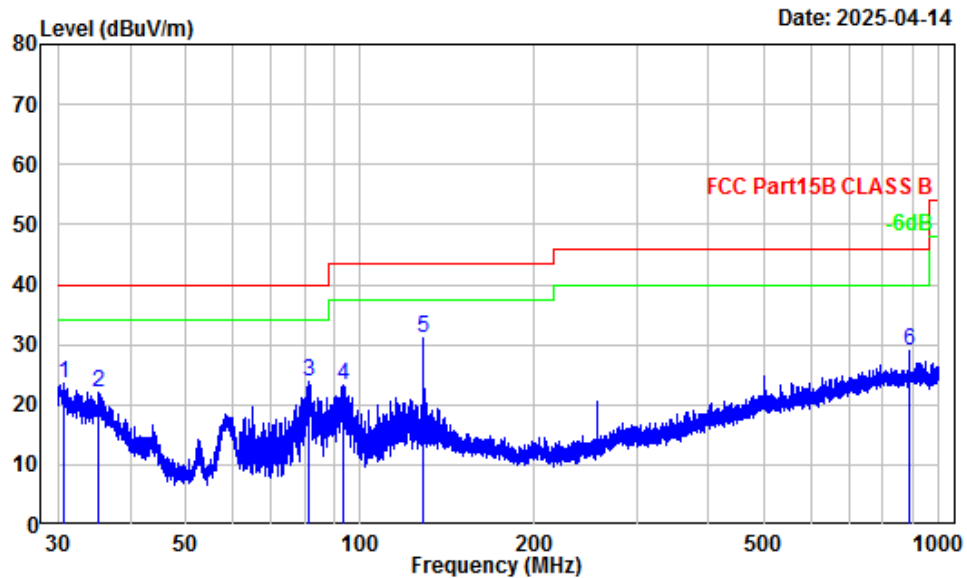
Horizontal



Site : Chamber A  
Condition : 3m Horizontal  
Project Number : 2501R35764E-EM  
Test Mode : Amplifying signal (1.8MHz, DC 15V)  
Detector: Peak RBW/VBW: 100/300kHz  
Tester : Alex Yan

	Freq Factor		Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	30.16	-6.04	27.87	21.83	40.00	-18.17	Peak
2	128.28	-11.15	34.54	23.39	43.50	-20.11	Peak
3	256.41	-13.00	36.48	23.48	46.00	-22.52	Peak
4	526.86	-5.79	28.58	22.79	46.00	-23.21	Peak
5	734.81	-3.10	28.53	25.43	46.00	-20.57	Peak
6	819.91	-2.03	29.24	27.21	46.00	-18.79	Peak

## Vertical



Site : Chamber A  
Condition : 3m Vertical  
Project Number : 2501R35764E-EM  
Test Mode : Amplifying signal (1.8MHz, DC 15V)  
Detector: Peak RBW/VBW: 100/300kHz  
Tester : Alex Yan

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	30.69	-6.32	29.89	23.57	40.00	-16.43	Peak
2	35.14	-8.98	31.12	22.14	40.00	-17.86	Peak
3	81.35	-18.00	41.75	23.75	40.00	-16.25	Peak
4	93.44	-17.60	40.81	23.21	43.50	-20.29	Peak
5	128.23	-11.14	42.19	31.05	43.50	-12.45	Peak
6	889.95	-1.42	30.55	29.13	46.00	-16.87	Peak

## **EUT PHOTOGRAPHS**

---

Please refer to the attachment 2501R35764E-EM External photo and 2501R35764E-EM Internal photo.

## **TEST SETUP PHOTOGRAPHS**

---

Please refer to the attachment 2501R35764E-EM Test Setup photo.

**\*\*\*\*\* END OF REPORT \*\*\*\*\***