

FCC TEST REPORT

On Behalf of

Product Name: INTELLIGENT PULSE REPAIR

Trademark: N/A

Model Number: XJB1210-2

Prepared For: Tianchang Jinjie Electronics Co., Ltd

Address: Union village Qinlan Town Tianchang City Anhui Provice

Prepared By: Shenzhen Huaxiang Testing Co , Ltd

Address: 1st Floor, Building A1, No. 2082 Jincheng Road, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, China

Report No.: HUAX250428083KR

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APPENDIX I (Photos of EUT)

TEST REPORT DECLARATION

Applicant	:	Tianchang Jinjie Electronics Co., Ltd
Address :	:	Union village Qinlan Town Tianchang City Anhui Provice
Manufacturer:	:	Tianchang Jinjie Electronics Co., Ltd
Address :	:	Union village Qinlan Town Tianchang City Anhui Provice
EUT Description :	:	INTELLIGENT PULSE REPAIR
Model Number	:	XJB1210-2
Rating(s)	:	Input Voltage:AC110-240V, 50-60Hz Output Voltage:12V-15.5V Output Current:DC 10A(4-180Ah)
Test Date	:	Apr. 24, 2025 - Apr. 28, 2025
Date of Report	:	Apr. 28, 2025

Test Standards:

FCC Part 15 subpart B Class B (2017)

The EUT described above is tested by US to determine the maximum emission levels emanating from the EUT, the maximum emission levels are compared to the FCC Part 15 limits. The measurement results are contained in this test report. and Shenzhen Huaxiang Testing Technology Co , Ltd. is assumed of full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT is to be technically compliant with the FCC requirements

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Huaxiang Testing Technology Co , Ltd.

Prepared by(Test Engineer):

Joan Wang

Joan Wang

Approved(Manager)

Amy Jiang

Amy Jiang

1 GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	:	INTELLIGENT PULSE REPAIR
Model Number	:	XJB1210-2
Supplementary Model	:	N/A
Test Voltage	:	AC110-240V, 50-60Hz
Applicant	:	Tianchang Jinjie Electronics Co., Ltd
Address	:	Union village Qinlan Town Tianchang City Anhui Provice
Manufacturer	:	Tianchang Jinjie Electronics Co., Ltd
Address	:	Union village Qinlan Town Tianchang City Anhui Provice

1.2. Description of test facility

All measurement required was performed at laboratory of Shenzhen Huaxiang Testing Co , Ltd at 1st Floor, Building A1, No. 2082 Jincheng Road, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, China

Shenzhen Huaxiang Testing Co , Ltd EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission.

1.3. Test Standards

The following Declaration of Conformity report of EUT is prepared in accordance with 47CFR Part 15(2014): Radio Frequency Device: Subpart B; Unintentional radiators Class B

ANSI C63.4 (2019): Interim Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9KHz to 40GHz.

1.4. Test Summary

TEST ITEMS	RESULT	NOTE
Disturbance voltage at a.c. mains terminal	PASS	
Radiated emission	PASS	

Notes: N/A=Not Applicable

1.5. Measurement Uncertainty

Radiation Uncertainty : $U_r = \pm 3.84\text{dB}$

Conduction Uncertainty : $U_c = \pm 2.72\text{dB}$

2. POWER LINE CONDUCTED MEASUREMENT

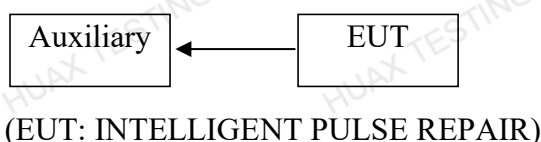
2.1. Test Equipment

The following test equipments are used during the power line conducted measurement:

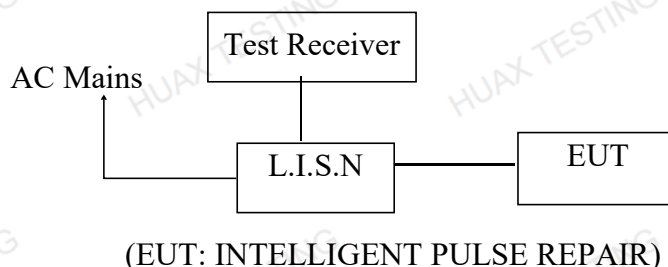
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCS30	8289851018	Nov. 20, 2024	1 Year
2.	L.I.S.N.	Rohde & Schwarz	ESH2-Z5	834549/005	Nov. 20, 2024	1 Year
3.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100006	Nov. 20, 2024	1 Year
4.	RF Cable	FUJIKURA	RG-55/U	LISN Cable	Nov. 20, 2024	1 Year

2.2. Block Diagram of Test Setup

2.2.1 Block diagram of connection between the EUT and simulators



2.2.2 Block diagram of test setup



2.3. Power Line Conducted Emission Measurement Limits (Class B)

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

2.4. Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

EUT : INTELLIGENT PULSE REPAIR
Model Number : XJB1210-2

2.5. Operating Condition of EUT

2.5.1. Setup the EUT and simulator as shown as Section 2.2.

2.5.2. Turn on the power of all equipment.

2.5.3. Let the EUT work in test mode (Normal) and measure it.

2.6. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides 50ohm-coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC/ANSI C63.4-2009 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9KHz.

The frequency range from 150KHz to 30MHz is checked.

The test result is reported on Section 2.7.

The frequency range from 150KHz to 30 MHz is investigated.

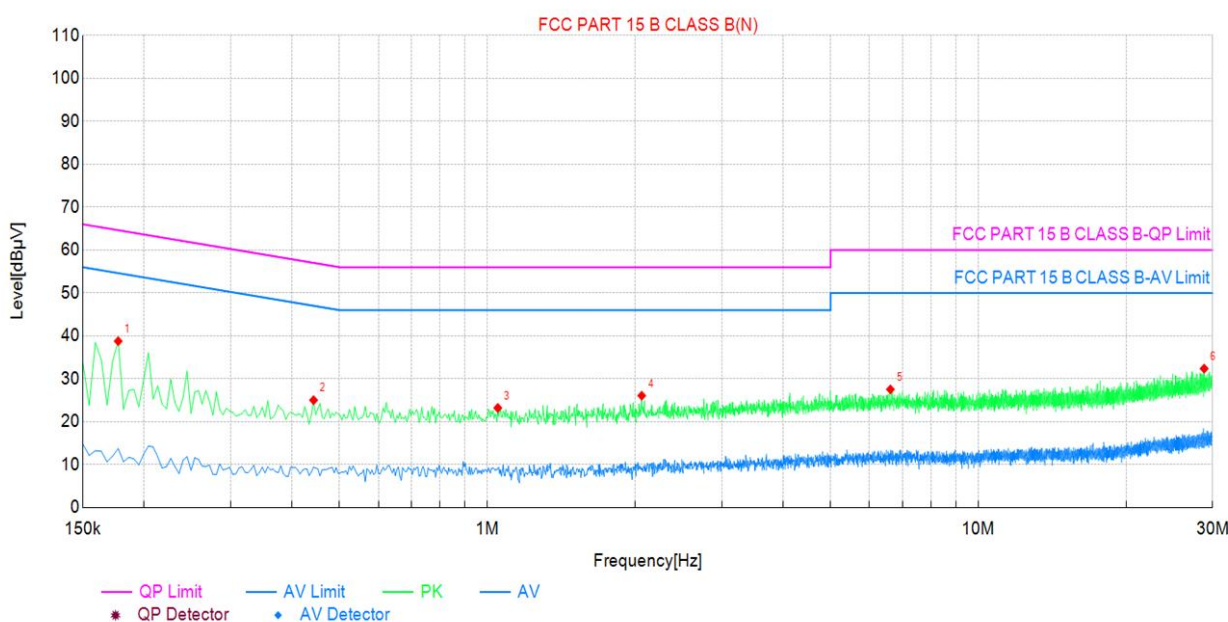
2.7. Power Line Conducted Emission Measurement Results

PASS

Please reference to the following pages

Conducted Emission Test Data

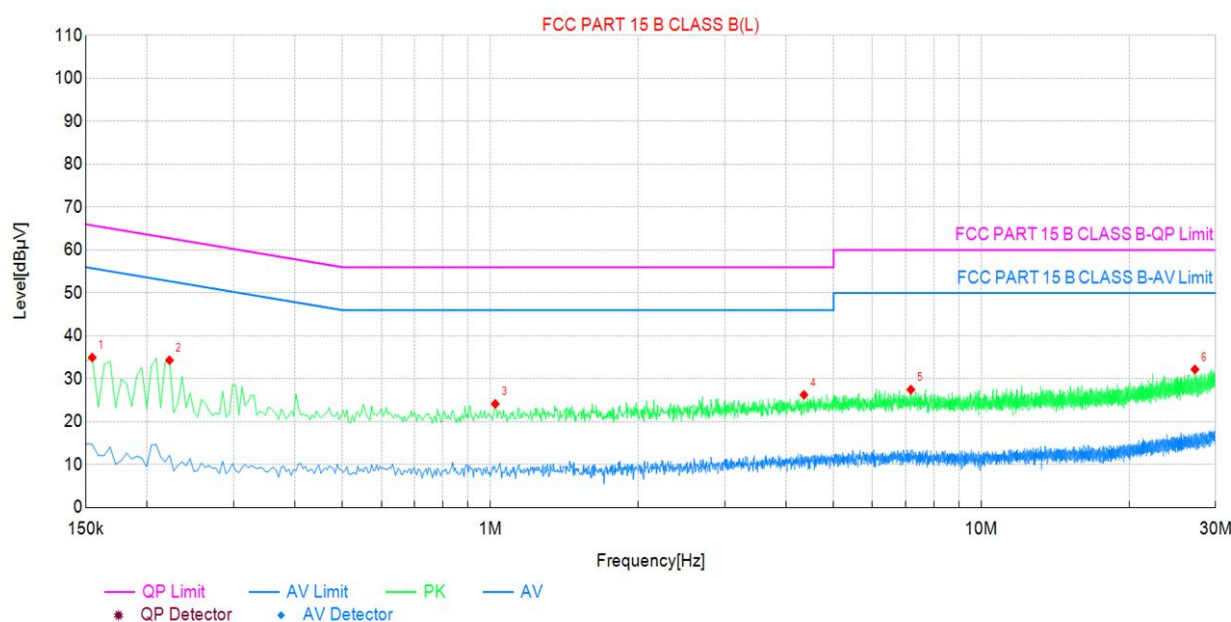
EUT: INTELLIGENT PULSE REPAIR
M/N: XJB1210-2
Operating Condition: Normal work
Test Site: Shielded Room
Operator: Mark
Test Specification: /
Comment: Neutral



Suspected Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Phase	Detector	Verdict
1	0.177000	19.02	38.78	19.76	64.63	25.85	N	PK	PASS
2	0.442500	5.31	25.04	19.73	57.01	31.97	N	PK	PASS
3	1.050000	3.40	23.23	19.83	56.00	32.77	N	PK	PASS
4	2.062500	6.16	26.09	19.93	56.00	29.91	N	PK	PASS
5	6.621000	6.89	27.56	20.67	60.00	32.44	N	PK	PASS
6	28.837500	7.58	32.39	24.81	60.00	27.61	N	PK	PASS

Conducted Emission Test Data

EUT: INTELLIGENT PULSE REPAIR
M/N: XJB1210-2
Operating Condition: Normal work
Test Site: Shielded Room
Operator: Mark
Test Specification: /
Comment: Line



Suspected Data List									
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Phase	Detector	Verdict
1	0.154500	15.15	34.97	19.82	65.75	30.78	L	PK	PASS
2	0.222000	14.43	34.33	19.90	62.74	28.41	L	PK	PASS
3	1.023000	4.26	24.18	19.92	56.00	31.82	L	PK	PASS
4	4.353000	6.15	26.28	20.13	56.00	29.72	L	PK	PASS
5	7.188000	6.75	27.50	20.75	60.00	32.50	L	PK	PASS
6	27.235500	7.55	32.21	24.66	60.00	27.79	L	PK	PASS

3. RADIATED EMISSION MEASUREMENT

3.1. Test Equipment

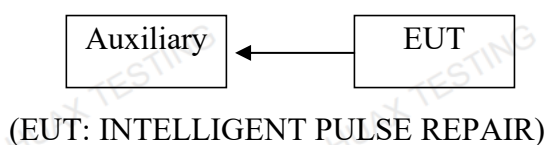
The following test equipments are used during the radiated emission measurement:

3.1.1. For Anechoic Chamber

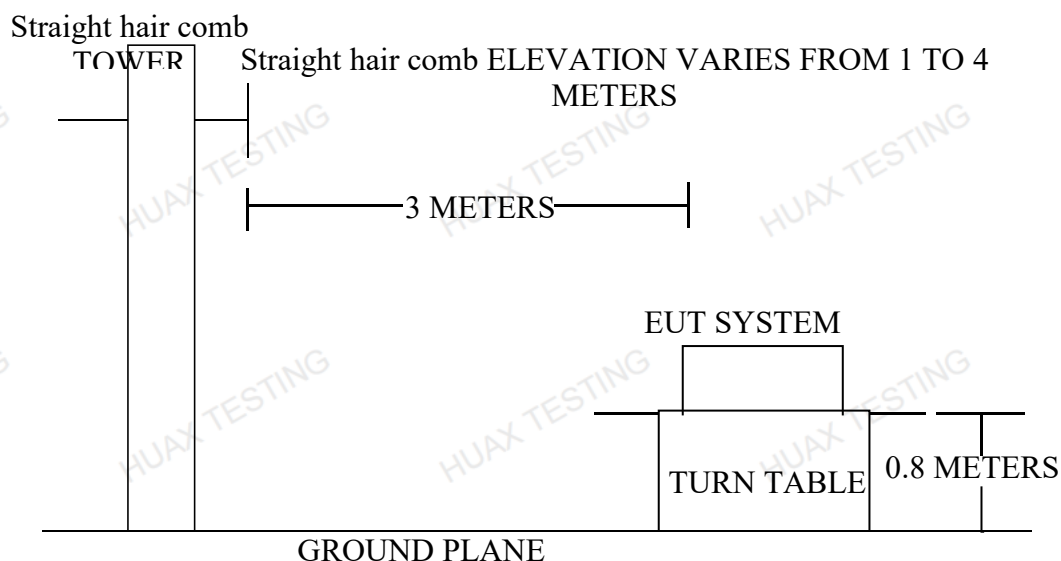
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	ANRITSU	MS2661C	6200140915	Nov. 20, 2024	1 Year
2.	Test Receiver	Rohde & Schwarz	ESCS30	828985/018	Nov. 20, 2024	1 Year
3.	Bilog Antenna	Schwarzbeck	VULB9163	142	Nov. 20, 2024	1 Year
4.	50 Coaxial Switch	Anritsu Corp	MP59B	6100237248	Nov. 20, 2024	1 Year
5.	Cable	Schwarzbeck	AK9513(1m)	CR RX2	Nov. 20, 2024	1 Year
6.	Cable	Schwarzbeck	AK9513(10m)	AC RX1	Nov. 20, 2024	1 Year
7.	Cable	Rosenberger	N/A(6m)	CR RX1	Nov. 20, 2024	1 Year
8.	Cable	Rosenberger	N/A(10m)	FP2RX2	Nov. 20, 2024	1 Year
9.	DC Power Filter	MPE	23872C	N/A	Nov. 20, 2024	1 Year
10.	Single Phase Power Line Filter	MPE	23332C	N/A	Nov. 20, 2024	1 Year
11.	3 Phase Power Line Filter	MPE	23333C	N/A	Nov. 20, 2024	1 Year
12.	Signal Generator	HP	8648A	3625U00573	Nov. 20, 2024	1 Year

3.2. Block Diagram of Test Setup

3.2.1. Block diagram of connection between the EUT and simulators



3.2.2. Anechoic Chamber Test Setup Diagram



(EUT: INTELLIGENT PULSE REPAIR)

3.3. Radiated Emission Limit (Class B)

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0

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

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

3.4. EUT Configuration on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

INTELLIGENT PULSE REPAIR(EUT)

Model Number : XJB1210-2

3.5. Operating Condition of EUT

1. Setup the EUT as shown in Section 3.2.
2. Let the EUT work in test mode (Normal) and measure it.

3.6. Test Procedure

EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2009 on radiated emission measurement. The bandwidth of the EMI test receiver (R&S ESCS30) is set at 120KHz.

The frequency range from 30MHz to 1000MHz is investigated.

3.7. Radiated Emission Measurement Results

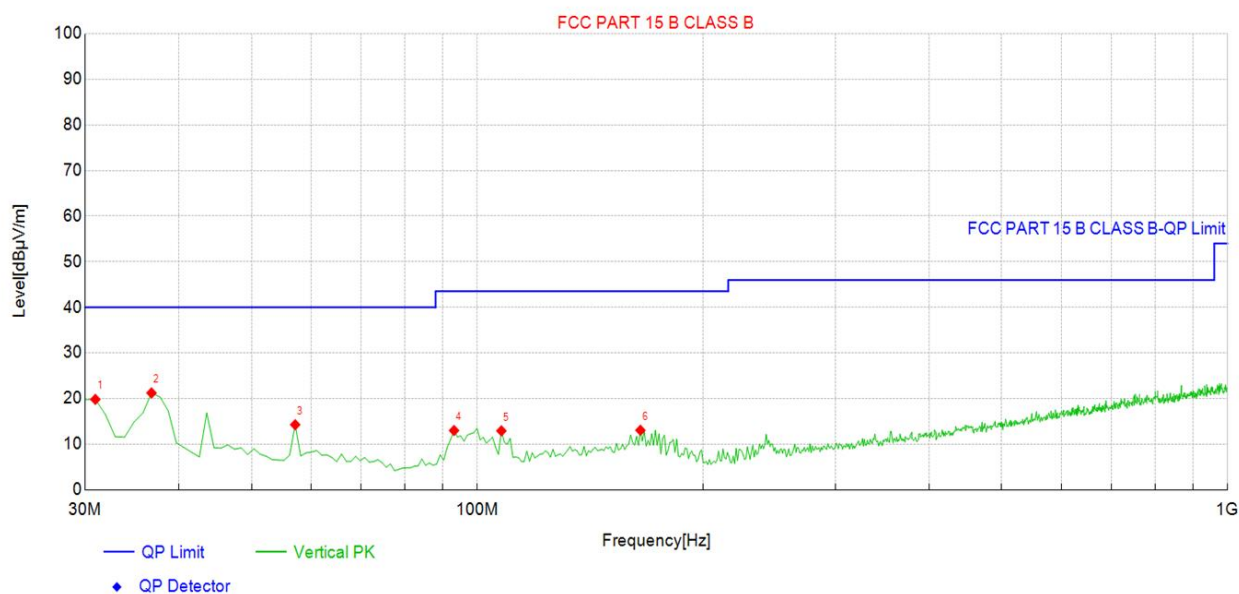
PASS

Please reference to the following pages

Radiated emissions were conducted in charging mode and discharging mode and the worst case (discharging mode) was reported only.

Radiated Emission Test Data

EUT: INTELLIGENT PULSE REPAIR
M/N: XJB1210-2
Operating Condition: Normal work
Test Site: 3m CHAMBER
Operator: Mark
Test Specification: /
Comment: Polarization: Vertical

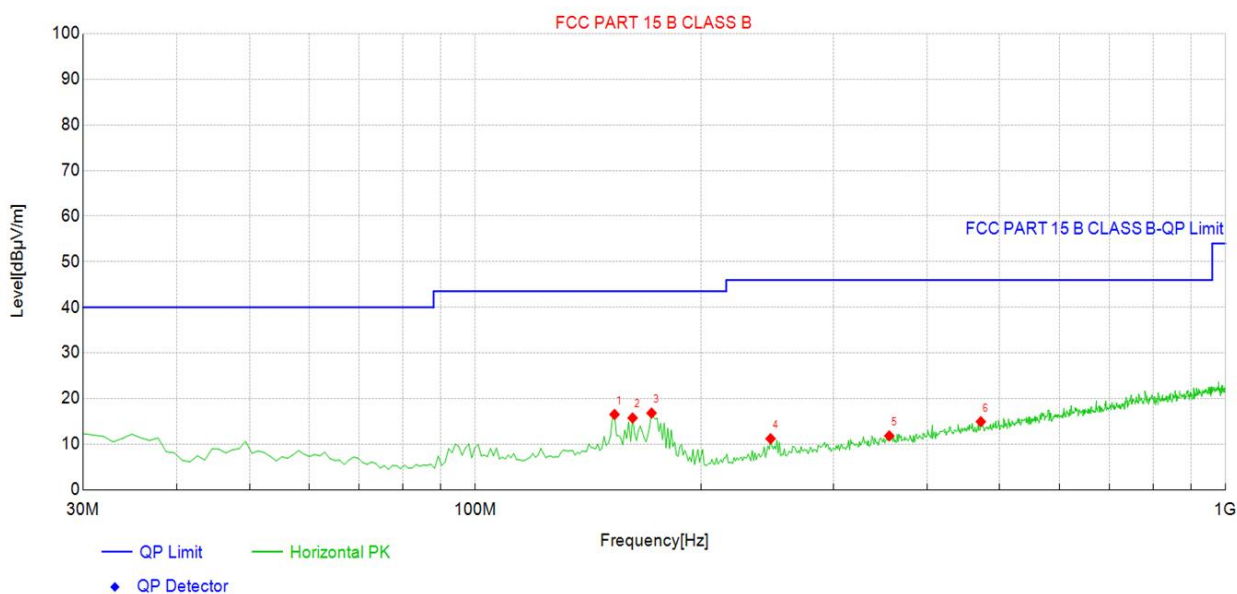


Suspected Data List

NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	30.97	31.7	19.82	-11.86	40.00	20.18	100	352	PK	Vert	PASS
2	36.80	36.1	21.23	-14.91	40.00	18.77	100	24	PK	Vert	PASS
3	57.19	31.5	14.25	-17.22	40.00	25.75	100	60	PK	Vert	PASS
4	93.11	33.2	12.98	-20.25	43.50	30.52	100	269	PK	Vert	PASS
5	107.68	32.0	12.92	-19.10	43.50	30.58	100	250	PK	Vert	PASS
6	164.96	29.4	13.05	-16.36	43.50	30.45	100	117	PK	Vert	PASS

Radiated Emission Test Data

EUT: INTELLIGENT PULSE REPAIR
M/N: XJB1210-2
Operating Condition: Normal work
Test Site: 3m CHAMBER
Operator: Mark
Test Specification: /
Comment: Polarization: Horizontal



Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	153.31	32.5	16.51	-15.97	43.50	26.99	100	315	PK	Hori	PASS
2	162.05	31.8	15.74	-16.07	43.50	27.76	100	255	PK	Hori	PASS
3	171.76	33.8	16.81	-16.94	43.50	26.69	100	27	PK	Hori	PASS
4	247.50	29.0	11.18	-17.78	46.00	34.82	100	247	PK	Hori	PASS
5	356.25	26.4	11.81	-14.62	46.00	34.19	100	220	PK	Hori	PASS
6	471.79	26.8	14.93	-11.84	46.00	31.07	100	35	PK	Hori	PASS

APPENDIX I (PHOTOS OF EUT)

FIGURE GENERAL APPEARANCE OF EUT

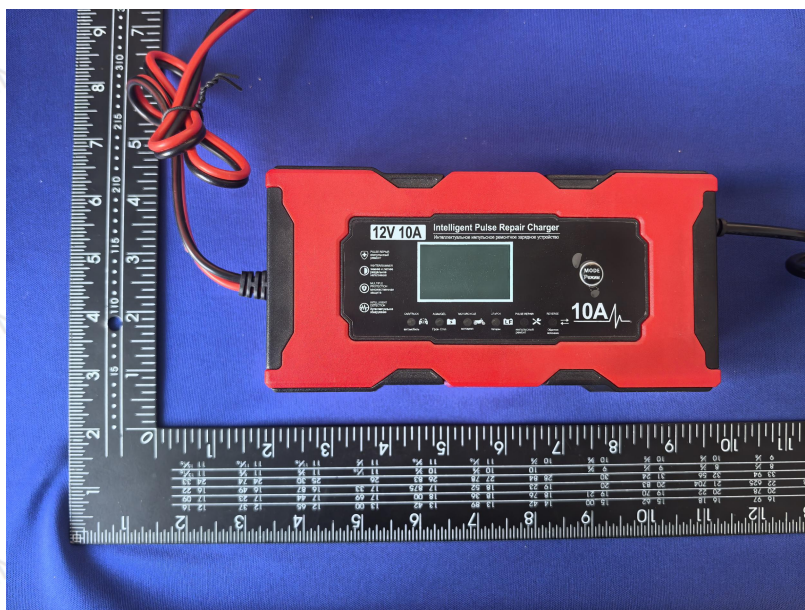


Figure-1



Figure-2

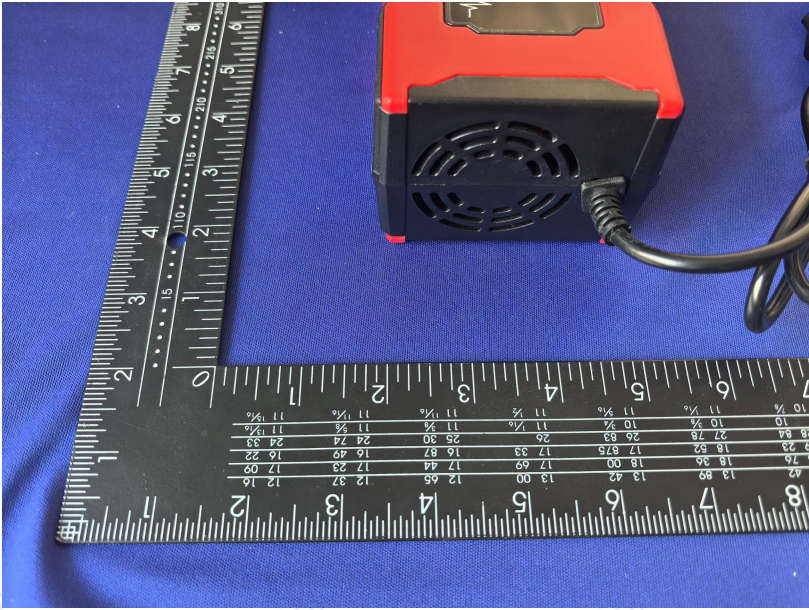


Figure-3

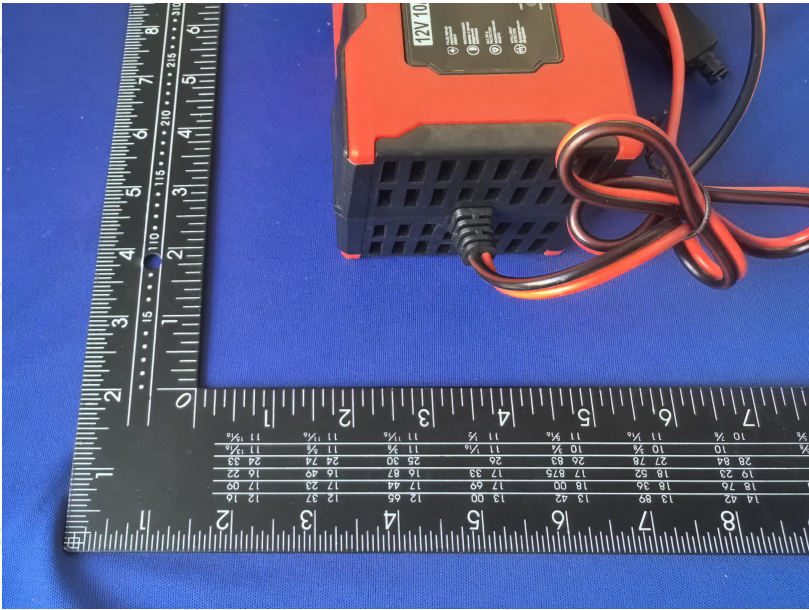


Figure-4

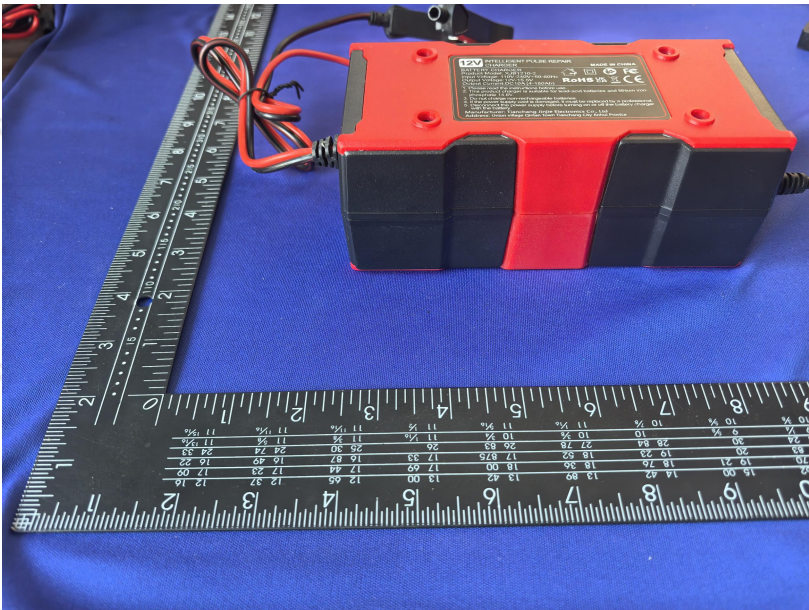


Figure-5

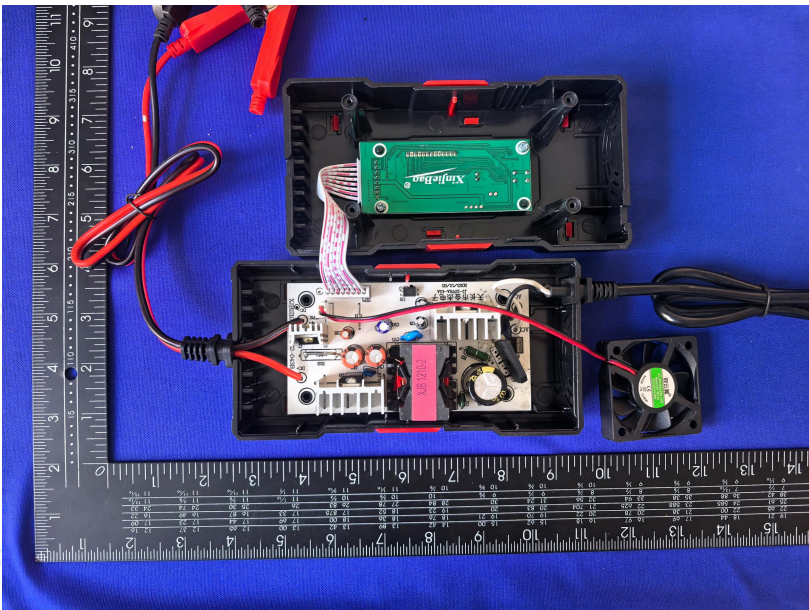


Figure-6

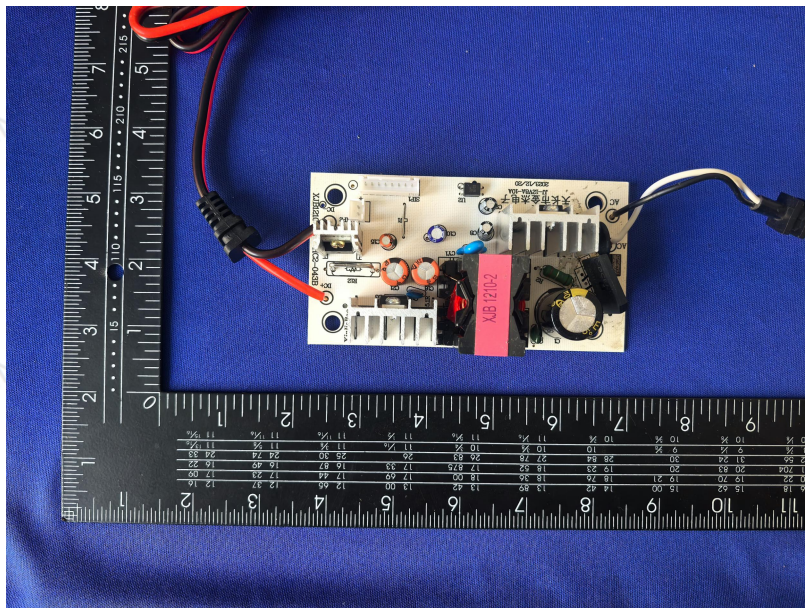


Figure-7

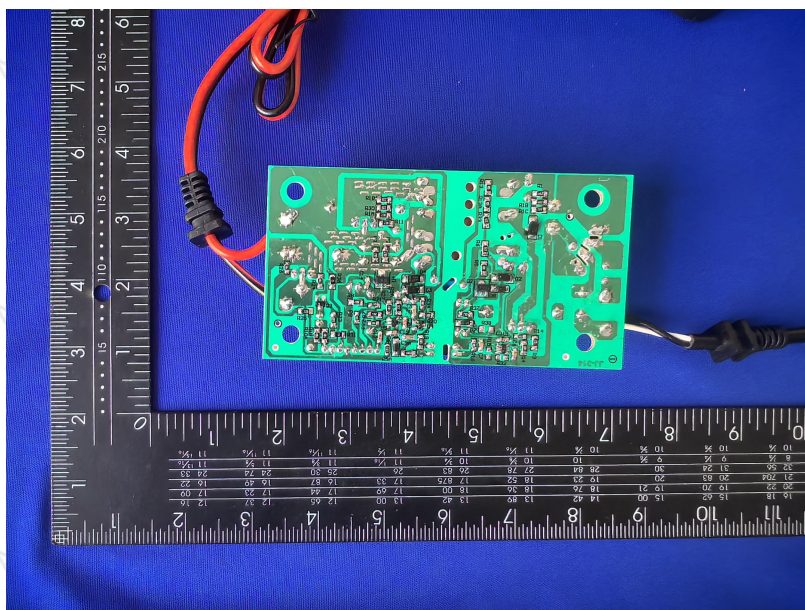


Figure-8

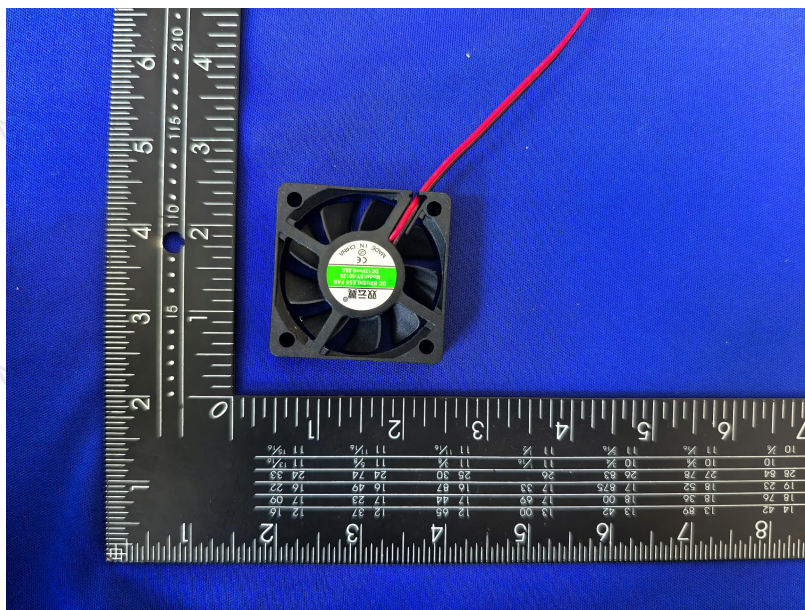


Figure-9

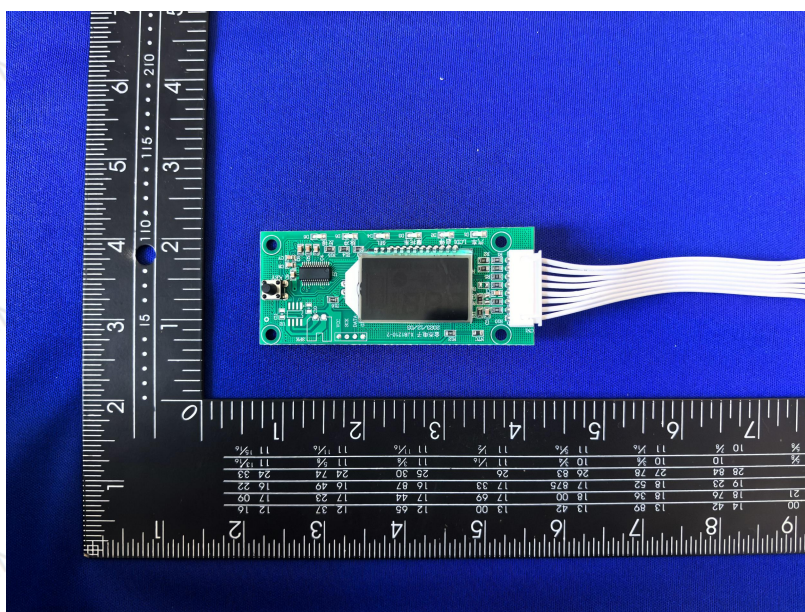


Figure-10

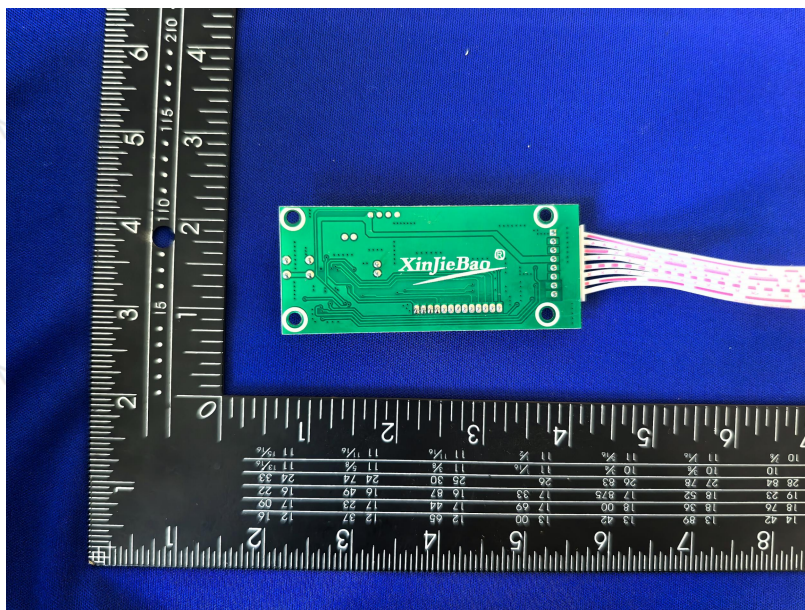


Figure-11

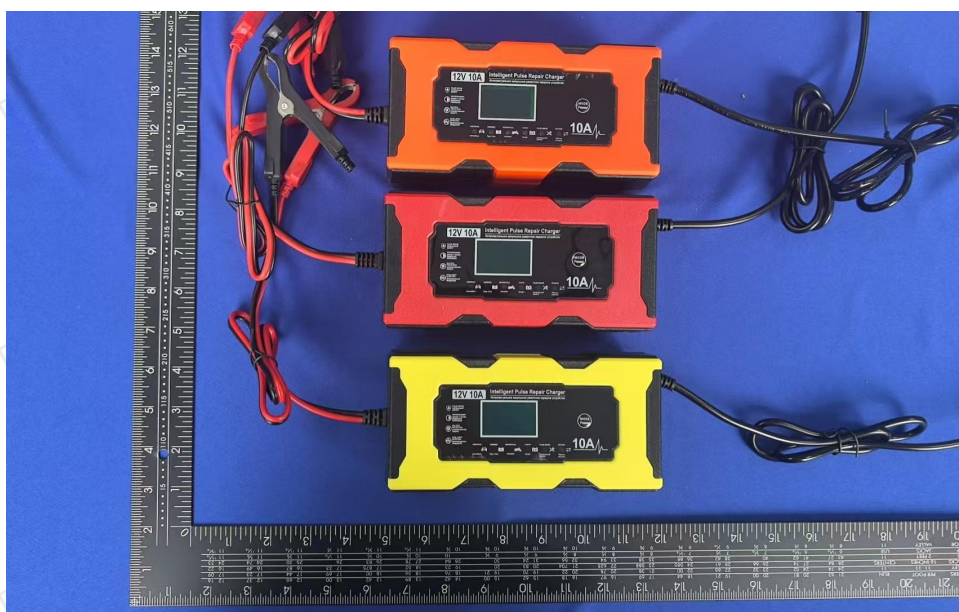


Figure-12

*****THE END OF REPORT*****