

TEST REPORT

Application No.: GZEM2502001175LM
Applicant: Shenzhen Chengxing Electronic Technology Co., Ltd.
Address of Applicant: 1405-07, Block A, Jiahe Building, Shennan Middle Road, Huaqiangbei Street, Futian District, Shenzhen, China
Manufacturer: Shenzhen Chengxing Electronic Technology Co., Ltd.
Address of Manufacturer: 1405-07, Block A, Jiahe Building, Shennan Middle Road, Huaqiangbei Street, Futian District, Shenzhen, China
Factory: Shenzhen Chengxing Electronic Technology Co., Ltd.
Address of Factory: 1405-07, Block A, Jiahe Building, Shennan Middle Road, Huaqiangbei Street, Futian District, Shenzhen, China
Product Name: RGB LED STRIP LIGHTS
Model No.: RGB LED STRIP LIGHTS
Trade Mark: STELLAR FIRE
Standard(s) : EN IEC 55015: 2019+A11:2020
 EN IEC 61547: 2023
Date of Receipt: 2025-02-26
Date of Test: 2025-03-05 to 2025-03-12
Date of Issue: 2025-04-03

Test Result:

Pass*

* In the configuration tested, the EUT complied with the standards specified above.

Jerry Chan

Jerry Chan
Manager



SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch, EMC/RF/CEC Laboratory

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Revision Record			
Version	Report No.	Date	Remark
01	GZEM250200117501	2025-04-03	Original

Authorized for issue by:			
		Luke Lin	
		Luke Lin/Project Engineer	
		Terry Lai	
		Terry Lai/Reviewer	



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2 Test Summary

Emission Part				
Item	Standard	Method	Requirement	Result
Radiated Emissions (30MHz-1GHz)	EN IEC 55015: 2019+A11:2020	CISPR 16-2-3: 2016	Table 10	Pass
Radiated Emissions (Magnetic Field Induced Current)(9kHz-30MHz) 2m loop		CISPR 16-2-3: 2016	Table 8	Pass

Immunity Part				
Item	Standard	Method	Requirement	Result
Electrostatic Discharge	EN IEC 61547: 2023	EN 61000-4-2:2009	±4kV Contact Discharge, ±8kV Air Discharge	Pass
Radiated Immunity (80MHz-1GHz)		EN IEC 61000-4-3:2020	3V/m, 80%, 1kHz Amp. Mod, 1% increment	Pass

Note:

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.



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4 General Information

4.1 Details of E.U.T.

Power supply: DC 5V 3A

Cable(s): N/A

Remark: The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
AC/DC Adapter	Supplied by applicant	MODEL:LY-0530(INPUT: AC 100-240V 50/60Hz)	N/A

4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Radiated Emissions (30MHz-1GHz)	5.14dB (30MHz-1GHz):3m; 4.90dB (30MHz-1GHz):10m
Radiated Emissions (Magnetic Field Induced Current)(9kHz-30MHz) 2m loop	3.08dB (9kHz to 150kHz); 3.19dB(150kHz to 30MHz): 2m loop
<p>Remark:</p> <p>The U_{lab} (lab Uncertainty) is less than U_{CISPR} (CISPR Uncertainty) or U_{ETSI} (ETSI Uncertainty).</p> <p>Emission decision rule:</p> <ul style="list-style-type: none"> – Compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit, marked as Pass in the report. – Non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit, marked as Fail in the report. <p>Immunity decision rule:</p> <ul style="list-style-type: none"> – Pass means the observation meets the Performance Criterion requirement. – Fail means the observation doesn't meet the Performance Criterion requirement. 	

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou,
Guangdong, China 510663

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No tests were sub-contracted.



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4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

4.8 EMS Monitor

Visual: Monitor the EUT lighting status.



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5 Equipment List

Radiated Emissions (30MHz-1GHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
966 Anechoic Chamber	Shenzhen C.R.T	CRTSGSSAC966	EMC2230	2022-03-22	2025-03-21
EMI Test Receiver(1Hz-8GHz)	Rohde & Schwarz	ESW8	EMC2229	2024-12-03	2025-12-02
Amplifier(9k-1000MHz)	SONOMA	310	EMC2237	2024-12-03	2025-12-02
Trilog Broadband Antenna (25MHz-2GHz)	Schwarzbeck Mess-Elektronik	VULB 9168	EMC2238	2022-04-20	2025-04-19
Coaxial Cable	Mirco-COAX UTIFLEX ve	LA2-C125-8000	EMC2239	2024-12-04	2026-12-03
Test Software E3	Audix	Ver.6.191211	GZE100-81	N/A	N/A
Coupling Decoupling Network M2	SCHWARZBECK	CDNE-M2	EMC2175	2024-12-04	2025-12-03
Coupling Decoupling Network M3	SCHWARZBECK	CDNE-M3	EMC2176	2024-12-04	2025-12-03

Radiated Emissions (Magnetic Field Induced Current)(9kHz-30MHz) 2m loop					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Coaxial Cable (RE 2m Loop)	INFINITE	CC223N-10	EMC0703	2023-06-25	2025-06-24
2m Large Loop Antenna System (ZN3040)	ZHINAN	ZN3040	EMC2187	2024-03-22	2026-03-21
EMI Test Receiver(1Hz-8GHz)	Rohde & Schwarz	ESW8	EMC2229	2024-12-03	2025-12-02
Test Software E3	Audix	Ver.6.191211	GZE100-81	N/A	N/A

Electrostatic Discharge					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Temperature & Humidity	Shanghai Meteorological Instrument Factory Co., Ltd.	ZJ1-2B	EMC0078	2024-06-12	2025-06-11
ESD Ground Plane	SGS-EMC	3m x 3m	EMC0804	N/A	N/A
Aneroid Barometer	Shanghai Meteorological Instrument Factory Co., Ltd.	YM3	EMC2181	2024-10-31	2025-10-30
ESD Simulator-E	EMTEST	NX30	EMC2186	2024-12-30	2025-12-29



Radiated Immunity (80MHz-1GHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
743 Compact 3m Semi-Anechoic Chamber	ChangZhou ZhongYu	N/A	EMC0525	2022-10-16	2025-10-15
Oscilloscope	Tektronix	TDS3052C	EMC2055	2024-10-14	2025-10-13
Laser Probe Interface	RF Microwave Instrumentation	FI7000	EMC2089	N/A	N/A
Open Switch And Control Unit	Rohde & Schwarz	OSP130	EMC2090	N/A	N/A
Broadband Amplifier (80MHz~1GHz/250W)	Rohde & Schwarz	BBA150	EMC2091	2024-10-14	2025-10-13
Signal Generator (9kHz-6GHz)	Rohde & Schwarz	SMB100A	EMC2093	2024-10-14	2025-10-13
Laser Probe	RF Microwave Instrumentation	FL7006	EMC2094	2024-04-23	2025-04-22
NRP-Z91 Power Sensor (9kHz-6GHz)	Rohde & Schwarz	NPR-Z91	EMC2095	2024-10-14	2025-10-13
NRP-Z91 Power Sensor (9kHz-6GHz)	Rohde & Schwarz	NPR-Z91	EMC2096	2024-10-14	2025-10-13
High-Gain Log-preiodic Antenna	Rohde & Schwarz	HL046E	EMC2097	2025-02-14	2028-02-13
RI Cable	Rohde & Schwarz	7m	EMC2098	2024-05-16	2025-05-15
Test Software EMC32	Rohde & Schwarz	Ver. 10.60.10	GZE100-63	N/A	N/A

General used equipment					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
DMM	Fluke	73	EMC0006	2024-06-13	2025-06-12



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6 Emission Test Results

6.1 Radiated Emissions (30MHz-1GHz)

Test Requirement: EN IEC 55015: 2019+A11:2020
 Test Method: CISPR 16-2-3: 2016
 Limit:
 Test Distance: 3m
 30MHz-230MHz 40 dB(μV/m) quasi-peak
 230MHz-1GHz 47 dB(μV/m) quasi-peak
 Detector: Peak for pre-scan (120kHz resolution bandwidth) 30M to 1000MHz

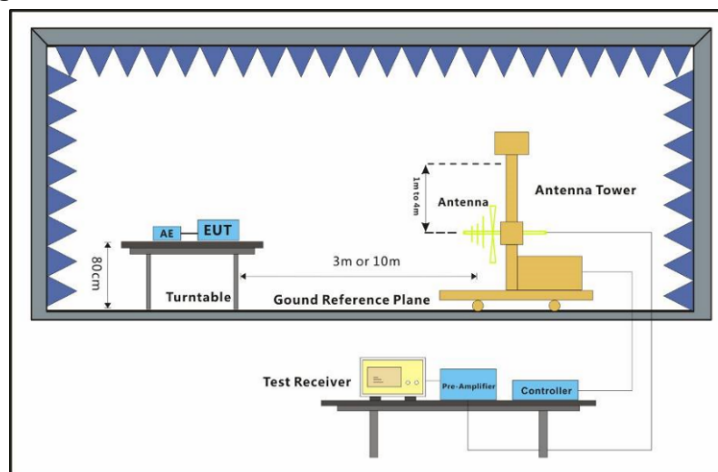
6.1.1 E.U.T. Operation

Operating Environment:
 Temperature: 24.3 °C Humidity: 45.2 % RH Atmospheric Pressure: 1012 mbar

6.1.2 Test Mode Description

Pre-scan / Mode	Description
Final test Code	
Final test 00	Test the EUT normal working.

6.1.3 Test Setup Diagram



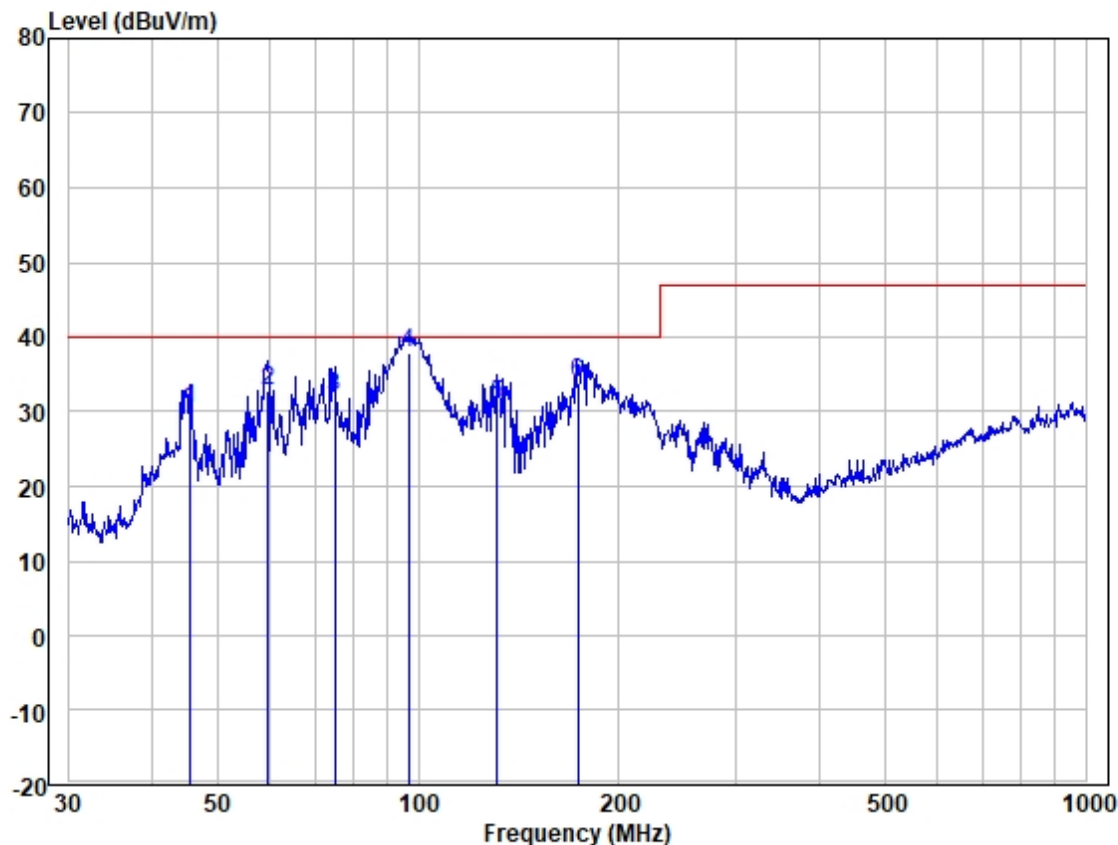
6.1.4 Measurement Procedure and Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.

The red line show in graphic is the limit in standard used in this section.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Test Mode: 00; Polarity: Horizontal

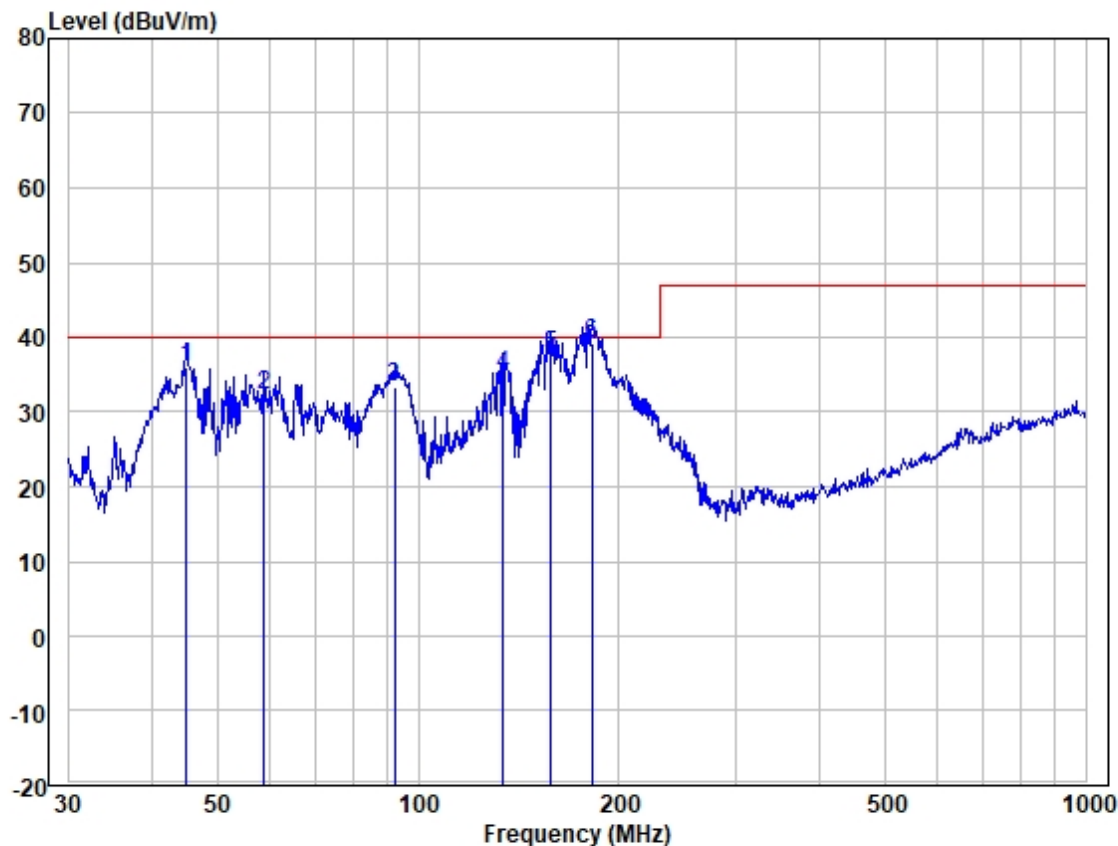


Site : 966 Chamber
Job :
Model :
Power :
Test Mode : FLASHING

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Measured Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	45.695	43.45	19.47	0.37	32.78	30.51	40.00	-9.49	HORIZONTAL	QP
2	59.649	46.28	18.79	0.41	32.78	32.70	40.00	-7.30	HORIZONTAL	QP
3	75.182	48.32	16.07	0.48	32.75	32.12	40.00	-7.88	HORIZONTAL	QP
4	96.775	55.90	14.14	0.53	32.70	37.87	40.00	-2.13	HORIZONTAL	QP
5	131.297	44.86	18.12	0.62	32.72	30.88	40.00	-9.12	HORIZONTAL	QP
6	173.205	47.59	18.40	0.73	32.79	33.93	40.00	-6.07	HORIZONTAL	QP



Test Mode: 00; Polarity: Vertical



Site : 966 Chamber
Job :
Model :
Power :
Test Mode : FLASHING

	Freq	Read Level	Antenna Factor	Cable Loss	Preamplifier Factor	Measured Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	45.058	49.04	19.47	0.37	32.78	36.10	40.00	-3.90	VERTICAL	QP
2	58.819	45.73	18.89	0.41	32.78	32.25	40.00	-7.75	VERTICAL	QP
3	92.139	51.87	13.76	0.52	32.71	33.44	40.00	-6.56	VERTICAL	QP
4	134.088	48.60	18.34	0.63	32.73	34.84	40.00	-5.16	VERTICAL	QP
5	158.112	50.61	19.19	0.70	32.77	37.73	40.00	-2.27	VERTICAL	QP
6	182.248	53.91	17.36	0.75	32.80	39.22	40.00	-0.78	VERTICAL	QP



6.2 Radiated Emissions (Magnetic Field Induced Current)(9kHz-30MHz) 2m loop

Test Requirement:	EN IEC 55015: 2019+A11:2020
Test Method:	CISPR 16-2-3: 2016
Limit:	
0.009MHz-0.07MHz	88dB(μA) quasi-peak
0.07MHz-0.15MHz	88dB(μA)-58dB(μA) quasi-peak
0.15MHz-3MHz	58dB(μA)-22dB(μA) quasi-peak
3MHz-30MHz	22dB(μA) quasi-peak
Detector:	Peak for pre-scan (200Hz resolution bandwidth) 0.009M to 0.15MHz Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

6.2.1 E.U.T. Operation

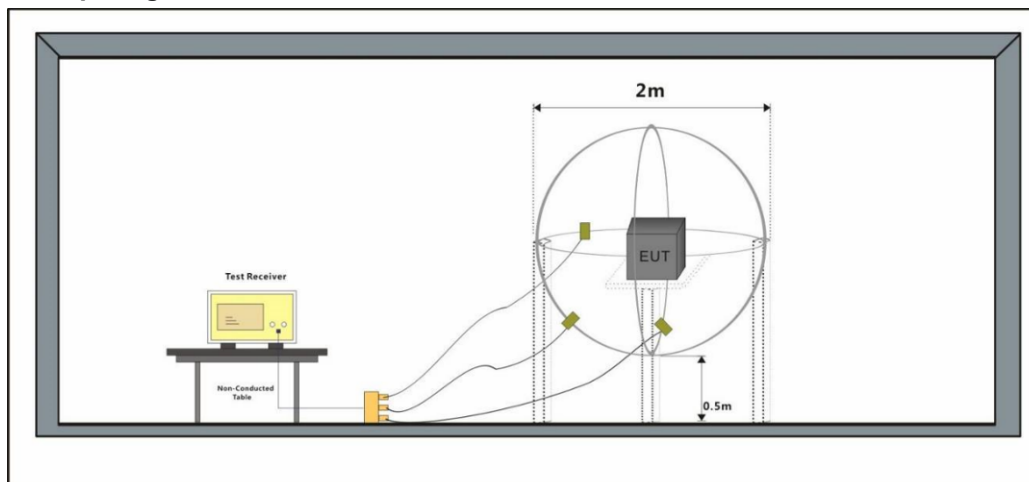
Operating Environment:

Temperature: 24.4 °C Humidity: 45.1 % RH Atmospheric Pressure: 1012 mbar

6.2.2 Test Mode Description

Pre-scan / Mode	Description
Final test Code	
Final test 00	Test the EUT normal working.

6.2.3 Test Setup Diagram



6.2.4 Measurement Procedure and Data

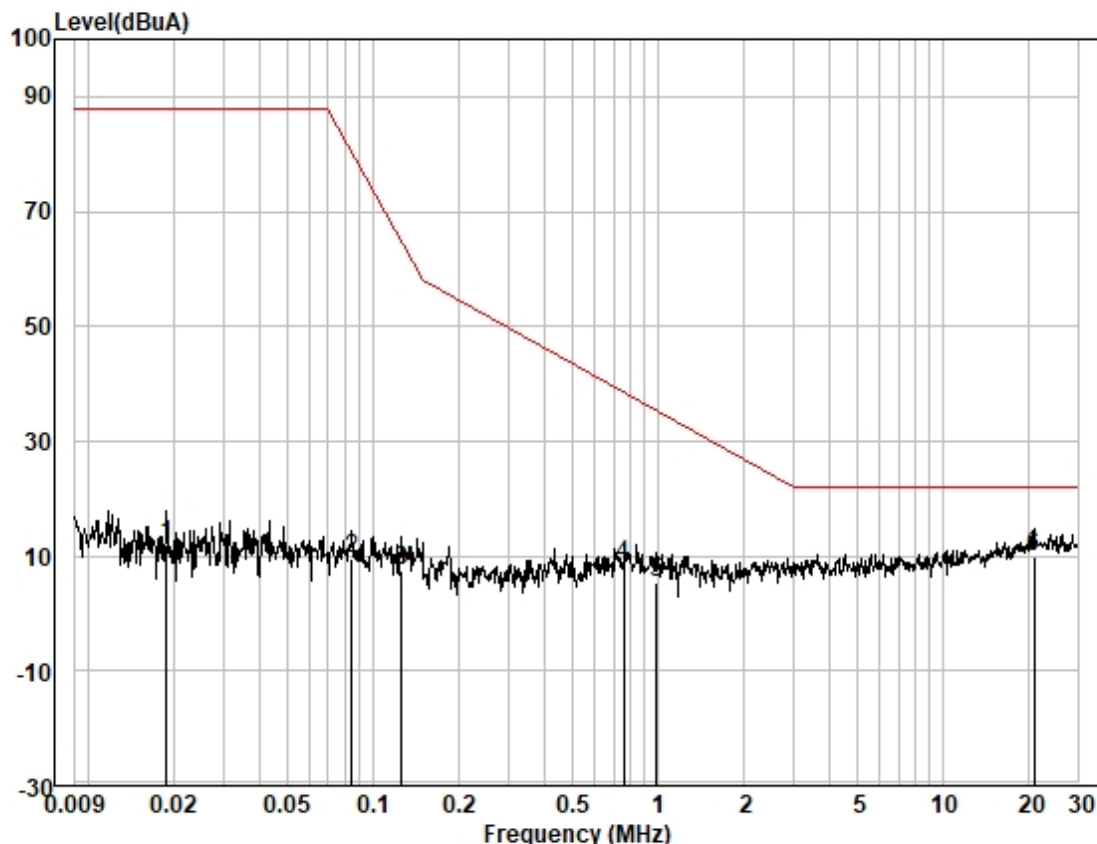
Frequency range: 9kHz-30MHz

An initial pre-scan was performed in the 2m loop antenna using the spectrum analyser in peak detection mode. The EUT was measured for X(A), Y(B), Z(C) polarities.

The red line show in graphic is the limit in standard used in this section.

Measured Level= Read Level + Cable Loss + Antenna Factor(if applicable)

Test Mode: 00; Axial:X

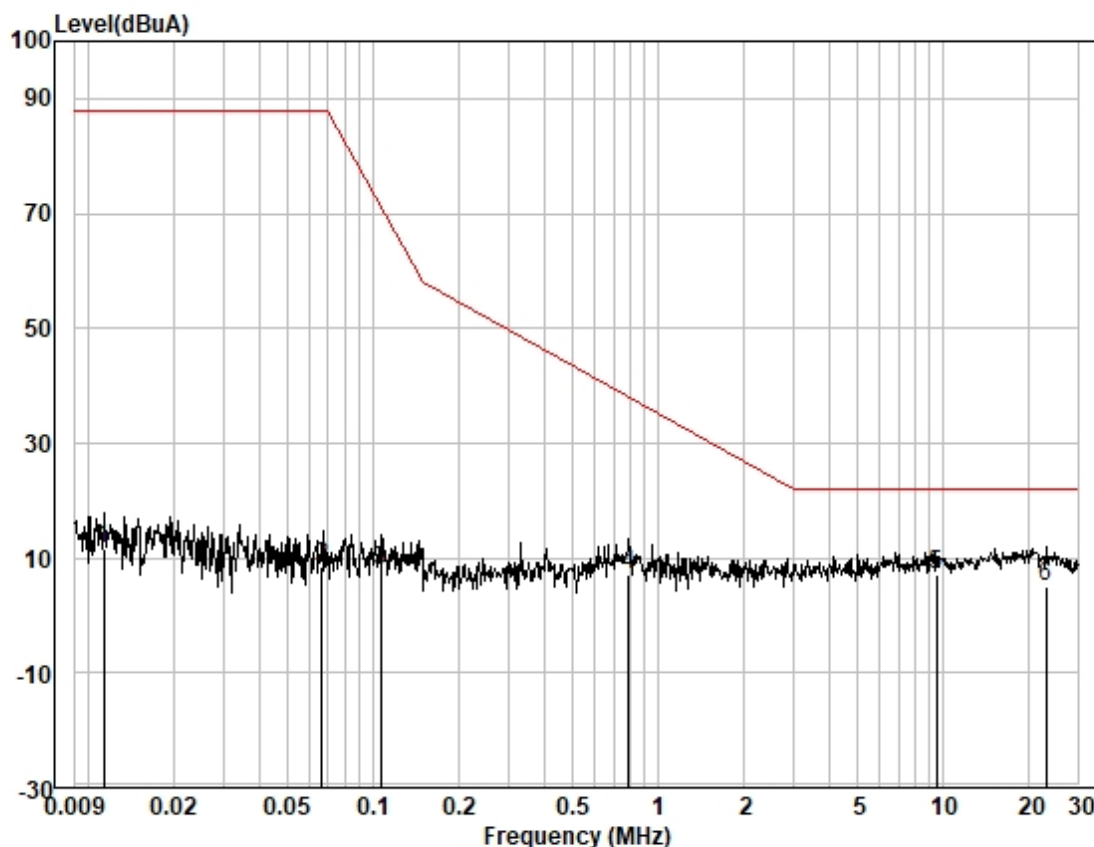


loop : X
Test Mode:
Model :

Frequency MHz	Read level dBuV	Cable Loss dB	Antenna Factor dB	Preamp Factor dB	Measured level dBuA	Limit Line dBuA	Over limit dB	Remark
0.02	12.61	0.00	-0.63	0.00	11.98	88.00	-76.02	QP
0.08	9.39	0.00	0.04	0.00	9.43	80.70	-71.27	QP
0.13	7.59	0.10	-0.22	0.00	7.47	64.64	-57.17	QP
0.76	8.82	0.10	-0.60	0.00	8.32	38.45	-30.13	QP
0.99	5.92	0.10	-0.50	0.00	5.52	35.27	-29.75	QP
21.04	7.01	0.90	1.81	0.00	9.72	22.00	-12.28	QP



Test Mode: 00; Axial:Y



loop : Y

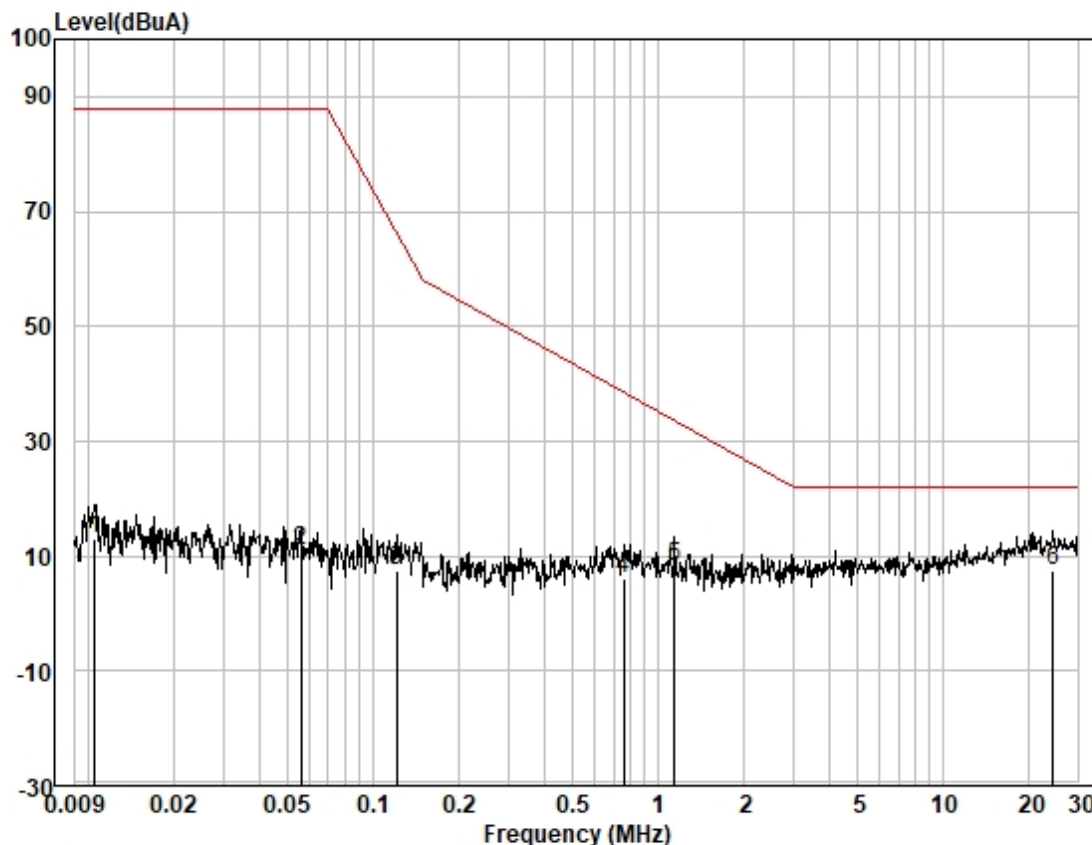
Test Mode:

Model :

Frequency MHz	Read level dBuV	Cable Loss dB	Antenna Factor dB	Preamp Factor dB	Measured level dBuA	Limit Line dBuA	Over limit dB	Remark
0.01	10.62	0.00	1.08	0.00	11.70	88.00	-76.30	QP
0.07	8.46	0.00	0.17	0.00	8.63	88.00	-79.37	QP
0.11	7.82	0.03	0.10	0.00	7.95	71.29	-63.34	QP
0.79	7.15	0.10	0.00	0.00	7.25	38.01	-30.76	QP
9.50	5.67	0.60	0.78	0.00	7.05	22.00	-14.95	QP
23.14	4.20	0.90	-0.16	0.00	4.94	22.00	-17.06	QP



Test Mode: 00; Axial:Z



loop : Z

Test Mode:

Model :

Frequency MHz	Read level dBuV	Cable Loss dB	Antenna Factor dB	Preamp Factor dB	Measured level dBuA	Limit Line dBuA	Over limit dB	Remark
0.01	12.11	0.00	0.79	0.00	12.90	88.00	-75.10	QP
0.06	11.11	0.00	-0.09	0.00	11.02	88.00	-76.98	QP
0.12	7.63	0.10	-0.20	0.00	7.53	66.20	-58.67	QP
0.76	6.31	0.10	-0.29	0.00	6.12	38.52	-32.40	QP
1.15	8.26	0.11	-0.17	0.00	8.20	33.55	-25.35	QP
24.53	5.32	0.95	1.25	0.00	7.52	22.00	-14.48	QP



7 Immunity Test Results

Performance Criteria Description in EN IEC 61547

- Criterion A:** During the test, no change of the luminous intensity shall be observed and the regulating control, if any, shall operate during the test as intended.
- Criterion B:** During the test, the luminous intensity may change to any value. After the test, the luminous intensity shall be restored to its initial value within 1 min. Regulating controls need not function during the test, but after the test, the mode of the control shall be the same as before the test provided that during the test no mode changing commands were given.
- Criterion C:** During and after the test, any change of the luminous intensity is allowed and the lamp(s) may be extinguished. After the test, within 30 min, all functions shall return to normal, if necessary by temporary interruption of the mains supply and/or operating the regulating control.

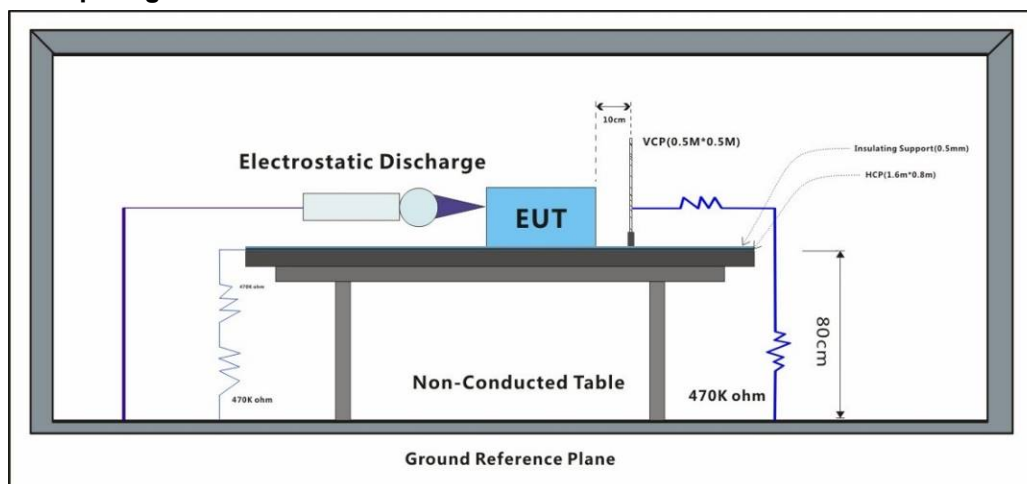


7.1 Electrostatic Discharge

Test Requirement: EN IEC 61547: 2023

Test Method: EN 61000-4-2:2009

7.1.1 Test Setup Diagram



7.1.2 E.U.T. Operation

Operating Environment:

Temperature: 23.4 °C

Humidity: 57.3 % RH

Atmospheric Pressure: 1012 mbar

7.1.3 Test Mode Description

Pre-scan / Mode	Code	Description
Final test	00	Test the EUT normal working.
Final test	01	Idle:Keep the EUT standby.



7.1.4 Test Condition and Results

Performance Criterion: B for other than Road and street lighting equipment;

Performance Criterion: C for Road and street lighting equipment.

Discharge Impedance: 330 Ω / 150 pF

Discharge Voltage: Air Discharge: $\pm 2,4,8$ kV; Contact Discharge: ± 4 kV; VCP/HCP: ± 4 kV for other than Road and street lighting equipment;

Air Discharge: $\pm 2,4,8,15$ kV; Contact Discharge: $\pm 4,8$ kV; VCP/HCP: $\pm 4,8$ kV for Road and street lighting equipment.

Polarity: Positive & Negative

Number of Discharge: Minimum 10 times at each test point

Discharge Mode: Single Discharge

Discharge Period: 1 second minimum

Test Point 1: All insulated enclosure & seams.

Test Point 2: All accessible metal parts of the enclosure.

Test Point 3: All sides.

Discharge type	Level (kV)	Polarity	Test Point	Result / Observations
Air Discharge	2,4,8	+	1	A
Air Discharge	2,4,8	-	1	A
Contact Discharge	4	+	2	A
Contact Discharge	4	-	2	A
Horizontal Coupling	4	+	3	A
Horizontal Coupling	4	-	3	A
Vertical Coupling	4	+	3	A
Vertical Coupling	4	-	3	A

A: No degradation in the performance of the EUT was observed



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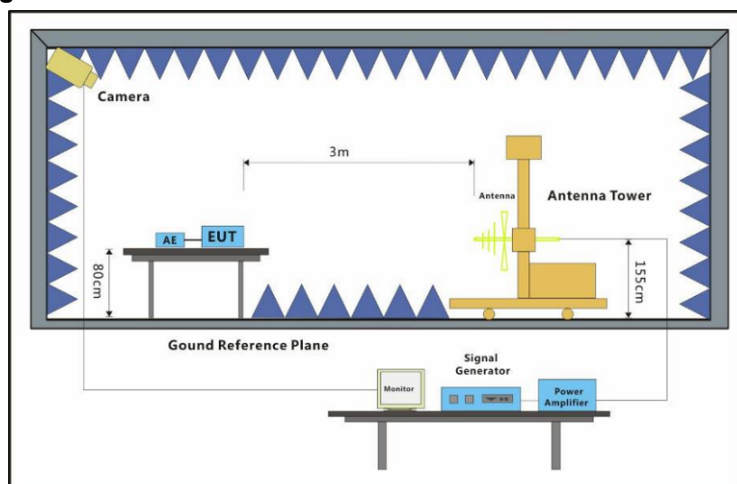
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7.2 Radiated Immunity (80MHz-1GHz)

Test Requirement: EN IEC 61547: 2023

Test Method: EN IEC 61000-4-3:2020

7.2.1 Test Setup Diagram



7.2.2 E.U.T. Operation

Operating Environment:

Temperature: 18.6 °C

Humidity: 55.3 % RH

Atmospheric Pressure: 1012 mbar

7.2.3 Test Mode Description

Pre-scan / Mode	Description
Final test Code	
Final test 00	Test the EUT normal working.
Final test 01	Idle:Keep the EUT standby.

7.2.4 Test Condition and Results

Performance Criterion:A

Frequency Range:80MHz to 1GHz

Test Distance:3m

Antenna Polarisation:Vertical and Horizontal

Modulation1kHz,80% Amp. Mod,1% increment

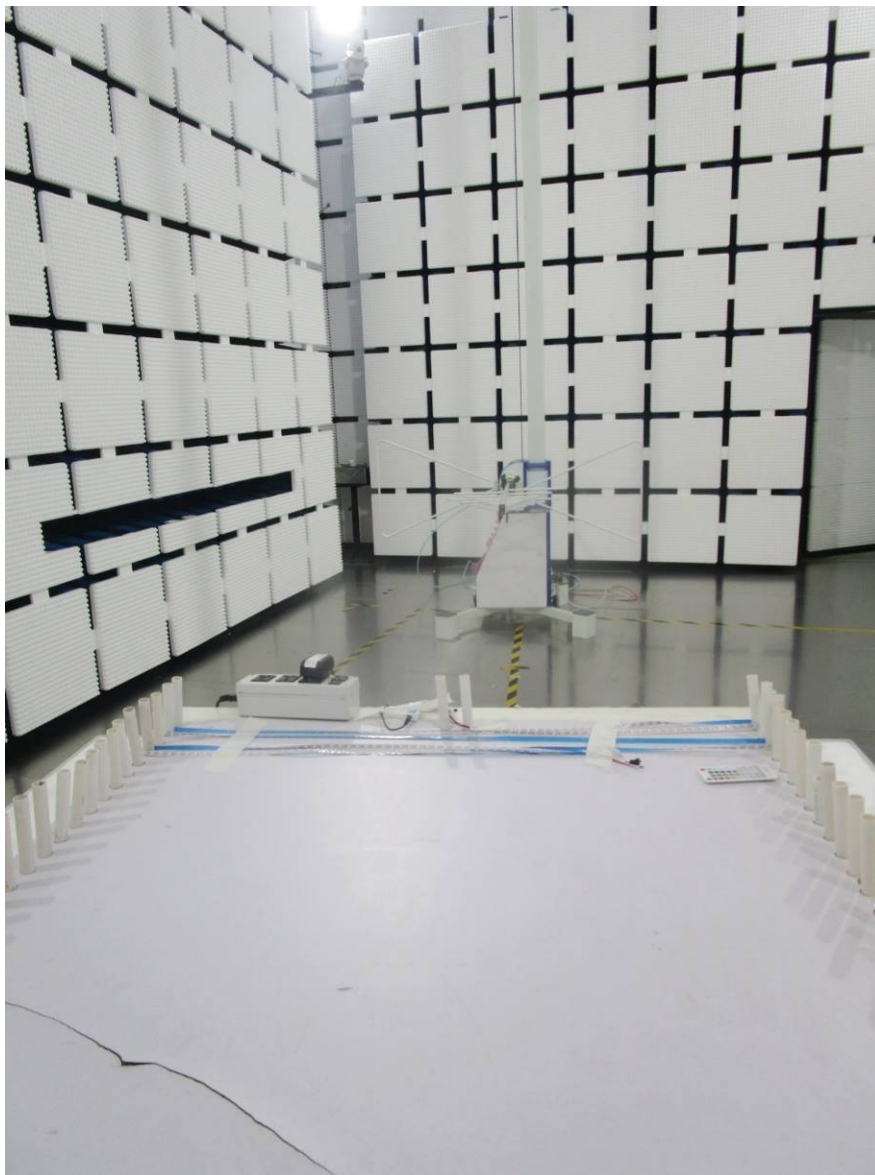
Frequency	Level (V/m)	EUT Face	Dwell time	Result / Observations
80MHz-1GHz	3	Front	3s	A
80MHz-1GHz	3	Back	3s	A
80MHz-1GHz	3	Left	3s	A
80MHz-1GHz	3	Right	3s	A
80MHz-1GHz	3	Top	3s	A
80MHz-1GHz	3	Bottom	3s	A

A: No degradation in the performance of the EUT was observed

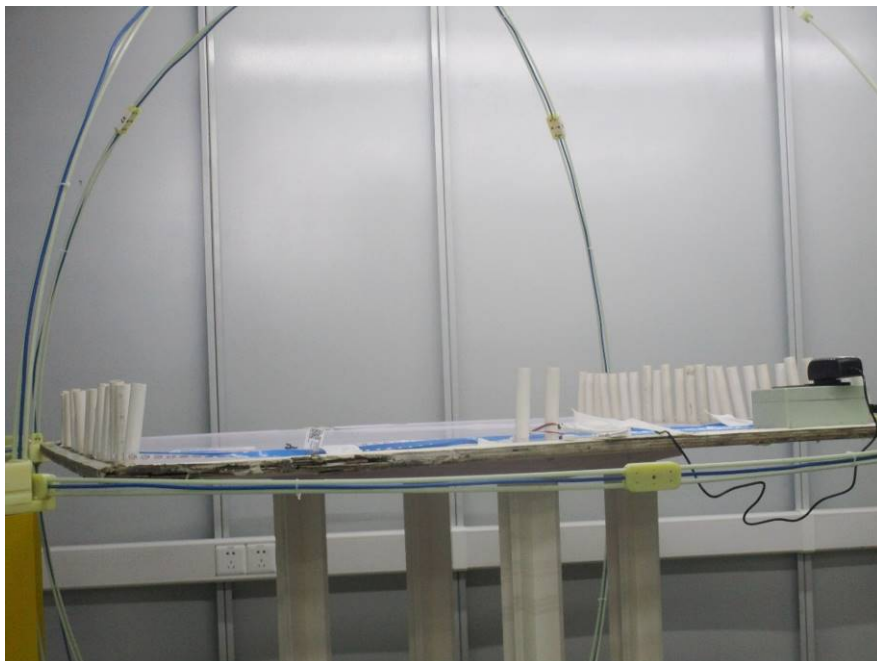


8 Test Setup Photo

Radiated Emissions (30MHz-1GHz)



Radiated Emissions (Magnetic Field Induced Current)(9kHz-30MHz) 2m loop



Electrostatic Discharge



Radiated Immunity (80MHz-1GHz)



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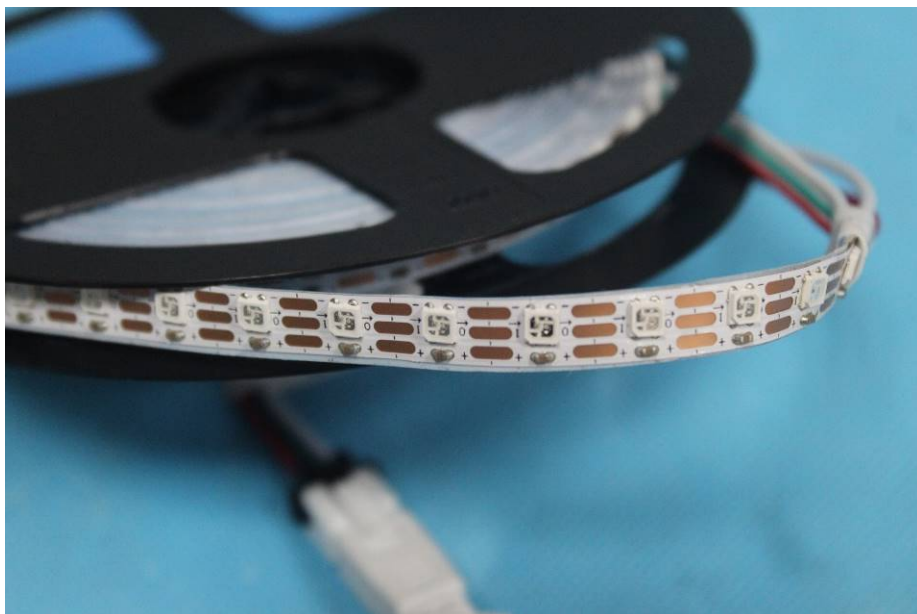
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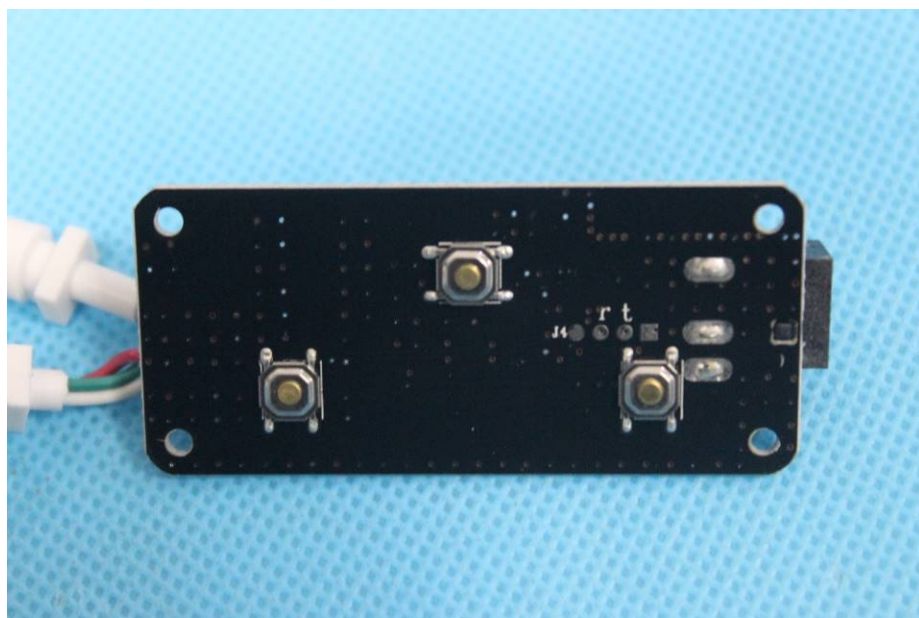
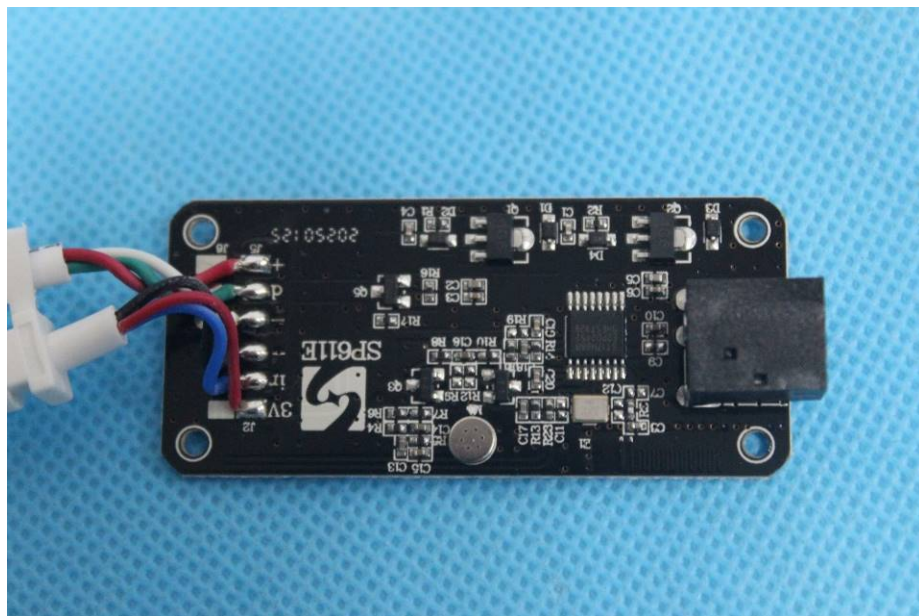
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9 EUT Constructional Details (EUT Photos)







- End of the Report -