



SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

SHEM-TRF-001 Rev. 02 Sep01, 2023

Report No.: SHEM251000701101

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TEST REPORT

Application No.: SHEM2510007011HS
Applicant: Shanghai Lutule Technology Co., Ltd.
Address of Applicant: 2nd Floor, No. 450, Hushong Highway, Minhang District, Shanghai
Manufacturer: Shanghai Lutule Technology Co., Ltd.
Address of Manufacturer: 2nd Floor, No. 450, Hushong Highway, Minhang District, Shanghai
Factory: Ningbo Kabihu Children's Products Co., Ltd.
Address of Factory: No. 17, Zhennan Road, Ditang Sub-district, Yuyao City, Ningbo City, Zhejiang Province

Equipment Under Test (EUT):

EUT Name: Safety seat TuYue Ultra
Model No.: Safety seat TuYue Ultra
Standard(s) : EN IEC 55014-1: 2021
EN IEC 55015: 2019+A11:2020
EN IEC 55014-2: 2021
EN IEC 61547: 2023

Date of Receipt: 2025-10-24
Date of Test: 2025-10-28 to 2025-11-03
Date of Issue: 2025-11-07

Test Result:

Pass*

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

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Member of the SGS Group (SGS SA)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.
588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China



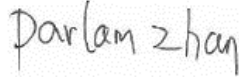
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Revision Record			
Version	Description	Date	Remark
00	Original	2025-11-07	/

Authorized for issue by:			
Tested By			
		Leo Xu/Project Engineer	
Approved By			
		Parlam Zhan / Reviewer	

2 Test Summary

Emission Part				
Item	Standard	Method	Requirement	Result
Radiated Emissions (30MHz-1GHz)	EN IEC 55014-1: 2021	CISPR 16-2-3: 2016 +A1:2019 +A2:2023	Table 9	Pass
Radiated Emissions (30MHz-1GHz)	EN IEC 55015: 2019+A11:2020	CISPR 16-2-3: 2016 +A1:2019 +A2:2023	Table 10	Pass
Radiated Emissions (Magnetic Field Induced Current)(9kHz-30MHz) 2m loop		CISPR 16-2-3: 2016 +A1:2019 +A2:2023	Table 8	Pass

Immunity Part				
Item	Standard	Method	Requirement	Result
Electrostatic Discharge	EN IEC 55014-2: 2021	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.	Pass
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

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4 General Information

4.1 Details of E.U.T.

Power supply:	DC5V,2A Sample No.: SHEM2510007011HS-M1
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4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
High-Speed Rechargeable Li-Ion portable Power Bank	Zimi Corporation	PLM07ZM	/

4.3 Measurement Uncertainty & Decision Rule

Measurement Uncertainty:

No.	Item	Measurement Uncertainty (U_{Lab})	U_{CISPR}
1	Conducted Emission at mains port using AMN	3.4dB (9kHz to 150kHz)	3.8dB (9kHz to 150kHz)
		2.9dB (150kHz to 30MHz)	3.4dB (150kHz to 30MHz)
2	Conducted Emission at mains port using VP	2.2dB (9kHz to 30MHz)	2.9dB (9kHz to 30MHz)
3	Conducted Emission at telecommunication port using AAN	4.6dB (150kHz to 30MHz)	5.0dB (150kHz to 30MHz)
4	Radiated Power	3.4dB (30MHz to 300MHz)	4.5dB (30MHz to 300MHz)
5	Radiated emission	5.7dB (30MHz-1GHz)	6.3dB (30MHz-1GHz)
		4.8dB (1GHz-6GHz)	5.2dB (1GHz-6GHz)
		5.0dB (6GHz-18GHz)	5.5dB (6GHz-18GHz)
6	Radiated disturbance (disturbance current in a LLAS)	2.6dB (9kHz to 30MHz)	3.3dB (9kHz to 30MHz)

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Decision Rule:

- CISPR 16-4-2 for emission measurements is as below described.

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

U_{LAB} less than U_{CISPR} , therefore:

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. E&E Lab
588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China
Tel: +86 21 6191 5666 Fax: +86 21 6191 5678

No tests were sub-contracted.

Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).
2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).
3. Sample source: sent by customer.

4.5 Test Facility

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

- **A2LA (Certificate No. 6332.01)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the American Association for Laboratory Accreditation(A2LA).

- **FCC (Designation Number: CN1301)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.

- **ISED (CAB Identifier: CN0020)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. EMC Laboratory has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.
Company Number: 8617A

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-13868, C-14336, T-12221, G-10830 respectively.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

4.8 EMS Monitor

Visual: Working status of EUT.

5 Equipment List

Radiated Emissions (30MHz-1GHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMI test receiver	Rohde & Schwarz	ESU40	SHEM051-1	2024/12/18	2025/12/17
EMI test receiver	Rohde & Schwarz	ESR7	SHEM201-1	2025/07/30	2026/07/29
CONTROLLER	INNCO	CO2000	SHEM047-1	N/A	N/A
ANTENNA MAST	INNCO	MA400-EP	SHEM047-2	N/A	N/A
TURN DEVICE	INNCO	DE 3600-RH	SHEM047-3	N/A	N/A
Broadband UHF-VHF ANTENNA	SCHWARZBECK	VULB9168	SHEM048-1	2025/08/31	2027/08/30
Broadband UHF-VHF ANTENNA	SCHWARZBECK	VULB9168	SHEM202-1	2025/04/12	2027/04/11
Semi/Fully Anechoic	ST	11*6*6M	SHEM078-2	2023/05/06	2026/05/05
Pre-amplifier	HP	8447D	SHEM236-1	2024/12/18	2025/12/17
Pre-amplifier	HP	8447D	SHEM143-1	2024/12/18	2025/12/17
RE test Cable	/	/	SHEM217-2	2024/12/18	2025/12/17
Test Software	ESE	e3	Version: 6.191211	N/A	N/A
Semi/Fully Anechoic	TIANDE	9*6*6M	SHEM198-1	2024/05/06	2027/05/05

Radiated Emissions (Magnetic Field Induced Current)(9kHz-30MHz) 2m loop					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
3-dimensional large loop antenna,diam.2m.acc	Rohde & Schwarz	HXYZ9170	SHEM017-1	2024/12/18	2025/12/17
EMI test receiver	Rohde & Schwarz	ESR7	SHEM162-1	2024/12/18	2025/12/17
Pulse limiter	Rohde & Schwarz	ESH3-Z2	SHEM029-1	2024/12/18	2025/12/17
Shielding Room	ZHONGYU	8*4*3M	SHEM079-2	2023/12/19	2026/12/18
Loop test Cable	/	9kHz-30MHz	SHEM180-1	2024/12/18	2025/12/17
Test Software	ESE	e3	Version: 6.191211	N/A	N/A

Electrostatic Discharge					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Electrostatic Discharge Simulator	TESEQ	NSG 437	SHEM041-2	2025/07/30	2026/07/29
Electrostatic Discharge Simulator	3CTEST	EDS20H	SHEM199-1	2024/12/18	2025/12/17
Electrostatic discharge simulator	EM TEST	dito	SHEM289-1	2025/02/10	2026/02/09



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Radiated Immunity (80MHz-1GHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Signal generator	Rohde & Schwarz	SMB100A	SHEM194-1	2024/12/18	2025/12/17
Power Meter	Rohde & Schwarz	NRP	SHEM057-1	2025/07/30	2026/07/29
Power meter sensor	Rohde & Schwarz	NRP-Z91	SHEM057-4	2025/07/30	2026/07/29
Antenna	SCHWARZBECK	STLP9128D	SHEM130-1	N/A	N/A
Amplifier	MILMEGA	80RF1000-250	SHEM132-1	2024/12/18	2025/12/17
ElectroMagnetic Field Probe	ETS-Lindgren	HI-6105	SHEM134-1	2025/08/05	2026/08/04
Semi/Fully Anechoic	ST	11*6*6M	SHEM078-2	2023/05/06	2026/05/05
Test Software	Rohde & Schwarz	EMC32	Version: 10.20.01	N/A	N/A
Power meter sensor	Rohde & Schwarz	NRP-Z91	SHEM057-5	2024/12/18	2025/12/17

General used equipment					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Atmospheric Pressure Meter	Nanjing XiangRuiDe	DYM3	SHEM082-2	2024/01/18	2027/01/17
Temperature&humidity recorder	ShangHai weather meter work	ZJ 1-2B	SHEM042-9~10	2024/12/22	2025/12/21
Temperature&humidity recorder	ShangHai weather meter work	ZJ 1-2B	SHEM042-5	2025/07/09	2026/07/08
Digital Temperature& humidity recorder	Jianda Renke	RS-WS-N01-6J	SHEM247-1~8	2025/01/06	2026/01/05
Digital Multimeter	FLUKE	17B+	SHEM271-7	2025/07/07	2026/07/06
AC Power Supply	APC	KDF-31020T-V0-F0-IO	SHEM216-1	2024/12/18	2025/12/17
DC Power Supply	HP	6010A	SHEM222-1	2024/12/18	2025/12/17
Multi-purpose tong tester	FLUKE	317	SHEM001-2	2025/10/23	2026/10/22

6 Emission Test Results

6.1 Radiated Emissions (30MHz-1GHz)

Test Requirement: EN IEC 55014-1: 2021

Test Method: CISPR 16-2-3: 2016 +A1:2019 +A2:2023

Limit:

Test Distance: 10m

30MHz-230MHz 30 dB(μ V/m) quasi-peak

230MHz-1GHz 37 dB(μ V/m) quasi-peak

Detector: Peak for pre-scan (120kHz resolution bandwidth) 30M to 1000MHz

Test Distance: 3m

30MHz-230MHz 40 dB(μ V/m) quasi-peak

230MHz-1GHz 47 dB(μ V/m) quasi-peak

Detector: Peak for pre-scan (120kHz resolution bandwidth) 30M to 1000MHz

6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 22.3 °C

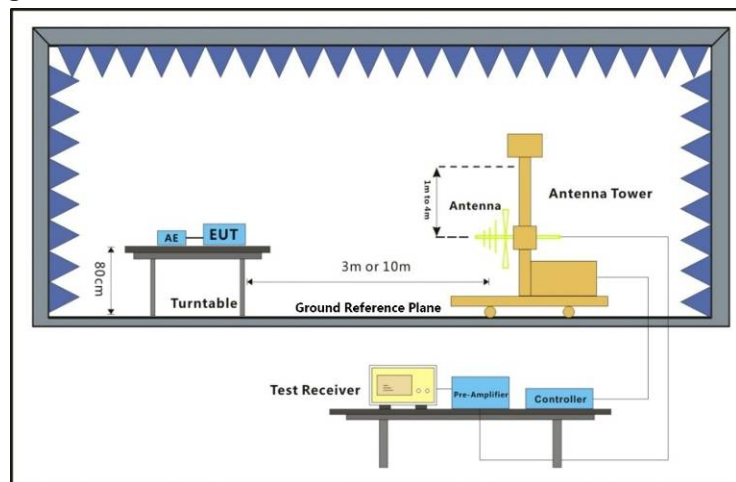
Humidity: 52.1 % RH

Atmospheric Pressure: 1010 mbar

6.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT running by power bank.

6.1.3 Test Setup Diagram





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6.1.4 Measurement Procedure and Data

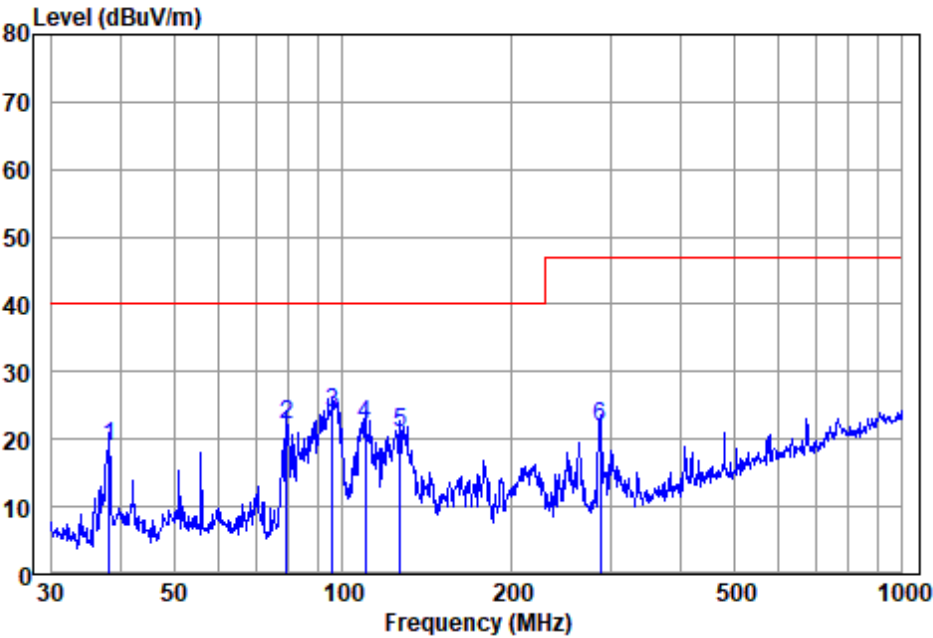
Frequency Range: 30MHz to 1GHz

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.

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

Test Mode: 00; Polarity: Horizontal

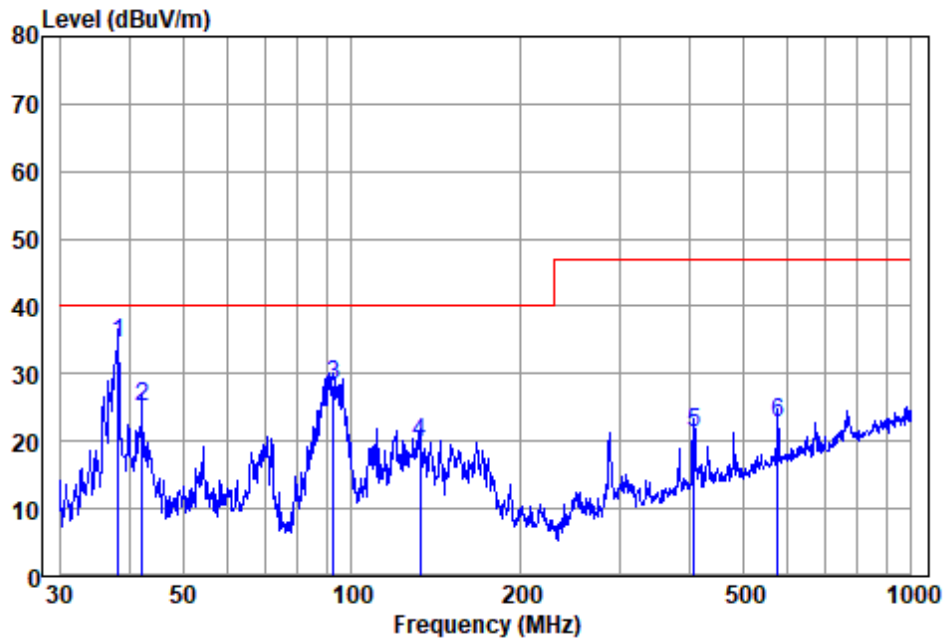


Antenna Polarity :HORIZONTAL
 EUT/Project :7011HS
 Test mode :00

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	38.212	37.84	13.10	1.24	33.20	18.98	40.00	-21.02	QP
2	79.243	44.45	9.23	1.79	33.20	22.27	40.00	-17.73	QP
3	95.762	46.96	8.33	1.96	33.20	24.05	40.00	-15.95	QP
4	109.796	42.78	10.47	2.12	33.15	22.22	40.00	-17.78	QP
5	126.772	39.96	11.63	2.31	33.08	20.82	40.00	-19.18	QP
6	287.990	38.01	13.04	3.54	32.88	21.71	47.00	-25.29	QP

Note1:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 00; Polarity: Vertical



Antenna Polarity :VERTICAL
EUT/Project :7011HS
Test mode :00

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	38.212	53.42	13.10	1.24	33.20	34.56	40.00	-5.44	QP
2	42.154	43.27	13.60	1.30	33.20	24.97	40.00	-15.03	QP
3	92.787	51.46	8.03	1.93	33.20	28.22	40.00	-11.78	QP
4	132.221	38.33	12.20	2.37	33.06	19.84	40.00	-20.16	QP
5	408.946	33.88	15.89	4.26	32.78	21.25	47.00	-25.75	QP
6	576.644	30.87	19.38	5.21	32.76	22.70	47.00	-24.30	QP

Note1:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

6.2 Radiated Emissions (30MHz-1GHz)

Test Requirement: EN IEC 55015: 2019+A11:2020
Test Method: CISPR 16-2-3: 2016 +A1:2019 +A2:2023

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

Test Distance: 10m
30MHz-230MHz 30 dB(μV/m) quasi-peak
230MHz-1GHz 37 dB(μV/m) quasi-peak
Detector: Peak for pre-scan (120kHz resolution bandwidth) 30M to 1000MHz

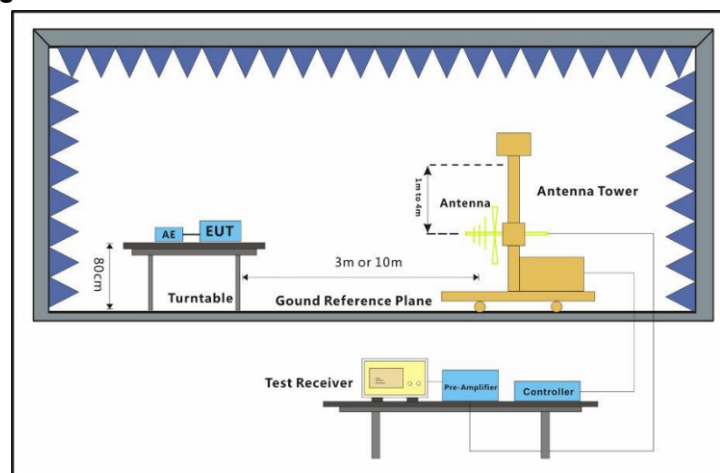
6.2.1 E.U.T. Operation

Operating Environment:
Temperature: 23.5 °C Humidity: 56.3 % RH Atmospheric Pressure: 1010 mbar

6.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT running by power bank.

6.2.3 Test Setup Diagram



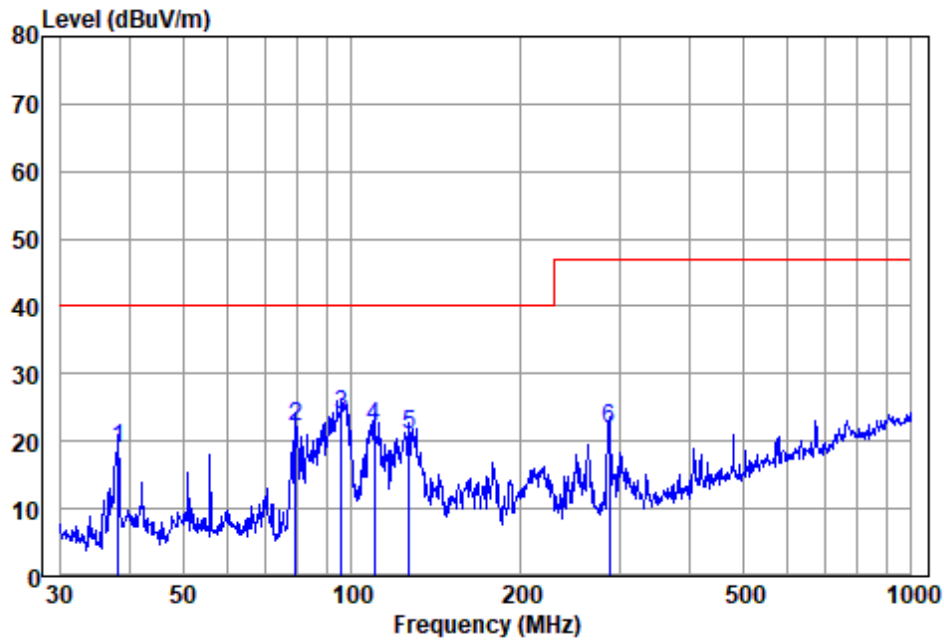
6.2.4 Measurement Procedure and Data

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

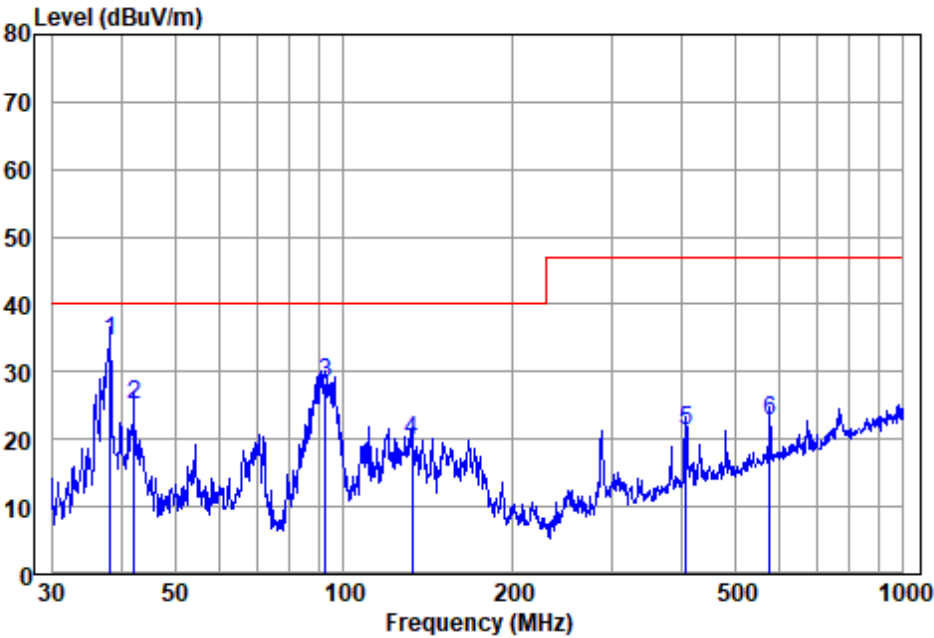


Antenna Polarity :HORIZONTAL
EUT/Project :7011HS
Test mode :00

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	38.212	37.84	13.10	1.24	33.20	18.98	40.00	-21.02	QP
2	79.243	44.45	9.23	1.79	33.20	22.27	40.00	-17.73	QP
3	95.762	46.96	8.33	1.96	33.20	24.05	40.00	-15.95	QP
4	109.796	42.78	10.47	2.12	33.15	22.22	40.00	-17.78	QP
5	126.772	39.96	11.63	2.31	33.08	20.82	40.00	-19.18	QP
6	287.990	38.01	13.04	3.54	32.88	21.71	47.00	-25.29	QP

Note1:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 00; Polarity: Vertical



Antenna Polarity :VERTICAL
 EUT/Project :7011HS
 Test mode :00

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	38.212	53.42	13.10	1.24	33.20	34.56	40.00	-5.44	QP
2	42.154	43.27	13.60	1.30	33.20	24.97	40.00	-15.03	QP
3	92.787	51.46	8.03	1.93	33.20	28.22	40.00	-11.78	QP
4	132.221	38.33	12.20	2.37	33.06	19.84	40.00	-20.16	QP
5	408.946	33.88	15.89	4.26	32.78	21.25	47.00	-25.75	QP
6	576.644	30.87	19.38	5.21	32.76	22.70	47.00	-24.30	QP

Note1:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

6.3 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 +A1:2019 +A2:2023

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

6.3.1 E.U.T. Operation

Operating Environment:

Temperature: 24.1 °C

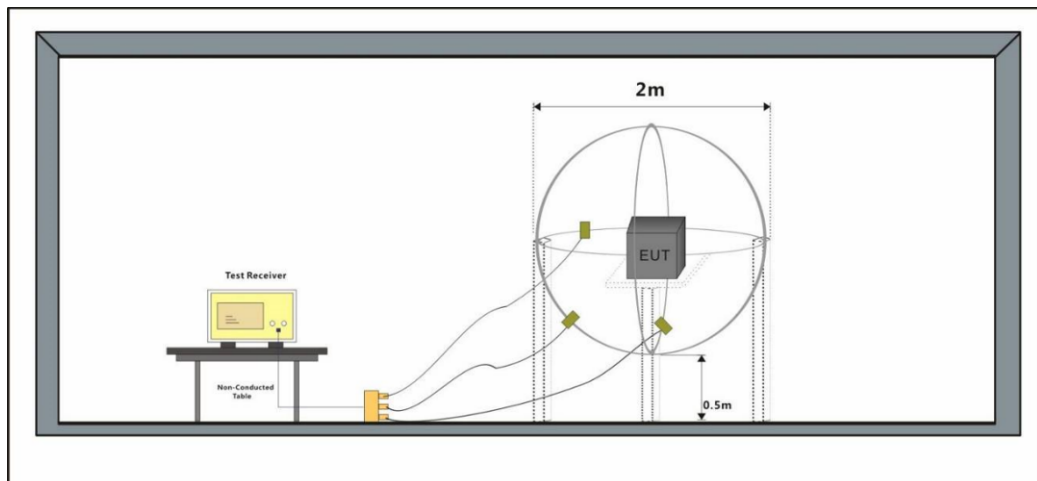
Humidity: 41.6 % RH

Atmospheric Pressure: 1010 mbar

6.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT running by power bank.

6.3.3 Test Setup Diagram



6.3.4 Measurement Procedure and Data

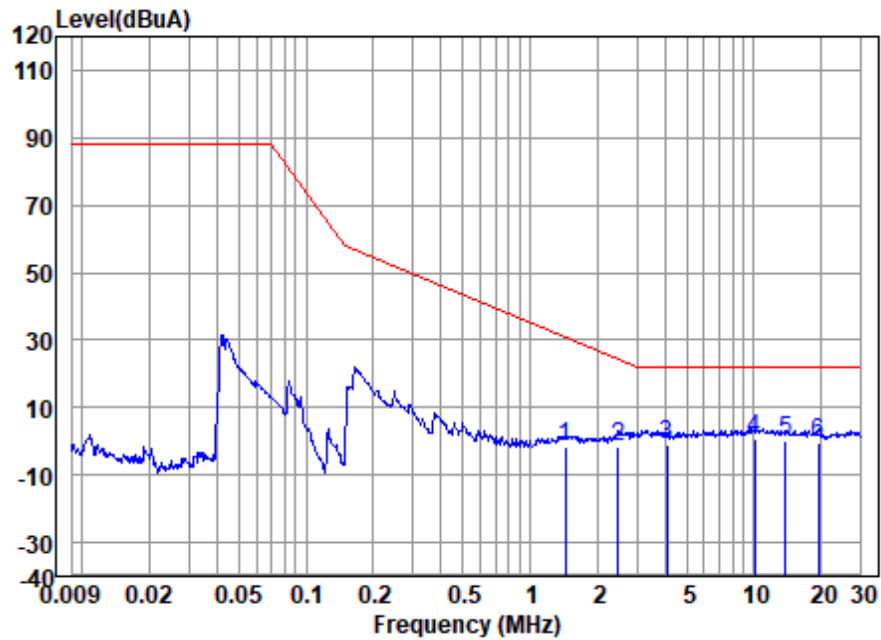
Frequency range: 9kHz-30MHz

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



EUT/Project No : 7011LM

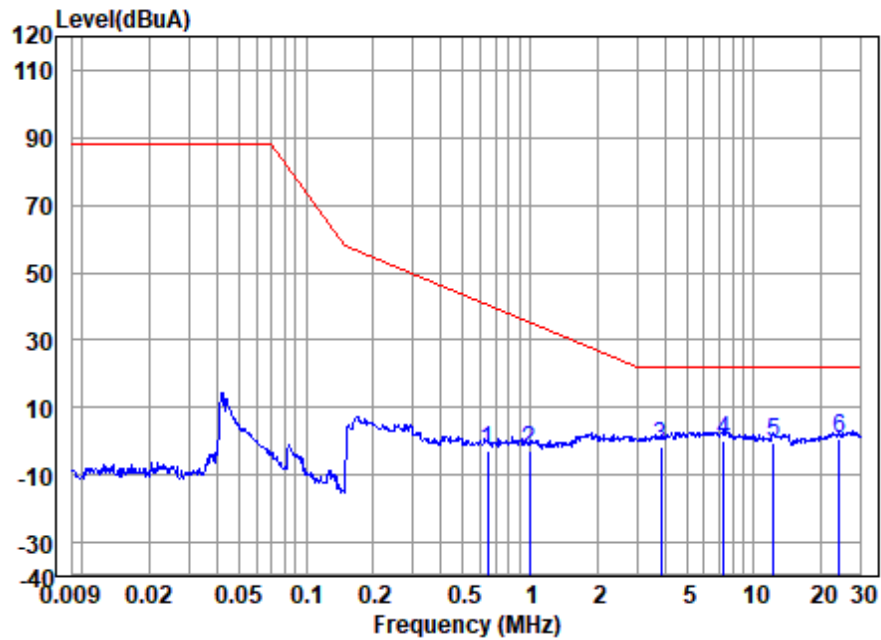
Test Mode : 00

: X

	Freq (MHz)	Read level (dBuA)	Cable Loss (dB)	Emission Level (dBuA)	Limit (dBuA)	Over Limit (dB)	Remark
1	1.43	-1.96	0.10	-1.86	30.88	-32.74	QP
2	2.47	-1.80	0.10	-1.70	24.35	-26.05	QP
3	4.08	-1.34	0.10	-1.24	22.00	-23.24	QP
4	10.12	0.67	0.10	0.77	22.00	-21.23	QP
5	13.77	-0.12	0.20	0.08	22.00	-21.92	QP
6	19.36	-0.70	0.20	-0.50	22.00	-22.50	QP

Notes: Emission Level = Read Level + Cable loss

Test Mode: 00; Axial:Y



EUT/Project No : 7011LM

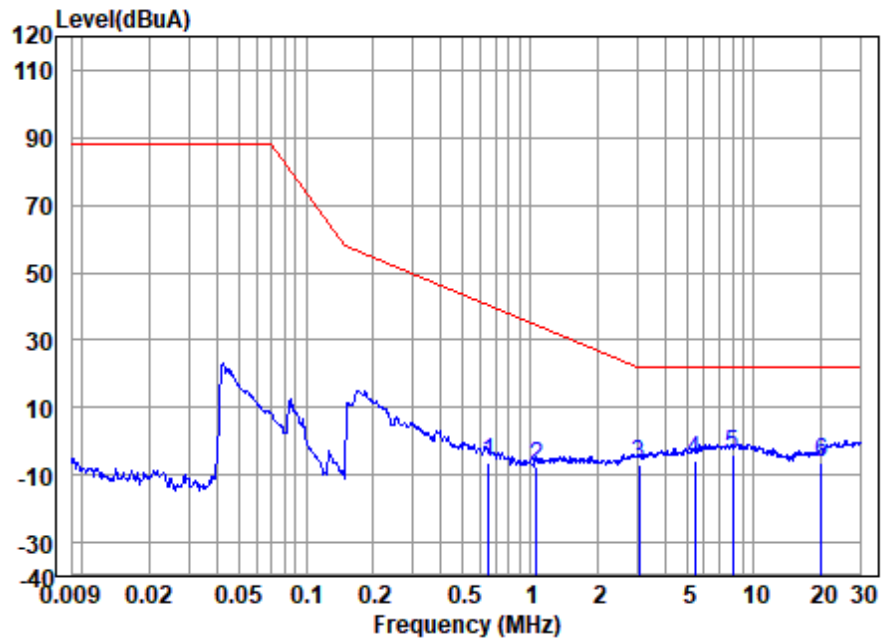
Test Mode : 00

: Y

	Freq (MHz)	Read level (dBuA)	Cable Loss (dB)	Emission Level (dBuA)	Limit (dBuA)	Over Limit (dB)	Remark
1	0.65	-3.16	0.10	-3.06	40.44	-43.50	QP
2	0.99	-2.72	0.10	-2.62	35.27	-37.89	QP
3	3.85	-2.01	0.10	-1.91	22.00	-23.91	QP
4	7.31	0.01	0.10	0.11	22.00	-21.89	QP
5	12.19	-0.74	0.20	-0.54	22.00	-22.54	QP
6	24.10	0.22	0.30	0.52	22.00	-21.48	QP

Notes: Emission Level = Read Level + Cable loss

Test Mode: 00; Axial:Z



EUT/Project No : 7011LM

Test Mode : 00

: Z

	Freq (MHz)	Read level (dBuA)	Cable Loss (dB)	Emission Level (dBuA)	Limit (dBuA)	Over Limit (dB)	Remark
1	0.66	-6.18	0.10	-6.08	40.24	-46.32	QP
2	1.07	-7.68	0.10	-7.58	34.39	-41.97	QP
3	3.07	-7.15	0.10	-7.05	22.00	-29.05	QP
4	5.46	-5.94	0.10	-5.84	22.00	-27.84	QP
5	8.06	-3.97	0.10	-3.87	22.00	-25.87	QP
6	20.00	-6.65	0.20	-6.45	22.00	-28.45	QP

Notes: Emission Level = Read Level + Cable loss

7 Immunity Test Results

Performance Criteria Description

- Criterion A:** The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.
- Criterion B:** The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however. No change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation and from what the user may reasonably expect from the apparatus if used as intended.
- Criterion C:** Temporary loss of function is allowed, provided the function is self recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

Performance Criteria Description in EN IEC 61547

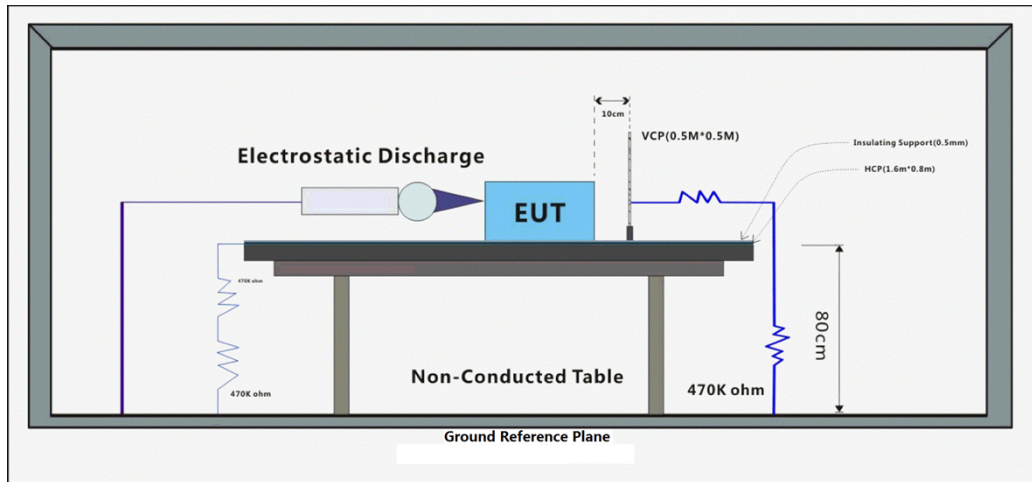
- Criterion A:** During the test, no change of the luminous intensity shall be observed and the regulating control, if any, shall operate during the test as intended.
- Criterion B:** During the test, the luminous intensity may change to any value. After the test, the luminous intensity shall be restored 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 55014-2: 2021

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: 53.6 % RH

Atmospheric Pressure: 1010 mbar

7.1.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT running by power bank.

7.1.4 Test Condition and Results:

Performance Criterion: B

Discharge Impedance: 330 Ω / 150 pF

Discharge Voltage: Air Discharge: 8 kV; Contact Discharge: 4 kV; VCP/HCP: 4 kV.

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.

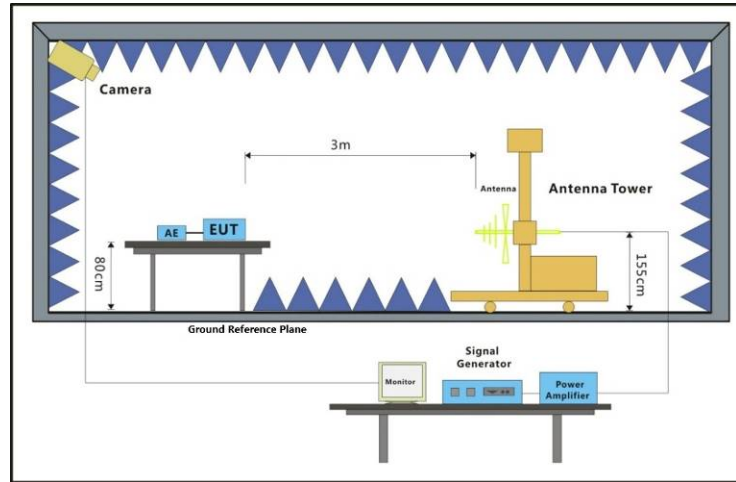
Discharge type	Level (kV)	Polarity	Test Point	Result / Observations
Air Discharge	8	+	1	A
Air Discharge	8	-	1	A
Contact Discharge	4	+	2	A
Contact Discharge	4	-	2	A
Horizontal Coupling	4	+	3	A
Horizontal Coupling	4	-	3	A
Vertical Coupling	4	+	3	A
Vertical Coupling	4	-	3	A
A: No degradation in the performance of the EUT was observed				

7.2 Radiated Immunity (80MHz-1GHz)

Test Requirement: EN IEC 55014-2: 2021

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

7.2.1 Test Setup Diagram



7.2.2 E.U.T. Operation

Operating Environment:

Temperature: 22.6 °C

Humidity: 50.4 % RH

Atmospheric Pressure: 1010 mbar

7.2.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT running by power bank.

7.2.4 Test Condition and Results:

Performance Criterion: A

Frequency Range: 80MHz to 1GHz

Antenna Polarisation: Vertical and Horizontal

Modulation 1kHz, 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	Underside	3s	A

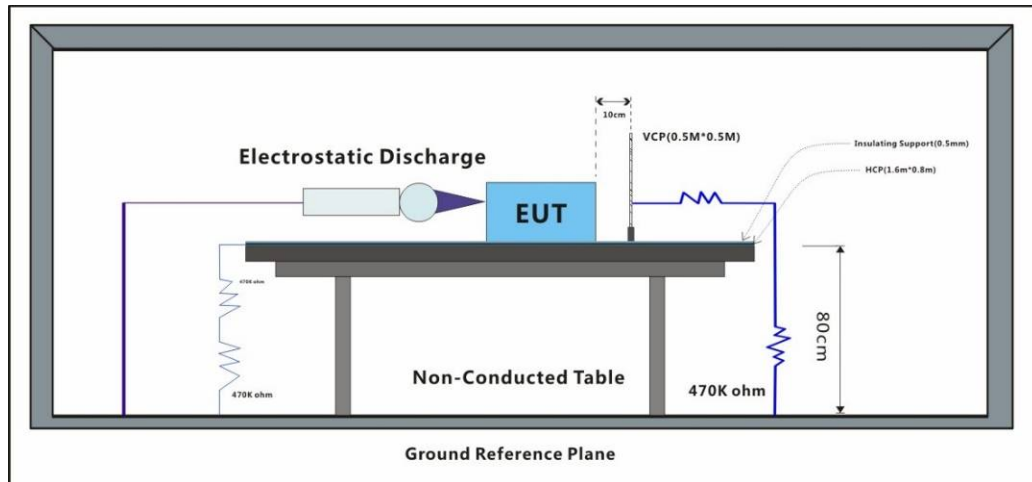
A: No degradation in the performance of the EUT was observed

7.3 Electrostatic Discharge

Test Requirement: EN IEC 61547: 2023

Test Method: EN 61000-4-2:2009

7.3.1 Test Setup Diagram



7.3.2 E.U.T. Operation

Operating Environment:

Temperature: 23.4 °C

Humidity: 53.6 % RH

Atmospheric Pressure: 1010 mbar

7.3.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT running by power bank.

7.3.4 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.

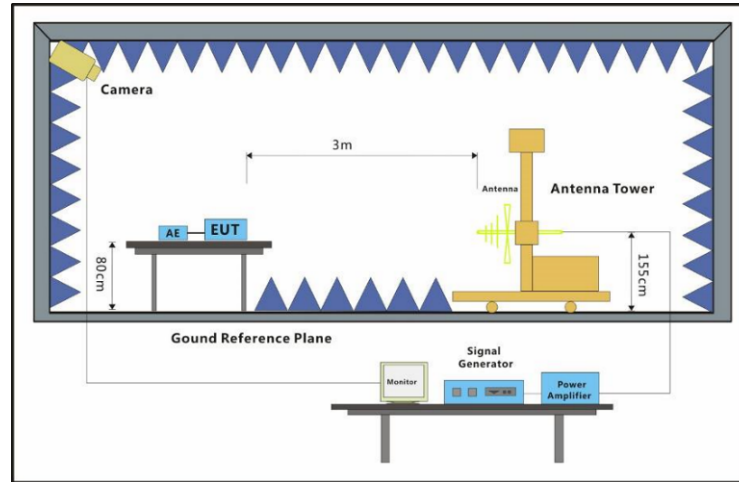
Discharge type	Level (kV)	Polarity	Test Point	Result / Observations
Air Discharge	2,4,8	+	1	A
Air Discharge	2,4,8	-	1	A
Contact Discharge	4	+	2	A
Contact Discharge	4	-	2	A
Horizontal Coupling	4	+	3	A
Horizontal Coupling	4	-	3	A
Vertical Coupling	4	+	3	A
Vertical Coupling	4	-	3	A
A: No degradation in the performance of the EUT was observed				

7.4 Radiated Immunity (80MHz-1GHz)

Test Requirement: EN IEC 61547: 2023

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

7.4.1 Test Setup Diagram



7.4.2 E.U.T. Operation

Operating Environment:

Temperature: 21.6 °C

Humidity: 50.4 % RH

Atmospheric Pressure: 1010 mbar

7.4.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT running by power bank.

7.4.4 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)



Electrostatic Discharge



Radiated Immunity (80MHz-1GHz)

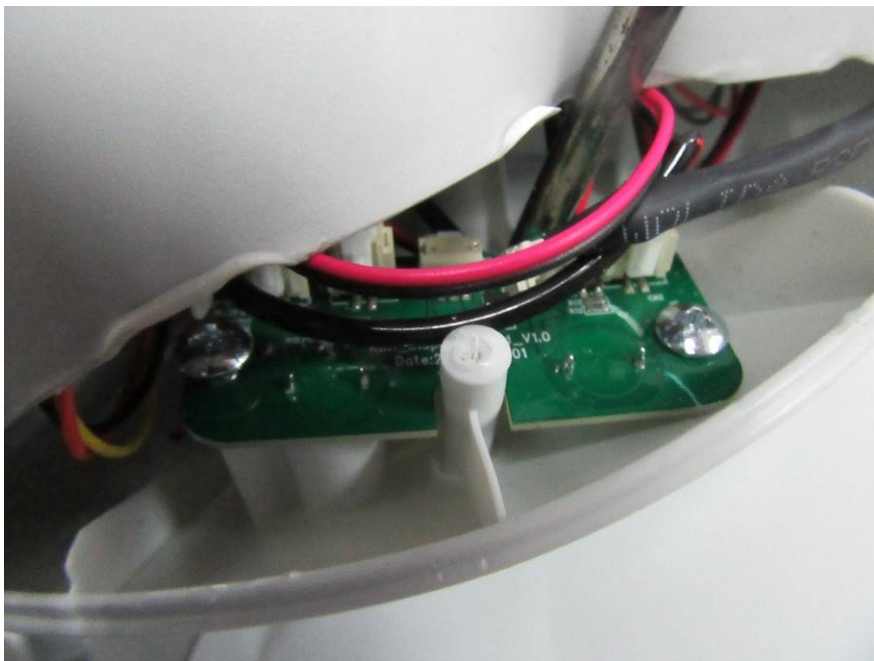


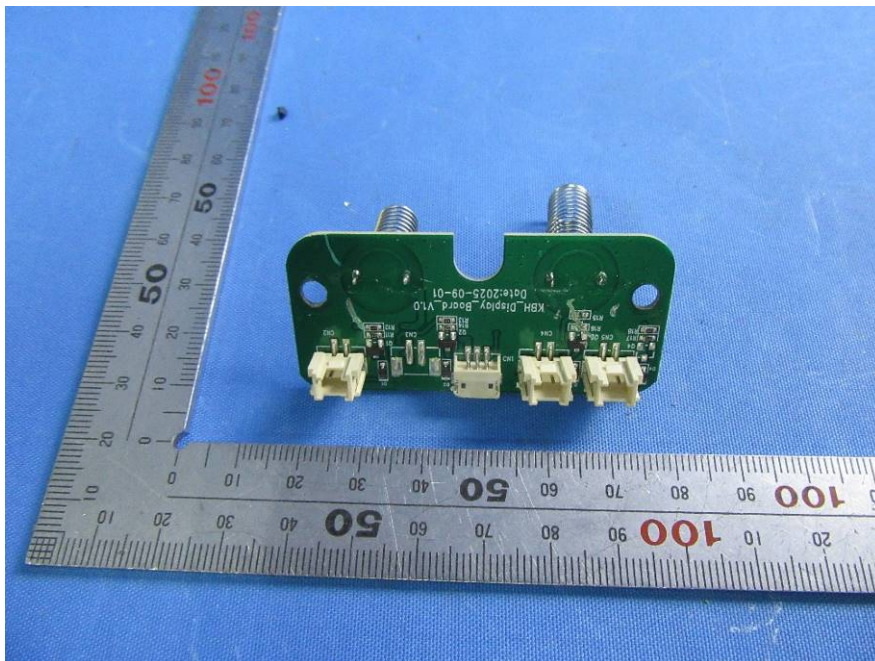
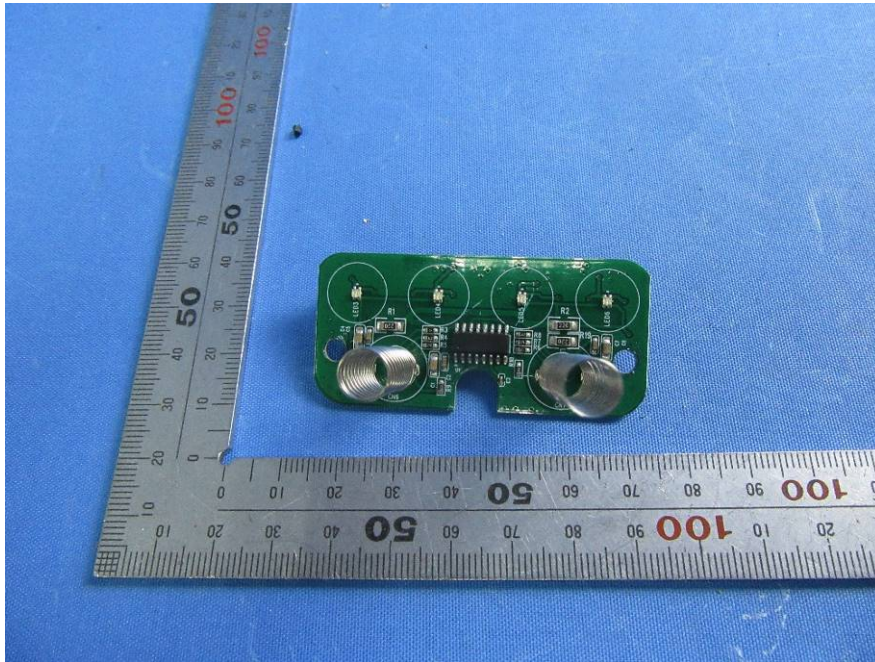
Radiated Emissions (Magnetic Field Induced Current)(9kHz-30MHz) 2m loop



9 EUT Constructional Details (EUT Photos)









- End of the Report -