

# TEST REPORT

**Application No.:** SHEM2005004207HS  
**Applicant:** cixi honge electric appliances co.,ltd  
**Address of Applicant:** NO.828,lilianxing road,kandun street,cixi,ningbo city,zhejiang prov.china  
**Manufacturer:** cixi honge electric appliances co.,ltd  
**Address of Manufacturer:** NO.828,lilianxing road,kandun street,cixi,ningbo city,zhejiang prov.china  
**Factory:** cixi honge electric appliances co.,ltd  
**Address of Factory:** NO.828,lilianxing road,kandun street,cixi,ningbo city,zhejiang prov.china  
**Equipment Under Test (EUT):**  
**EUT Name:** Wearable plasama purifier  
**Model No.:** HG-CJ01  
**Standard(s) :** 47 CFR Part 15, Subpart B  
**Date of Receipt:** 2020-06-01  
**Date of Test:** 2020-06-02 to 2020-06-03  
**Date of Issue:** 2020-06-08

<b>Test Result:</b>	<b>Pass*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.

*Parlan Zhan*

Parlan Zhan  
E&E Section Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.





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Revision Record			
Version	Description	Date	Remark
00	Original	2020-06-08	/

<b>Authorized for issue by:</b>			
			
	<hr/>		
	<b>Leo Xu / Project Engineer</b>		
			
	<hr/>		
	<b>Bruce Tang / Reviewer</b>		

## 2 Test Summary

Emission Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at Mains Terminals (150kHz-30MHz)	47 CFR Part 15, Subpart B	ANSI C63.4:2014	Class B	Pass
Radiated Emissions (30MHz-1GHz)	47 CFR Part 15, Subpart B	ANSI C63.4:2014	Class B	Pass

InternalSource	UpperFrequency
Below 1.705MHz	30MHz
1.705MHz to 108MHz	1GHz
108MHz to 500MHz	2GHz
500MHz to 1GHz	5GHz
Above 1GHz	5th harmonic of the highest frequency or 40GHz, whichever is lower

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## 4 General Information

### 4.1 Details of E.U.T.

Power supply: DC3.7V,0.25A,1W  
Test voltage: AC120V60Hz

### 4.2 Description of Support Units

The EUT has been tested as an independent unit.

### 4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Conducted Emission at mains port using AMN	2.6dB (9kHz to 150kHz)
		2.4dB (150kHz to 30MHz)
2	Conducted Emission at mains port using VP	1.8 dB (9kHz to 30MHz)
3	Conducted Emission at telecommunication port using AAN	4.2 dB (150kHz to 30MHz)
4	Radiated Power	3.2dB
5	Radiated Emission	4.5dB (30MHz-1GHz)
		5.1dB (1GHz-6GHz)
		5.4dB (6GHz-18GHz)
6	Radiated Disturbance (disturbance current in a LLAS)	2.4dB (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.

#### 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.

#### 4.5 Test Facility

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

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **NVLAP (LAB CODE: 201034-0)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

- **FCC (Designation Number: CN5033)**

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.

- **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

## 5 Equipment List

<b>Conducted Emissions at Mains Terminals (150kHz-30MHz)</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No</b>	<b>Inventory No</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
EMI test receiver	Rohde & Schwarz	ESR7	SHEM162-1	2019-12-20	2020-12-19
Line impedance stabilization network	SCHWARZBECK	NSLK8127	SHEM061-1	2019-12-20	2020-12-19
Line impedance stabilization network	EMCO	3816/2	SHEM019-1	2019-12-20	2020-12-19
Pulse limiter	Rohde & Schwarz	ESH3-Z2	SHEM029-1	2019-12-20	2020-12-19
Shielding Room	ZHONGYU	8*4*3M	SHEM079-2	2017-12-20	2020-12-19
CE test Cable	/	/	CE01	2019-12-26	2020-12-25

<b>Radiated Emissions (30MHz-1GHz)</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No</b>	<b>Inventory No</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
EMI test receiver	Rohde & Schwarz	ESU40	SHEM051-1	2019-12-20	2020-12-19
CONTROLLER	INNCO	CO200	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	2019-10-14	2021-10-13
Semi/Fully Anechoic	ST	11*6*6M	SHEM078-2	2017-07-22	2020-07-21
Low Amplifier	CLAVIIO	BDLNA-0001-412010	SHEM164-1	2019-08-13	2020-08-12

<b>General used equipment</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No</b>	<b>Inventory No</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
Digital pressure meter	YONGZHI	DYM3-01	SHEM082-1	2018-01-25	2021-01-24
Temperature&humidity recorder	ShangHai weather meter work	ZJ 1-2B	SHEM042-1~6	2019-09-16	2020-09-15
Digital Multimeter	FLUKE	17B	SHEM043-3	2019-09-02	2020-09-01
Autoformer regulator	Guangzhou bao de	TDGC2-5KVA	SHEM150-1	N/A	N/A
Multi-purpose tong tester	FLUKE	316	SHEM001-1	2019-12-20	2020-12-19

## 6 Emission Test Results

### 6.1 Conducted Emissions at Mains Terminals (150kHz-30MHz)

Test Requirement:	47 CFR Part 15, Subpart B
Test Method:	ANSI C63.4:2014
Frequency Range:	150kHz to 30MHz
Limit:	
0.15M-0.5MHz	66dB(μV)-56dB(μV) quasi-peak, 56dB(μV)-46dB(μV) average
0.5M-5MHz	56dB(μV) quasi-peak, 46dB(μV) average
5M-30MHz	60dB(μV) quasi-peak, 50dB(μV) average
Detector:	Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

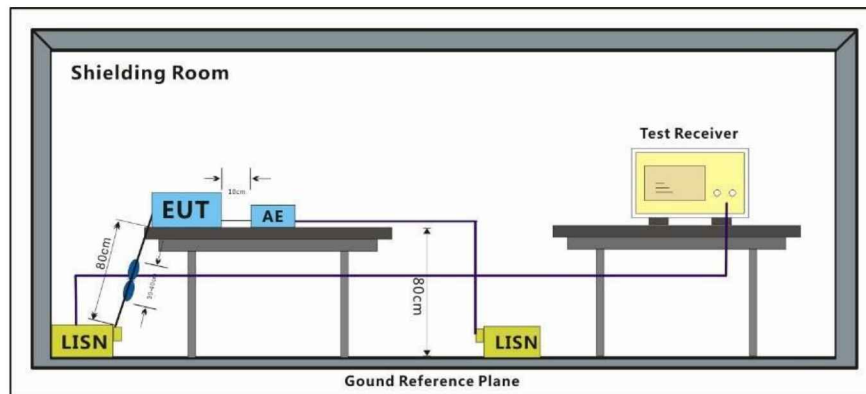
#### 6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 22 °C      Humidity: 50 % RH      Atmospheric Pressure: 1002 mbar

Test mode      a: Charging mode: keep EUT charging by SGS provide power supply,

#### 6.1.2 Test Setup Diagram

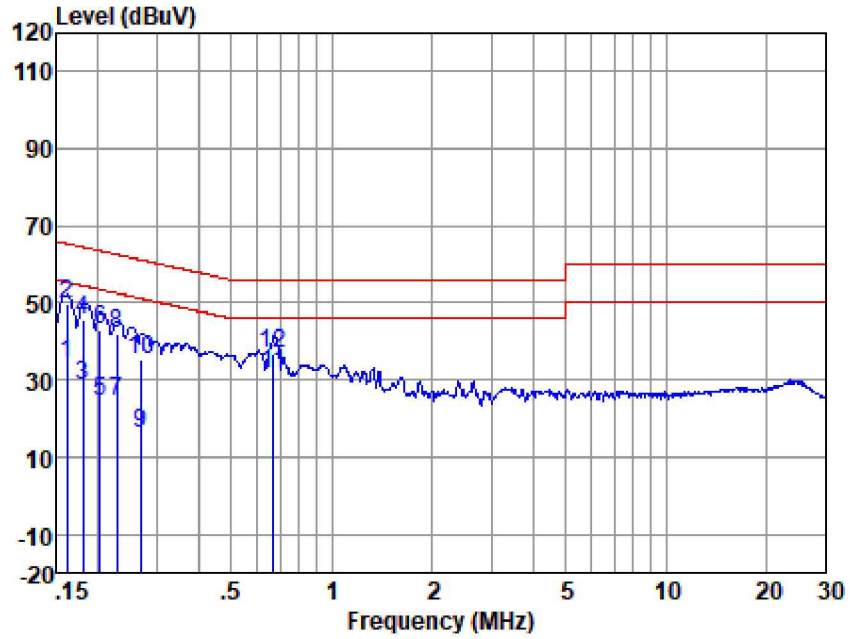


#### 6.1.3 Measurement Data

An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.



Mode:a; Line:Live Line

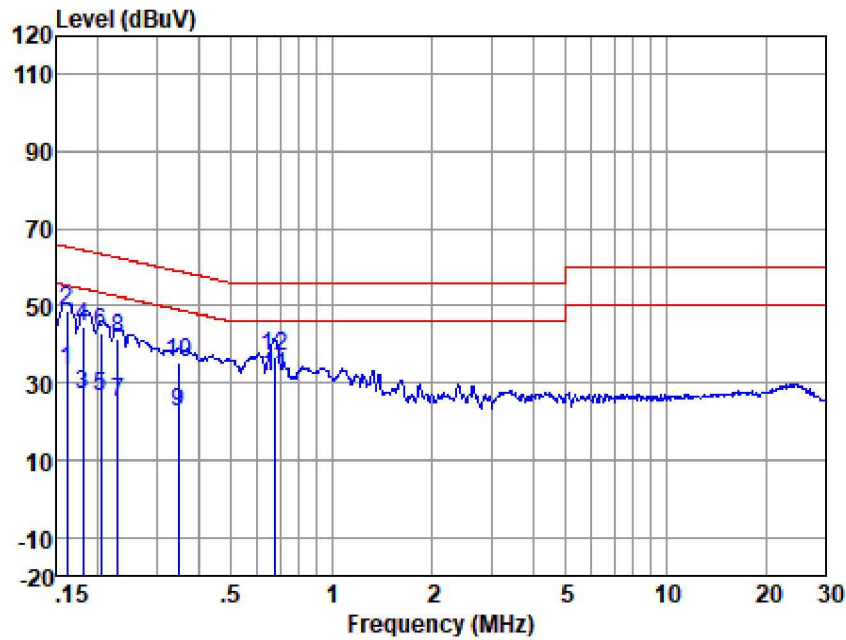


LISN : LINE  
EUT/Project No : 04207HS  
Test Mode : a

	Freq (MHz)	Read level (dBuV)	LISN Factor (dB)	Cable Loss (dB)	Emission Level (dBuV)	Limit (dBuV)	Over Limit (dB)	Remark
1	0.16	24.09	0.08	9.97	34.14	55.38	-21.24	Average
2	0.16	39.78	0.08	9.97	49.83	65.38	-15.55	QP
3	0.18	18.23	0.08	9.99	28.30	54.50	-26.20	Average
4	0.18	35.71	0.08	9.99	45.78	64.50	-18.72	QP
5	0.20	14.41	0.07	10.00	24.48	53.54	-29.06	Average
6	0.20	32.78	0.07	10.00	42.85	63.54	-20.69	QP
7	0.23	14.22	0.07	10.01	24.30	52.57	-28.27	Average
8	0.23	31.93	0.07	10.01	42.01	62.57	-20.56	QP
9	0.27	6.30	0.07	10.02	16.39	51.16	-34.77	Average
10	0.27	25.37	0.07	10.02	35.46	61.16	-25.70	QP
11	0.67	21.33	0.08	10.07	31.48	46.00	-14.52	Average
12	0.67	26.57	0.08	10.07	36.72	56.00	-19.28	QP

Notes: Emission Level = Read Level + LISN Factor + Cable loss

Mode:a; Line:Neutral Line



LISN : NEUTRAL  
EUT/Project No : 04207HS  
Test Mode : a

	Freq (MHz)	Read level (dBuV)	LISN Factor (dB)	Cable Loss (dB)	Emission Level (dBuV)	Limit (dBuV)	Over Limit (dB)	Remark
1	0.16	23.17	0.07	9.97	33.21	55.38	-22.17	Average
2	0.16	38.71	0.07	9.97	48.75	65.38	-16.63	QP
3	0.18	17.19	0.06	9.99	27.24	54.50	-27.26	Average
4	0.18	34.55	0.06	9.99	44.60	64.50	-19.90	QP
5	0.20	16.51	0.06	10.00	26.57	53.45	-26.88	Average
6	0.20	33.00	0.06	10.00	43.06	63.45	-20.39	QP
7	0.23	14.85	0.06	10.01	24.92	52.48	-27.56	Average
8	0.23	31.46	0.06	10.01	41.53	62.48	-20.95	QP
9	0.35	12.31	0.06	10.03	22.40	49.00	-26.60	Average
10	0.35	25.24	0.06	10.03	35.33	59.00	-23.67	QP
11	0.68	21.52	0.07	10.07	31.66	46.00	-14.34	Average
12	0.68	26.73	0.07	10.07	36.87	56.00	-19.13	QP

Notes: Emission Level = Read Level + LISN Factor + Cable loss

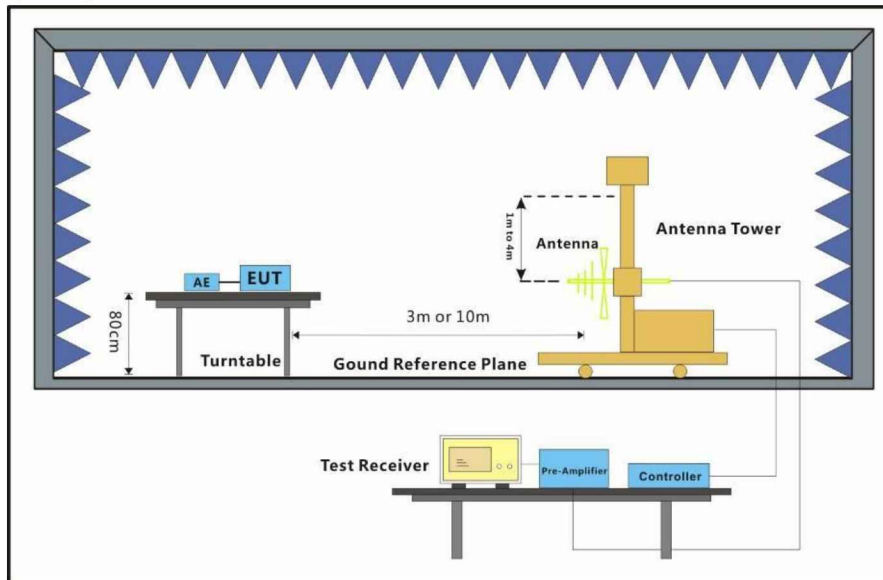
## 6.2 Radiated Emissions (30MHz-1GHz)

Test Requirement:	47 CFR Part 15, Subpart B
Test Method:	ANSI C63.4:2014
Frequency Range:	30MHz to 1GHz
Measurement Distance:	3m
Limit:	
30MHz -88MHz	40.0(dB $\mu$ V/m) quasi-peak
88MHz-216MHz	43.5(dB $\mu$ V/m) quasi-peak
216MHz-960MHz	46.0(dB $\mu$ V/m) quasi-peak
960MHz-1000MHz	54.0(dB $\mu$ V/m) quasi-peak
Detector:	Peak for pre-scan (120kHz resolution bandwidth) 30M to1000MHz

### 6.2.1 E.U.T. Operation

Operating Environment:			
Temperature:	22 °C	Humidity:	50 % RH
		Atmospheric Pressure:	1020 mbar
Test mode:	a: Charging mode: keep EUT charging by SGS provide power supply, b: Running mode: keep EUT running.		

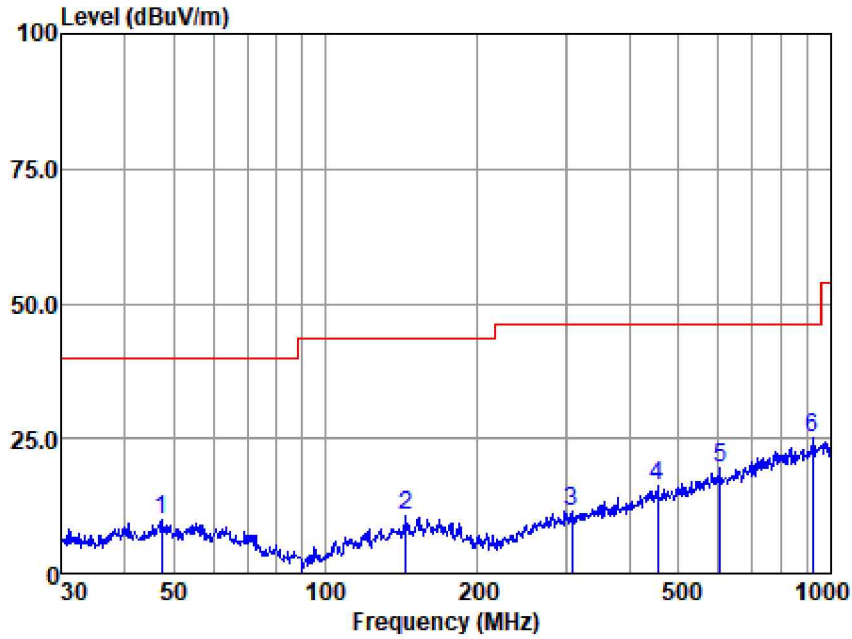
### 6.2.2 Test Setup Diagram



### 6.2.3 Measurement 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.

Mode:a; Polarization:Horizontal

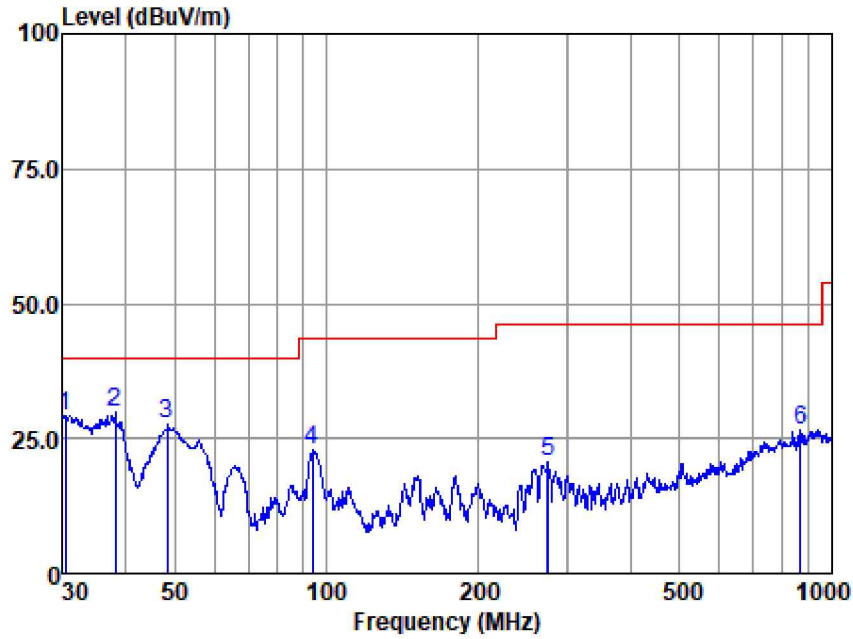


Antenna Polarity :HORIZONTAL  
EUT/Project :4207HS  
Test mode :a

	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	47.492	37.75	13.60	1.03	42.33	10.05	40.00	-29.95	QP
2	144.335	38.76	12.68	1.67	42.24	10.87	43.50	-32.63	QP
3	307.831	37.71	13.52	2.43	42.08	11.58	46.00	-34.42	QP
4	454.310	38.19	16.96	2.80	41.75	16.20	46.00	-29.80	QP
5	605.659	38.38	19.69	3.23	41.68	19.62	46.00	-26.38	QP
6	922.516	38.83	23.68	3.96	41.55	24.92	46.00	-21.08	QP

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

Mode:a; Polarization:Vertical

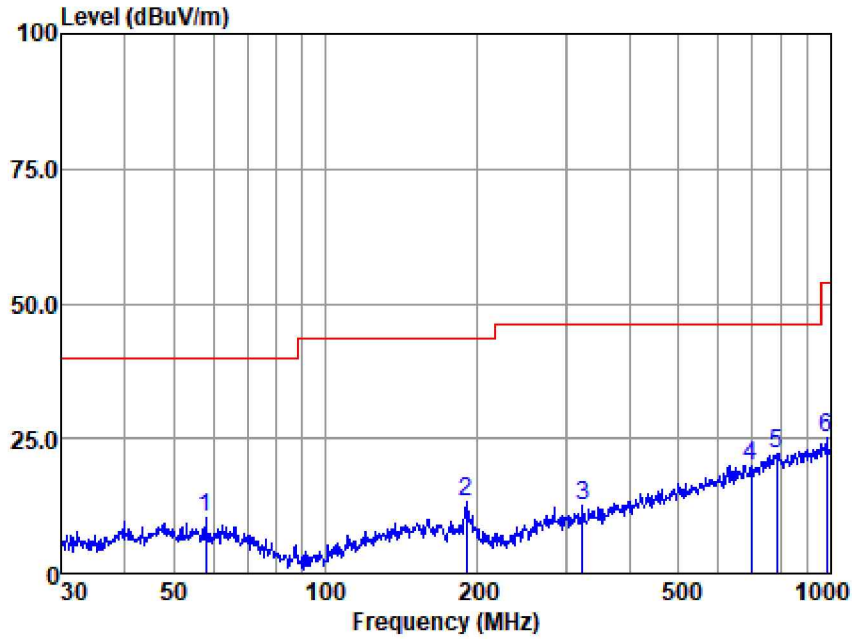


Antenna Polarity :VERTICAL  
EUT/Project :4207HS  
Test mode :a

	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	30.424	58.62	12.22	0.85	42.38	29.31	40.00	-10.69	QP
2	38.078	58.35	12.91	0.94	42.34	29.86	40.00	-10.14	QP
3	48.332	55.26	13.63	1.03	42.33	27.59	40.00	-12.41	QP
4	93.768	55.86	8.10	1.29	42.30	22.95	43.50	-20.55	QP
5	274.194	47.94	12.66	2.31	42.11	20.80	46.00	-25.20	QP
6	869.130	41.55	22.90	3.86	41.74	26.57	46.00	-19.43	QP

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

Mode:b; Polarization:Horizontal

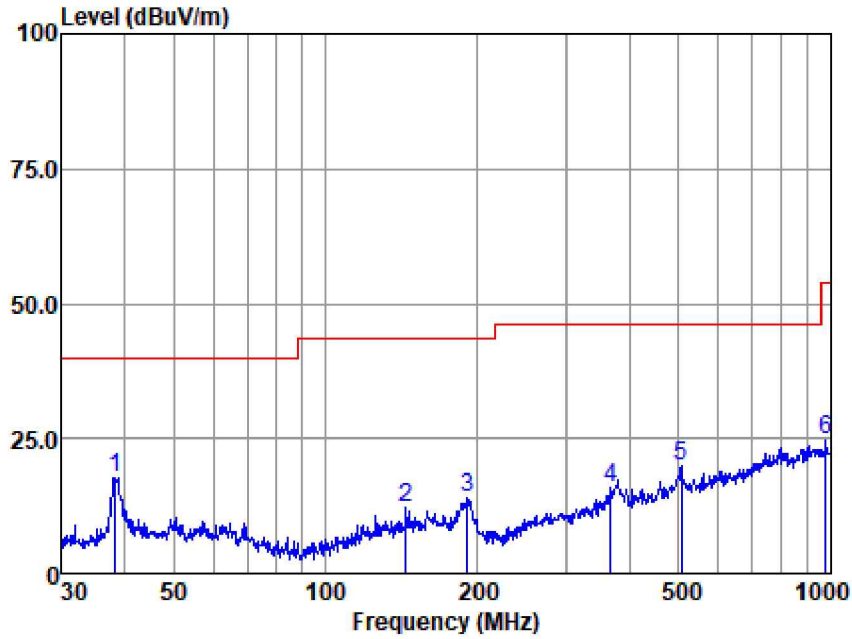


Antenna Polarity :HORIZONTAL  
EUT/Project :4207HS  
Test mode :b

	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	57.796	38.26	13.23	1.10	42.33	10.26	40.00	-29.74	QP
2	189.739	43.14	10.50	1.93	42.19	13.38	43.50	-30.12	QP
3	323.320	38.22	13.97	2.46	42.03	12.62	46.00	-33.38	QP
4	696.857	37.57	20.78	3.47	41.78	20.04	46.00	-25.96	QP
5	782.345	38.33	22.23	3.67	41.99	22.24	46.00	-23.76	QP
6	982.620	38.10	24.00	4.08	41.17	25.01	54.00	-28.99	QP

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

Mode:b; Polarization:Vertical



Antenna Polarity :VERTICAL  
EUT/Project :4207HS  
Test mode :b

	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	46.34	12.93	0.94	42.34	17.87	40.00	-22.13	QP
2	144.335	40.02	12.68	1.67	42.24	12.13	43.50	-31.37	QP
3	191.074	43.95	10.42	1.96	42.19	14.14	43.50	-29.36	QP
4	366.823	40.50	14.78	2.60	41.93	15.95	46.00	-30.05	QP
5	506.479	40.90	17.79	2.92	41.69	19.92	46.00	-26.08	QP
6	979.180	37.77	24.00	4.06	41.17	24.66	54.00	-29.34	QP

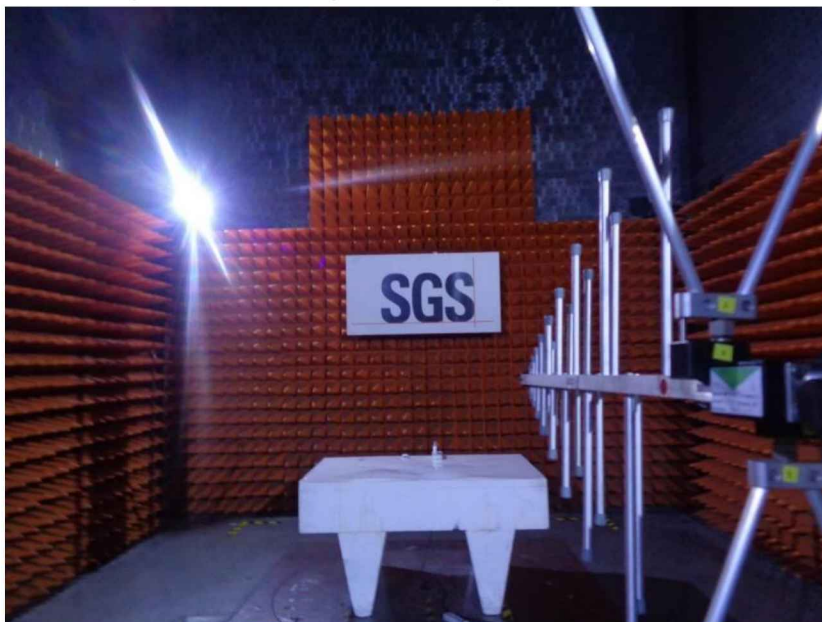
Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

## 7 Photographs

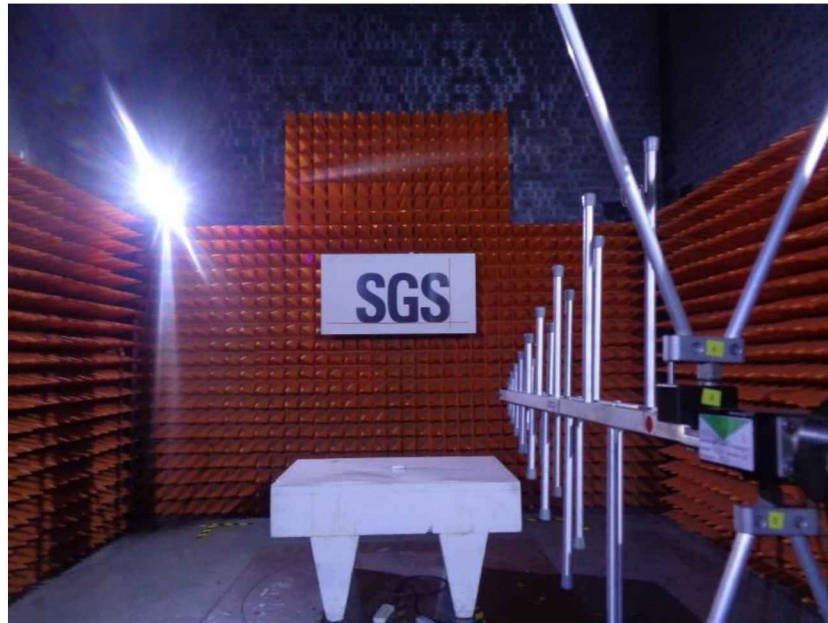
### 7.1 Conducted Emissions at Mains Terminals (150kHz-30MHz) Test Setup



### 7.2 Radiated Emissions (30MHz-1GHz) Test Setup



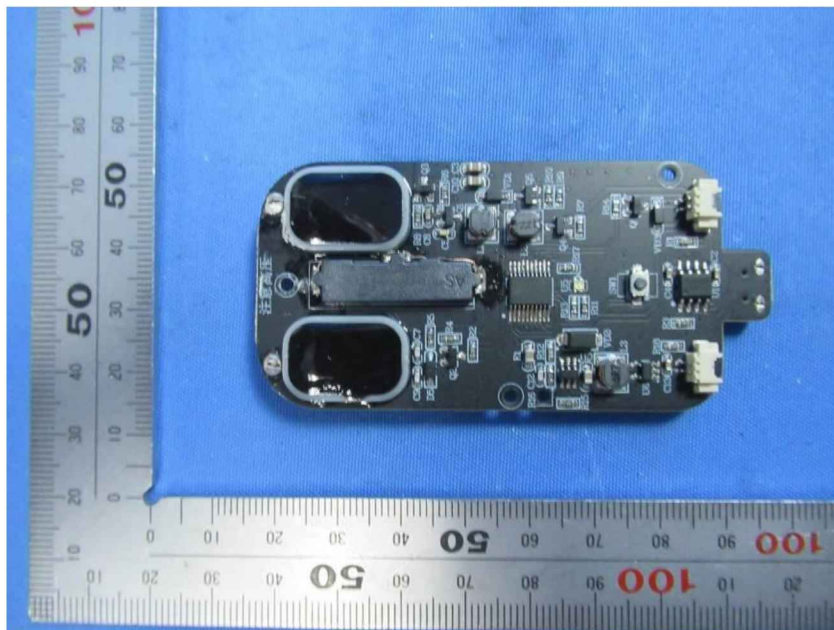




### 7.3 EUT Constructional Details (EUT Photos)









- End of the Report -