TEST REPORT

EMC DIRECTIVE
2014/30/EU

REPORT NO. : STDNB-180402-E

Standard-Tech Building, No. 6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China
Tel: +86-20-32290320 32290719
Fax: +86-20-32290422 32290556
www.standard-tech.com E-mail: STD@standard-tech.com

TEST REPORT

Report No.: STDNB-180402-E **Issue Date:** 2018-04-08

Model No.: SC-CMH315W-1; SC-CMH315W-2; SC-CMH315W-4; SC-CMH630W-1; SC-CMH630W-2

Product Name: CMH Electronic ballast

Applicant: FUZHOU SEECHANCE HOLDING CO.,LTD

Address: UNIT 1906,19/F HUALIN MANSION,201 HUALIN RD.,FUZHOU CHINA

Manufacturer: FUZHOU SEECHANCE HOLDING CO.,LTD

Address: UNIT 1906,19/F HUALIN MANSION,201 HUALIN RD.,FUZHOU CHINA

Factory: FUZHOU SEECHANCE HOLDING CO.,LTD

Address: 169 hongwei rd.,min hou country fujian china

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Test Standards:

■ - EN 55015:2013+A1:2015
■ - EN 61000-3-2:2014
■ - EN 61000-3-3:2013
■ - EN 61547:2009

Test Facilities：

■ - Standard-Tech Co., Ltd. Testing Center
Address: Standard-Tech Building, No. 6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Product Information:

Model	Rated power	Remark
SC-CMH315W-1	120V-240V~, 50/60Hz, 315W	Same circuit diagram and PCB layout, only different in the color of appearance and the location of the input and output core.
SC-CMH315W-2		
SC-CMH315W-4		
SC-CMH630W-1	120V-240V~, 50/60Hz, 630W	Same circuit diagram and PCB layout, only different in the color of appearance and the location of the input and output core.
SC-CMH630W-2		

General Remarks:

1.Tests were only applied to the models SC-CMH315W-2 and SC-CMH630W-1 only, according to the difference above.
2.This is additional test report which is based on the original report STDNB-171004-E.There are no any difference among the models except for the applicant, product models and switch button. After reviwer, no additional test should be carried out.

Prepared by: Victor Hua

Victor Hua

Date: 2018-04-16

Reviewed by: Philip Guo

Philip Guo

Date: 2018-04-16

1 SUMMARY OF TESTS AND RESULTS

1.1 DESCRIPTION OF TEST RESULTS

Test Emission / Immunity		Test Result
Insertion Loss	EN 55015:2013+A1:2015	N/A
Conducted Emission	EN 55015:2013+A1:2015	Pass
Radiated Emission (9kHz-30MHz)	EN 55015:2013+A1:2015	Pass
Radiated Emission (30MHz-300MHz)	EN 55015:2013+A1:2015	Pass
Harmonics Current	EN 61000 - 3 - 2: 2014	Pass
Voltage Fluctuations	EN 61000 - 3 - 3: 2013	Pass
Electrostatic Discharge Immunity	EN 61547:2009 (IEC 61000 - 4 - 2: 2008)	Pass
Radiated Immunity	EN 61547: 2009 (IEC 61000-4-3:2006+A1:2007)	Pass
Electrical Fast Transient/Burst Immunity	EN 61547: 2009 (IEC 61000 - 4 - 4: 2004)	Pass
Surge Immunity	EN 61547: 2009 (IEC 61000 - 4 - 5: 2005)	Pass
RF Continues Conducted Immunity	EN 61547: 2009 (IEC 61000 - 4 - 6: 2008)	Pass
Power Frequency Magnetic Field Immunity	EN 61547: 2009 (IEC 61000-4-8:2009)	N/A
Voltage Dips and Interruptions Immunity	EN 61547: 2009 (IEC 61000 - 4 - 11: 2004)	Pass

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GENERAL PERFORMANCE CRITERIA DESCRIPTION	
Criteria 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.
Criteria 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.
Criteria 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. Additional requirement for lighting equipment incorporating a starting device: After the test the lighting equipment is switched off. After half an hour it is switched on again. The lighting equipment shall start and operate as intended.

1.2 TEST EQUIPMENT

Conducted Emissions

Equipment Name	Manufacturer	Model No.	Serial No.	Cal. Due
EMI Test Receiver	ROHDE&SCHWARZ	ESR7	101487	2018-07-06
Two-Line V-network	ROHDE&SCHWARZ	ENV216	101917	2018-03-28

Measurement Uncertainty:±3.38dB, This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Radiated Emissions （9kHz-30MHz）

Equipment Name	Manufacturer	Model No.	Serial No.	Cal. Due
EMI Test Receiver	ROHDE&SCHWARZ	ESR7	101487	2018-07-06
2m Loop Antenna	Beijing DaZe	ZN30401	16009	2018-04-06

Measurement Uncertainty:±3.70dB, This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Radiated Emissions （30MHz-300MHz）

Equipment Name	Manufacturer	Model No.	Serial No.	Cal. Due
EMI Test Receiver	ROHDE&SCHWARZ	ESR7	101487	2018-07-06
Biconical Logarithmic Antenna	SCHWARDZBECK	VULB 9162	9162-104	2018-09-12

Measurement Uncertainty:±4.30dB, This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Harmonic and Flicker

Equipment Name	Manufacturer	Model No.	Serial No.	Cal. Due
Harmonics, Flicker & Power Analyser	TTi	HA1600A	448241	2018-07-06
Low Distortion Power Source	TTi	AC1000A	448935	2018-07-06

The laboratory has confidence that all the tests compliant with the relevant standards with a 95% confidence level.

ESD

Equipment Name	Manufacturer	Model No.	Serial No.	Cal. Due
ESD Generator	Schloder	SESD 216	603123	2018-05-23
HCP/VCP	/	/	/	/

The laboratory has confidence that all the tests compliant with the relevant standards with a 95% confidence level.

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RS

Equipment Name	Manufacturer	Model No.	Serial No.	Cal. Due
Log Periodic Antenna	SCHWARZBECK	STLP 9128 E	9128E-029	2018-05-25
Power Amplifier II	PRANA R&D	AP32 DT214	0611-767	2018-01-09
Isotropic Field Monitor	BOOTON	4232A	10543	2018-12-09
R.F Signal Generator	R&S	SML03	103002	2018-01-23

The laboratory has confidence that all the tests compliant with the relevant standards with a 95% confidence level.

EFT and Surge

Equipment Name	Manufacturer	Model No.	Serial No.	Cal. Due
EFT and Surge generator	Prima	PRM61045A	PR14023230	2018-03-28
Isolating transformer	Prima	JMB-3KVA	LL-PRM1605	/
CLAMP	Prima	EFT-CLAMP	EFT-CLAMP	2018-03-28

The laboratory has confidence that all the tests compliant with the relevant standards with a 95% confidence level.

CS

Equipment Name	Manufacturer	Model No.	Serial No.	Cal. Due
Power Amplifier II	PRANA R&D	AP32 DT214	0611-767	2018-01-09
Isotropic Field Monitor	BOOTON	4232A	10543	2018-12-09
R,F Signal Generator	R&S	SML03	103002	2018-01-25
CDN	Luthi	CDN L-801 M2/M3	2265	2018-02-28

The laboratory has confidence that all the tests compliant with the relevant standards with a 95% confidence level.

Dips

Equipment Name	Manufacturer	Model No.	Serial No.	Cal. Due
Dips generator	Prima	DRP61011BG	PR16036224	2018-03-28

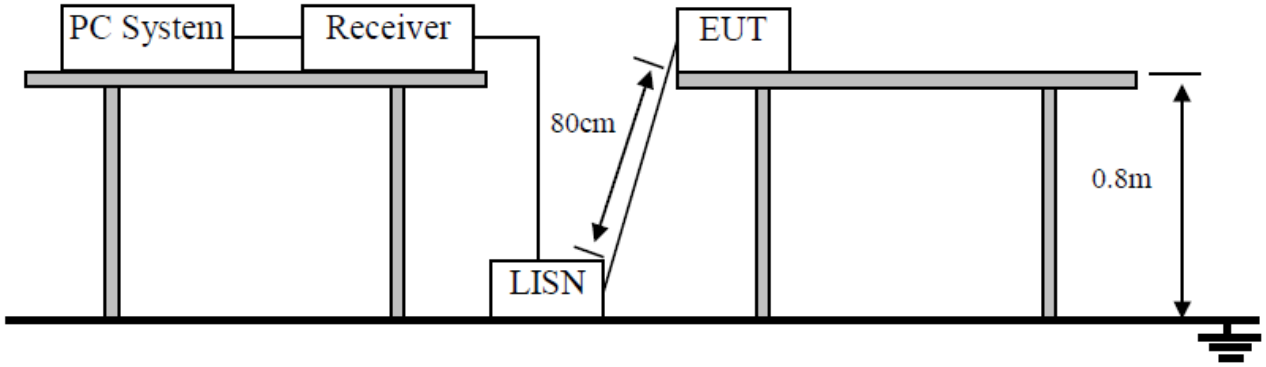
The laboratory has confidence that all the tests compliant with the relevant standards with a 95% confidence level.

2 TEST SETUP AND TEST DATA

2.1 CONDUCTED EMISSION

2.1.1 Test Setup

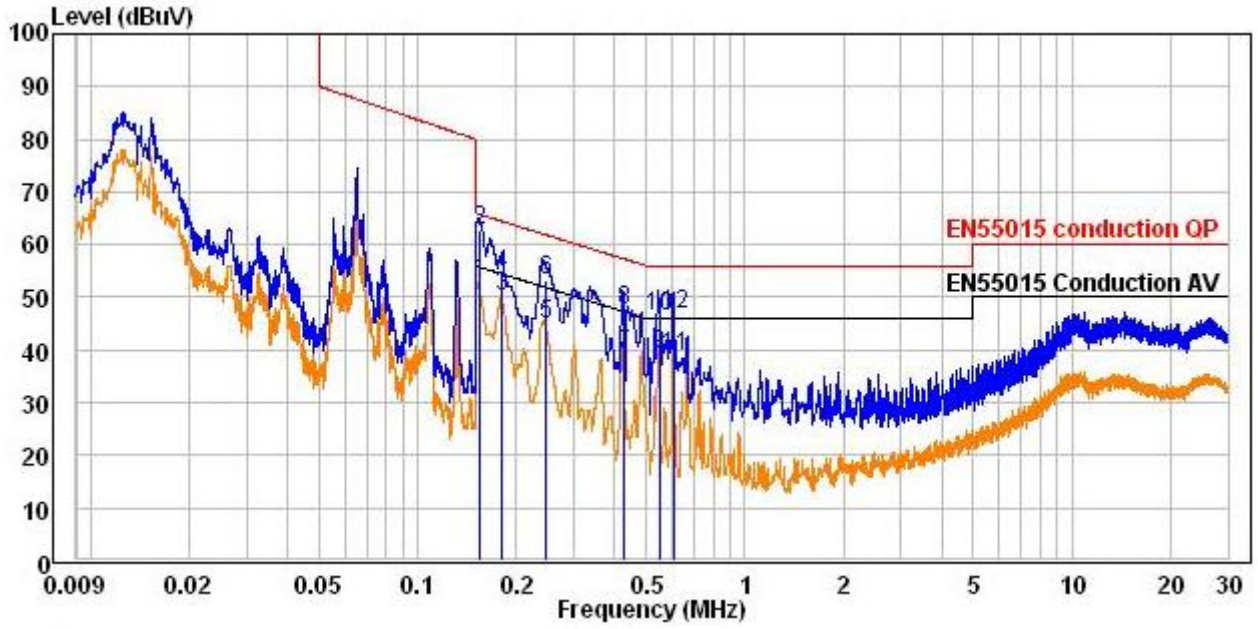
Test Drawn



TEST REPORT

2.1.2 Test Data

Environmental Condition:	Temperature: 23.0℃	Humidity: 50%	Pressure: 101kPa
Model:	SC-CMH315W-2	**Power Supply:**	AC 230V 50Hz
Operation Mode:	Full Load	**Conducted Line:**	L
Tested By:	Victor	**Test Date:**	2017-12-01



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	
1	0.154	52.84	42.82	10.02	55.75	-2.91	Average
2	0.154	62.84	52.82	10.02	65.75	-2.91	QP
3	0.181	50.21	40.19	10.02	54.42	-4.21	Average
4	0.181	54.21	44.19	10.02	64.42	-10.21	QP
5	0.245	44.92	34.90	10.02	51.93	-7.01	Average
6	0.245	53.32	43.30	10.02	61.93	-8.61	QP
7	0.424	39.34	29.32	10.02	47.36	-8.02	Average
8	0.424	47.34	37.32	10.02	57.36	-10.02	QP
9	0.546	39.24	29.22	10.02	46.00	-6.76	Average
10	0.546	46.24	36.22	10.02	56.00	-9.76	QP
11	0.604	38.86	28.82	10.04	46.00	-7.14	Average
12	0.604	46.86	36.82	10.04	56.00	-9.14	QP

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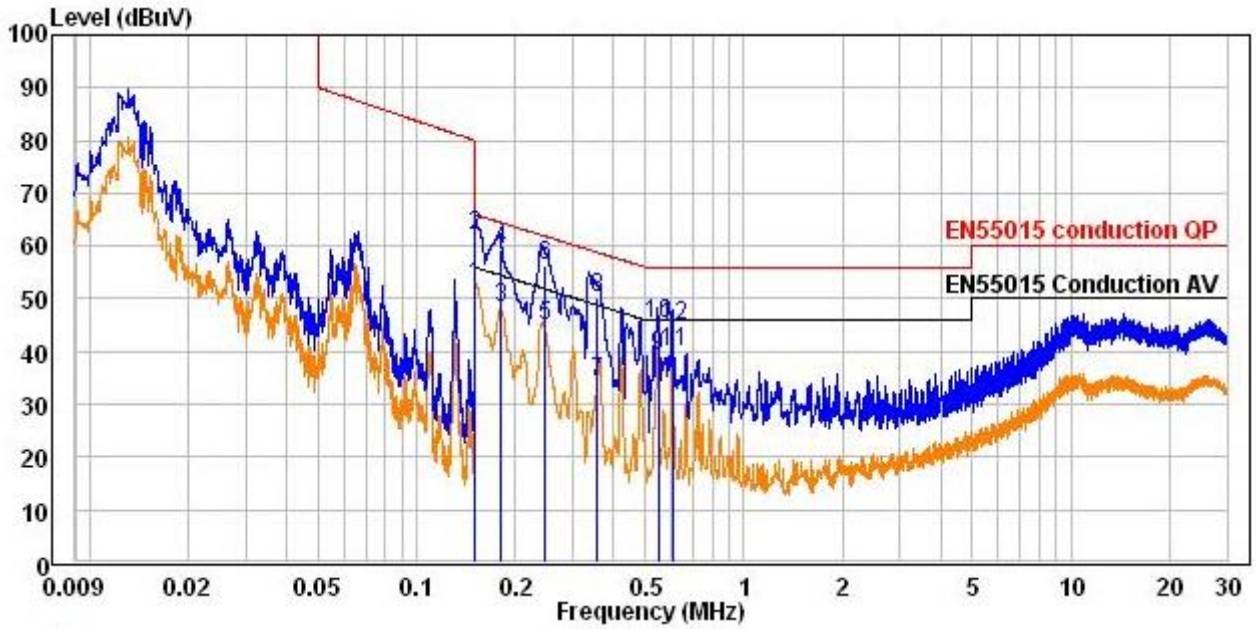
Environmental Condition：	Temperature：23.0℃	Humidity：50%	Pressure：101kPa
Model:	SC-CMH315W-2	**Power Supply：**	AC 230V 50Hz
Operation Mode:	Full Load	**Conducted Line:**	N
Tested By：	Victor	**Test Date：**	2017-12-01



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	
1	0.150	52.52	42.50	10.02	56.00	-3.48	Average
2	0.150	62.12	52.10	10.02	66.00	-3.88	QP
3	0.181	48.21	38.19	10.02	54.42	-6.21	Average
4	0.181	59.21	49.19	10.02	64.42	-5.21	QP
5	0.245	44.92	34.90	10.02	51.93	-7.01	Average
6	0.245	56.32	46.30	10.02	61.93	-5.61	QP
7	0.357	34.24	24.21	10.03	48.80	-14.56	Average
8	0.357	50.24	40.21	10.03	58.80	-8.56	QP
9	0.546	39.24	29.22	10.02	46.00	-6.76	Average
10	0.546	45.24	35.22	10.02	56.00	-10.76	QP
11	0.604	39.86	29.82	10.04	46.00	-6.14	Average
12	0.604	44.86	34.82	10.04	56.00	-11.14	QP

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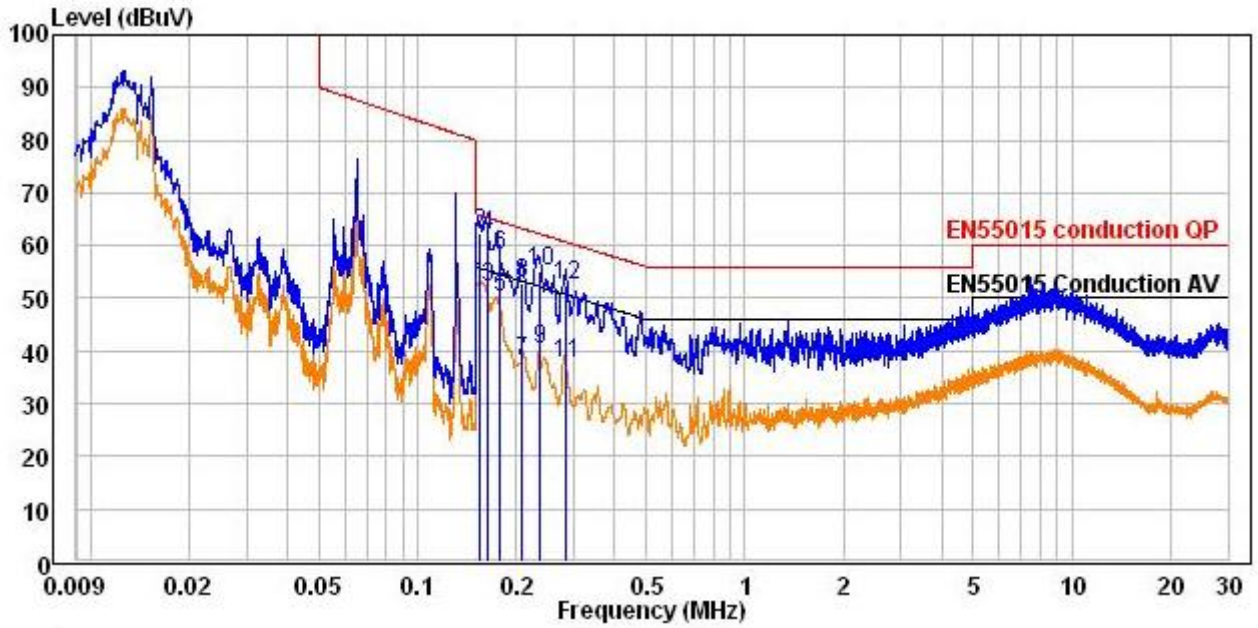
Environmental Condition：	Temperature：23.0℃	Humidity：50%	Pressure：101kPa
Model:	SC-CMH630W-1	**Power Supply：**	AC 230V 50Hz
Operation Mode:	Full Load	**Conducted Line:**	L
Tested By：	Victor	**Test Date：**	2017-12-01



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	
1	0.154	52.52	42.50	10.02	55.75	-3.23	Average
2	0.154	62.22	52.20	10.02	65.75	-3.53	QP
3	0.163	52.02	42.00	10.02	55.28	-3.26	Average
4	0.163	62.02	52.00	10.02	65.28	-3.26	QP
5	0.177	50.20	40.18	10.02	54.63	-4.43	Average
6	0.177	58.20	48.18	10.02	64.63	-6.43	QP
7	0.208	38.02	28.00	10.02	53.27	-15.25	Average
8	0.208	53.02	43.00	10.02	63.27	-10.25	QP
9	0.235	40.17	30.15	10.02	52.25	-12.08	Average
10	0.235	55.17	45.15	10.02	62.25	-7.08	QP
11	0.285	37.63	27.59	10.04	50.67	-13.04	Average
12	0.285	52.63	42.59	10.04	60.67	-8.04	QP

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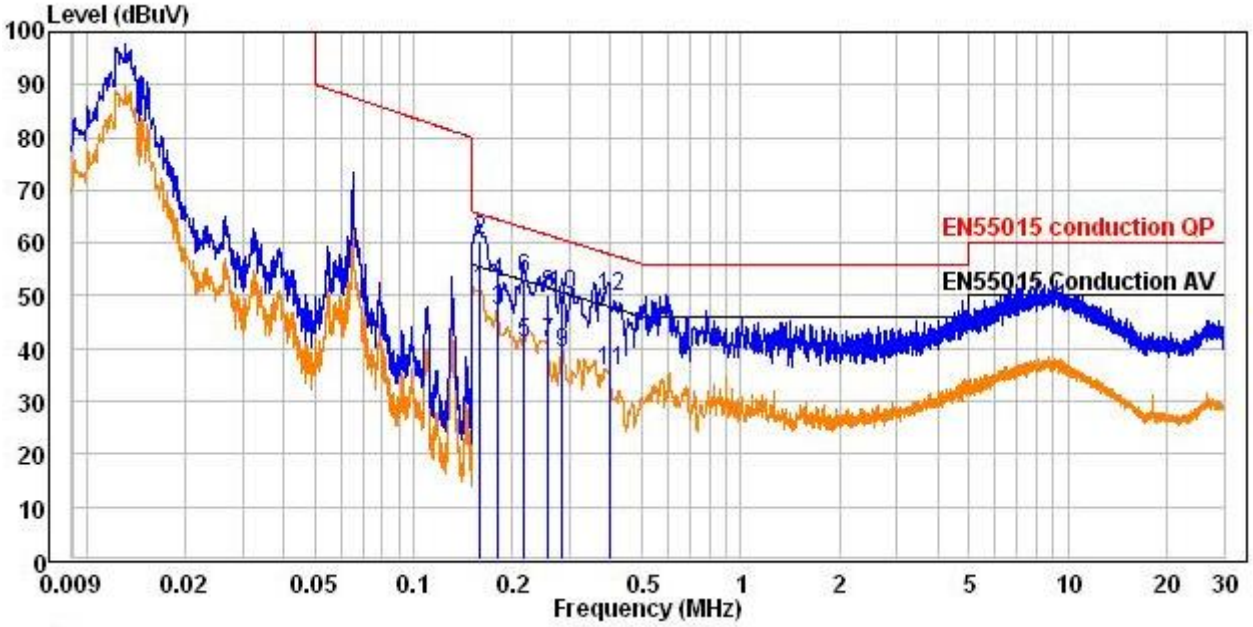
Environmental Condition：	Temperature：23.0℃	Humidity：50%	Pressure：101kPa
Model:	SC-CMH630W-1	**Power Supply：**	AC 230V 50Hz
Operation Mode:	Full Load	**Conducted Line:**	N
Tested By：	Victor	**Test Date：**	2017-12-01

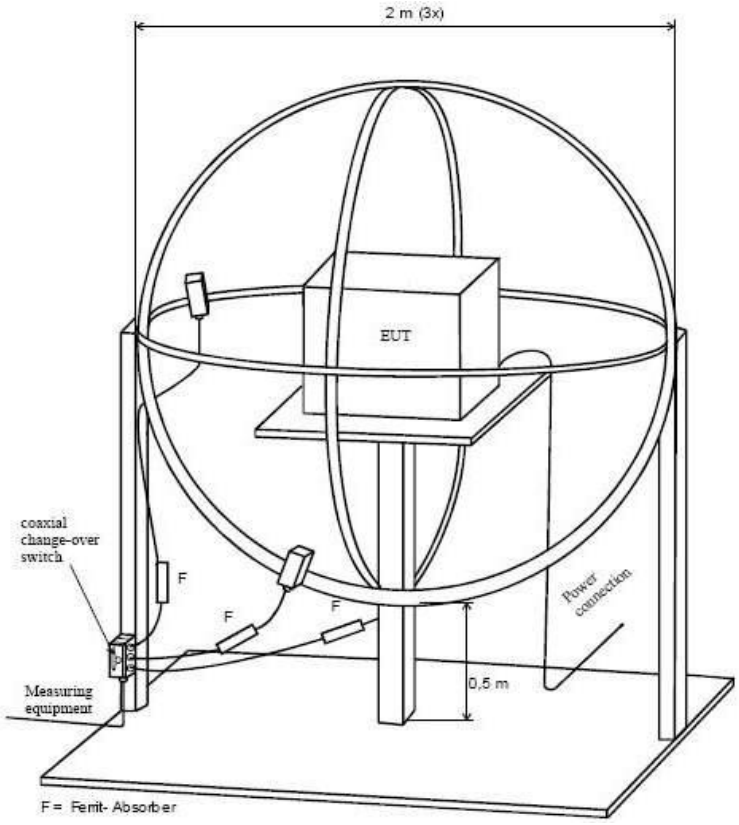


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	
1	0.159	50.82	40.80	10.02	55.52	-4.70	Average
2	0.159	60.32	50.30	10.02	65.52	-5.20	QP
3	0.182	47.12	37.10	10.02	54.42	-7.30	Average
4	0.182	52.42	42.40	10.02	64.42	-12.00	QP
5	0.217	41.25	31.23	10.02	52.91	-11.66	Average
6	0.217	53.25	43.23	10.02	62.91	-9.66	QP
7	0.258	41.14	31.11	10.03	51.50	-10.36	Average
8	0.258	50.14	40.11	10.03	61.50	-11.36	QP
9	0.285	39.16	29.12	10.04	50.67	-11.51	Average
10	0.285	50.16	40.12	10.04	60.67	-10.51	QP
11	0.397	35.63	25.61	10.02	47.91	-12.28	Average
12	0.397	49.63	39.61	10.02	57.91	-8.28	QP

2.2 RADIATED EMISSION (9kHZ-30MHZ)

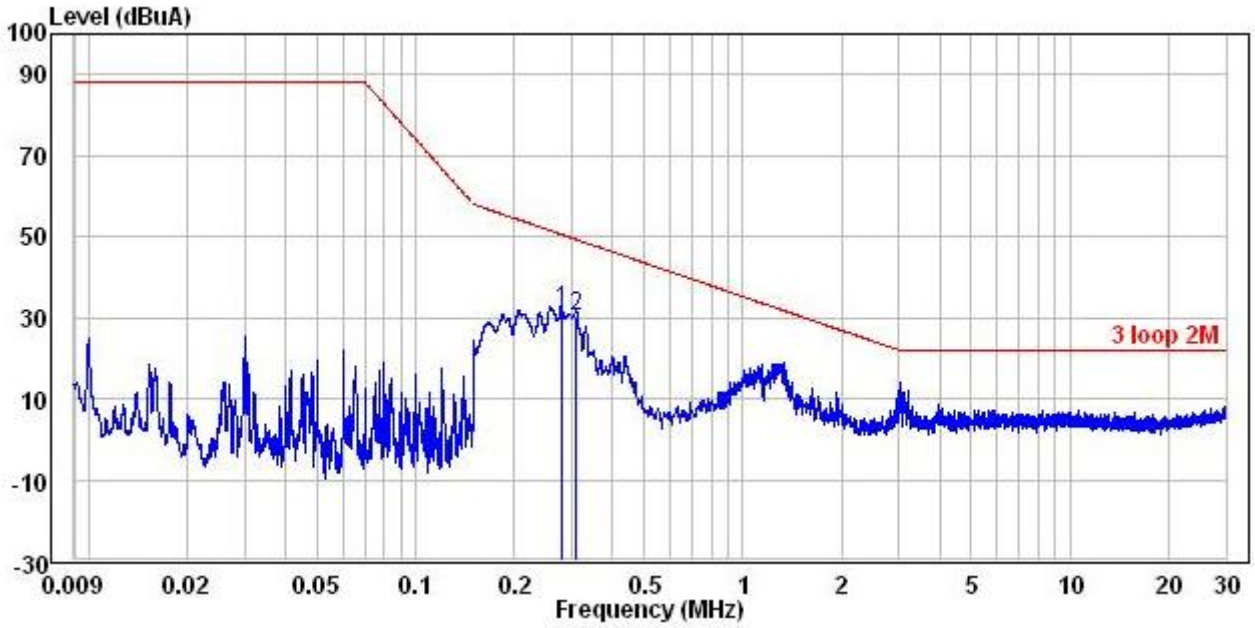
2.2.1 Test Setup

Test Drawn



2.2.2 Test Data

Environmental Condition：	Temperature：23.4℃	Humidity：50%	Pressure：101kPa
Model:	SC-CMH315W-2	**Power Supply：**	AC 230V 50Hz
Operation Mode:	Full Load	**Antenna:**	X
Tested By：	Victor	**Test Date：**	2017-12-01



	Freq	Level	Read Level	Limit Line	Over Limit	Remark
	MHz	dBuA	dBuA	dBuA	dB	
1	0.278	31.80	31.80	50.57	-18.77	QP
2	0.310	30.50	30.50	49.29	-18.79	QP

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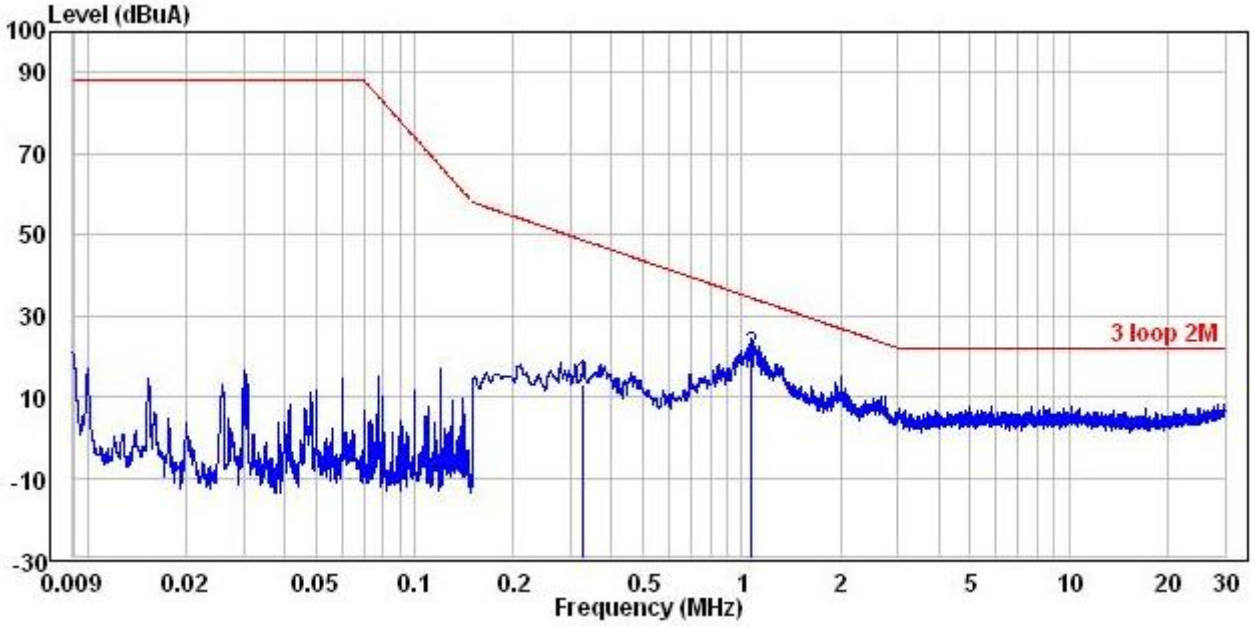
Environmental Condition：	Temperature：23.4℃	Humidity：50%	Pressure：101kPa
Model:	SC-CMH315W-2	**Power Supply：**	AC 230V 50Hz
Operation Mode:	Full Load	**Antenna:**	Y
Tested By：	Victor	**Test Date：**	2017-12-01



	Freq	Level	Read Level	Limit Line	Over Limit	Remark
	MHz	dBuA	dBuA	dBuA	dB	
1	0.328	13.00	13.00	48.61	-35.61	QP
2	1.061	20.00	20.00	34.49	-14.49	QP

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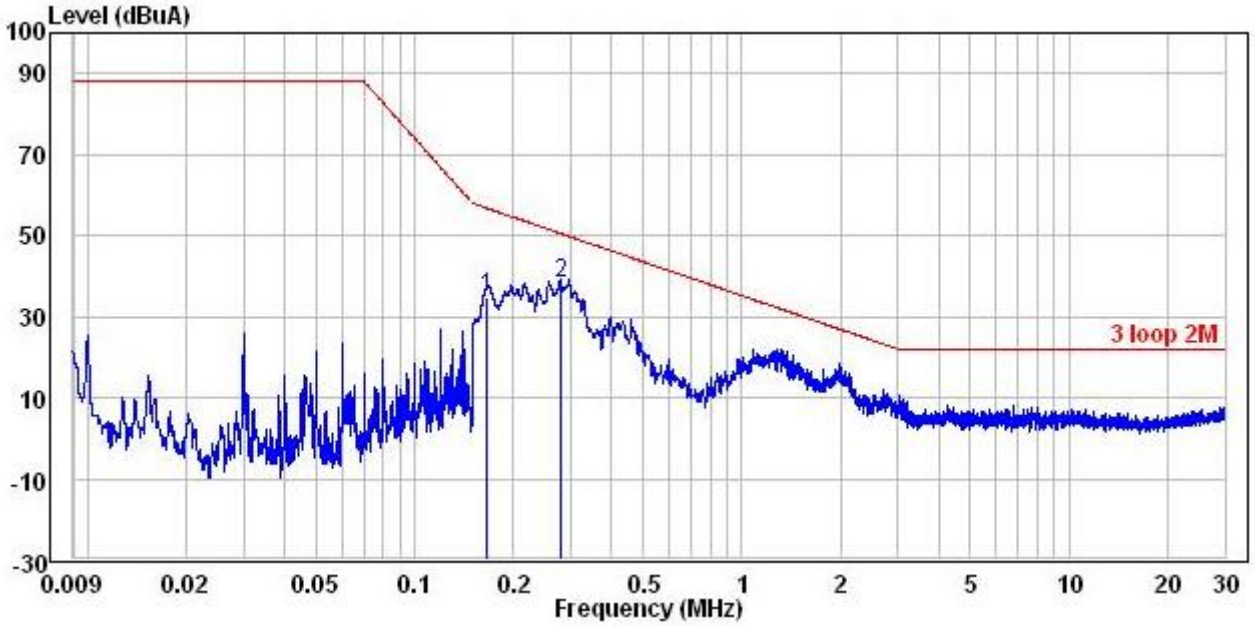
Environmental Condition：	Temperature：23.4℃	Humidity：50%	Pressure：101kPa
Model:	SC-CMH315W-2	**Power Supply：**	AC 230V 50Hz
Operation Mode:	Full Load	**Antenna:**	Z
Tested By：	Victor	**Test Date：**	2017-12-01



	Freq	Level	Read Level	Limit Line	Over Limit	Remark
	MHz	dBuA	dBuA	dBuA	dB	
1	0.166	34.80	34.80	56.79	-21.99	QP
2	0.278	38.20	38.20	50.57	-12.37	QP

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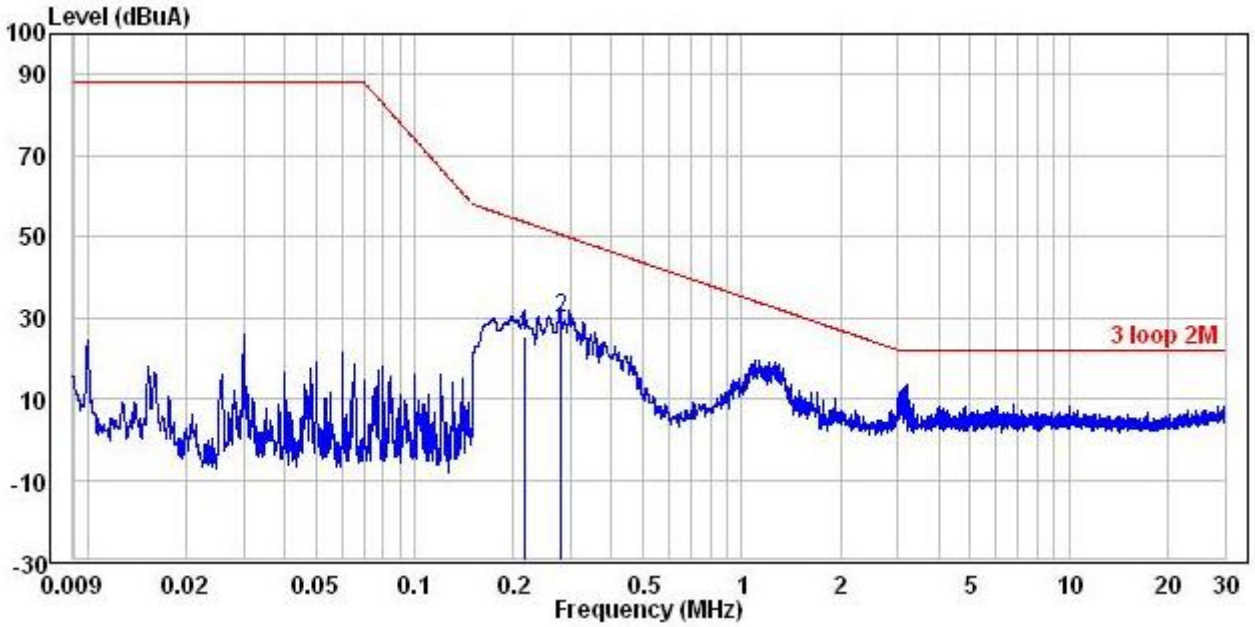
Environmental Condition：	Temperature：23.4℃	Humidity：50%	Pressure：101kPa
Model:	SC-CMH630W-1	**Power Supply：**	AC 230V 50Hz
Operation Mode:	Full Load	**Antenna:**	X
Tested By：	Victor	**Test Date：**	2017-12-01



	Freq	Level	Read Level	Limit Line	Over Limit	Remark
	MHz	dBuA	dBuA	dBuA	dB	
1	0.215	25.30	25.30	53.65	-28.35	QP
2	0.278	29.90	29.90	50.57	-20.67	QP

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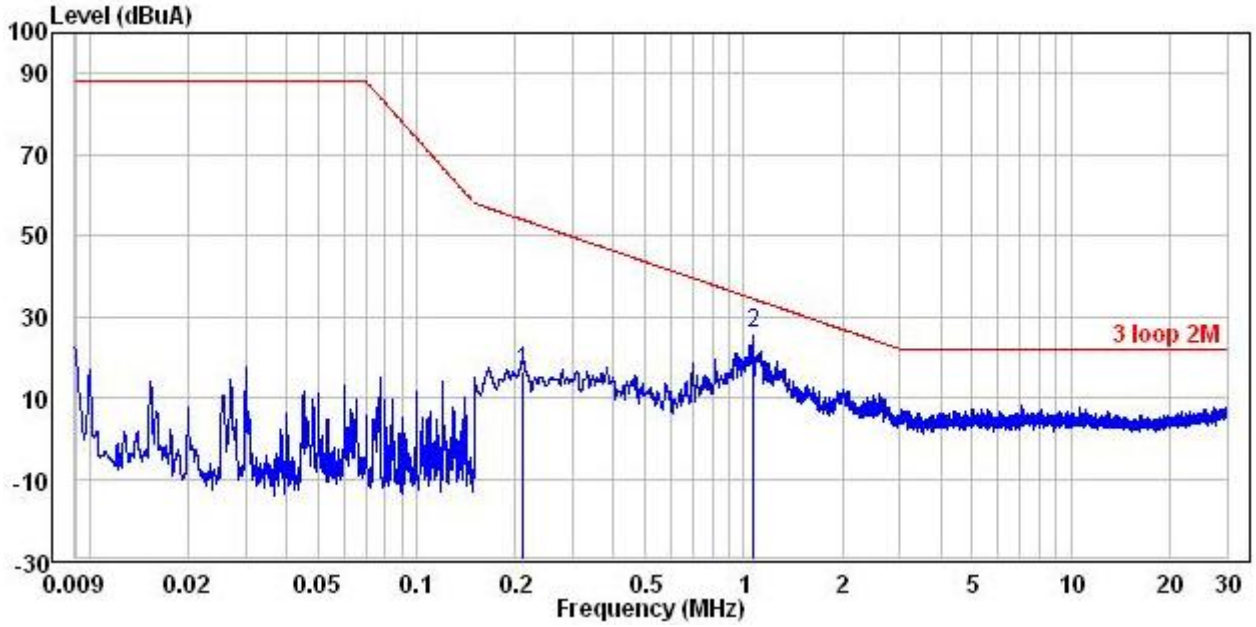
Environmental Condition：	Temperature：23.4℃	Humidity：50%	Pressure：101kPa
Model:	SC-CMH630W-1	**Power Supply：**	AC 230V 50Hz
Operation Mode:	Full Load	**Antenna:**	Y
Tested By：	Victor	**Test Date：**	2017-12-01



	Freq	Level	Read Level	Limit Line	Over Limit	Remark
	MHz	dBuA	dBuA	dBuA	dB	
1	0.211	16.30	16.30	53.92	-37.62	QP
2	1.071	26.00	26.00	34.38	-8.38	QP

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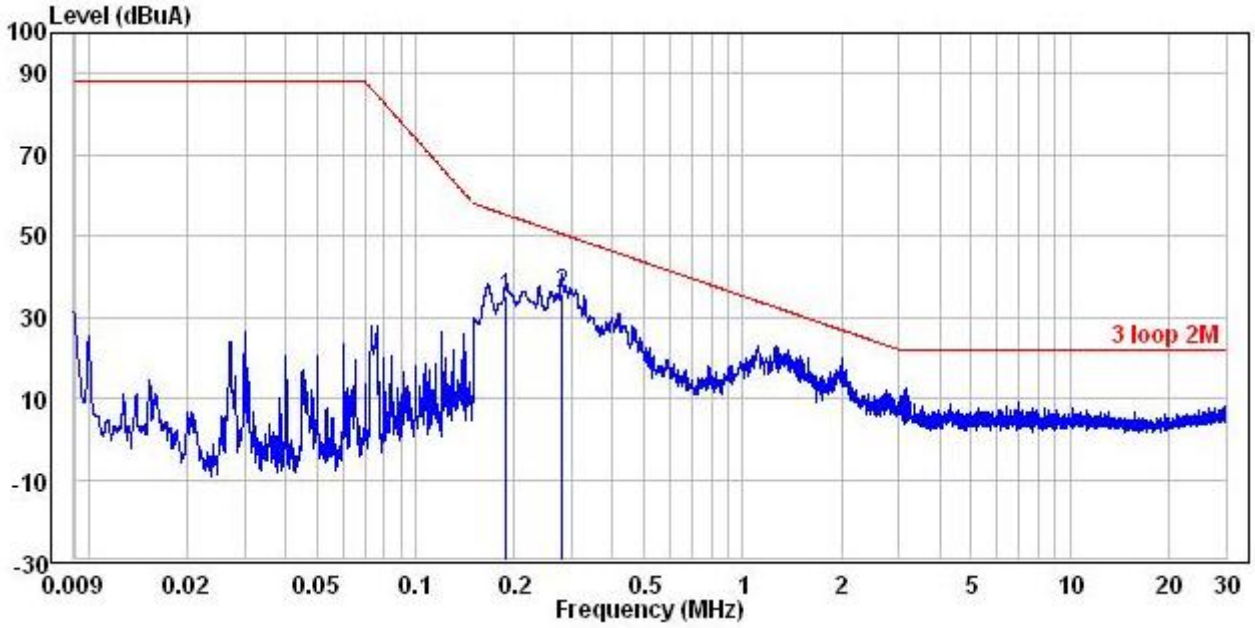
Environmental Condition：	Temperature：23.4℃	Humidity：50%	Pressure：101kPa
Model:	SC-CMH630W-1	**Power Supply：**	AC 230V 50Hz
Operation Mode:	Full Load	**Antenna:**	Z
Tested By：	Victor	**Test Date：**	2017-12-01

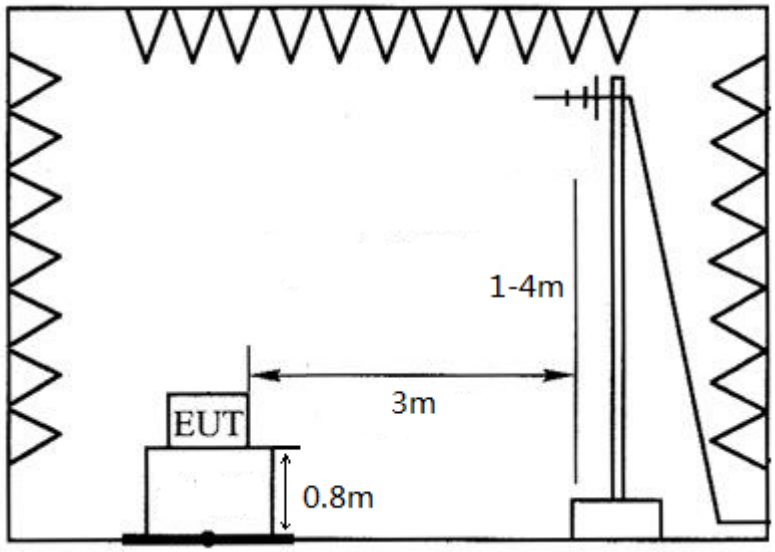


	Freq	Level	Read Level	Limit Line	Over Limit	Remark
	MHz	dBuA	dBuA	dBuA	dB	
1	0.188	35.00	35.00	55.26	-20.26	QP
2	0.278	35.70	35.70	50.57	-14.87	QP

2.3 RADIATED EMISSION (30MHZ-300MHZ)

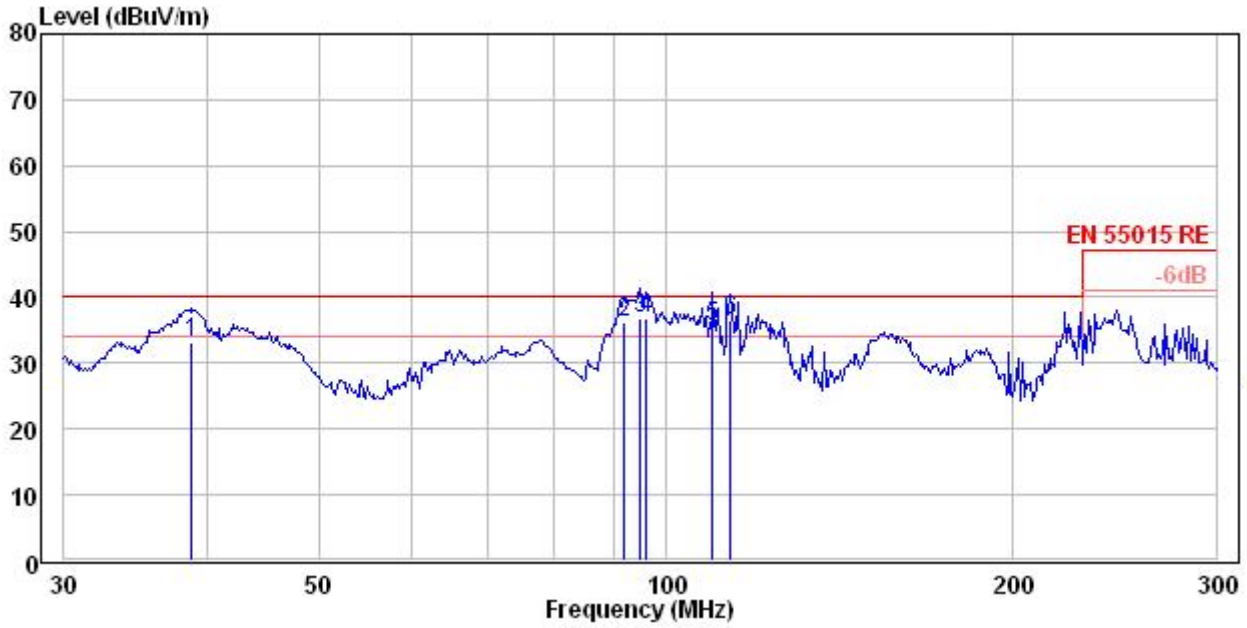
2.3.1 Test Setup

Test Drawn



2.3.2 Test Data

Environmental Condition：	Temperature：24.0℃	Humidity：50%	Pressure：101kPa
Model:	SC-CMH315W-2	**Power Supply：**	AC 230V 50Hz
Operation Mode:	Full Load	**Antenna Polarization:**	Horizontal
Tested By：	Victor	**Test Date：**	2017-12-01



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	
1	42.007	36.59	22.09	14.50	40.00	-3.41	QP
2	43.659	35.63	20.83	14.80	40.00	-4.37	QP
3	79.243	35.59	26.46	9.13	40.00	-4.41	QP
4	120.277	32.28	21.14	11.14	40.00	-7.72	QP
5	190.405	37.21	25.29	11.92	40.00	-2.79	QP
6	194.453	36.80	24.60	12.20	40.00	-3.20	QP

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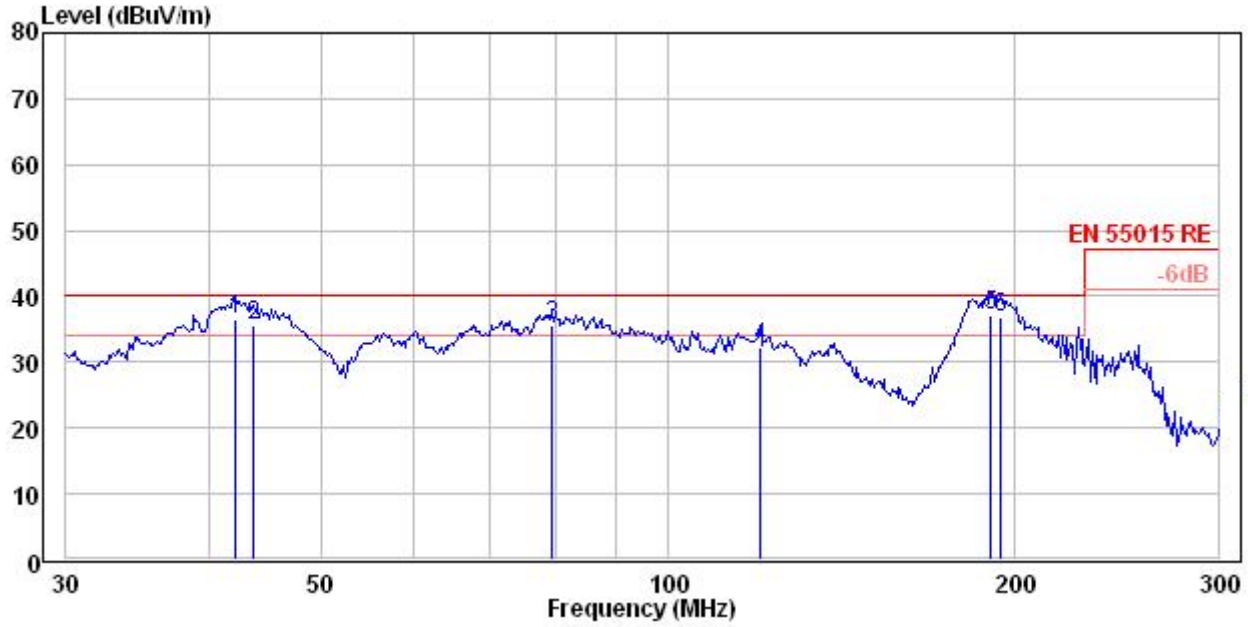
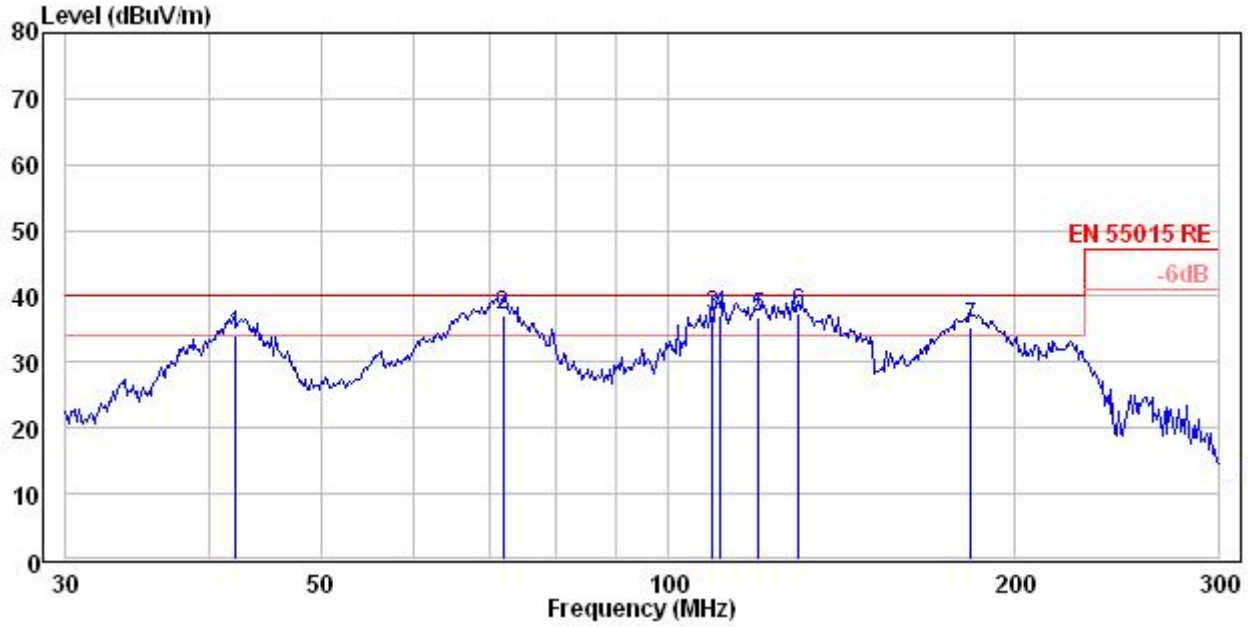
Environmental Condition：	Temperature：24.0℃	Humidity：50%	Pressure：101kPa
Model:	SC-CMH315W-2	**Power Supply：**	AC 230V 50Hz
Operation Mode:	Full Load	**Antenna Polarization:**	Vertical
Tested By：	Victor	**Test Date：**	2017-12-01



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	
1	42.007	36.59	22.09	14.50	40.00	-3.41	QP
2	43.659	35.63	20.83	14.80	40.00	-4.37	QP
3	79.243	35.59	26.46	9.13	40.00	-4.41	QP
4	120.277	32.28	21.14	11.14	40.00	-7.72	QP
5	190.405	37.21	25.29	11.92	40.00	-2.79	QP
6	194.453	36.80	24.60	12.20	40.00	-3.20	QP

TEST REPORT

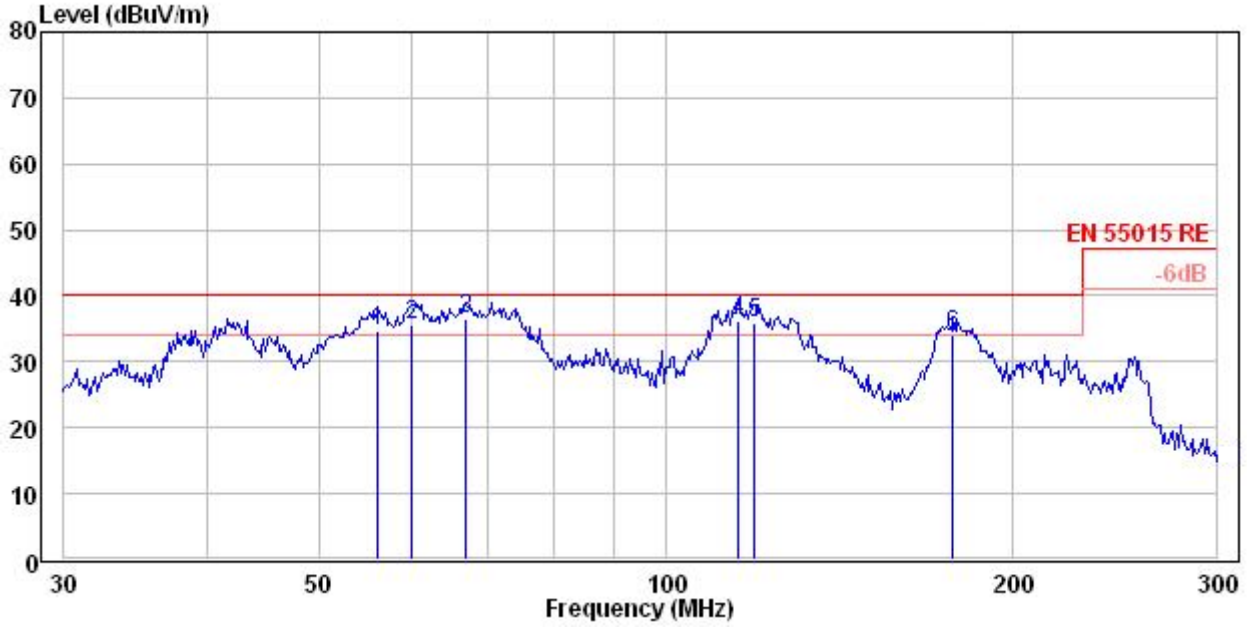
Environmental Condition：	Temperature：24.0℃	Humidity：50%	Pressure：101kPa
Model:	SC-CMH630W-1	**Power Supply：**	AC 230V 50Hz
Operation Mode:	Full Load	**Antenna Polarization:**	Horizontal
Tested By：	Victor	**Test Date：**	2017-12-01



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	
1	42.007	34.10	19.60	14.50	40.00	-5.90	QP
2	71.832	36.99	26.61	10.38	40.00	-3.01	QP
3	109.029	36.97	23.87	13.10	40.00	-3.03	QP
4	110.957	37.20	24.32	12.88	40.00	-2.80	QP
5	119.856	36.81	25.62	11.19	40.00	-3.19	QP
6	129.468	37.29	27.17	10.12	40.00	-2.71	QP
7	183.201	35.15	23.90	11.25	40.00	-4.85	QP

TEST REPORT

Environmental Condition：	Temperature：24.0℃	Humidity：50%	Pressure：101kPa
Model:	SC-CMH630W-1	**Power Supply：**	AC 230V 50Hz
Operation Mode:	Full Load	**Antenna Polarization:**	Vertical
Tested By：	Victor	**Test Date：**	2017-12-01

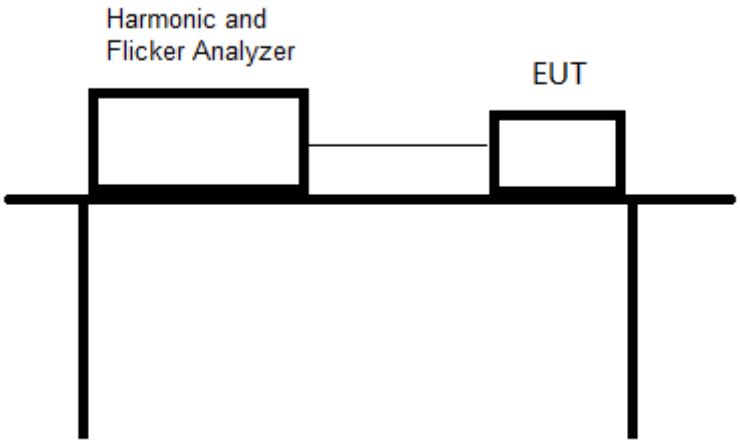


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	
1	56.197	34.70	19.99	14.71	40.00	-5.30	QP
2	60.069	35.55	21.40	14.15	40.00	-4.45	QP
3	66.967	36.65	24.50	12.15	40.00	-3.35	QP
4	115.321	36.12	23.86	12.26	40.00	-3.88	QP
5	119.018	35.75	24.38	11.37	40.00	-4.25	QP
6	177.509	33.95	23.17	10.78	40.00	-6.05	QP

2.4 HARMONICS CURRENT

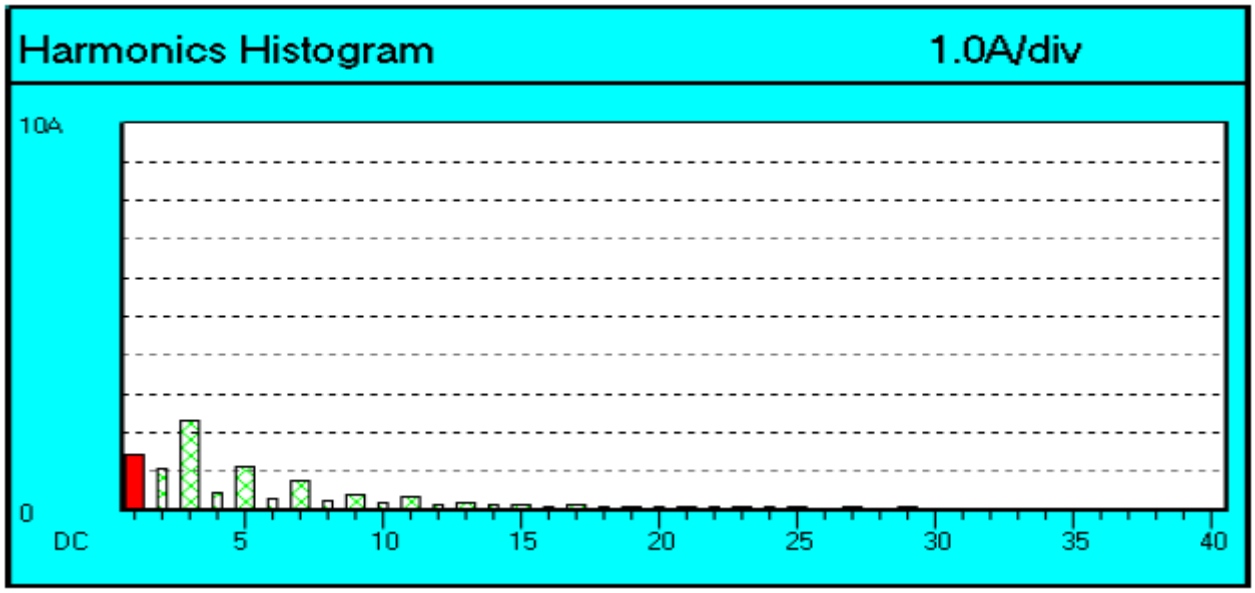
2.4.1 Test Setup

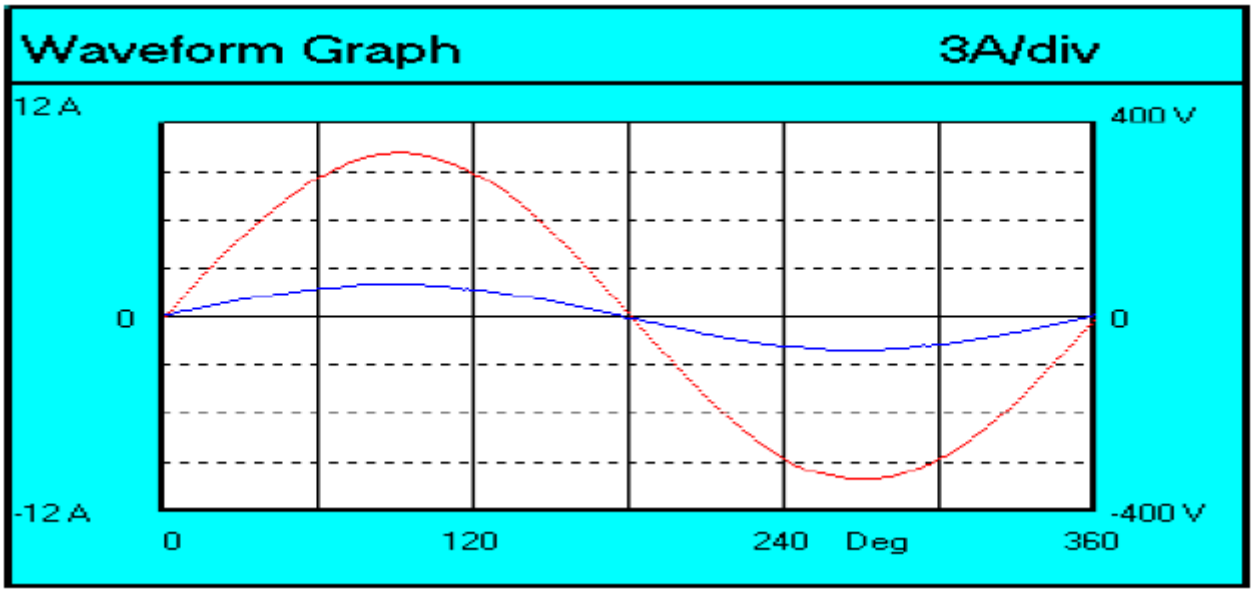
Test Drawn



2.4.2 Test Data

Environmental Condition:	Temperature: 24.0℃	Humidity: 50%	Pressure: 101kPa
Model:	SC-CMH315W-2	**Power Supply:**	AC 240V 50Hz
Operation Mode:	Full Load	**Conducted Line:**	AC mains
Tested By:	Victor Hua	**Test Date:**	2017-12-01





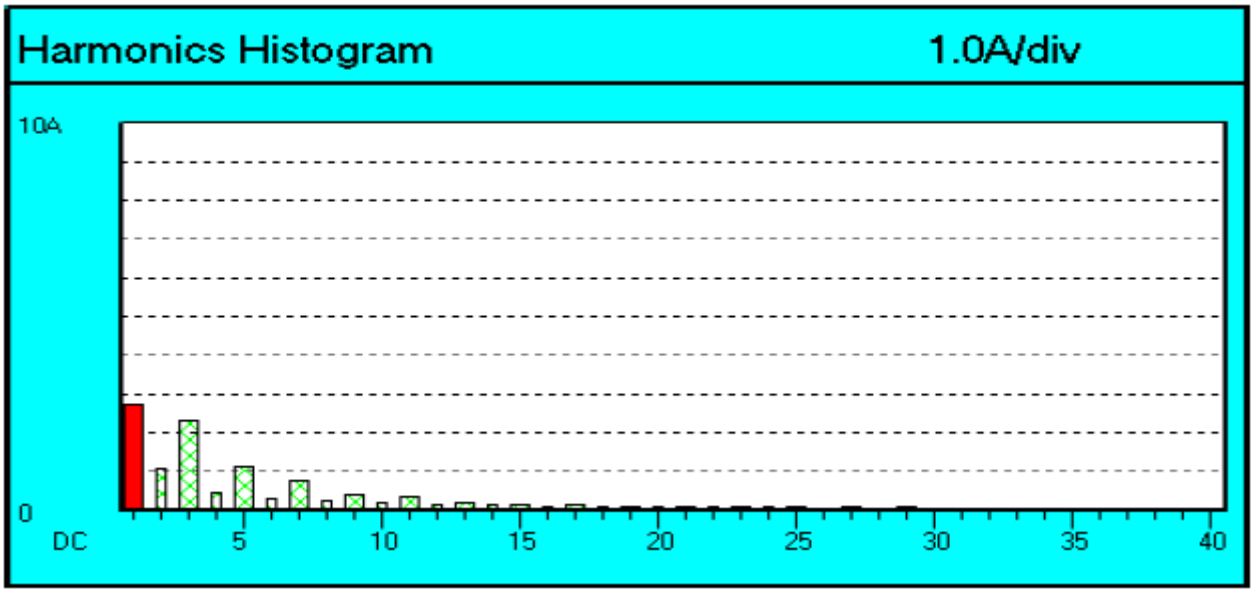
TEST REPORT

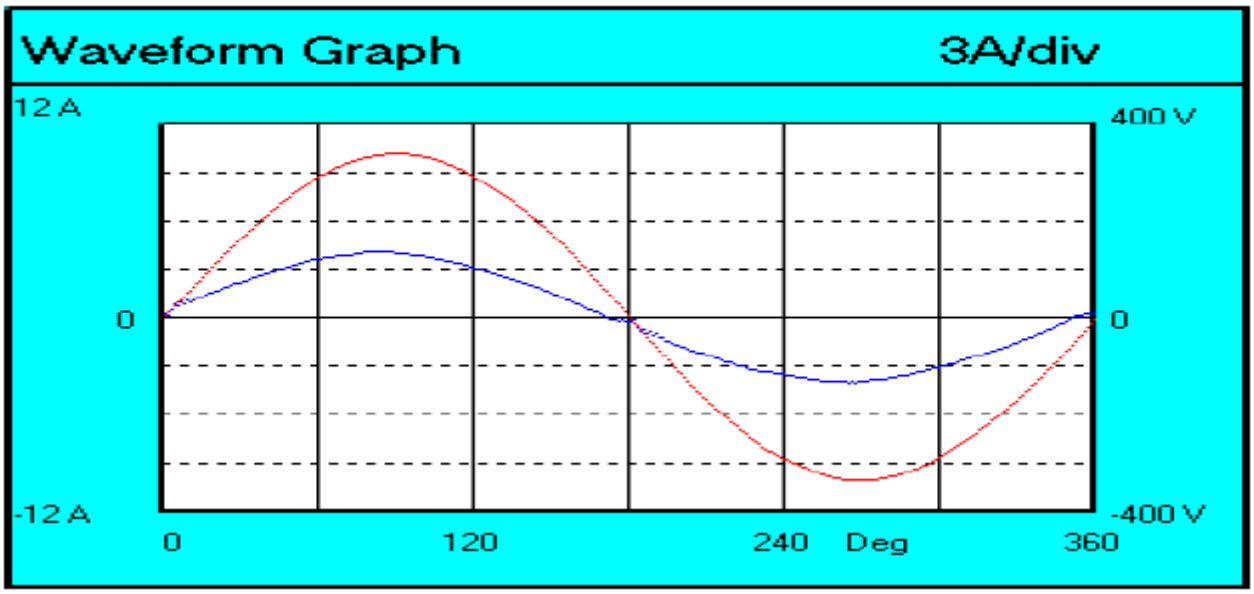
Supply Voltage : 240.3 Vrms Frequency 50.00 Hz
Load Power : 324.6 W 336.5 VA Power Factor 0.964
Load Current : 1.356 Arms 1.955 Apk Crest Factor 1.473
Measurement Standard : EN61000-4-7:2002+A1:2009
Limits Applied : EN61000-3-2:2014 Class A

Harmonic Number	Limit Current mA	Average (filtered) mA	%Limit	Max Value (filtered) mA	%Limit	Assessment
2	1080	2.8	0.3	11.1	1	Pass
3	2300	9.7	0.4	11.8	0.5	Pass
4	430	1.7	0.4	4.3	1	Pass
5	1140	4.6	0.4	6.1	0.5	Pass
6	300	2.8	0.9	2.8	0.9	Pass
7	770	6.8	0.9	7.1	0.9	Pass
8	230	1.4	0.6	2.1	0.9	Pass
9	400	5.3	1.3	6.1	1.5	Pass
10	184	0.7	0.4	1.4	0.8	Pass
11	330	1.4	0.4	2.1	0.6	Pass
12	153.3	1	0.7	2.5	1.6	Pass
13	210	0.7	0.3	1.4	0.7	Pass
14	131.4	0.7	0.5	1.4	1.1	Pass
15	150	5.3	3.5	6.1	4.1	Pass
16	115	0.7	0.6	1.4	1.2	Pass
17	132.3	1.7	1.3	2.1	1.6	Pass
18	102.2	0.7	0.7	1	1	Pass
19	118.4	1.7	1.4	2.1	1.8	Pass
20	92	0	-	1	1.1	Pass
21	107.1	2.1	2	2.8	2.6	Pass
22	83.6	0.3	0.4	1	1.2	Pass
23	97.8	2.1	2.1	2.5	2.6	Pass
24	76.7	0.3	0.4	0.7	0.9	Pass
25	90	3.2	3.6	3.5	3.9	Pass
26	70.8	0.3	0.4	1	1.4	Pass
27	83.3	1	1.2	1.4	1.7	Pass
28	65.7	0.3	0.5	1	1.5	Pass
29	77.6	1.4	1.8	1.4	1.8	Pass
30	61.3	0	-	1	1.6	Pass
31	72.6	2.1	2.9	2.1	2.9	Pass
32	57.5	0.3	0.5	1	1.7	Pass
33	68.2	2.5	3.7	2.8	4.1	Pass
34	54.1	0.7	1.3	1	1.8	Pass
35	64.3	1.4	2.2	2.1	3.3	Pass
36	51.1	0	-	1	2	Pass
37	60.8	1.4	2.3	1.7	2.8	Pass
38	48.4	0	-	1.4	2.9	Pass
39	57.7	3.2	5.5	3.2	5.5	Pass
40	46	0.3	0.7	1	2.2	Pass

TEST REPORT

Environmental Condition：	Temperature：24.0℃	Humidity：50%	Pressure：101kPa
Model:	SC-CMH630W-1	**Power Supply：**	AC 240V 50Hz
Operation Mode:	Full Load	**Conducted Line:**	AC mains
Tested By：	Victor Hua	**Test Date：**	2017-12-01





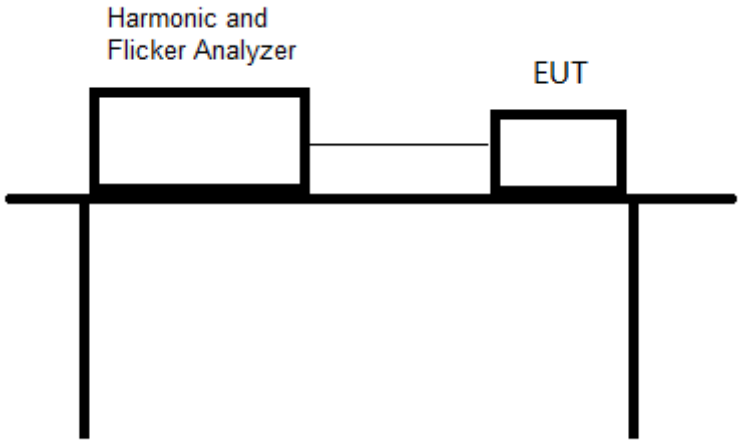
TEST REPORT

Supply Voltage : 239.9 Vrms Frequency 50.00 Hz
Load Power : 646.7W 651.8 VA Power Factor 0.992
Load Current : 2.701 Arms 4.01 Apk Crest Factor 1.457
Measurement Standard : EN61000-4-7:2002+A1:2009
Limits Applied : EN61000-3-2:2014 Class A

Harmonic Number	Limit Current mA	Average (filtered) mA	%Limit	Max Value (filtered) mA	%Limit	Assessment
2	1080	6.1	0.6	29.4	2.7	Pass
3	2300	53.5	2.3	55.3	2.4	Pass
4	430	4.3	1	14	3.3	Pass
5	1140	8.6	0.8	11.8	1	Pass
6	300	8.2	2.7	8.9	3	Pass
7	770	26.9	3.5	27.6	3.6	Pass
8	230	6.1	2.7	8.2	3.6	Pass
9	400	13.6	3.4	13.6	3.4	Pass
10	184	3.5	1.9	9.3	5.1	Pass
11	330	24	7.3	25.8	7.8	Pass
12	153.3	3.5	2.3	9.3	6.1	Pass
13	210	9.3	4.4	13.3	6.3	Pass
14	131.4	3.2	2.4	7.9	6	Pass
15	150	10.7	7.1	14.7	9.8	Pass
16	115	3.9	3.4	6.4	5.6	Pass
17	132.3	5.7	4.3	9.3	7	Pass
18	102.2	2.5	2.4	4.3	4.2	Pass
19	118.4	8.9	7.5	10.7	9	Pass
20	92	2.5	2.7	4.3	4.7	Pass
21	107.1	11.1	10.4	12.5	11.7	Pass
22	83.6	2.1	2.5	4.3	5.1	Pass
23	97.8	15.8	16.2	16.1	16.5	Pass
24	76.7	1.7	2.2	3.2	4.2	Pass
25	90	12.2	13.6	12.9	14.3	Pass
26	70.8	2.1	3	3.5	4.9	Pass
27	83.3	8.2	9.8	8.6	10.3	Pass
28	65.7	2.1	3.2	2.5	3.8	Pass
29	77.6	8.2	10.6	9.7	12.5	Pass
30	61.3	2.1	3.4	3.5	5.7	Pass
31	72.6	11.1	15.3	12.9	17.8	Pass
32	57.5	1.7	3	2.8	4.9	Pass
33	68.2	12.5	18.3	13.3	19.5	Pass
34	54.1	2.1	3.9	3.5	6.5	Pass
35	64.3	9.3	14.5	10.7	16.6	Pass
36	51.1	2.1	4.1	4.3	8.4	Pass
37	60.8	8.6	14.1	9.7	16	Pass
38	48.4	2.1	4.3	3.2	6.6	Pass
39	57.7	10	17.3	10.4	18	Pass
40	46	2.1	4.6	3.5	7.6	Pass

2.5 VOLTAGE FLUCTUATIONS

2.5.1 Test Setup



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2.5.2 Test Data

Environmental Condition:	Temperature: 24.0℃	Humidity: 50%	Pressure: 101kPa
Model:	SC-CMH315W-2	**Power Supply:**	AC 230V 50Hz
Operation Mode:	Full Load	**Conducted Line:**	AC mains
Tested By:	Victor	**Test Date:**	2017-12-01

Largest d(c) change	:	0.53%	Limit: 3.3%	PASS
d(max)	:	0.60%	Limit: 4%	PASS
t(max)	:	0.00seconds	Limit: 500ms	PASS
Pst	:	0.14	Limit: 1.00	PASS

Environmental Condition:	Temperature: 24.0℃	Humidity: 50%	Pressure: 101kPa
Model:	SC-CMH630W-1	**Power Supply:**	AC 230V 50Hz
Operation Mode:	Full Load	**Conducted Line:**	AC mains
Tested By:	Victor	**Test Date:**	2017-12-01

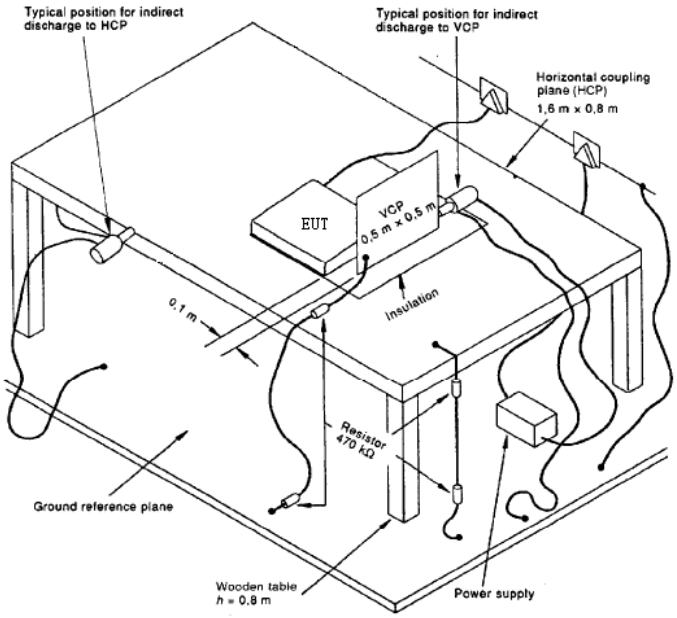
Largest d(c) change	:	0.71%	Limit: 3.3%	PASS
d(max)	:	0.79%	Limit: 4%	PASS
t(max)	:	0.00seconds	Limit: 500ms	PASS
Pst	:	0.17	Limit: 1.00	PASS

TEST REPORT

2.6 ELECTROSTATIC DISCHARGE IMMUNITY

2.6.1 Test Setup

Test Drawn



2.6.2 Test Data

Environmental Condition：	Temperature：23.5℃	Humidity：52%	Pressure：101kPa
Model：	SC-CMH315W-2	**Power Supply:**	AC 230V 50Hz
Test Mode:	Full Load	**Test Date:**	2017-12-01
Tested By:	Victor	**Total Result:**	Pass

Test Point	Test Level (kV)	Air (A) Contact (C)	Required Criterion	Performance Criterion	Result
Enclosure (Non-conductive)	±8	A	B	A	PASS
HCP	±4	C	B	A	PASS
VCP	±4	C	B	A	PASS

Note: 1. For indirect discharge: HCP=Horizontal Coupling Plane, VCP=Vertical Coupling Plane
2. There was no change compared with initial operation during and after the test.

TEST REPORT

Environmental Condition：	Temperature：23.5℃	Humidity：52%	Pressure：101kPa
Model：	SC-CMH630W-1	**Power Supply:**	AC 230V 50Hz
Test Mode:	Full Load	**Test Date:**	2017-12-01
Tested By:	Victor	**Total Result:**	Pass

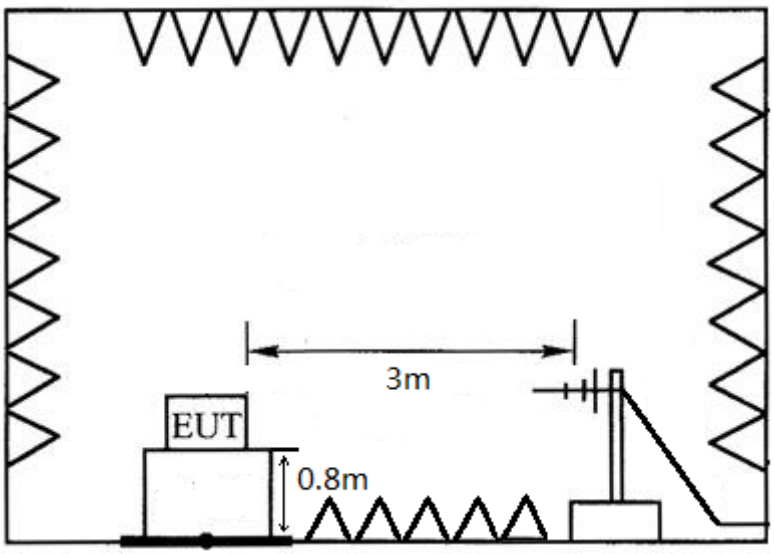
Test Point	Test Level (kV)	Air (A) Contact (C)	Required Criterion	Performance Criterion	Result
Enclosure (Non-conductive)	±8	A	B	A	PASS
HCP	±4	C	B	A	PASS
VCP	±4	C	B	A	PASS

Note: 1. For indirect discharge: HCP=Horizontal Coupling Plane, VCP=Vertical Coupling Plane
2. There was no change compared with initial operation during and after the test.

2.7 RADIATED IMMUNITY

2.7.1 Test Setup

Test Drawn



2.7.2 Test Data

Environmental Condition：	Temperature：22.8℃	Humidity：54%	Pressure：101kPa
Model：	SC-CMH315W-2	**Power Supply:**	AC 230V 50Hz
Test Mode:	Full Load	**Test Date:**	2017-12-01
Tested By:	Victor	**Total Result:**	Pass

Frequency Range (MHz)	Test Level (V/m)	Test Location	Required Criterion	Performance Criterion	Result
80 - 1000	3	Front	A	A	PASS
80 - 1000	3	Back	A	A	PASS
80 - 1000	3	Left	A	A	PASS
80 - 1000	3	Right	A	A	PASS

Note: There was no change compared with initial operation during and after the test.

Environmental Condition：	Temperature：22.8℃	Humidity：54%	Pressure：101kPa
Model：	SC-CMH630W-1	**Power Supply:**	AC 230V 50Hz
Test Mode:	Full Load	**Test Date:**	2017-12-01
Tested By:	Victor	**Total Result:**	Pass

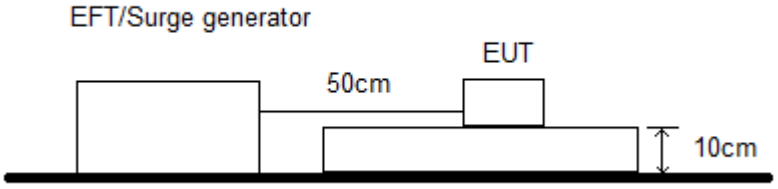
Frequency Range (MHz)	Test Level (V/m)	Test Location	Required Criterion	Performance Criterion	Result
80 - 1000	3	Front	A	A	PASS
80 - 1000	3	Back	A	A	PASS
80 - 1000	3	Left	A	A	PASS
80 - 1000	3	Right	A	A	PASS

Note: There was no change compared with initial operation during and after the test.

2.8 ELECTRICAL FAST TRANSIENT/BURST IMMUNITY

2.8.1 Test Setup

Test Drawn



2.8.2 Test Data

Environmental Condition:	Temperature: 23.5℃	Humidity: 50%	Pressure: 101kPa
Model:	SC-CMH315W-2	**Power Supply:**	AC 230V 50Hz
Test Mode:	Full Load	**Test Date:**	2017-12-01
Tested By:	Victor	**Total Result:**	Pass

Test Point	Test Level (kV)	Required Criterion	Performance Criterion	Result
L	±1	B	A	Pass
N	±1	B	A	Pass
PE	±1	B	A	Pass
L–N	±1	B	A	Pass
L-PE	±1	B	A	Pass
N-PE	±1	B	A	Pass
L-N-PE	±1	B	A	Pass

Note: There was no change compared with initial operation during and after the test.

TEST REPORT

Environmental Condition：	Temperature：23.5℃	Humidity：50%	Pressure：101kPa
Model：	SC-CMH630W-1	**Power Supply:**	AC 230V 50Hz
Test Mode:	Full Load	**Test Date:**	2017-12-01
Tested By:	Victor	**Total Result:**	Pass

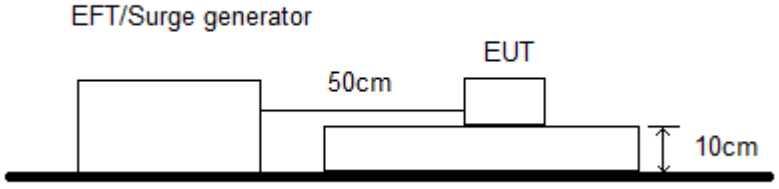
Test Point	Test Level (kV)	Required Criterion	Performance Criterion	Result
L	±1	B	A	Pass
N	±1	B	A	Pass
PE	±1	B	A	Pass
L–N	±1	B	A	Pass
L-PE	±1	B	A	Pass
N-PE	±1	B	A	Pass
L-N-PE	±1	B	A	Pass

Note: There was no change compared with initial operation during and after the test.

2.9 SURGE IMMUNITY

2.9.1 Test Setup

Test Drawn



2.9.2 Test Data

Environmental Condition:	Temperature: 23.5℃	Humidity: 50%	Pressure: 101kPa
Model:	SC-CMH315W-2	**Power Supply:**	AC 230V 50Hz
Test Mode:	Full Load	**Test Date:**	2017-12-01
Tested By:	Victor	**Total Result:**	Pass

Test Point	Test Level (kV)	Phase Angle	Required Criterion	Performance Criterion	Result
L–N	+1	90°	C	B	Pass
	-1	270°	C	B	Pass
L–PE	+2	90°	C	B	Pass
	-2	270°	C	B	Pass
N–PE	+2	90°	C	B	Pass
	-2	270°	C	B	Pass

Note: Temporary loss of function or degradation of performance which ceases after the disturbance ceases, and from which the EUT recovers its normal performance, without operator intervention.

Environmental Condition:	Temperature: 23.5℃	Humidity: 50%	Pressure: 101kPa
Model:	SC-CMH630W-1	**Power Supply:**	AC 230V 50Hz
Test Mode:	Full Load	**Test Date:**	2017-12-01
Tested By:	Victor	**Total Result:**	Pass

Test Point	Test Level (kV)	Phase Angle	Required Criterion	Performance Criterion	Result
L–N	+1	90°	C	B	Pass
	-1	270°	C	B	Pass
L–PE	+2	90°	C	B	Pass
	-2	270°	C	B	Pass
N–PE	+2	90°	C	B	Pass
	-2	270°	C	B	Pass

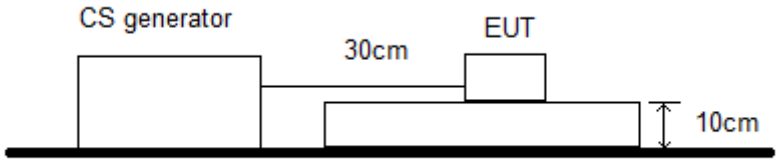
Note: Temporary loss of function or degradation of performance which ceases after the disturbance ceases, and from which the EUT recovers its normal performance, without operator intervention.

TEST REPORT

2.10 RF CONDUCTED IMMUNITY

2.10.1 Test Setup

Test Drawn



2.10.2 Test Data

Environmental Condition:	Temperature: 23.5℃	Humidity: 50%	Pressure: 101kPa
Model:	SC-CMH315W-2	**Power Supply:**	AC 230V 50Hz
Test Mode:	Full Load	**Test Date:**	2017-12-01
Tested By:	Victor	**Total Result:**	Pass

Cable	Frequency Band (MHz)	Field Strength (Vrms)	Required Criterion	Performance Criterion	Result
AC mains	0.15 ~ 80	3	A	A	PASS

Note: There was no change compared with initial operation during and after the test.

Environmental Condition:	Temperature: 23.5℃	Humidity: 50%	Pressure: 101kPa
Model:	SC-CMH630W-1	**Power Supply:**	AC 230V 50Hz
Test Mode:	Full Load	**Test Date:**	2017-12-01
Tested By:	Victor	**Total Result:**	Pass

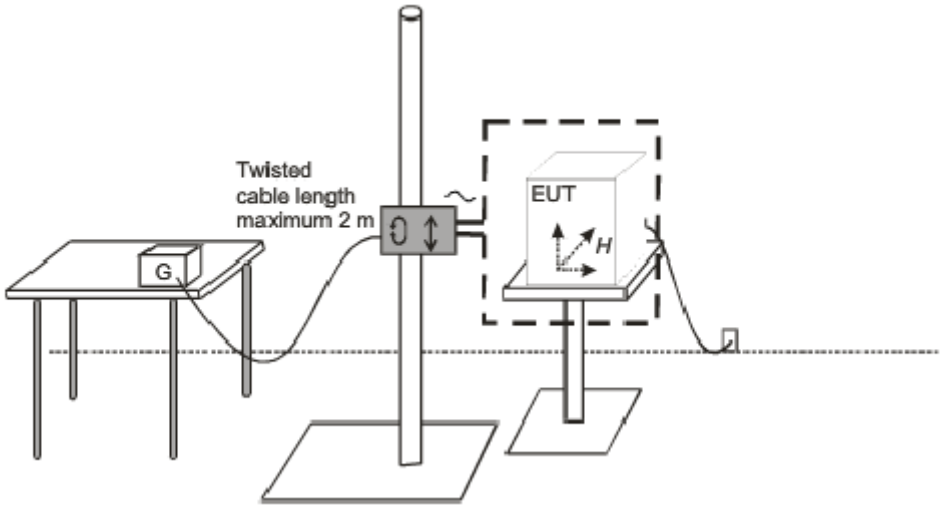
Cable	Frequency Band (MHz)	Field Strength (Vrms)	Required Criterion	Performance Criterion	Result
AC mains	0.15 ~ 80	3	A	A	PASS

Note: There was no change compared with initial operation during and after the test.

2.11 POWER FREQUENCY MAGNETIC FIELD IMMUNITY

2.11.1 Test Setup

Test Drawn



2.11.2 Test Data

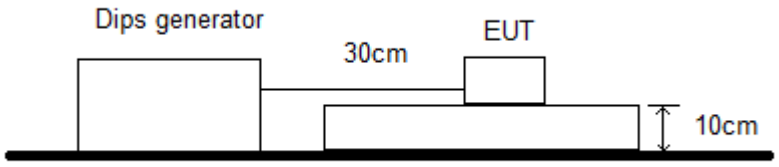
Environmental Condition：			
Model：		**Power Supply:**	
Test Mode:		**Test Date:**	
Tested By:		**Total Result:**	

N/A

2.12 VOLTAGE DIPS AND INTERRUPTION IMMUNITY

2.12.1 Test Setup

Test Drawn



2.12.2 Test Data

Environmental Condition:	Temperature: 23.0℃	Humidity: 49%	Pressure: 101kPa
Model:	SC-CMH315W-2	**Power Supply:**	AC 230V 50Hz
Test Mode:	Full Load	**Test Date:**	2017-12-01
Tested By:	Victor	**Total Result:**	Pass

Reduction of Supply Voltage	Voltage in %	Duration in Parts of Period (in ms)	Required Criterion	Performance Criterion	Result
100%	0%	0.5 (10ms)	C	B	PASS
30%	70%	10 (200ms)	B	A	PASS

Note: Temporary loss of function or degradation of performance which ceases after the disturbance ceases, and from which the EUT recovers its normal performance, without operator intervention.

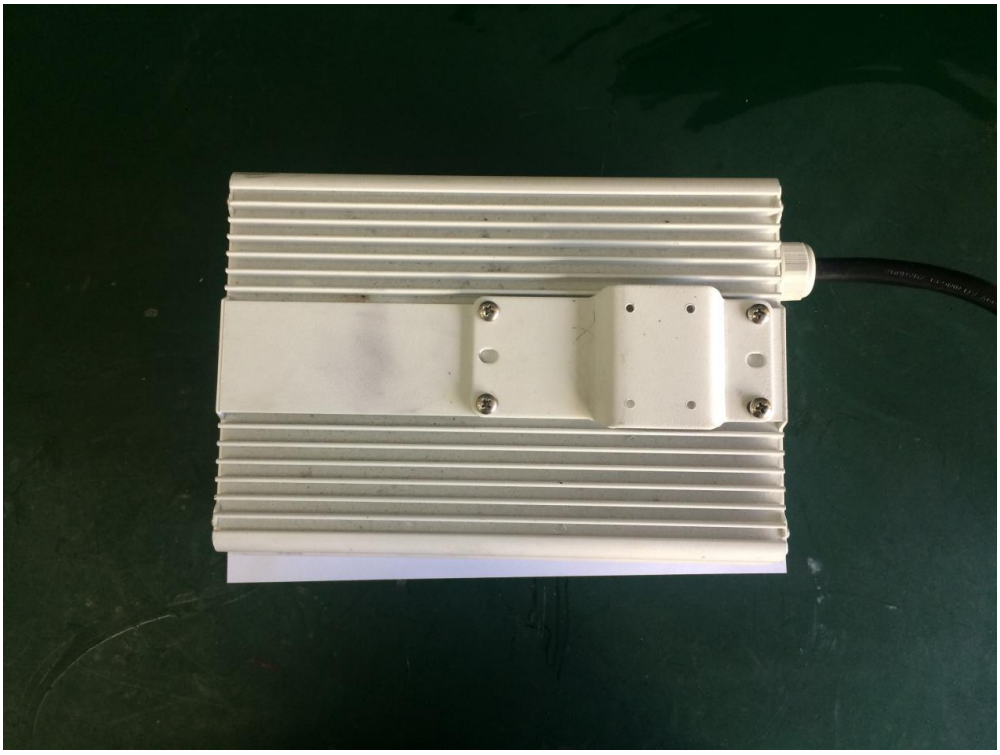
Environmental Condition:	Temperature: 23.0℃	Humidity: 49%	Pressure: 101kPa
Model:	SC-CMH630W-1	**Power Supply:**	AC 230V 50Hz
Test Mode:	Full Load	**Test Date:**	2017-12-01
Tested By:	Victor	**Total Result:**	Pass

Reduction of Supply Voltage	Voltage in %	Duration in Parts of Period (in ms)	Required Criterion	Performance Criterion	Result
100%	0%	0.5 (10ms)	C	B	PASS
30%	70%	10 (200ms)	B	A	PASS

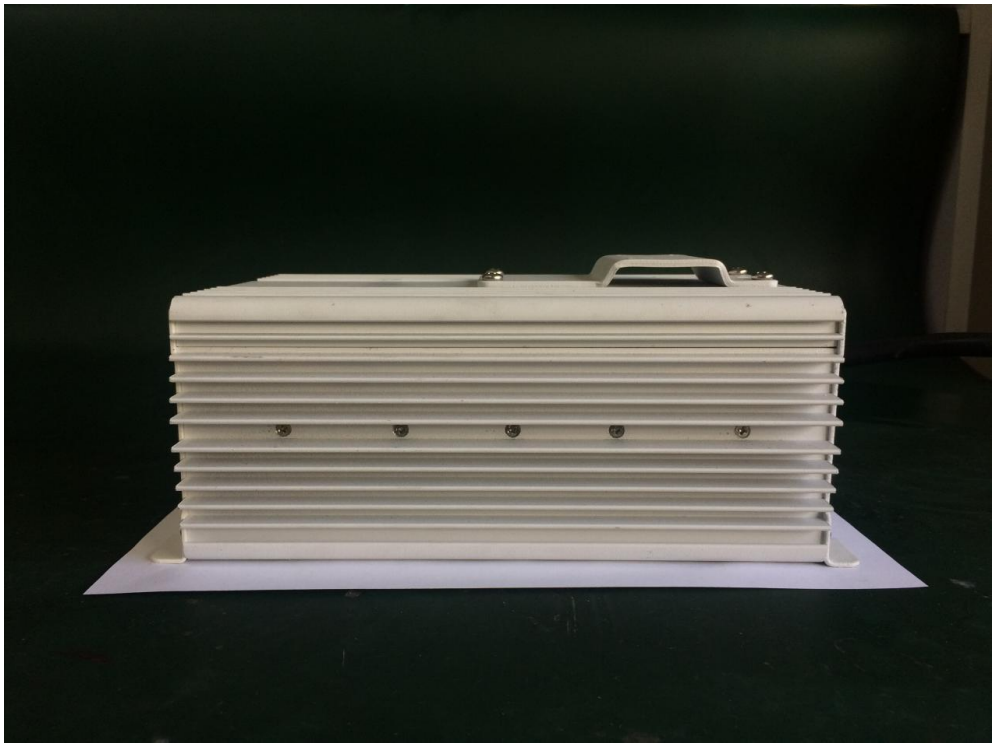
Note: Temporary loss of function or degradation of performance which ceases after the disturbance ceases, and from which the EUT recovers its normal performance, without operator intervention.

3 PRODUCT PHOTOS

Model: SC-CMH630W-1

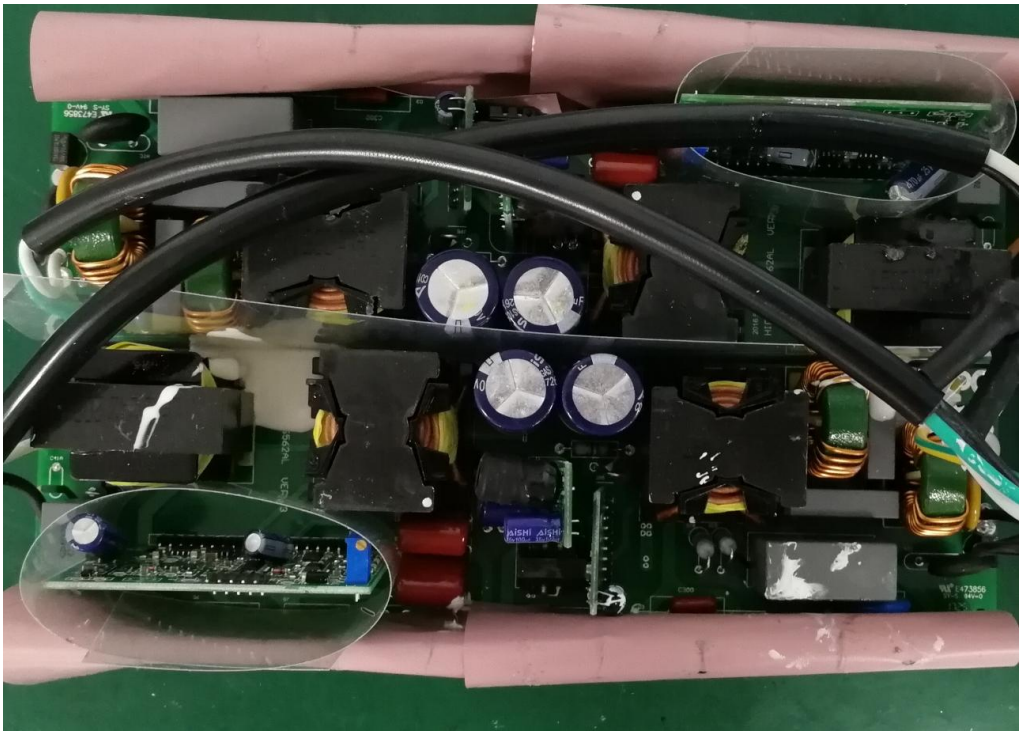


View 1

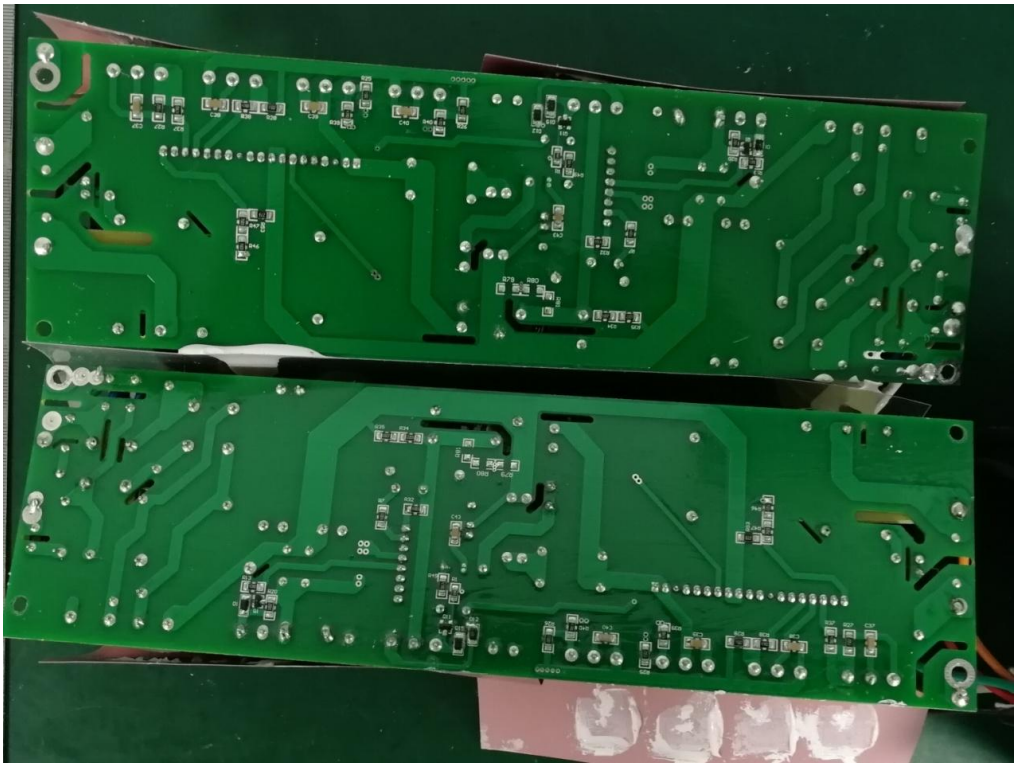


View 2

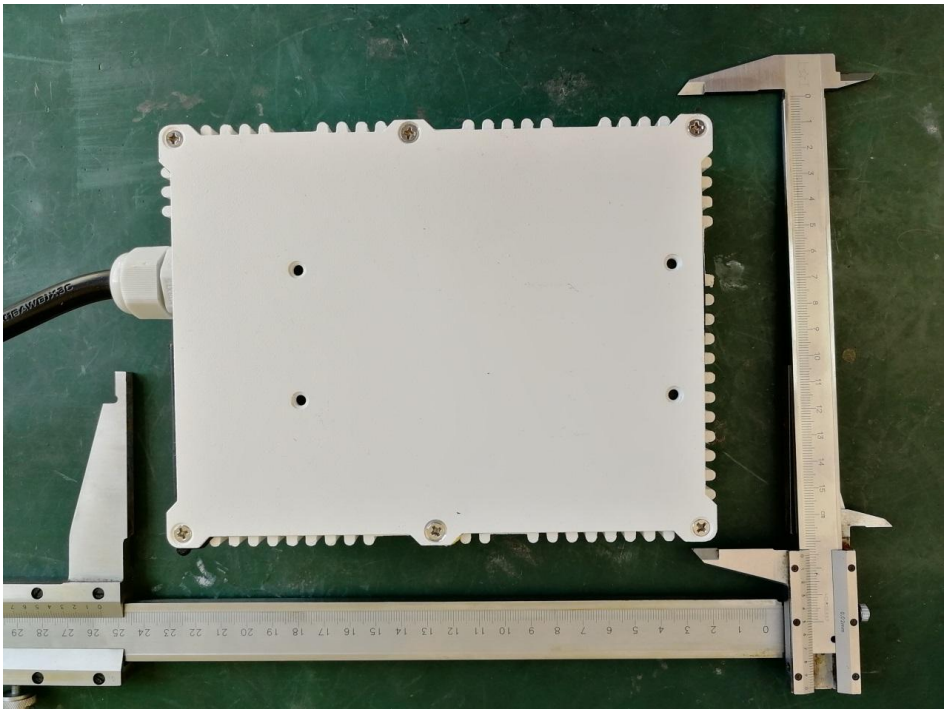
TEST REPORT



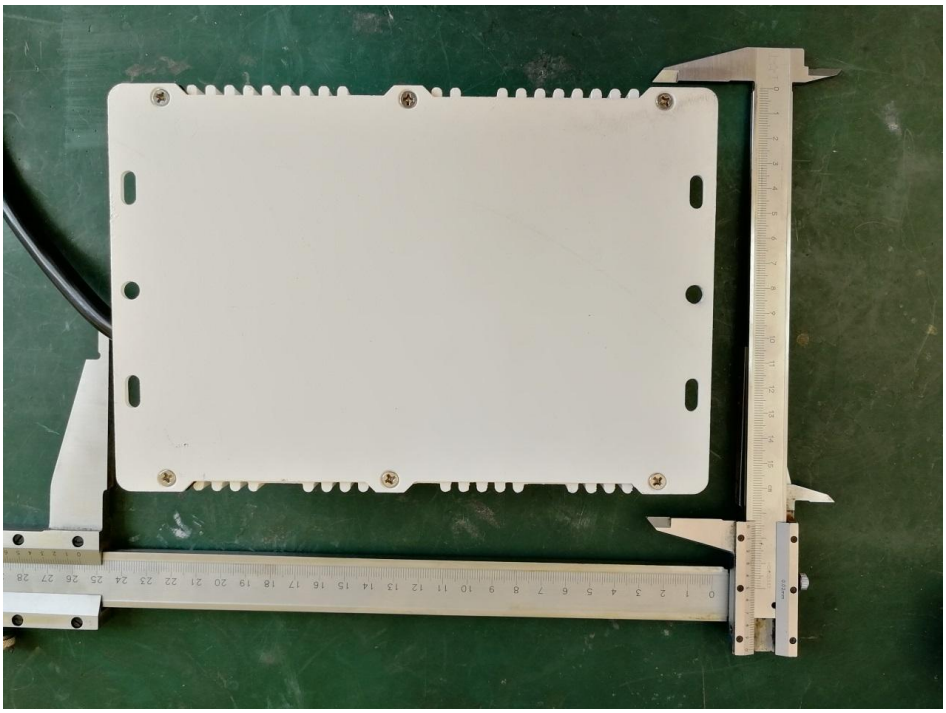
View 3



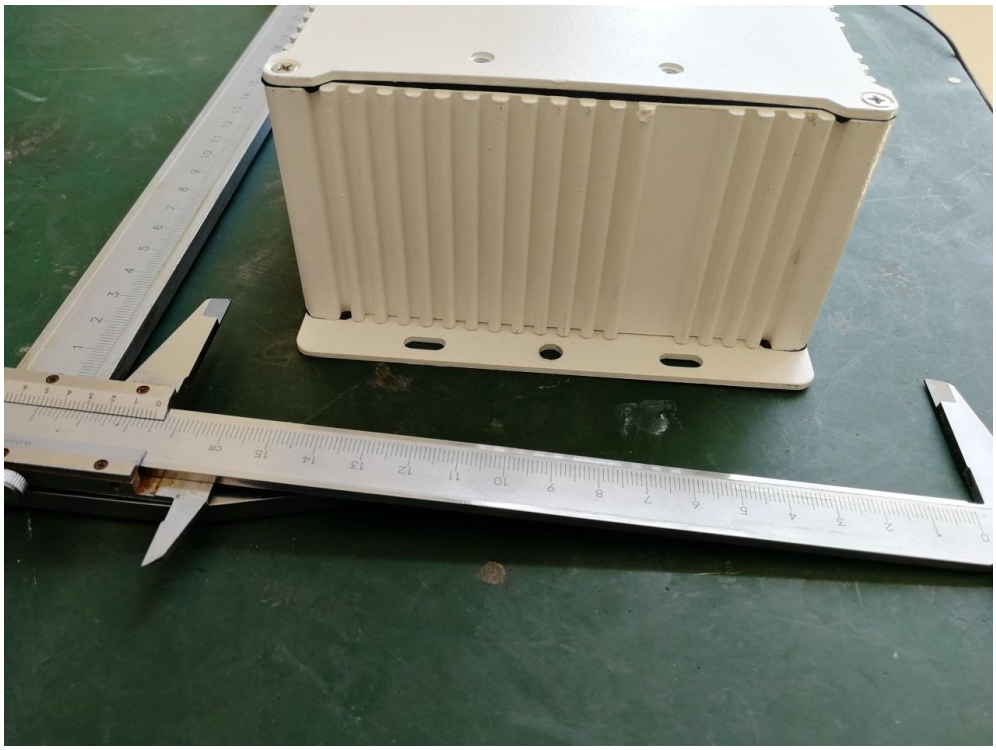
View 4



View 5



View 6



View 7

View 8

**********End of Report**********