

EMC Test Report

Applicant: Dongguan Saiji Electric Technology Co.Ltd.

Product: Fan

Model: SZ6030HA2, SZ8025HA2, SZ8038HA2,
SZ9225HA2, SZ9238HA2, SZ12025HA2,
SZ11025HA2, SZ12038HA2, SZ12738HA2,
SZ13538HA2, SZ15050HA2, SZ17255HA2,
SZ17251HA2, SZ18060HA2, SZ20060HA2



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In accordance with EN IEC 55014-1, EN IEC 61000-3-2,
EN 61000-3-3 and EN IEC 55014-2

Prepared for: Dongguan Saiji Electric Technology Co.Ltd.
The third floor of Building A4, Zhigu Science and Technology Park,
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Province, PEOPLE'S REPUBLIC OF CHINA

COMMERCIAL-IN-CONFIDENCE

Report Number: 68.710.22.0098.01

RESPONSIBLE FOR	NAME	SIGNATURE	DATE
Approved by	Jessie He		2022-06-21
Prepared by	Richard He		2022-06-21

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD Product Service control rules.

EXECUTIVE SUMMARY

A sample of this product was tested and found to be in compliance with EN IEC 55014-1:2021, EN IEC 61000-3-2:2019/A1:2021, EN 61000-3-3:2013/A2:2021 and EN IEC 55014-2:2021.

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1 Report Summary

1.1 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
1	First Issue	2022-06-21

1.2 Introduction

The information contained in this report is intended to show verification of the EMC Qualification Approval Testing of the requirements of the standards for the tests listed in Section 1.3.

Applicant	Dongguan Saiji Electric Technology Co.Ltd.
Address	The third floor of Building A4, Zhigu Science and Technology Park, Gekeng Village, Hengli Town, 523469 Dongguan City, Guangdong Province, PEOPLE'S REPUBLIC OF CHINA
Manufacturer	Dongguan Saiji Electric Technology Co.Ltd.
Address	The third floor of Building A4, Zhigu Science and Technology Park, Gekeng Village, Hengli Town, 523469 Dongguan City, Guangdong Province, PEOPLE'S REPUBLIC OF CHINA
Factory	Dongguan Saiji Electric Technology Co.Ltd.
Address	The third floor of Building A4, Zhigu Science and Technology Park, Gekeng Village, Hengli Town, 523469 Dongguan City, Guangdong Province, PEOPLE'S REPUBLIC OF CHINA
Model Number(s)	SZ6030HA2, SZ8025HA2, SZ8038HA2, SZ9225HA2, SZ9238HA2, SZ12025HA2, SZ11025HA2, SZ12038HA2, SZ12738HA2, SZ13538HA2, SZ15050HA2, SZ17255HA2, SZ17251HA2, SZ18060HA2, SZ20060HA2
Product Type	Fan
Trade Mark	
Test Specification	EN IEC 55014-1:2021, EN IEC 61000-3-2:2019/A1:2021, EN 61000-3-3:2013/A2:2021 and EN IEC 55014-2:2021
Date of Receipt of EUT	2022-06-07
Start of Test	2022-06-07
Finish of Test	2022-06-13
Name of Engineer(s)	Richard He

1.3 Brief Summary of Results

A brief summary of the tests carried out in accordance with EN IEC 55014-1, EN IEC 61000-3-2, EN 61000-3-3 and EN IEC 55014-2 is shown below.

Specification	Clause	Test Description	Result	Comments/Base Standard
EN IEC 55014-1:2021	4.3.3	Conducted Disturbance at Mains Terminals	Pass	/
EN IEC 55014-1:2021	4.4.2	Discontinuous Disturbance*	N/A	/
EN IEC 55014-1:2021	4.3.4	Disturbance power	Pass	/
EN IEC 55014-1:2021	4.3.4	Radiated Disturbance**	N/A	/
EN IEC 61000-3-2:2019/A1:2021	7	Harmonic current emission***	N/A	/
EN 61000-3-3:2013/A2:2021	5	Flicker	Pass	/
EN IEC 55014-2:2021	5.1	Electrostatic discharge immunity test****	N/A	IEC 61000-4-2
EN IEC 55014-2:2021	5.2	Electrical fast transient /burst immunity test****	N/A	IEC 61000-4-4
EN IEC 55014-2:2021	5.3	Immunity to conducted disturbances, induced by radio-frequency fields****	N/A	IEC 61000-4-6
EN IEC 55014-2:2021	5.5	Radio frequency electromagnetic fields immunity test****	N/A	IEC 61000-4-3
EN IEC 55014-2:2021	5.6	Surge immunity test****	N/A	IEC 61000-4-5
EN IEC 55014-2:2021	5.7	Voltage dips, short interruptions and voltage variations immunity tests****	N/A	IEC 61000-4-11

Remark:

“*”: The product is excluded from switching operation in thermostatically controlled appliance, automatic programme-controlled machines and electrically controlled or operated appliances generate discontinuous disturbance, Therefore, it is deemed to fulfil discontinuous Emission test without further test. (EN IEC 55014-1 clause 5.4.3)

“***”: Since the disturbance power emission from the EUT is lower than the limits of Table 7 reduced by the values of Table 8 and their maximum clock frequency is less than 30 MHz, it is deemed to comply in the frequency range from 300 MHz to 1 000 MHz and fulfil EMC requirement of standard EN IEC 55014-1 without test. (EN IEC 55014-1 Clause 4.3.4.2).

“****”: This test is only applicable to product have a rated power more than 75W, other than lighting equipment.

“*****”: The EUT contains no electronic control circuitry (Category I), it is deemed to fulfil the relevant immunity requirements without testing. (EN IEC 55014-2:2015, clause 4.2 & 7.2.1).

1.4 Product Information

1. The fans are components, when installing it into the end product, all requirements of the end product standard must be fulfilled.
2. Model differences see below table:

Item	Model No.	Rated voltage (V)	Rated frequency (Hz)	Rated power input (W)	Rated current (A)	Insulation class of motor	Motor No.	Dimension
1	SZ6030HA2	220-240	50	7W	0.04A	Class 155(F)	6030	60*60*30mm
			60	6W	0.03A			
2	SZ8025HA2	220-240	50	15W	0.08	Class 155(F)	8025	80*80*25mm
			60	13W	0.07			
3	SZ8038HA2	220-240	50	11W	0.07	Class 155(F)	8038	80*80*38mm
			60	8W	0.05			
4	SZ9225HA2	220-240	50	14W	0.08	Class 155(F)	9225	92*92*25mm
			60	12W	0.06			
5	SZ9238HA2	220-240	50	11W	0.07	Class 155(F)	9238	92*92*38mm
			60	9W	0.06			
6	SZ12025HA2	220-240	50	14W	0.07	Class 155(F)	12025	120*120*25mm
			60	13W	0.06			
7	SZ11025HA2	220-240	50	14W	0.07	Class 155(F)	11025	110*110*25mm
			60	12W	0.06			
8	SZ12038HA2	220-240	50	19W	0.13	Class 155(F)	12038	120*120*38mm
			60	16W	0.10			
9	SZ12738HA2	220-240	50	25W	0.14	Class 155(F)	12738	127*127*38mm
			60	22W	0.12			
10	SZ13538HA2	220-240	50	31W	0.20	Class 155(F)	13538	135*135*38mm
			60	24W	0.16			
11	SZ15050HA2	220-240	50	37W	0.23	Class 155(F)	15050	150*150*51mm
			60	35W	0.22			
12	SZ17255HA2	220-240	50	34W	0.23	Class 155(F)	17255	172*162*55mm
			60	33W	0.22			
13	SZ17251HA2	220-240	50	37W	0.23	Class 155(F)	17251	172*162*51mm
			60	35W	0.21			
14	SZ18060HA2	220-240	50	43W	0.27	Class 155(F)	18060	180*180*60mm
			60	42W	0.26			
15	SZ20060HA2	220-240	50	46W	0.29	Class 155(F)	20060	200*200*60mm
			60	50W	0.30			

Unless otherwise specified, models SZ6030HA2 and SZ20060HA2 were chosen as representative models to perform all the tests.

1.4.2 Technical Description

Ratings	:	220-240V~, 50/60Hz; 0.04A/0.03A, 7W/6W for SZ6030HA2; 0.08A/0.07A, 15W /13W for SZ8025HA2, 0.07A/0.05A, 11W/8W for SZ8038HA2, 0.08A/0.06A, 14W/12W for SZ9225HA2, 0.07A/0.06A, 11W/9W for SZ9238HA2, 0.07A/0.06A, 14W/13W for SZ12025HA2, 0.07A/0.06A, 14W/12W for SZ11025HA2, 0.13A/0.10A, 19W/16W for SZ12038HA2, 0.14A/0.12A, 25W /22Wfor SZ12738HA2, 0.20A/0.16A, 31W/24W for SZ13538HA2, 0.23A/0.22A, 37W/35W for SZ15050HA2, 0.23A/0.22A, 34W/33W for SZ17255HA2, 0.23A/0.21A, 37W/35W for SZ17251HA2, 0.27A/0.26A, 43W/42W for SZ18060HA2, 0.29A/0.30A, 46W/50W for SZ20060HA2
	Protection class	: II

1.4.3 Test Configuration

Configuration	Description
AC powered	230VAC, 50Hz

1.4.4 Modes of Operation

Mode	Description
ON	The EUT was operated under normal operation.

1.4.5 Performance Criteria

Performance 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.

Performance 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 to persist after the test. 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.

Performance 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 instruction for use.

1.5 Deviations from the Standard

No deviations from the applicable test standard were made during testing.

1.6 Test Location

Test Site:

TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch

Address:

Building 12 & 13, Zhiheng Wisdomland Business Park, Guankou Erlu, Nantou, Nanshan District, Shenzhen, 518052 China

Test Name	Name of Engineer(s)
Conducted Disturbance at Mains Terminals	Molly Mo
Disturbance power	Molly Mo
Flicker	Abel Zhang

2 Test Details

2.1 Conducted Disturbance at Mains Terminals

2.1.1 Specification Reference

EN IEC 55014-1:2021, Clause 4.3.3

2.1.2 Equipment Under Test

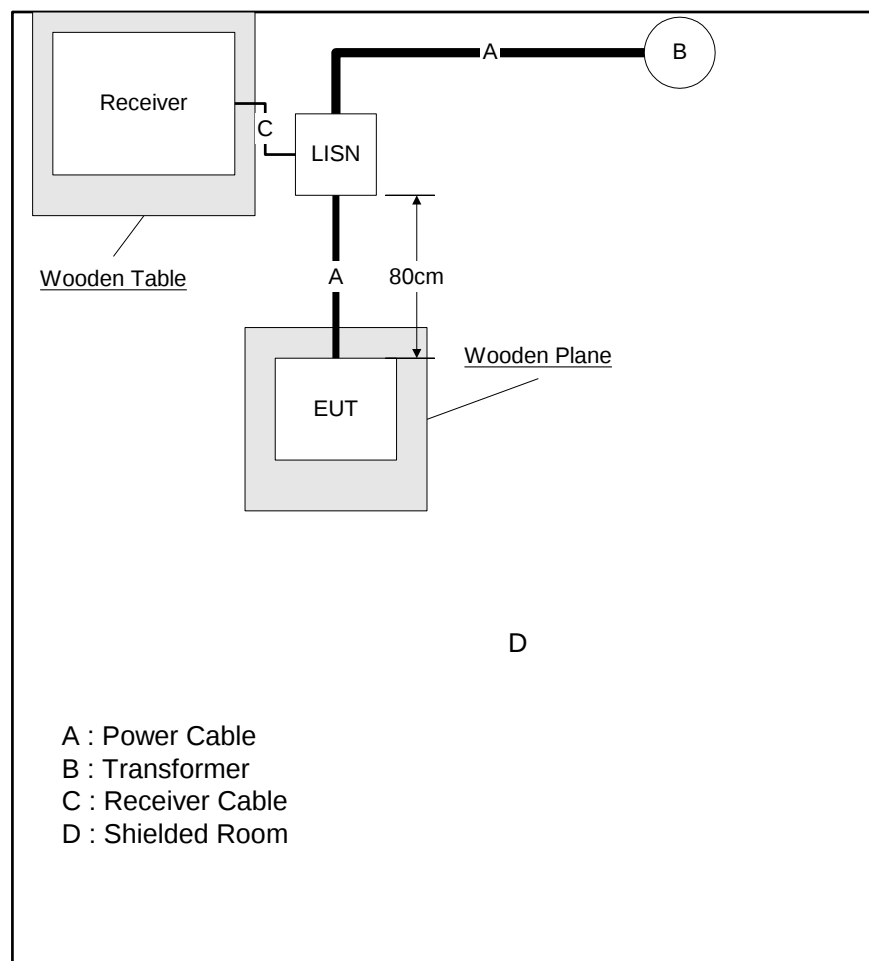
SZ6030HA2, SZ20060HA2

2.1.3 Date of Test

2022-06-11

2.1.4 Test Method

The EUT was placed on a non-conductive table 0.8m above a reference ground plane. All power was connected to the EUT through an Artificial Mains Network (AMN). Conducted disturbance voltage measurements on mains lines were made at the output of the AMN. The AMN was placed 0.8m from the boundary of the EUT and bonded to the reference ground plane.



2.1.5 Environmental Conditions

Ambient Temperature	23.1 °C
Relative Humidity	52.0 %
Atmospheric Pressure	1019 mbar

2.1.6 Specification Limits

Household appliances and equipment causing similar disturbances and regulating controls incorporating semiconductor devices				
Frequency range	At main terminals dB(μV)		At load terminals and additional terminals dB(μV)	
MHz	Quasi-peak	Average	Quasi-peak	Average
0.15 to 0.5	66 to 56	59 to 46	80	70
0.5 to 5	56	46	74	64
5 to 30	60	50	74	64

Remark for test data:

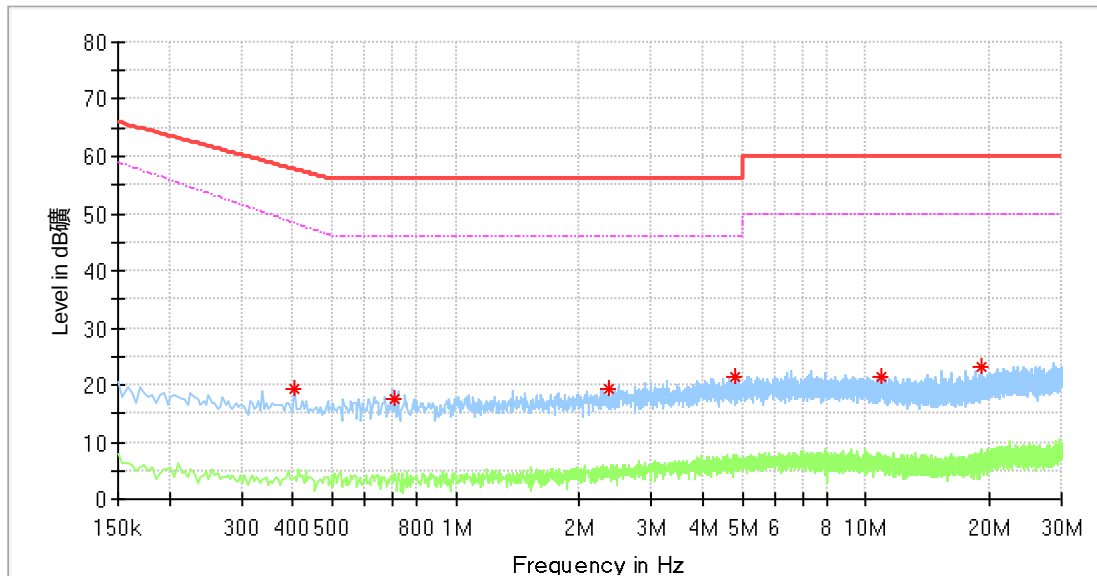
*Level=Reading Level + Correction Factor

**Correction Factor=Cable Loss + LISN Factor

(The Reading Level is recorded by software which is not shown in the sheet)

2.1.7 Test Results

M/N : SZ6030HA2
 Test mode : ON
 Test voltage : AC 230V/50Hz
 Test specification : Power Line, Live



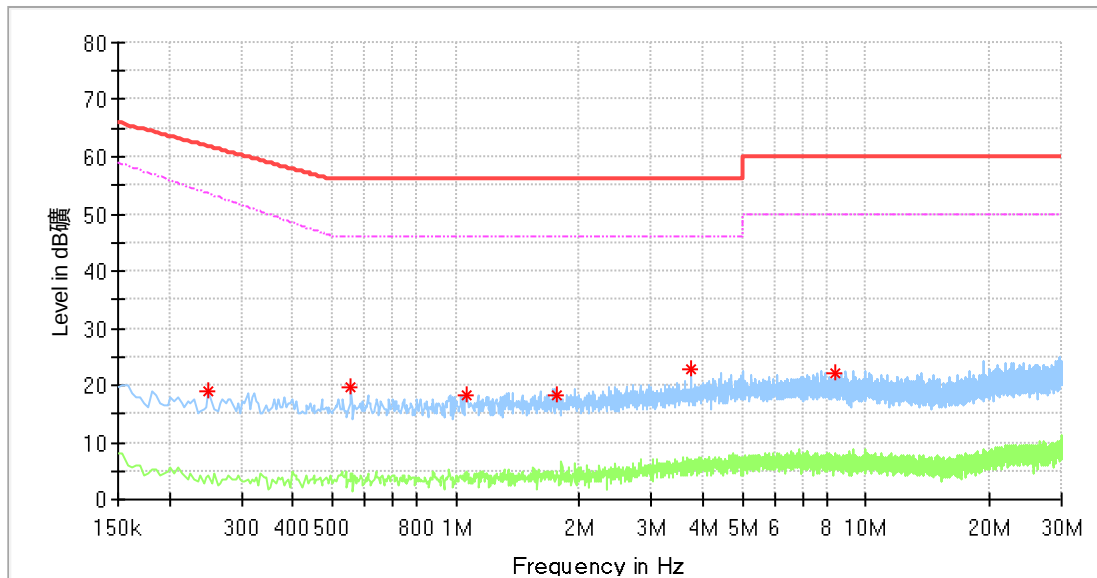
Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.402000	19.33	---	57.81	38.48	L1	9.66
0.710000	17.63	---	56.00	38.37	L1	9.65
2.362000	19.41	---	56.00	36.59	L1	9.71
4.774000	21.23	---	56.00	34.77	L1	9.81
10.874000	21.40	---	60.00	38.60	L1	10.18
19.222000	23.31	---	60.00	36.69	L1	10.41

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---

M/N : SZ6030HA2
 Test mode : ON
 Test voltage : AC 230V/50Hz
 Test specification : Power Line, Neural



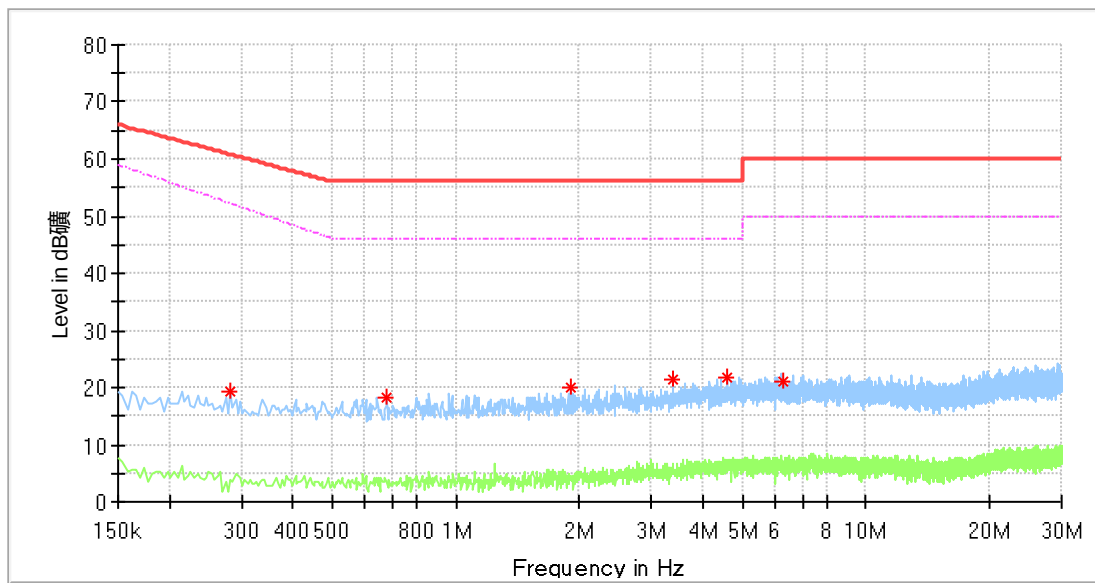
Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.250000	18.98	---	61.76	42.78	N	9.71
0.554000	19.47	---	56.00	36.53	N	9.68
1.066000	18.08	---	56.00	37.92	N	9.70
1.762000	18.13	---	56.00	37.87	N	9.73
3.750000	22.86	---	56.00	33.14	N	9.81
8.422000	22.03	---	60.00	37.97	N	10.13

Final_Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---

M/N : SZ20060HA2
 Test mode : ON
 Test voltage : AC 230V/50Hz
 Test specification : Power Line, Live



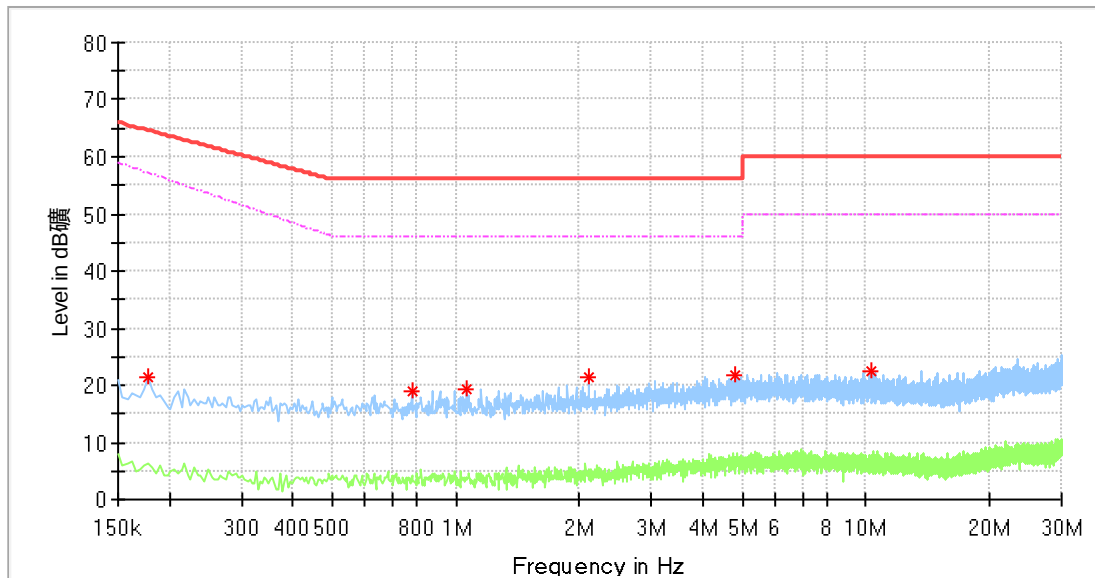
Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.282000	19.42	---	60.76	41.34	L1	9.66
0.678000	18.32	---	56.00	37.68	L1	9.65
1.910000	19.86	---	56.00	36.14	L1	9.68
3.370000	21.23	---	56.00	34.77	L1	9.75
4.590000	21.89	---	56.00	34.11	L1	9.80
6.278000	21.19	---	60.00	38.81	L1	9.88

Final_Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---

M/N : SZ20060HA2
 Test mode : ON
 Test voltage : AC 230V/50Hz
 Test specification : Power Line, Neural

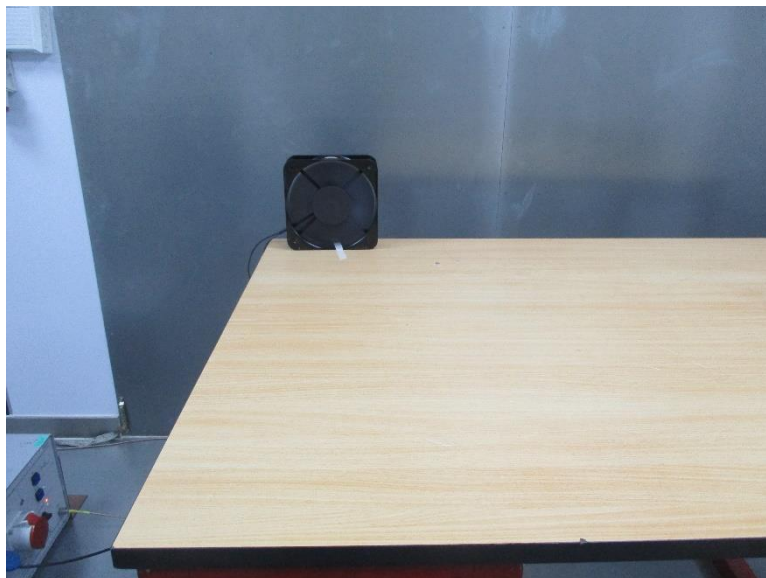


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.178000	21.30	---	64.58	43.28	N	9.76
0.782000	18.90	---	56.00	37.10	N	9.69
1.062000	19.45	---	56.00	36.55	N	9.70
2.110000	21.55	---	56.00	34.45	N	9.74
4.810000	21.76	---	56.00	34.24	N	9.86
10.310000	22.54	---	60.00	37.46	N	10.28

Final_Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



Test Setup

2.1.8 Test Location

This test was carried out in conducted emission shielded room.

2.2 Disturbance power

2.2.1 Specification Reference

EN IEC 55014-1:2021, Clause 4.3.4

2.2.2 Equipment Under Test

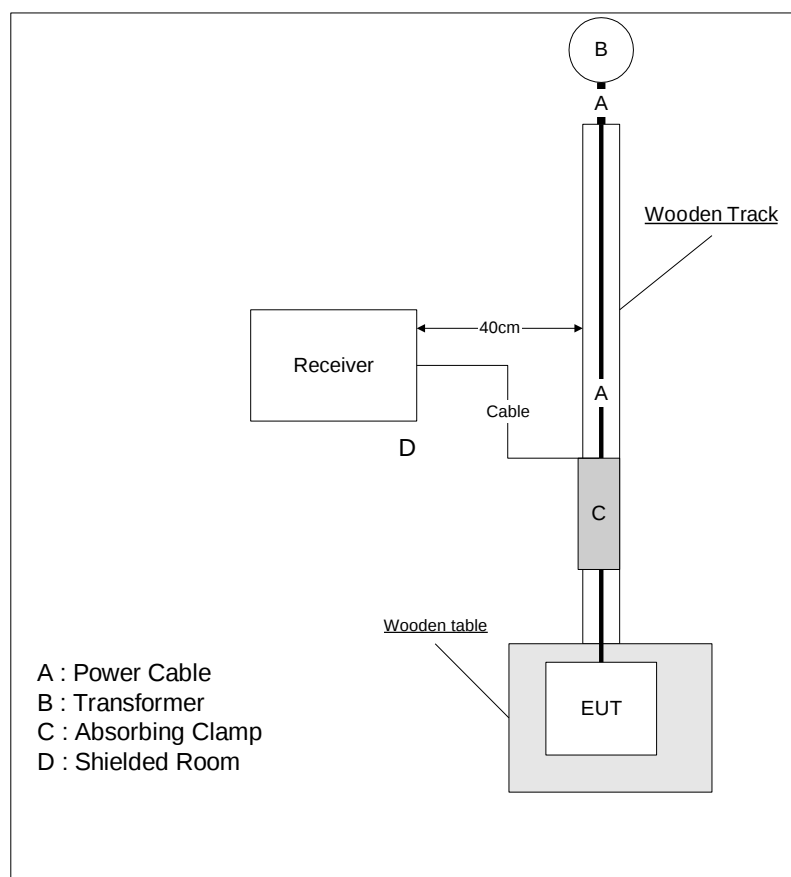
SZ6030HA2, SZ20060HA2

2.2.3 Date of Test

2022-06-11

2.2.4 Test Method

The associated equipment under test was placed on a non-metallic table of 0.8m above a reference ground plane and at least 0.4m from other metallic objects and from any person. The lead to be measured shall be stretched in a straight horizontal line for a length sufficient to accommodate the absorbing clamp. At each test frequency, the absorbing clamp shall be moved along the lead until the maximum value is found.



2.2.5 Environmental Conditions

Ambient Temperature	23.1 °C
Relative Humidity	52.0 %
Atmospheric Pressure	1019 mbar

2.2.6 Specification Limits

Disturbance power limits for frequency range 30MHz to 300MHz		
Frequency range	Household and similar appliances dB(pW)	
MHz	Quasi-peak	Average
30 to 300	45 to 55	35 to 45

Margin when performing disturbance power measurement in the frequency range 30MHz to 300MHz		
Frequency range	Household and similar appliances dB(pW)	
MHz	Quasi-peak	Average
	Increasing linearly with the frequency from	
200 to 300	0 to 10 dB	-

Remark for test data:

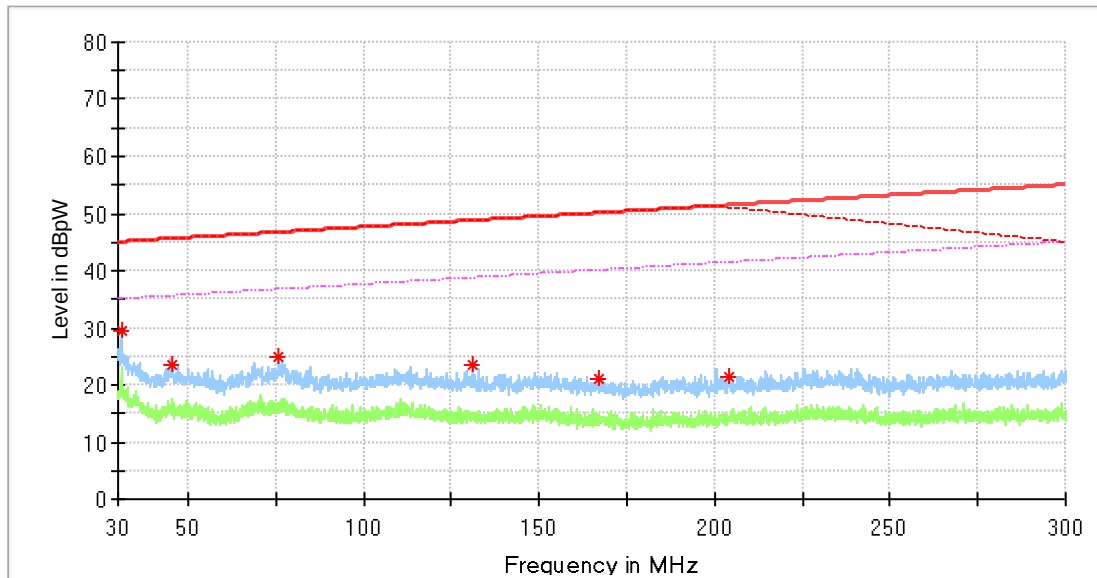
*Level=Reading Level + Correction Factor

**Correction Factor=Cable Loss + Clamp Factor

(The Reading Level is recorded by software which is not shown in the sheet)

2.2.7 Test Results

M/N : SZ6030HA2
 Test mode : ON
 Test voltage : AC 230V/50Hz
 Test specification : AC mains



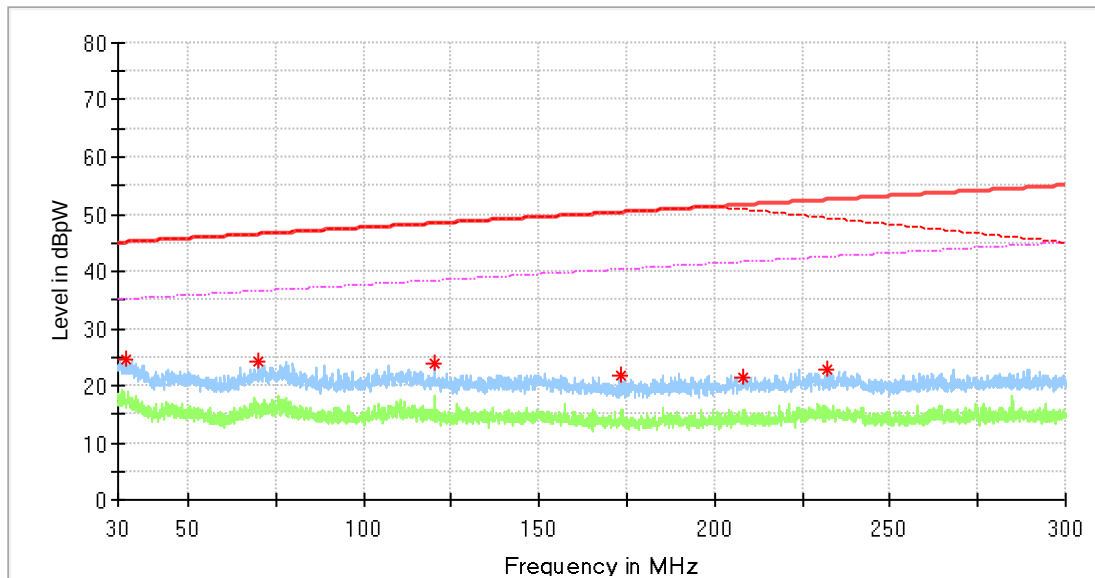
Critical Freqs

Frequency (MHz)	MaxPeak (dBpW)	Average (dBpW)	Limit (dBpW)	Margin (dB)	Corr. (dB)
30.859091	29.61	---	45.03	15.43	7.86
45.402273	23.39	---	45.57	22.18	7.23
75.777273	24.98	---	46.70	21.72	6.84
131.065909	23.62	---	48.74	25.12	5.04
167.147727	21.00	---	50.08	29.08	4.17
203.965909	21.57	---	51.44	29.88	4.17

Final Result

Frequency (MHz)	QuasiPeak (dBpW)	Average (dBpW)	Limit (dBpW)	Margin (dB)	Corr. (dB)
---	---	---	---	---	---

M/N : SZ20060HA2
 Test mode : ON
 Test voltage : AC 230V/50Hz
 Test specification : AC mains



Critical_Freqs

Frequency (MHz)	MaxPeak (dBpW)	Average (dBpW)	Limit (dBpW)	Margin (dB)	Corr. (dB)
32.086364	24.54	---	45.08	20.54	7.92
69.886364	24.23	---	46.48	22.25	6.88
120.327273	23.79	---	48.35	24.55	5.58
173.406818	21.60	---	50.31	28.71	3.93
208.261364	21.53	---	51.60	30.08	4.38
232.315909	22.72	---	52.49	29.77	4.86

Final_Result

Frequency (MHz)	QuasiPeak (dBpW)	Average (dBpW)	Limit (dBpW)	Margin (dB)	Corr. (dB)
---	---	---	---	---	---



Test Setup

2.2.8 Test Location

This test was carried out in conducted emission shielded room.

2.3 Flicker

2.3.1 Specification Reference

EN 61000-3-3:2013/A2:2021, Clause 5

2.3.2 Equipment Under Test

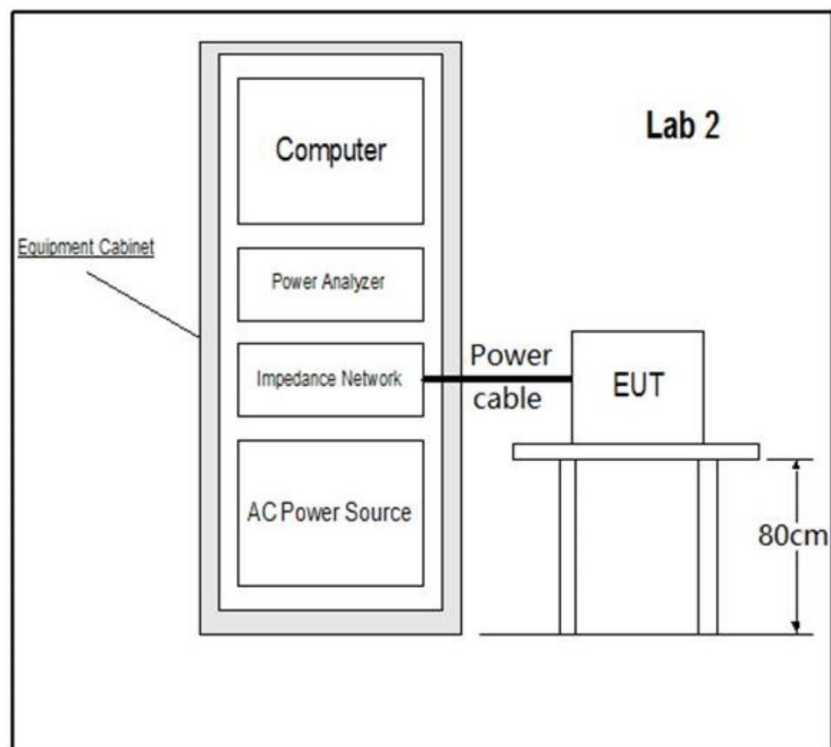
SZ6030HA2, SZ20060HA2

2.3.3 Date of Test

2022-06-13

2.3.4 Test Method

Flicker test should be conducted with the user's operation controls or automatic programs set to the mode expected to produce the most unfavourable sequence of voltage change, using only those combinations of controls and programmes which are mentioned by the manufacturer in the instruction manual, or are otherwise likely to be used.



2.3.5 Environmental Conditions

Ambient Temperature	23.4 °C
Relative Humidity	48.7 %
Atmospheric Pressure	1007 mbar

2.3.6 Specification Limits

The value of P_{st} shall not be greater than 1.0

The value of P_{lt} shall not be greater than 0.65

T_{max} , the accumulated time value of $d(t)$ with a deviation exceeding 3.3% during a single voltage change at the EUT terminals, shall not exceed 500ms

The maximum relative steady-state voltage change, d_c , shall not exceed 3.3%

The maximum relative voltage change d_{max} , shall not exceed

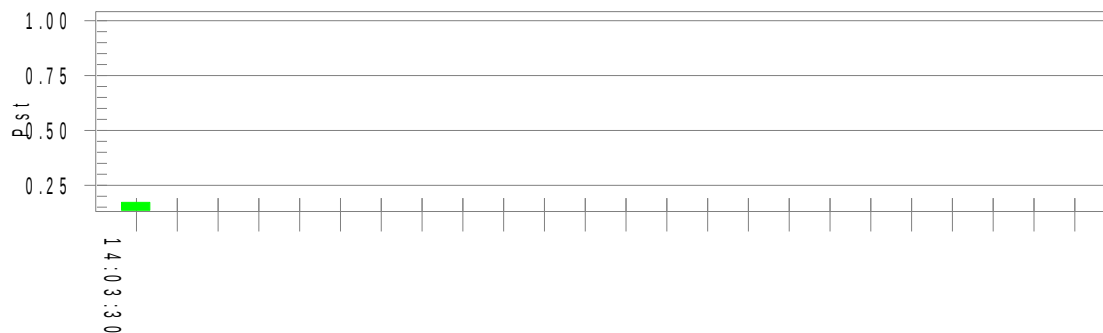
- a) 4% without additional conditions
- b) 6% for equipment which is:
 - Switched manually, or
 - Switched automatically more frequently than twice per day, and also has either a delayed start, or manual restart, after a power supply interruption
- c) 7% for equipment which is:
 - Attended whilst in use, or
 - Switched on automatically, or is intended to be switched on manually, no more than twice per day, and also has either a delayed restart or manual restart, after a power supply interruption

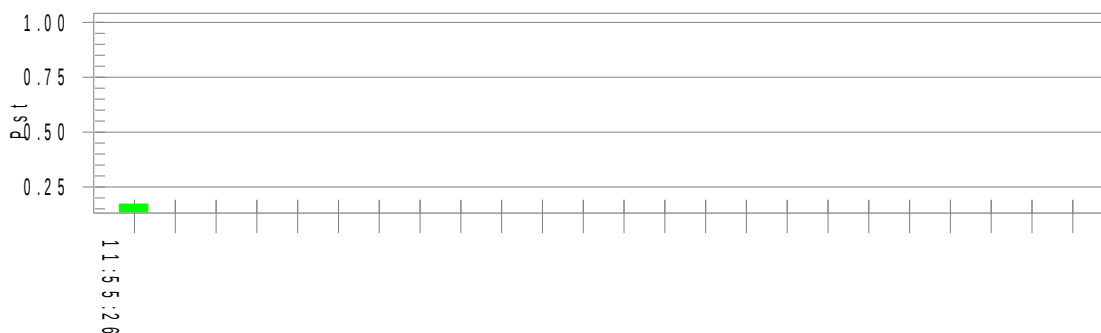
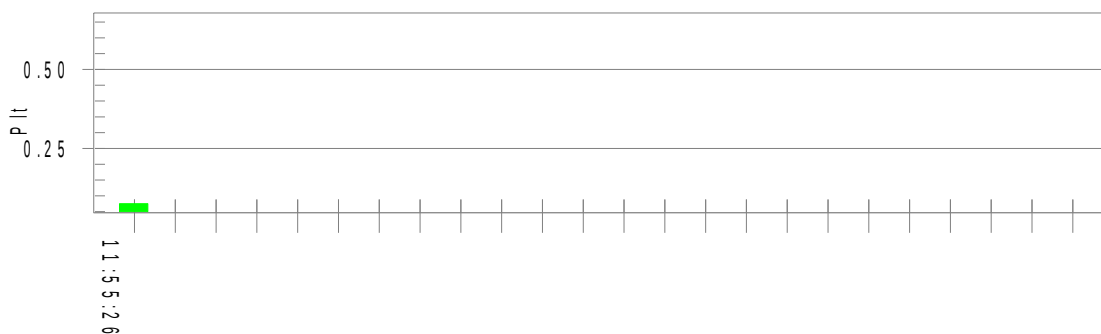
2.3.7 Test Results

Results for Configuration and Mode: AC powered / ON.

Performance assessment of the EUT made during this test: Pass.

Detailed results are shown below.

Flicker Test Summary per EN/IEC61000-3-3 Ed. 3.0 (2013) (Run time)**EUT: SZ6030HA2****Tested by: Abel****Test category: All parameters (European limits)****Test Margin: 100****Test date: 13/06/2022****Start time: 13:53:09****End time: 14:03:36****Test duration (min): 10****Data file name: CTSMXL_F-000724.cts_data****Comment: ON****Customer: Dongguan Saiji Electric Technology Co.Ltd.****Test Result: Pass****Status: Test Completed****Pst_i and limit line****European Limits****Plt and limit line****Parameter values recorded during the test:****Vrms at the end of test (Volt): 229.97****T-max (mS): 0.0****Highest dc (%): 0.00****Highest dmax (%): 0.15****Highest Pst (10 min. period): 0.172****Highest Plt (2 hr. period): 0.075****Test limit (mS): 500.0 Pass****Test limit (%): 3.30 Pass****Test limit (%): 4.00 Pass****Test limit: 1.000 Pass****Test limit: 0.650 Pass**

Flicker Test Summary per EN/IEC61000-3-3 Ed. 3.0 (2013) (Run time)**EUT: SZ20060HA2****Tested by: Abel****Test category: All parameters (European limits)****Test Margin: 100****Test date: 13/06/2022****Start time: 11:45:05****End time: 11:55:32****Test duration (min): 10****Data file name: CTSMXL_F-000723.cts_data****Comment: ON****Customer: Dongguan Saiji Electric Technology Co.Ltd.****Test Result: Pass****Status: Test Completed****Pst_i and limit line****European Limits****Plt and limit line****Parameter values recorded during the test:****Vrms at the end of test (Volt): 229.87****T-max (mS): 0.0****Highest dc (%): 0.00****Highest dmax (%): -0.16****Highest Pst (10 min. period): 0.172****Highest Plt (2 hr. period): 0.075****Test limit (mS): 500.0 Pass****Test limit (%): 3.30 Pass****Test limit (%): 4.00 Pass****Test limit: 1.000 Pass****Test limit: 0.650 Pass**



Test setup

2.3.8 Test Location

This test was carried out in Harmonic Flicker Test area.

3 Test Equipment Information

3.1 General Test Equipment Used

Conducted Emission Test 1# Test

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 3	68-4-74-14-001	101782	1	2023-5-27
LISN	Rohde & Schwarz	ENV4200	68-4-87-14-001	100249	1	2023-5-27
LISN	Rohde & Schwarz	ENV432	68-4-87-16-001	101318	1	2023-5-27
LISN	Rohde & Schwarz	ENV216	68-4-87-14-002	100326	1	2023-5-27
ISN	Rohde & Schwarz	ENY81	68-4-87-14-003	100177	1	2023-5-27
ISN	Rohde & Schwarz	ENY81-CA6	68-4-87-14-004	101664	1	2023-5-27
High Voltage Probe	Schwarzbeck	TK9420(VT9420)	68-4-27-14-001	9420-584	1	2023-5-27
RF Current Probe	Rohde & Schwarz	EZ-17	68-4-27-14-002	100816	1	2023-5-31
Attenuator	Shanghai Huaxiang	TS2-26-3	68-4-81-16-003	080928189	1	2023-5-27
Test software	Rohde & Schwarz	EMC32	68-4-90-14-003-A10	Version9.15.00	N/A	N/A
Shielding Room	TDK	CSR #1	68-4-90-19-004	----	3	2022-11-07

Disturbance Power Test

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 3	68-4-74-14-001	101782	1	2023-5-27
Absorbing Clamp	Rohde & Schwarz	MDS-21	68-4-84-14-001	100661	1	2022-7-8
Test software	Rohde & Schwarz	EMC32	68-4-90-14-003-A10	Version9.15.00	N/A	N/A
Shielding Room	TDK	CSR #1	68-4-90-19-004	----	3	2022-11-07

Harmonic Test / Flicker Test

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
Three Phase Harmonic flicker test system	CI	MX45-3PI-400-413-CTSHL-LF-SNK	68-4-74-14-006	1424A00547	1	2023-5-27
Test software	Ametek	CTSMXL	68-4-74-14-006-A11	Version 2.9.0&Version 2.24.0	N/A	N/A
Test software	Ametek	CTSMXH	68-4-74-14-006-A12	Version 2.10.0	N/A	N/A

4 Measurement Uncertainty

For a 95% confidence level, the measurement uncertainties for defined systems are:

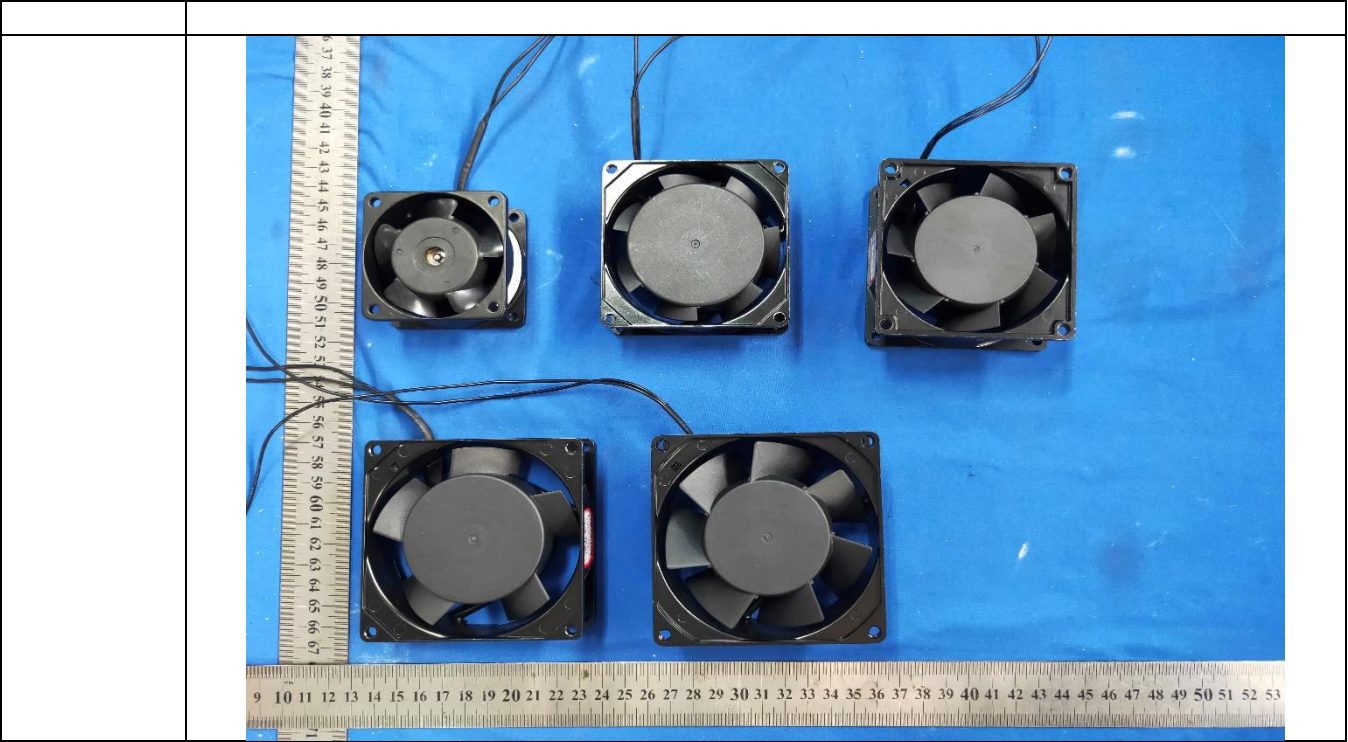
System Measurement Uncertainty	
Test Items	Extended Uncertainty
Uncertainty for Conducted Emission 150kHz-30MHz (for test using AMN ENV216 or ENV4200)	3.31dB
Uncertainty for Power Clamp test	4.07dB
Uncertainty for Flicker test	4.68%

Measurement Uncertainty Decision Rule

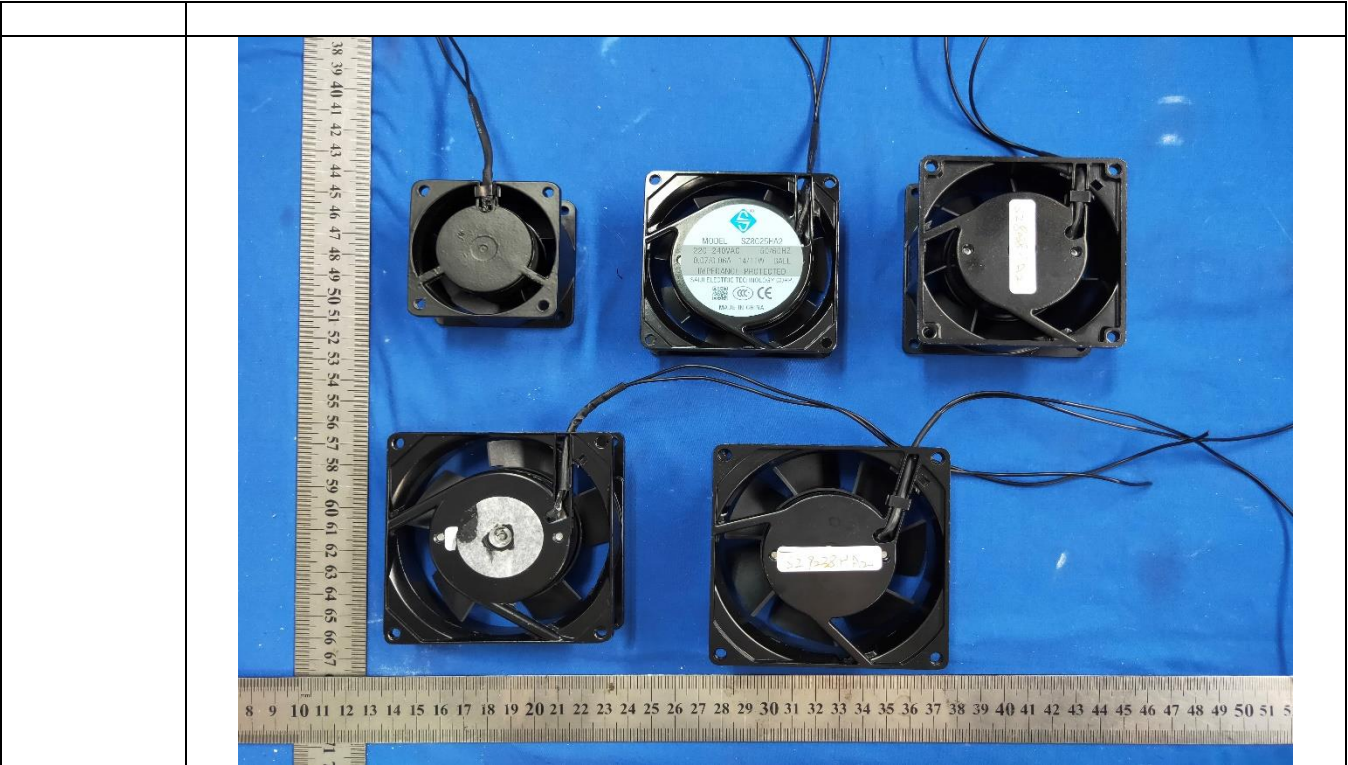
Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2021, clause 4.4.3 and 4.5.1.

5 Photographs

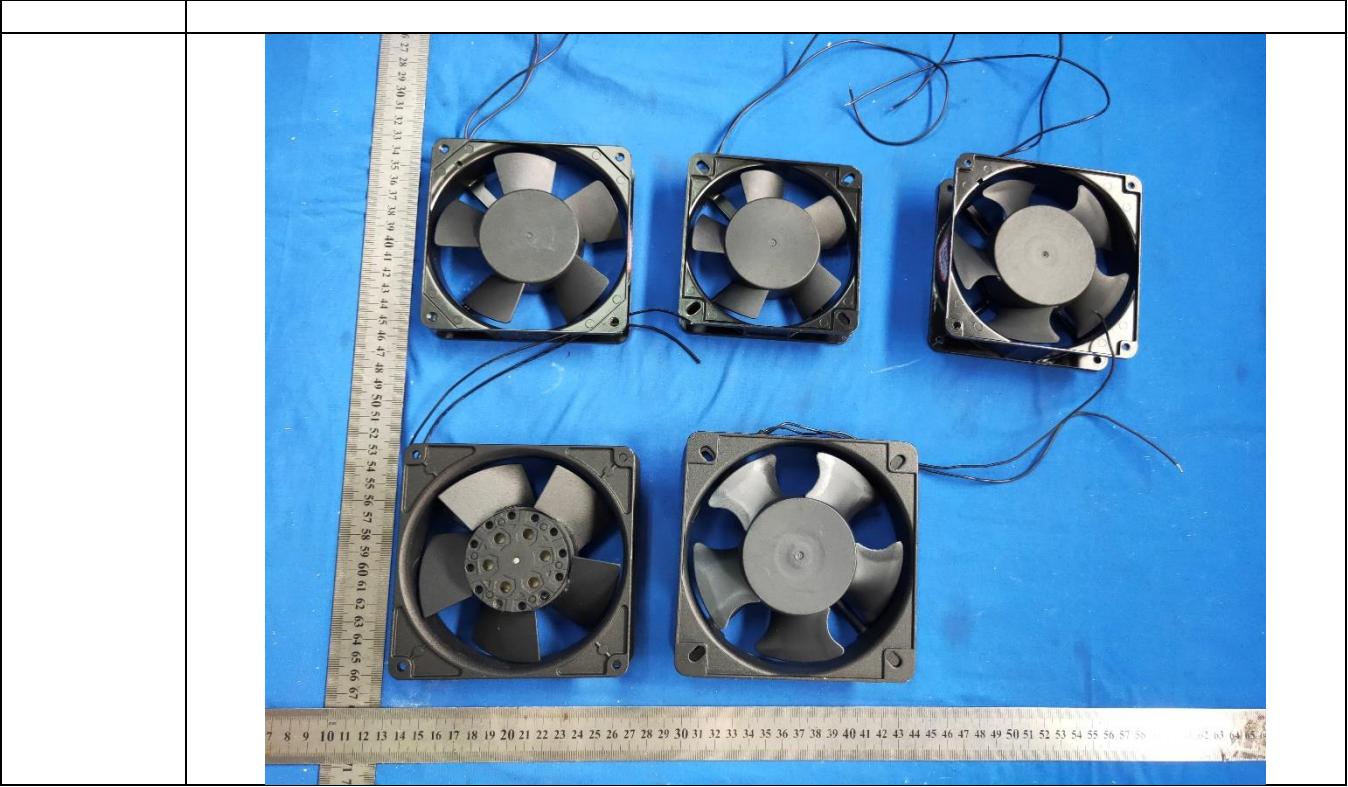
Details of: General view for SZ6030HA2, SZ98025HA2, SZ8038HA2, SZ9225HA2, SZ9238HA2



Details of: General view for SZ6030HA2, SZ98025HA2, SZ8038HA2, SZ9225HA2, SZ9238HA2



Details of: General view for SZ12025HA2, SZ11025HA2, SZ12038HA2, SZ12738HA2, SZ13538HA2



Details of: General view for SZ12025HA2, SZ11025HA2, SZ12038HA2, SZ12738HA2, SZ13538HA2



Details of: General view for SZ15050HA2, SZ17255HA2, SZ17251HA2, SZ18060HA2, SZ20060HA2

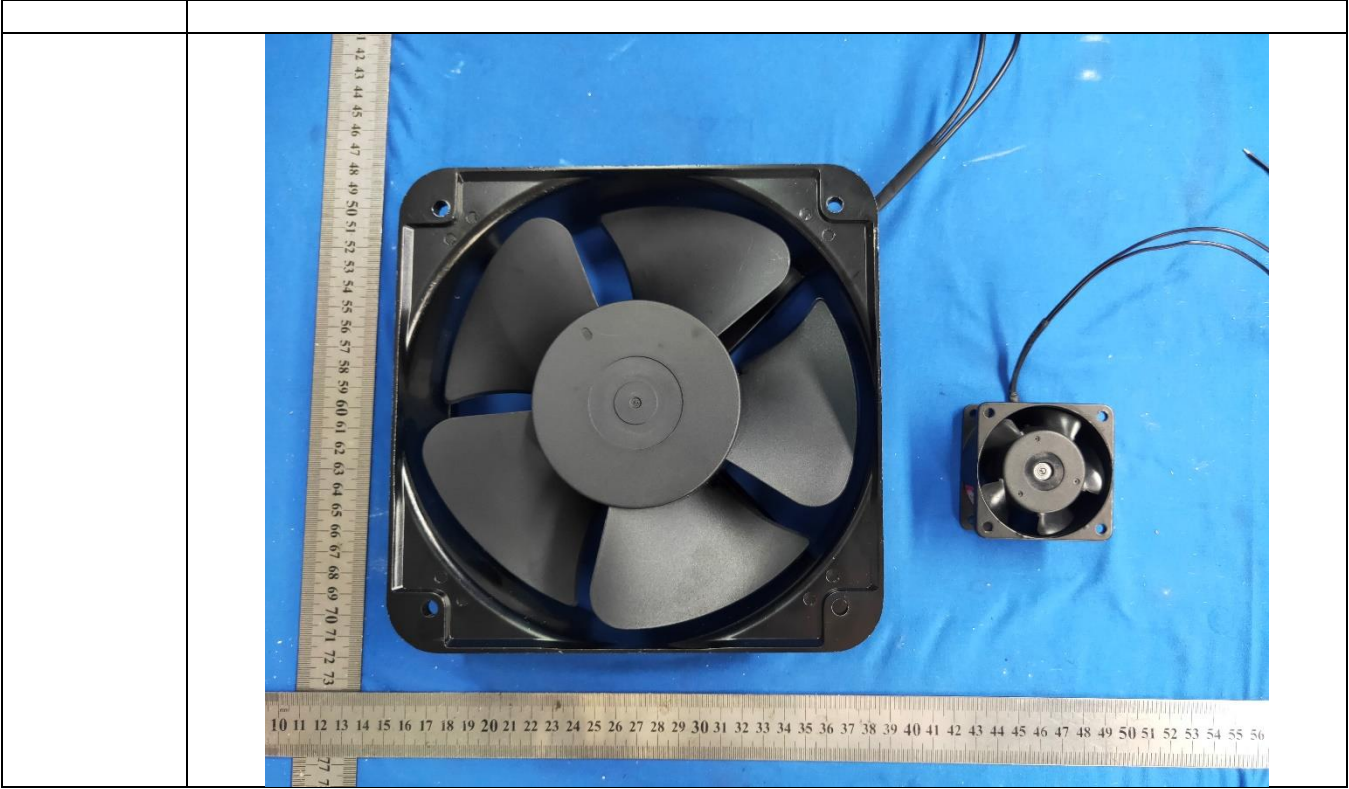


Details of: General view for SZ15050HA2, SZ17255HA2, SZ17251HA2, SZ18060HA2, SZ20060HA2



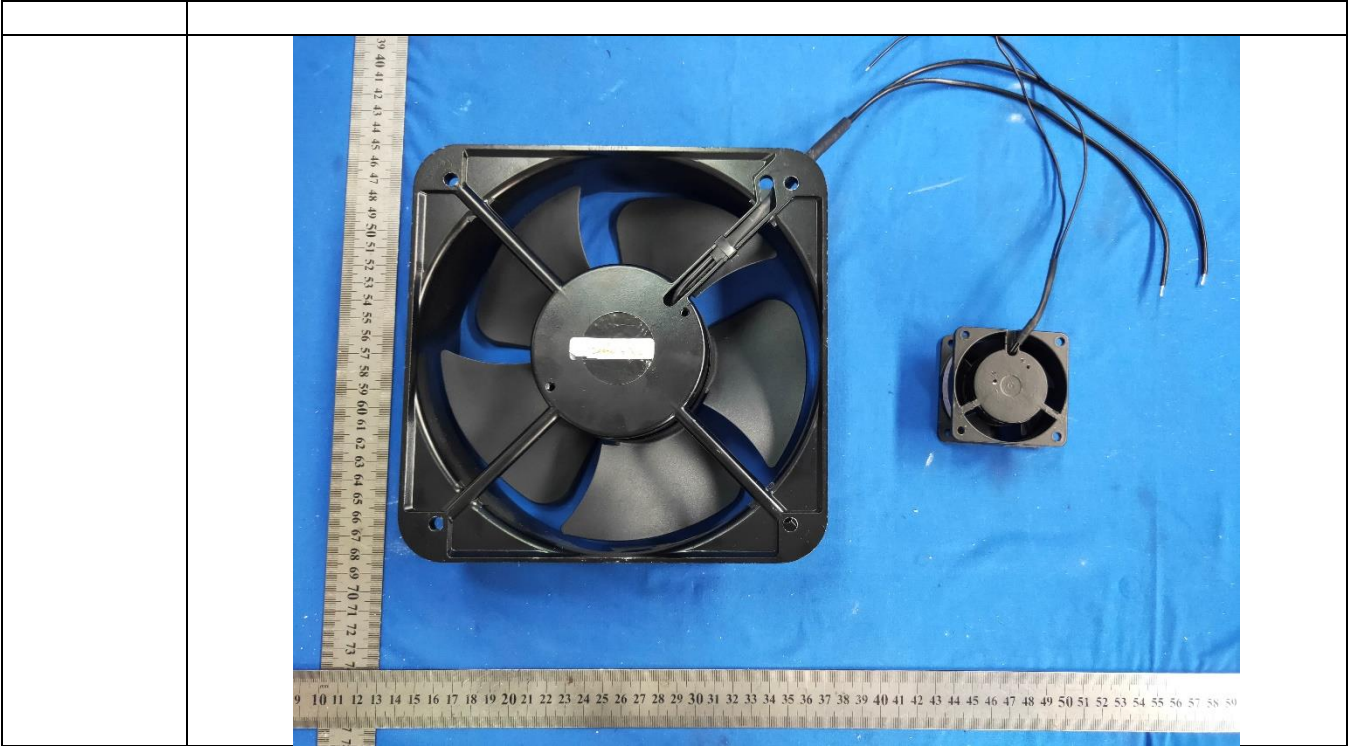
Details of:

General view for SZ6030HA2, SZ20060HA2



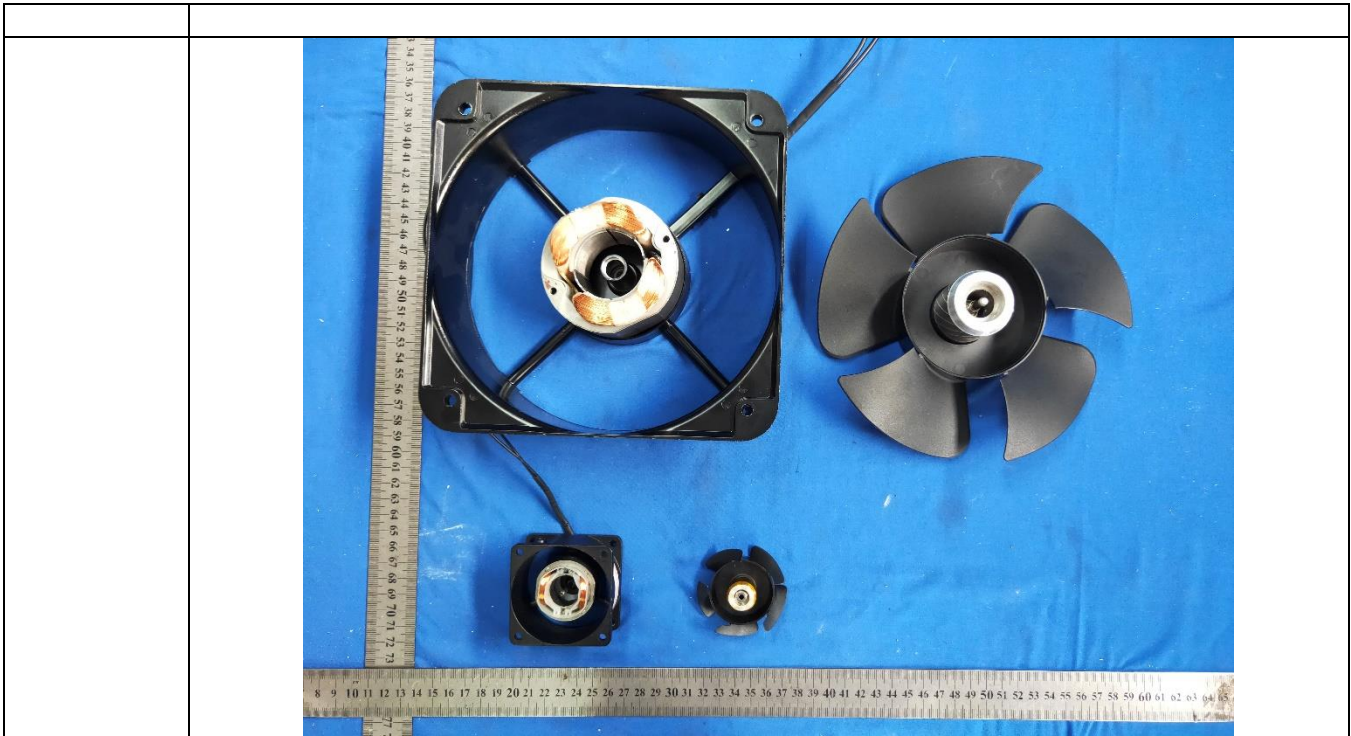
Details of:

General view for SZ6030HA2, SZ20060HA2



Details of:

Internal view for SZ6030HA2, SZ20060HA2



Details of:

Internal view for SZ20060HA2

