中国认可
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检测
TESTING
CNAS L1000

Inspection and Detection Report

检验检测报告

Inspection and Detection Report

№：(2024)SJSXW-WT0631

Name of Sample	Solar Inverter
Party being tested	——
Manufacturer	——
Consigner	REFU Elektronik GmbH
Inspection and Detection Kind	Entrusted Inspection

Jiangsu Product Quality Testing & Inspection Institute

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Inspection and Detection Report

№:(2024)SJSXW-WT0631

Name of Sample	Solar Inverter		Type and Specifications	REFUsol 250K-5T / REFUsol 350K-6T	
Producing Date\Batch No.	\		Trademark	——	
Consigner\Add\Tel\PC	For: REFU Elektronik GmbH, Marktstraße 185, D-72793 Pfullingen, Germany				
Manufacturer\Add\Tel\PC	——				
Party being tested\Add\Tel\PC	——				
Inspection and Detection kind	Entrusted Inspection	Task from/Task NO.	——	Sampling List	——
Quantity of Sample	1pc	Batch of Sample	——	Numbered of Sample	(2024)SJSXW-WT0631
Sampling Date	——	Sampling Staff	——	Sampling Location	——
Grade	——	Quantity & Location of Backup Samples	0\——	Sealing State	——
Arrival Date of Sample	2024/9/2	Description of Sample	Match Test Requirement	Checking of Sealing Sample	——
Inspection and Detection Date	2024/9/2		Inspection and Detection Add.	No. 1368, Wuzhongdadao Avenue, Suzhou, China	
Inspection and Detection Standard(s)	ISO 7779:2018<Acoustics - Measurement of airborne noise emitted by information technology and telecommunications equipment>				
Decision Criterion	——				
Test Conclusion	No judgment. (The Special Seal for Inspection and Detection) **Signature Date:** 2024/09/14				
Note	The sample's product name is determined according to consignment testing contract. *REFUsol 250K-5T and REFUsol 360K-6T inverters have same fan structure.*				

Approval 梁学俊 梁学俊 roofreader 鞠伟刚 鞠伟刚 jortester 陈丹妮 陈丹妮

Summary of Test Results

No.	Test Item	Test Standard	Result	Judgment
1	Noise Testing	ISO 7779:2018	See more details at 1.5 and 1.6	No judgment
Remark	——			

Description of Equipment Under Test

0 Basic Information of EUT:

0.1 EUT

Product Name:	Solar Inverter
Specifications:	REFUsol 250K-5T



Photo 1: Appearance of sample

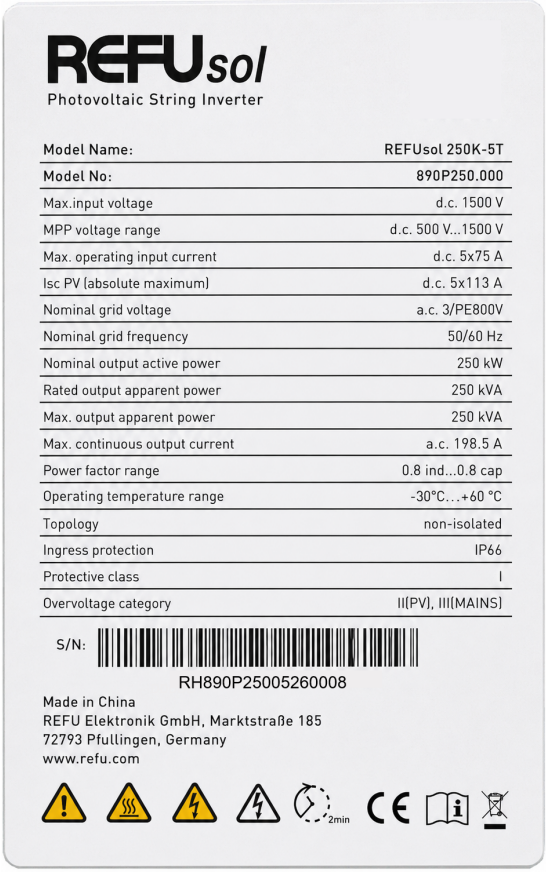


Photo 2: Nameplate of sample

Test Requirements and Results

1 Noise Testing

1.1 Limiting Value of Noise

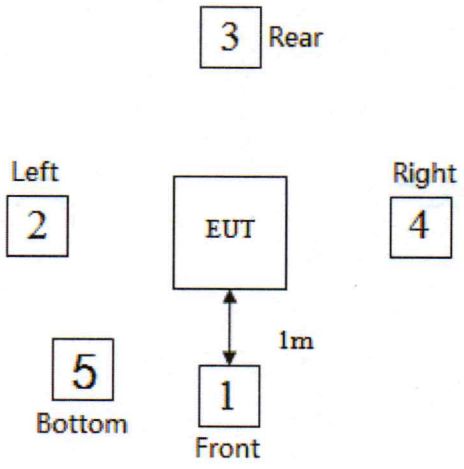
No limiting value.

1.2 Test Set-up

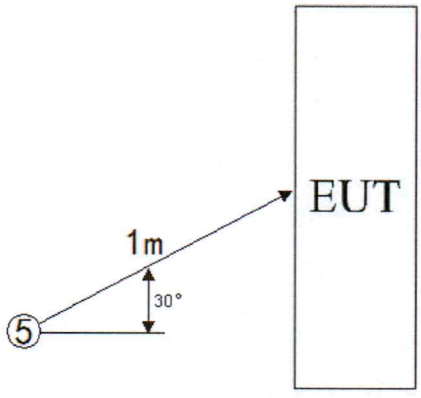
The noise test of EUT proceeds in a semi-anechoic chamber. The microphones which are used to measure the sound pressure level of EUT lie in five positions. Four microphones pointed to the center of the side faces horizontally with distance of 1m. The microphones shall be oriented in such a way that the angle of sound incidence is the same as the angle for which the microphone has the most uniform frequency response. The fifth microphone pointed to the center of front panel with a angle 30 degree to the horizontal plant.

The results are tested by the five microphones in 60s in the frequency between 20Hz to 20kHz of noise (sound pressure level).

Test Set-up Diagram:



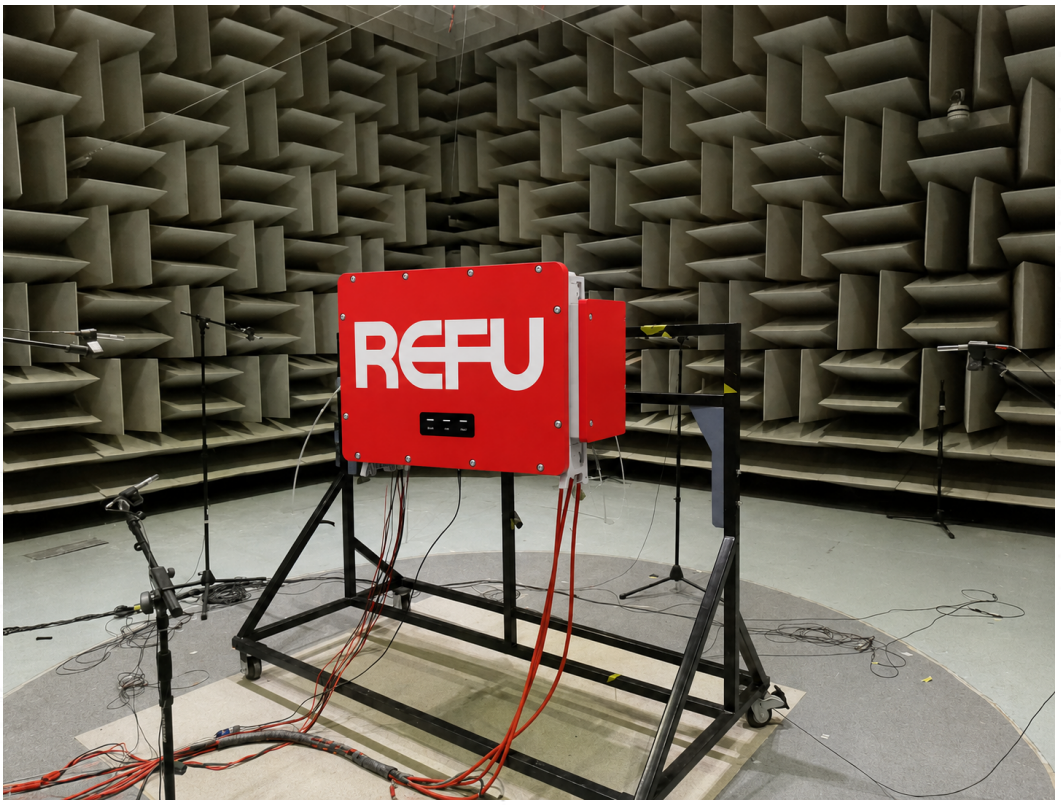
(1): 1、2、3、4 、5stand for the location of the microphone



(2): 5 stands for the location of the fifth microphone

Test Requirements and Results

Test Set-up Photos:



1.3 Test Condition

Environment temperature: 25 ℃; Relative humidity: 59 %RH; Atmospheric pressure: 101k Pa

1.4 Test Status

Connect the EUT to the power supply and start the test in 60s after running for 30 minutes. Collect data for 60 seconds.

1.5 Test Data

Test item information	Value					
Weighting	A-weighting					
Octave	One third octave					
Distance	1m					
Inherent noise(dB(A))	18.5					
	Acoustic Noise(SPL)(dB(A))					
Power	Average	Front	Right	Rear	Left	Bottom
External fan 40% load	55.77	54.2	52.2	58.7	56.2	54.8
External fan 100% load	69.86	70.8	65.2	73.3	68.9	65.9
Internal fan 30% load	41.74	38.6	35.4	45.3	43.5	38.8
Internal fan 100% load	57.58	58.9	53.1	58.2	58.7	56.8
External fan 40% load, Internal fan 30% load	54.31	52	50.4	57.2	55.4	53.2

Test Requirements and Results

External fan 40% load, Internal fan 100% load	59.99	60	55.4	62.1	61	58.8
External fan 100% load, Internal fan 30% load	69.81	70.6	65.1	73.2	69.2	66
External fan 100% load, Internal fan 100% load	70.15	71	65.4	73.5	69.5	66.4
External fan 90% load, Internal fan 100% load	69.89	70.9	65.3	73.2	69	66.3
External fan 80% load, Internal fan 100% load	68.43	64.2	63.7	72.9	67.2	67.1
External fan 70% load, Internal fan 100% load	66.04	64.6	61.4	69	65.6	66.3
External fan 60% load, Internal fan 100% load	63.51	64.9	59.5	64.5	64.3	62.4
External fan 50% load, Internal fan 100% load	61.01	60.5	56.5	64	61.6	58.9
External fan 30% load, Internal fan 100% load	59.1	59.4	54.8	61	60.2	57.7
External fan 20% load, Internal fan 100% load	57.99	58.6	53.1	59.4	59.5	56.6

1.6 Test Result

No judgment.

Equipment List

No.	Instrument	Model No.	Serial No.	Valid Date	Used
1	Free Field Microphone	MP201+MA231	NTIe-511-020-04-C	2025-02-27	☑
2	Free Field Microphone	MP201+MA231	NTIe-511-020-05-C	2025-02-27	☑
3	Free Field Microphone	MP201+MA231	NTIe-511-020-06-C	2025-02-27	☑
4	Free Field Microphone	MP201+MA231	NTIe-511-020-07-C	2025-02-27	☑
5	Free Field Microphone	MP201+MA231	NTIe-511-020-08-C	2025-02-27	☑
6	Acoustic Analyzer	PXI4498	NTIe-511-020-02-C	2025-03-07	☑
7	Semi-anechoic Room	AN01	NTIe-511-076-00-C	2026-02-22	☑
8	Acoustic Calibrator	BK 4231	NTIe-511-020-24-C	2025-03-07	☑
9	Steel Tape Measure	3m	NTIe-510-206-00-P	2025-03-07	☑

Remark:☑ stands for the equipments used in this test

（End of Report）

简　介

江苏省产品质量监督检验研究院是隶属于江苏省质量技术监督局的全额拨款公益性事业单位，是江苏省从事综合性、专业性产品质量监督检验的机构，于一九八二年二月经江苏省编制委员会批准成立。下设七个国家中心，分别是：

- **国家化妆品产品质量监督检验中心**　业务电话：025-84470308；传真：025-84470257；　地址：南京市光华东街5号；邮编：210007
- **国家农药产品质量监督检验中心(南京)**　业务电话：025-84470312、84470252、84470324；传真：025-84470312；地址：南京市光华东街5号；邮编：210007
- **国家工程复合材料产品监督检验中心**　业务电话：冶金中心\025-84470294、025-84470291/化建中心\025-84470296、025-84470289；传真：冶金中心\025-84470293／化建中心\025-84470297；地址：南京市光华东街5号；邮编：210007
- **国家电线电缆产品质量监督检验中心(江苏)**　业务电话：0510-80713730(宜兴)0510-80713755(宜兴)／0516-83641910(徐州)；　传真0510-80713799(南京)／0516-85610125(徐州)；地址：宜兴市绿园路500号/徐州市新城区产业园区商聚路；邮编：214205(宜兴)／221000(徐州)
- **国家食品包装产品质量监督检验中心**　业务电话：025-84470318；传真：025-84470263；地址：南京市光华东街5号；邮编：210007
- **国家信息网络产品质量监督检验中心(江苏)**　业务电话：0512-66591853；传真：0512-65252771；地址：苏州市吴中区吴中大道1368号吴中科技园B楼；邮编：215104

Profile

Jiangsu Product Quality Supervision and Inspection Institute (JPQSII), is specialized in product testing, quality certification, technical development and technical consultation, under the authorization from China General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) and Jiangsu Quality and Technical Supervision Bureau. JPQSII now is consisted of 7 country-level product quality testing centers:

- National Quality Supervision & Testing Center for Cosmetics / National Quality Supervision & Testing Center for Pesticide (Nanjing) / National Quality Supervision & Testing Center for Engineering Composite Materials / National Quality Supervision & Testing Center for Food Fackaging (Jiangsu)

Address: 5 Guanghua East Road, Nanjing; Vocational Tel: 025-84470235

- National Quality Supervision & Testing Center For Cables And Wires (JiangSu)

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