EMC TEST REPORT

Applicant	:	Guangzhou Felicity Solar Technology Co., Ltd.
Addres	:	(Airport Baiyun)No.2, 4, 6, 8, 10 and 12 Donghua Huaye Road, Renhe Town, Baiyun District, Guangzhou, Guangdong, P. R. China
Manufacturer	:	Guangzhou Felicity Solar Technology Co., Ltd.
Address	:	(Airport Baiyun)No.2, 4, 6, 8, 10 and 12 Donghua Huaye Road, Renhe Town, Baiyun District, Guangzhou, Guangdong, P. R. China
Factory	:	Guangzhou Felicity Solar Technology Co., Ltd.
Address	:	(Airport Baiyun)No.2, 4, 6, 8, 10 and 12 Donghua Huaye Road, Renhe Town, Baiyun District, Guangzhou, Guangdong, P. R. China
Product Name	:	Hybrid inverter
Brand Name	:	Felicitysolar®
Model No.	:	IVGM25KHP3G3, IVGM20KHP3G3, IVGM15KHP3G3, IVGM12KHP3G3, IVGM10KHP3G3, IVGM9K9HP3G3, IVGM8KHP3G3
Standard	:	EN IEC 61000-6-1:2019 EN IEC 61000-6-2:2019 EN IEC 61000-6-3:2021 EN IEC 61000-6-4:2019
Date of Receiving Samples	:	December 23, 2025 May 27, 2026
Date of Test	:	December 30, 2025 to March 09, 2026 May 27, 2026 to June 01, 2026
Date of Report	:	June 02, 2026

This Test Report is Issued Under the Authority of:

Prepared by

Jason Liu

Jason Liu / Engineer

Approved & Authorized Signer

Han Song / Authorized Signatory

This report shows that above equipment is technically compliant with the requirements of the standards above. All test results in this report apply only to the tested sample(s). Without prior written approval of Shenzhen Nore Testing Center Co., Ltd, this report shall not be reproduced except in full.

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Revision History of This Test Report

Report Number	Description	Issued Date
SZNTC2512174EV00	**Initial Issue**	**2026-03-12**
SZNTC2605108EV00	**Derivative version**	**2026-06-02**
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Remark:
1. This report is a derivative version. The original report number was SZNTC2512174EV00. Compared with the original report, the new report changes from IP65 to IP66, the input current of PV changes from “30+30A” to “42+42A”, part of the parameters of the PV input board changes, and the altitude changes from 2000m to 3000m.
2. Through the evaluation of the above differences. The items that need to be retested are conducted emission measurement and radiated emission measurement, the fast transients test (PV port). Other test data are all from the original report.

1.SUMMARY OF TEST RESULTS

The E.U.T. has been tested according to the following specifications:

EMISSION			
Standard	**Test Type**	**Result**	**Remarks**
EN IEC 61000-6-3:2021	Conducted Emission Measurement	PASS	Meet the requirements of residential environment
	Radiated Emission Measurement	PASS	Meet the requirements of residential environment
IEC 61000-3-2:2018 IEC 61000-3-12:2011	Harmonic current emission Measurement	PASS	Meet the requirements
IEC 61000-3-3:2013+ A1:2017 IEC 61000-3-11:2017	Voltage Fluctuations & Flicker Measurement	PASS	Meet the requirements

IMMUNITY(EN IEC 61000-6-2:2019)			
Basic Standard	**Test Type**	**Result**	**Results (Performance Criterion)**
IEC 61000-4-2:2008	Electrostatic Discharge Test	PASS	A
IEC 61000-4-3:2006+ A1:2007+ A2:2010	Radio-Frequency Electromagnetic Field Test	PASS	A
IEC 61000-4-4:2012	Fast transients test	PASS	A
IEC 61000-4-5:2014	Surges Test	PASS	A
IEC 61000-4-6:2013	Radio-Frequency Common Mode Test	PASS	A
IEC 61000-4-8:2009	Power-Frequency Magnetic Field Test	PASS	A
IEC 61000-4-11:2004 IEC 61000-4-34: 2005+A1:2009	Voltage Dips and Interruptions Test	PASS	B

2.TEST UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Uncertainty
Conducted Emission Measurement (0.15-30MHz)	±2.7dB
Radiated Emission Measurement (30-1000MHz)	±4.4dB
Note: As U_{lab} in all applicable tests listed above are less than U_{cispr} according to CISPR 16-4-2, compliance is deemed to occur if no measured disturbance exceeds the disturbance limit; non-compliance is deemed to occur if any measured disturbance exceeds the disturbance limit.	

3.GENERAL INFORMATION

3.1.Product Information

Product Name:	Hybrid inverter
Model No.:	IVGM25KHP3G3, IVGM20KHP3G3, IVGM15KHP3G3, IVGM12KHP3G3, IVGM10KHP3G3, IVGM9K9HP3G3, IVGM8KHP3G3
Description of model difference:	1. These models have the same circuitry, PCB layout and physical construction, the difference is model name and the power changed by the software. 2. We tested all items at IVGM25KHP3G3 and only harmonic current, flicker, voltage dips and interruption were tested at IVGM10KHP3G3.
Classification of Equipment:	Such equipment would fulfil the tighter emission requirements of the residential environment as well as the severe immunity requirements of the industrial environment.
Typical arrangement:	Tabletop or/and Wall-Mounted
Highest Internal Frequency:	Below 108MHz (Highest internal frequency below 108MHz, radiation test frequency range 30MHz-1000MHz)
Rating:	**Model: IVGM25KHP3G3** Product Type: Hybrid Inverter Protection Degree: IP66 Overvoltage-category: DC II, AC III Ambient Temperture: -40℃-60℃ >45℃ Derating Warranty: 10 years **Battery Input Data** Battery Voltage Range: 160Vd.c.-700Vd.c. Max. Charging Current: 50Ad.c Max. Discharging Current: 50Ad.c. **PV String Input Data** Max. DC Input Power: 40kW Max. DC Input Voltage: 1000Vd.c Min. DC Input Voltage: 150Vd.c. MPPT Range: 150-850Vd.c. Full Load DC Voltage Range: 476-850Vd.c. PV Input Current: 42+42Ad.c. Max.PV Isc: 63+63Ad.c. **AC Input/Output Data** Rated AC Input/Output Power: 25kW Max. Apparent Input/Output Power: 27.5KVA AC Input/Output Rated Current: 36.3A a.c. Max. AC Input/Output Current: 39.8A a.c. Max. Continuous AC Passthrough: 80Aa.c. Rated AC Voltage: 220/380Va.c., 230/400 Va.c.(-20%-+15%) AC Wiring Mode: 3L+N+PE Rated AC Frequency: 50/60 Hz (45-55Hz/55-65Hz) Power Factor: 0.8 (leading)to 0.8 (lagging)

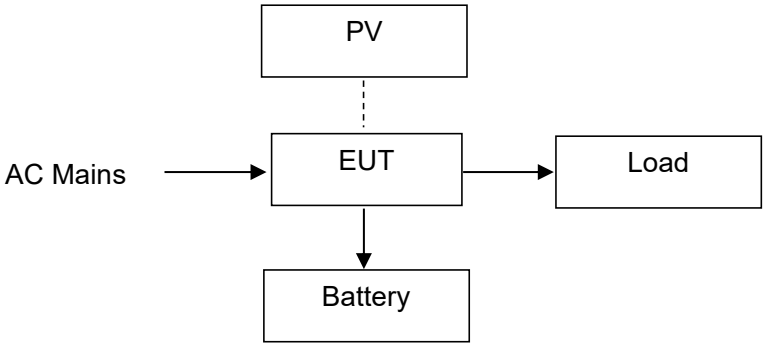
	Efficiency Max. Efficiency: 97.60% Euro Efficiency: 97.00% MPPT Efficiency: >99% Non-isolated topology, Class I protective class
Sample No.:	SZNTC2512174EV00-001 SZNTC2605108EV00-001
Remark:	All the information above is provided by the manufacturer. For more detailed features of the EUT, please refer to the user manual.

3.2.Description of Support Device

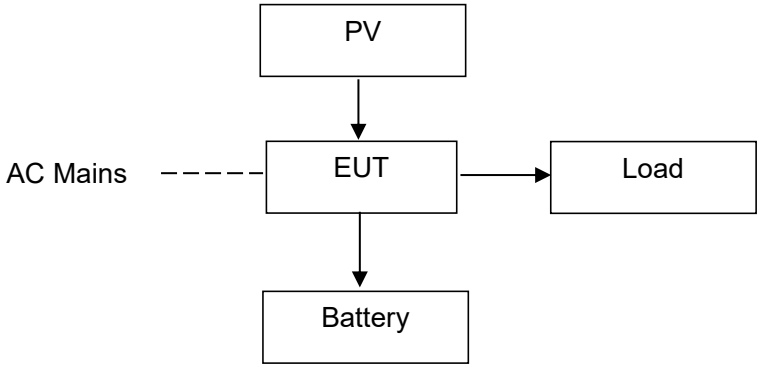
No.	Equipment	Manufacturer	M/N	Cable Specification	Remark
1.	Incandescent lamp load	----	---	----	Provided by the lab.
2.	Photovoltaic simulator source	ITECH	IT 6018C-1500-40	---	Provided by the lab.
3.	AC input cable	---	---	The test uses a 3P/N/PE power cable of 1.0m length without magnetic ring and unshielded.	Provided by the lab.
4.	AC output cable	---	---	The test uses a 3P/N/PE power cable of 1.0m length without magnetic ring and unshielded.	Provided by the lab.
5.	Battery cable	---	---	The test uses a power cable of 2.0m length without magnetic ring and unshielded.	Provided by the manufacturer
6.	PV cable	---	---	The test uses a power cable of 2.0m length without magnetic ring and unshielded.	Provided by the lab.

3.3.Block Diagram of Test Setup

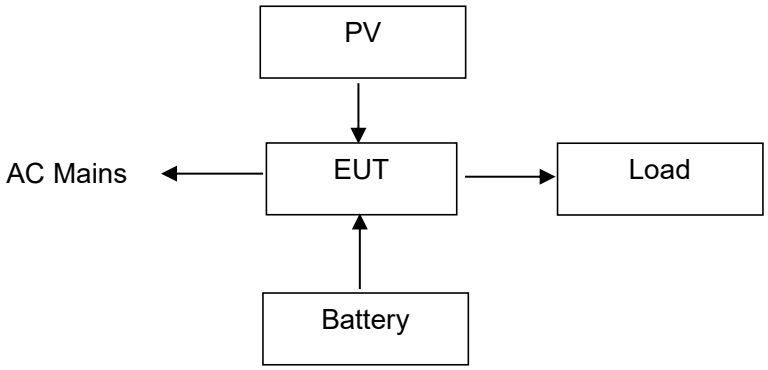
Mode 1: AC Charger Mode(AC Input+ Battery+ Load)



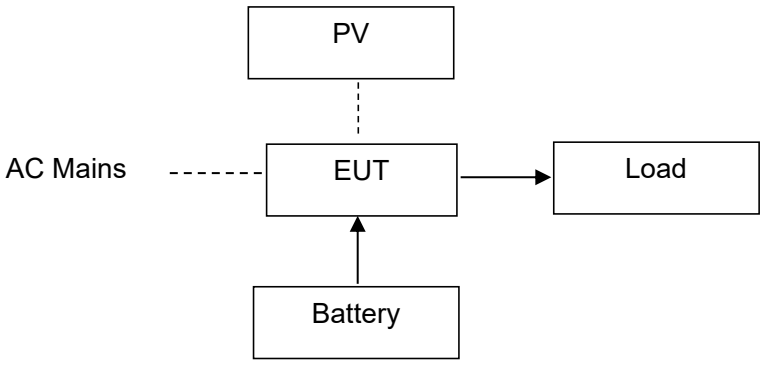
Mode 2: Solar Charger Mode (PV+ Battery+ Load)



Mode 3: Grid Mode (Grid+ PV+ Battery+ Load)



Mode 4: Inverter Mode(Battery+ Load）



Remark: The dashed line indicates a power-off connection.

3.4.Test Mode

No.	Test Mode	Remark
1.	AC Charger Mode(AC Input + Battery+ Load)	The mains input charges the battery, and the AC output connects to an analog load.
2.	Solar Charger Mode (PV+ Battery+ Load)	The PV input charges the battery, and the AC output connects to an analog load, also feed power into the AC mains.
3.	Grid Mode (Grid+ PV+ Battery+ Load)	PV and the battery are fed into the AC grid, and the AC output is connected to the analog load.
4.	Inverter Mode(Battery+ Load)	Battery inverter status, AC output connected to analog load.

3.5.Test Conditions

No.	Test Item	Test Mode	Test Voltage	Tested by	Remarks
1.	Conducted Emission - AC Power Input Port	1-4	AC 400V/50Hz PV 600V DC 480V	Taoshizheng	See note 1&4
2.	Conducted Emission - DC Power Input Port	2, 3	AC 400V/50Hz PV 600V DC 480V	Taoshizheng	See note 1&4
3.	Conducted Disturbances - Wired Network Port	---	---	---	---
4.	Radiated Emission	1-4	AC 400V/50Hz PV 600V DC 480V	Xieyizhe	See note 1&4
5.	Harmonic Current Emission	1, 3	AC 400V/50Hz	Chenrongbin	See note 1&&3&4
6.	Voltage Fluctuations & Flicker	1, 3	AC 400V/50Hz	Chenrongbin	See note 1&&3&4
7.	Electrostatic Discharges (ESD)	1-4	AC 400V/50Hz PV 600V DC 480V	Chenrongbin	See note 2&4
8.	Radio-Frequency Electromagnetic Field	1-4	AC 400V/50Hz PV 600V DC 480V	Jones	See note 1&4
9.	Fast Transients	1-4	AC 400V/50Hz PV 600V DC 480V	Chenrongbin	See note 1&4
10.	Surges	1-4	AC 400V/50Hz PV 600V DC 480V	Chenrongbin	See note 1&4
11.	Radio-Frequency Common Mode	1-4	AC 400V/50Hz PV 600V DC 480V	Jones	See note 1&4
12.	Power Frequency Magnetic Field	1-4	AC 400V/50Hz PV 600V DC 480V	Chenrongbin	See note 1&4
13.	Voltage Dips and Interruptions	1, 3	AC 400V 50Hz/60Hz	Chenrongbin	See note 1&4

Note:
1. The testing climatic conditions for temperature, humidity, and atmospheric pressure are within: 15~35°C, 30~70%, 86~106kPa.
2. The testing climatic conditions for temperature, humidity, and atmospheric pressure are within: 15~35°C, 30~60%, 86~106kPa.
3. Only the worst data were recorded on the report.
4. Only the most stringent limits were recorded on the report.
（This product is suitable for industrial environment, also suitable for residential environment, we use most stringent standards EN IEC 61000-6-3 and EN IEC 61000-6-2 for testing.）