

# Product Carbon Footprint Verification Statement

The Inventory of Product Carbon Footprint of  
Small Signal Diodes (SOT-23)

which is calculated by

**PANJIT International Inc.**

No.24, Gangshan N. Rd., Gangshan Dist.,  
Kaohsiung City 820115, Taiwan

Based on life cycle assessment verified in accordance  
with ISO 14064-3:2006 as meeting the requirements of



## ISO 14067:2018

**Basis of Assessment**

Cradle-to-Gate

Authorized by

Stephen Pao

Knowledge Deputy General Manager

Version 1

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TGP57-15-16 2207  
SGS Taiwan Ltd.

No. 136-1, Wu Kung Road, New Taipei Industrial Park, Wu Ku District,  
New Taipei City 24803, Taiwan

t (02) 22993279 f (02)22999453 www.sgs.com



Statement TW23/00541CFP, continued

Product Name	Small Signal Diodes (SOT-23)		
Declared Unit	Per Kpcs		
Life cycle GHG emissions			
Declared Unit emissions (Unit: kilograms of CO <sub>2</sub> e)			
Life Cycle Stage	Material	Manufacture	Total
Small Signal Diodes (SOT-23) : MOSFET · Schottky · SWITCHING · Zener · BJT	0.628	1.829	2.46

## Statement TW23/00541CFP, continued

SGS has been commissioned by PANJIT International Inc. (hereinafter referred to as “PANJIT”), No.24, Gangshan N. Rd., Gangshan Dist., Kaohsiung City 820, Taiwan to conduct the life cycle Greenhouse Gas (hereinafter referred to as “GHG”) emissions verification of Small Signal Diodes (SOT-23) in accordance with ISO 14064-3:2006 against the requirements of

### ISO 14067:2018

#### Roles and responsibilities

The management of PANJIT is responsible for the organization’s GHG information system, the development and maintenance of records and reporting procedures in accordance with that system, including the calculation and determination of the life cycle GHG emissions for product information and the reported life cycle GHG emissions of the product.

It is SGS’s responsibility to express an independent GHG verification opinion on the life cycle GHG emissions of the product.

SGS conducted a third party verification of the provided GHG assertion against the principles of ISO 14067:2018 and ISO 14064-3: 2006 in the period 09 September 2023 to 27 September 2023. The verification was based on the verification scope, objectives and criteria as agreed between PANJIT and SGS.

#### Level of Assurance

The level of assurance agreed is that of reasonable assurance.

#### Scope

PANJIT has commissioned an independent verification by SGS Taiwan of the reported Cradle-to-Gate life cycle GHG emissions associated with the sourcing of raw materials and through manufacture of the product, to establish conformance with ISO 14067:2018 and ISO 14064-3:2006 principles within the scope of the verification as outlined below.

- Title or description of activities : Product carbon footprint verification of the Cradle-to-Gate life cycle GHG emissions of Small Signal Diodes (SOT-23).
- Product Category Rule : Nil.
- Declared unit : Kpcs

## Statement TW23/00541CFP, continued

- System boundary : Covers a Cradle-to-Gate assessment of the full life cycle emissions; the system boundary was clearly defined in accordance with ISO 14067:2018. All GHG's enlisted on ISO 14067:2018.
- Data resources : The primary data collection is from manufacturing and operational control phases. The secondary data collection is from Carbon Footprint Information Platform, Ecoinvent 3、EF Database 2.0、EF Database 3.1、AGRIBALYSE 3.
- Life cycle assessment tool and index :
- Life cycle emissions are calculated by Excel and SimaPro 9.5.0.0.
  - IPCC 2021 AR6 GWP values are applied in this inventory.
- Manufacturing location :
  - No.24, Gangshan N. Rd., Gangshan Dist., Kaohsiung City 820115, Taiwan.
- GHG information for the following production period was verified : 01 January 2022 to 31 December 2022.
- Intended use of the verification statement : Private.

### Objective

The purpose of this verification exercise is, by review of objective evidence, to independently review:

- Whether the life cycle GHG emissions of the product are as declared by the organization's GHG assertion.
- The data reported is accurate, complete, consistent, transparent and free of material error or omission.

### Criteria

Criteria against which the verification assessment is undertaken is the principles of ISO 14067:2018 and ISO 14064-3:2006.

### Materiality

The materiality required of the verification was considered by SGS to 5%, based on the needs of the intended user of the GHG Assertion.

### Conclusion

PANJIT provided the GHG assertion based on the requirements of ISO 14067:2018. The data had been verified by SGS to a reasonable level of assurance, consistent with the agreed verification scope, objectives and criteria.

Statement TW23/00541CFP, continued

The GHG emission of each product is described as below:

Product Name	Small Signal Diodes (SOT-23)		
Declared Unit	Per Kpcs		
Life cycle GHG emissions			
Declared Unit emissions (Unit: kilograms of CO <sub>2</sub> e)			
Life Cycle Stage	Material	Manufacture	Total
Small Signal Diodes (SOT-23) : MOSFET · Schottky · SWITCHING · Zener · BJT	0.628	1.829	2.46

SGS’s approach is risk-based, drawing on an understanding of the risks associated with reporting the life cycle GHG emissions of product information and the controls in place to mitigate these risks. Our examination included assessment and a test of evidence relevant to the amounts and disclosures in relation to the reported life cycle GHG emissions of the product.

We planned and performed our work to obtain the information, explanations and evidence that we considered necessary to provide a reasonable level of assurance that the life cycle GHG emissions per Kpcs Small Signal Diodes (SOT-23) are fairly stated.

We conducted our verification with regard to the GHG assertion of PANJIT, which included assessment of the company GHG information system, monitoring and reporting protocol. This assessment included the collection of evidence that support the reported data and verification of whether the provisions of the protocol reference were consistently and appropriately applied.

In SGS’s opinion, the presented GHG assertion :

- is materially correct and is a fair representation of the GHG data and information, and
- is prepared in accordance with ISO 14067:2018 in relation to GHG quantification, monitoring and reporting.

**Confidentiality**

The reports and attachments may contain relevantly confidential information of the clients. In addition to being submitted as governmental application or certification documents, the reports and attachments are not allowed to be edited, duplicated, or published without the clients’ agreement in written form.

Statement TW23/00541CFP, continued

**Avoidance of Conflict of Interest**

The reports and attachments are completely complied with the standards and procedures that related-authorities established. The reports and attachments of auditing process are conduct with fairness and honesty. If not, the auditing institution not only has to bear the relevant compensation duties, but also to receive legal charge and punishment.

**Verifier Group**

Above statements coincide with auditing process with fairness and impartiality, and aim at the emission of clients.

Lead Verifier:



Verifier:



This statement shall be interpreted with the GHG assertion of PANJIT as a whole. This result shall be valid for a maximum period of two years, after which the GHG emission shall be re-assessed.

Note: This Statement is issued, on behalf of Client, by SGS Taiwan Ltd. ("SGS") under its General Conditions for Green Gas Verification Services available at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). The findings recorded hereon are based upon an audit performed by SGS. A full copy of this statement, the findings and the supporting Carbon Footprint Assertion may be consulted at PANJIT International Inc., No.24, Gangshan N. Rd., Gangshan Dist., Kaohsiung City 820115, Taiwan. This Statement does not relieve Client from compliance with any bylaws, federal, national or regional acts and regulations or with any guidelines issued pursuant to such regulations. Stipulations to the contrary are not binding on SGS and SGS shall have no responsibility vis-à-vis parties other than its Client.