



VERIFICATION OPINION OF CARBON FOOTPRINT ASSERTIONS

Opinion No.:
C706097-2023-AG-TWN-DNV

Date of Issue:
20 September, 2024

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This is to verify Nuvoton Technology Corporation's initiative reporting of Product Carbon Footprint Inventory Report (2023)

Scope of Verification

DNV Business Assurance (DNV) has been commissioned by Nuvoton Technology Corporation (hereafter "the Company") to perform a verification of the carbon footprint assertions in the Company's Product Carbon Footprint Inventory Report (2023) (hereafter "the Inventory Report") with respect to the target product specified, based on the data from the Company's following site(s):

- No. 4, Creation Rd. III, Hsinchu Science Park, Hsinchu, Taiwan (R.O.C.)

Verification Criteria

The verification was performed on the basis of ISO 14067:2018 and the Product Category Rules (PCR) for preparing an environmental product declaration (EPD) for Semiconductor Foundry (No. 2024-001, Ver. 2.1, 2024-04-10) to provide a consistent basis for carbon footprint identification, calculation, monitoring, and reporting.

Verification Opinion

It is DNV's opinion that the reliability of the information within the Inventory Report for site-specific data was verified with a reasonable level of assurance. We conclude that no systematic errors were detected, which causes us to believe that the specified data presented in the Inventory Report issued on September 10, 2024, is not reliable in accordance with ISO 14067:2018 and the Product Category Rules (PCR) for preparing an environmental product declaration (EPD) for Semiconductor Foundry (No. 2024-001, Ver 2.1, 2024-04-10).

Yu Chung Chen
Verifier

Place and date:
Taipei, 20 September, 2024

For the issuing office:
DNV Business Assurance Co., Ltd.
29Fl., No. 293, Sec. 2, Wenhua Rd.,
Banqiao District, New Taipei City 220,
Taiwan

Management Representative



Supplement to Verification Opinion

Process and Methodology

The reviews of the Inventory Report and the subsequent follow-up interviews have provided DNV with sufficient evidence to determine the fulfilment of the stated criteria. The Inventory Report correctly complies with the requirements of ISO 14067:2018 and the Product Category Rules (PCR) for preparing an environmental product declaration (EPD) for Semiconductor Foundry (No. 2024-001, Ver 2.1, 2024-04-10).

Quantification of Carbon Footprint

The Inventory Report covers the period from January 1, 2023, to December 31, 2023. Commercial life cycle assessment databases were utilized for acquiring relevant carbon footprint factors and assessing the life cycle impacts of target product. It is DNV's opinion that the quantification results of the carbon footprint in the Inventory Report are real, transparent, and measurable.

System Boundary of Verification

Cradle-to-gate, with raw material wafer included.

Declared Unit

Per 6-inch wafer

Carbon Footprint Verified (kg CO₂e/Declared Unit)*

Target Product	Declared Unit	Raw Material Acquisition Stage**	Production Stage	Total
Wafer	Per 6-inch wafer	16.38128	134.05926	150.4405

Note: The total value is rounded off to the 4th decimal place.

* The present results are derived using the IPCC AR5 GWP values, instead of the IPCC AR6 GWP values that were available during the verification activities, based on the justifications provided and documented by the Company.

** The present results include a portion of the raw material wafer supplied by the Company's clients with certain assumptions applied and specified in the Report.

Verification Opinion

Verified without Qualifications