

ICS 31.080.99
CCS L40



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 48163.2-2026

**Semiconductor devices - Semiconductor devices for energy
harvesting and generation - Part 2: Thermo power based
thermoelectric energy harvesting**

半导体器件 能量收集和产生半导体器件 第2部分：基于热功率的热电能量收集器
(English Translation)

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Table of Contents

Foreword

1 Scope

2 Normative references

3 Terms and definitions

Foreword

GB/T 48163.2-2026 is a recommended national standard (GB/T) of the People's Republic of China, issued on 28 September 2026 by the State Administration for Market Regulation and the Standardization Administration of China, with effect from 1 April 2027.

The document adopts an international standard (ISO or IEC).

It is under the responsibility of the Ministry of Industry and Information Technology (Electronics).

Classification: ICS 31.080.99; CCS L40.

1 Scope

Part 2 of the series on semiconductor devices for energy harvesting and generation addresses thermoelectric energy harvesting based on thermo power. Such devices convert temperature differences into electrical energy and are used to power small sensors and low power electronics without batteries. The standard adopts an international standard.

It is relevant to device manufacturers, researchers, designers of wireless sensor nodes and test laboratories that characterize energy harvesters. A common vocabulary and evaluation approach helps compare devices from different makers on a like-for-like basis.

As one part of a multi-part series, it sits alongside other parts that address different harvesting principles, so users should consider the series as a whole. The standard is a recommended national standard (GB/T) prepared under the Ministry of Industry and Information Technology. Companies developing self-powered electronics for the Chinese market may use it to align terminology and evaluation approach with domestic practice. It takes effect on 1 April 2027.