

ICS 31.080.99
CCS L40



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

GB/T 47239.4-2026

**Semiconductor devices - Flexible and stretchable semiconductor
devices - Part 4: Fatigue evaluation for flexible conductive thin film on
the substrate for flexible semiconductor devices**

半导体器件 柔性可拉伸半导体器件 第4部分：柔性半导体器件基板上柔性导电薄
膜的疲劳评价

(English Translation)

Issued on: August 28, 2026

Implemented on: March 1, 2027

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Terms and definitions

Foreword

GB/T 47239.4-2026 is a recommended national standard (GB/T) of the People's Republic of China, issued on 28 August 2026 by the State Administration for Market Regulation and the Standardization Administration of China, with effect from 1 March 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

Flexible electronics depend on thin conductive films that must keep working while they are bent, stretched or repeatedly flexed. This document, Part 4 of the series on flexible and stretchable semiconductor devices, concerns the fatigue evaluation of a flexible conductive thin film on the substrate used in flexible semiconductor devices. It gives researchers and engineers a defined way of judging how such a film withstands repeated mechanical loading.

The audience includes developers of flexible displays, wearable electronics and sensors, materials suppliers who coat or pattern conductive layers, and testing laboratories that characterise reliability. Because it addresses evaluation rather than product design, it is useful when comparing materials or process options and when reporting results in a way that others can reproduce. The standard is a recommended national standard and adopts an international standard. It was issued on 28 August 2026 and takes effect on 1 March 2027.