ICS 27.120
CCS F88

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 13178-2008

Replacing GB/T 13178-1991

Partially depleted gold silicon surface barrier detectors

金硅面垒型探测器

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Standardization Administration of China

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Foreword

The reference to the standard IEC 60333.1993 "Nuclear Instruments semiconductor charged particle detector test program." This standard replaces GB/T 13178-1991 "gold silicon surface barrier detectors" (hereinafter referred to as the original standard). This standard is retained most of GB/T 13178-1991, the main amendments, as follows:

--- Increase Preface;

--- Reference the new normative documents;

--- Product appearance and structure size to retain only type A, by deleting the original criteria B and C;

--- Partially depleted gold silicon surface barrier detectors free to retain only a minimum depletion layer depth is 300μm for a class, and the main performance increase "Allow maximum noise." The standard proposed by China National Nuclear Corporation. This standard by the National Standardization Technical Committee on nuclear instrumentation. This standard was drafted. nuclear (Beijing) Nuclear Instrument Factory. The main drafters of this standard. Li Zhiyong. This standard replaces the previous standard release case. GB/T 13178-1991. Gold silicon surface barrier detector

1 Scope

GB/T 13178-2008 is the Chinese national standard on partially depleted gold silicon surface barrier detectors, in the field of energy and heat transfer engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 2 July 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 April 2009. Classification: ICS 27.120, CCS F88. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies a partially depleted gold silicon surface barrier detectors (referred to probe) product classification, technical requirements, test methods, inspection regulations The like. This standard applies to partially depleted gold silicon surface barrier detector (not including the position sensitive detector). Lithium drift surface barrier detectors also May refer to.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 5201 semiconductor charged particle detector test method (GB/T 5201-1994, neq IEC 60333.1993)

GB/T 10257-2001 nuclear instruments and nuclear radiation detectors Quality inspection rule

3 Definitions and symbols

3.1 Terms and Definitions The following terms and definitions apply to this standard.

3.1.1 By the inversion layer on the surface of the junction is formed barrier semiconductor detector.

3.1.2 The radiation-sensitive semiconductor detector for that layer of semiconductor material in which the particle energy loss can be converted into an electrical signal.

3.1.3 Depletion layer of semiconductor material is smaller than the depth of the thickness of the substrate.

3.1.4 Radiation detectors most likely to enter that part of the surface depletion layer.

3.1.5 In the spectrum, the peak of the distribution curve formed by a single, horizontal axis between two points at half the peak difference.

3.1.6 Resolution detector incident particle energy capacity. Usually predetermined energy ray spectral line width at half maximum representation.

3.2 Symbols and codes The following symbols and codes apply to this standard.