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

GB/T 27700.1-2023

**Surface acoustic wave (SAW) filters of assessed quality - Part
1: Generic specification**

有质量评定的声表面波滤波器 第1部分：总规范

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents" Drafting. This document is Part 1 of GB/T 27700 "Quality-rated Surface Acoustic Wave Filters". GB/T 27700 has been released with Lower part.

1. General specifications;

2. User Guide. This document replaces GB/T 27700.1-2011 "Surface Acoustic Wave Filters with Quality Assessment Part

1. General Specifications" and is consistent with Compared with GB/T 27700.1-2011, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

---Added terms and definitions such as "actual reference", "stop band bandwidth", "reflection filter" and "sector IDT filter" (see 3.1.1.13, 3.1.2.16, 3.1.3.7, 3.1.3.6);

---Added "balanced filter measurement method" (see 8.5.13);

---Added "electrostatic discharge sensitivity test (destructive)" (see 8.6.20);

---Added some nominal values, such as the nominal frequency value "700M" (see 5.2.1), the operating temperature range "-40°C~125°C" (see 5.5). This document is equivalent to IEC 60862-1.2015 "Quality-rated surface acoustic wave filters - Part

1. General specifications". Please note that some contents of this document may involve patents, and the issuing organization of this document does not assume the responsibility for identifying patents. This document is proposed by the Ministry of Industry and Information Technology of the People's Republic of China. This document is under the jurisdiction of the National Technical Committee on Standardization of Piezoelectric Devices for Frequency Control and Selection (SAC/TC182). This document was drafted by: China Electronics Technology Group Corporation Twenty-sixth Research Institute, Beijing Aerospace Microelectronics Technology Co., Ltd., Jiaying Jiali Co., Ltd., Wuxi Haoda Electronics Co., Ltd., and China Electronics Technology Standardization Institute. The main drafters of this document. Zhang Jun, Chen Xiaoyang, Hu Yuanyun, Huang Hui, and Xue Chao. The previous versions of this document and the documents it replaces are as follows:

---First published as GB/T 27700.1-2011 in.2011;

---This is the first revision.

GB/T 27700 "Surface Acoustic Wave Filters with Quality Assessment" aims to specify the use of quality assessment procedures to evaluate surface acoustic wave filters. The quality requirements and test methods are planned to be composed of three parts.

1.General specifications. The purpose is to provide for the use of capability approval procedures and qualification approval procedures to evaluate the quality of surface acoustic wave filters. Quantitative test methods and general requirements.

1 Scope

GB/T 27700.1-2023 is Part 1 of the Chinese series on surface acoustic wave filters of assessed quality, and is the generic specification. A phone contains dozens of SAW filters, one for each band it must receive without hearing the others, and they are bought under a quality assessment system rather than tested individually by the customer - which means the generic specification carries the whole weight of what the buyer is relying on. The standard sets the priority of documents, the preferred ratings and characteristics including the nominal frequency, the operating temperature range, the climatic category and the bump, vibration, shock and leak rate severities, the marking of the filters, and the quality assessment procedures covering the initial manufacturing stage, the structurally similar components, the qualification approval and the lot-by-lot and periodic tests. It took effect on 1 December 2023.

This document specifies the test methods and general applicability of surface acoustic wave filters used for quality assessment in capability approval procedures or qualification approval procedures. Require.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document.

GB/T 2421-2020 Environmental Testing Overview and Guidelines (IEC 60068-1.2013,IDT)

GB/T 2423.23-2013 Environmental testing of electrical and electronic products Part

20 Environmental testing Part 2-

20.Test test T. Test method for solderability and resistance to soldering heat of leaded components IEC 60068-2-

21 Environmental testing Part 2-

21.Test test U. Strength of terminals and overall mounting parts devices) Part 2-

27.Tests-TestEaandguidance.Shock)

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