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

GB/T 43186.2-2023

**Surface acoustic wave (SAW) and bulk acoustic wave (BAW)
duplexers of assessed quality - Part 2: Guidelines for the use**

有质量评定的声表面波（SAW）和体声波（BAW）双工器 第2部分：使用指南
(English Translation)

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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 2 of GB/T 43186 "Quality-rated Surface Acoustic Wave (SAW) and Bulk Acoustic Wave (BAW) Duplexers".

GB/T 43186 has released the following parts.

---Part 1: General specifications;

---Part 2: User Guide.

This document is equivalent to IEC 62604-2:2022 "Quality-rated Surface Acoustic Wave (SAW) and Bulk Acoustic Wave (BAW) Duplexers Part 2 Section. User Guide.

This document has made the following minimal editorial changes.

---"TXfilter" in Figure 8 is corrected to "RXfilter", which is "receiver filter".

Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents.

Introduction

GB/T 43186 "Quality-rated Surface Acoustic Wave (SAW) and Bulk Acoustic Wave (BAW) Duplexers" aims to provide surface acoustic wave (SAW) the general requirements, quality assessment procedures, appearance and terminal drawings of bulk acoustic wave (BAW) duplexers are planned to be composed of three parts.

---Part 1: General specifications. The purpose is to specify the terms and definitions of surface acoustic wave (SAW) and bulk acoustic wave (BAW) duplexers, divided into categories and characteristics, and quality assessment procedures.

---Part 2: User Guide. The purpose is to provide the basic structure and operation of surface acoustic wave (SAW) and bulk acoustic wave (BAW) duplexers.

The operating principle is used to provide guidance for users to reasonably select resonators and meet their usage needs.

---Part 3: Standard shape and terminal connection. The purpose is to provide surface acoustic wave (SAW) and bulk acoustic wave (BAW) duplexers Commonly used outline drawings and terminal function definitions.

Quality-rated surface acoustic waves (SAW) and Bulk Acoustic Wave (BAW) Duplexer Part 2: User Guide

1 Scope

This document applies to duplexers. The function of the duplexer is to separate the receiving signal and the transmitting signal, and is a key component in two-way wireless communication.

Duplexers are usually used in CDMA mobile communication systems, such as narrowband code division multiple access (N-CD-MA), Wideband Code Division Multiple Access (W-CDMA)/Universal Mobile Telecommunications System (UMTS) in the third generation mobile communication system (3G) or fourth generation Long-term evolution (LTE) of

mobile communication systems (4G).

This document looks at some basic questions about the principles of surface acoustic wave and bulk acoustic wave duplexers and how to use them, that is, what the user needs to do Issues to consider before purchasing surface acoustic wave and bulk acoustic wave duplexers for new applications. This document is to ensure that users get satisfactory performance.

Since surface acoustic wave and bulk acoustic wave duplexers have very similar performance characteristics, it would be convenient for users to use one standard for these two types of duplexers.

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.

IEC 60862-1 Qualified surface acoustic wave (SAW) filters Part 1: General specification [Surfaceacousticwave Note. GB/T 27700.1-2023 Surface acoustic wave filters with quality assessment Part 1: General specifications (IEC 60862-1:2015, IDT) IEC 62575-1 Radio frequency (RF) bulk acoustic wave (BAW) filters with quality assessment Part 2: Instructions for use [Radio

3 Terms and definitions

The following terms and definitions apply to this document.

ISO and IEC maintain terminology databases used for standardization at the following addresses.

3.1 Terminology related to response characteristics

3.1.1

guardband

To prevent interference, the unused portion of the radio frequency spectrum between radio frequency bands.

3.1.2

cross-isolation in a multiplexer, the ratio of leakage power from one of the transmit ports to one of the receive ports from another nominal frequency band.