



Product Overview

RHYTHM SB3230: Preconfigured DSP System for Hearing Aids, with up to 4 WDRC channels

For complete documentation, see the [data sheet](#)

Product Description

ON Semiconductor's Rhythm™ SB3230 hybrid is a trimmer-configurable DSP system based on a four-channel compression circuit featuring adaptive feedback cancellation and adaptive noise reduction.

The Rhythm SB3230's Adaptive Noise Reduction (ANR) monitors noise levels independently in 64 individual bands and employs advanced psychoacoustic models to provide user comfort.

In addition to these adaptive algorithms, Rhythm SB3230 also supports the following features: up to four channel WDRC, low-distortion compression limiting, cross fading between audio paths for click-free memory changes, eight-band graphic equalizer, eight configurable generic biquad filters, programming speed enhancements, in-channel squelch to attenuate microphone and circuit noise in quiet environments, optional peak clipping, flexible compression adjustments, volume control, rocker switch, noise generation for tinnitus treatment, and industry-leading security features to avoid cloning and software piracy.

A trimmer interface supports manual circuit configuration. It continuously monitors trimmer positions and translates them into the hearing-aid parameters of choice. A Serial Data or I²C Interface provides full programmability at the factory and in the field.

The Rhythm SB3230 hybrid contains a 256 kbit EEPROM intended for programmable and trimmer based devices.

Software Support

ARK is a set of software building blocks that can help reduce the time it takes to develop hearing aid fitting software. ARKonline® is an efficient web-based tool for creating product libraries and keeping them organized. To access ARKonline, please go to [www.onsemi.com/arkonline](http://ark.onsemi.com/).

Features

- Adaptive noise reduction
- Adaptive feedback cancellation
- WDRC compression with choice of 1, 2 or 4 channels of compression
- Auto telecoil with programmable delay
- EVOKE Lite™ acoustic indicators
- Noise Generator for tinnitus treatment or in-situ audiometry
- Frequency response shaping with graphic EQ
- Trimmer compatibility - four three-terminal trimmers with configurable assignments of control parameters
- I²C and SDA programming
- Rocker switch support for memory change and/or volume control adjustment

Applications

- Hearing Aids

For more information please contact your local sales support at www.onsemi.com

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