

1 General Description

The RDA5830/1 is a single-chip broadcast FM/AM/LW/SW (LW/SW only for RDA5830) receiver with fully integrated synthesizer, IF selectivity and MPX decoder. The chip uses the CMOS process, support multi-interface and require the least external component. The package size is 4X4mm and is completely adjustment-free. All these make it very suitable for portable devices.

The RDA5830/1 has a powerful low-IF digital audio processor, this make it have optimum sound quality with varying reception conditions.

The RDA5830/1 use auto frequency calibration, this make it have perfectly performance and agility.

The RDA5830/1 support world band FM/AM (RDA5831 also support LW/SW) frequency band receive, support weather band and also support RDS/RBDS receive.

The RDA5830/1 directly support wide power supply range (1.8V~5V).

1.1 Features

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| <ul style="list-style-type: none"> I CMOS single-chip fully-integrated FM/AM receiver I Low power consumption <ul style="list-style-type: none"> Ø Total current consumption lower than 20mA at FM mode and 23mA at AM mode I Support worldwide and campus frequency band <ul style="list-style-type: none"> Ø 500-2000 KHz AM band Ø 65-220 MHz FM band Ø 150-500KHz LW band (RDA5831 only) Ø 2-30MHz SW band (RDA5831 only) Ø Weather band I Digital low-IF tuner <ul style="list-style-type: none"> Ø Image-reject down-converter Ø High performance A/D converter Ø IF selectivity performed internally | <ul style="list-style-type: none"> I Fully integrated digital frequency synthesizer <ul style="list-style-type: none"> Ø Fully integrated on-chip RF and IF VCO Ø Fully integrated on-chip loop filter I Autonomous search tuning I Support RDS/RBDS receive I Support SNR FM searching I Include 4K memory I Support 32.768KHz crystal oscillator I Digital auto gain control (AGC) I Digital adaptive noise cancellation <ul style="list-style-type: none"> Ø Mono/stereo switch Ø Soft mute Ø High cut I Programmable de-emphasis (50/75 µs) |
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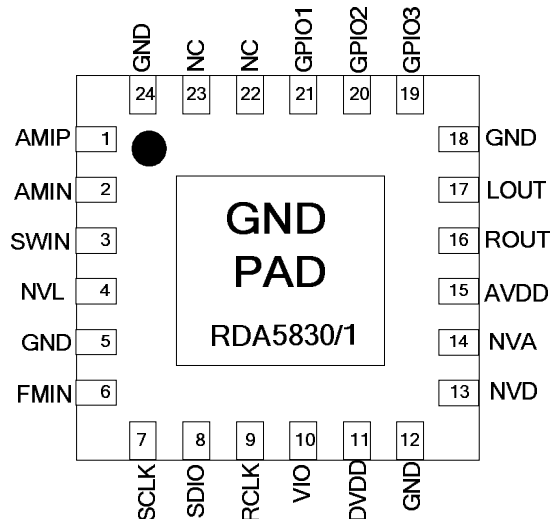


Figure 1-1. RDA5830/1 Top View