

SINGLE-CHIP BROADCAST FM RADIO TUNER

Rev.1.0–Jul.2009

1 General Description

The RDA5802ES (RDA5802S Enhanced) is a single-chip broadcast FM stereo radio tuner with fully integrated synthesizer, IF selectivity and MPX decoder. The tuner uses the CMOS process, support multi-interface and require the least external component. The package size is 3X3mm and is completely adjustment-free. All these make it very suitable for portable devices.

The RDA5802ES has a powerful low-IF digital audio processor, this make it have optimum sound quality with varying reception conditions.

The RDA5802ES can be tuned to the worldwide frequency band.

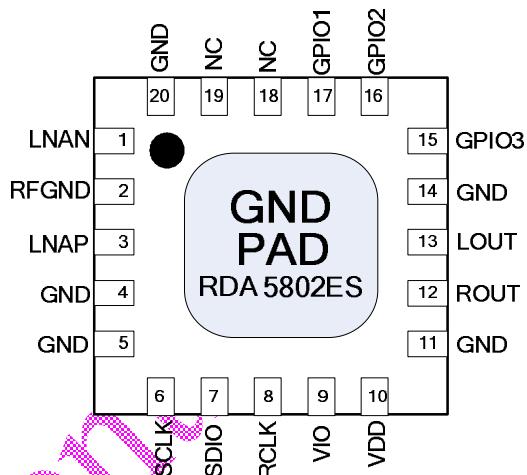


Figure 1-1. RDA5802ES Top View

1.1 Features

- | CMOS single-chip fully-integrated FM tuner
- | Low power consumption
 - | Ø Total current consumption lower than 22mA at 3.0V power supply
- | Support worldwide frequency band
 - | Ø 65 -108 MHz
- | Digital low-IF tuner
 - | Ø Image-reject down-converter
 - | Ø High performance A/D converter
 - | Ø IF selectivity performed internally
- | Fully integrated digital frequency synthesizer
 - | Ø Fully integrated on-chip RF and IF VCO
 - | Ø Fully integrated on-chip loop filter
- | Autonomous search tuning
- | Support 32.768KHz crystal oscillator
- | Digital auto gain control (AGC)
- | Digital adaptive noise cancellation
 - | Ø Mono/stereo switch
 - | Ø Soft mute
- | Ø High cut
- | Programmable de-emphasis (50/75 µs)
- | Receive signal strength indicator (RSSI)
- | Bass boost
- | Volume control
- | I²S digital output interface
- | Line-level analog output voltage
- | 32.768 KHz 12M,24M,13M,26M,19.2M,38.4MHz Reference clock
- | 2-wire serial control bus interface
- | Directly support 32Ω resistance loading
- | Integrated LDO regulator
- | Ø 1.8 to 5.5 V operation voltage
- | 3X3mm 20 pin QFN package

1.2 Applications

- | Cellular handsets
- | MP3, MP4 players
- | Portable radios, PDAs, Notebook