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Analog mobile television receiver system-on-chip

The current position is : Home - Products - Analog mobile television receiver

RDA5888E Fully Integrated, Low Power Analog TV On a Chip

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The RDA5888E is a fully integrated direct conversion SOC for NTSC/PAL/SECAM analog TV standards. The receiving frequency range is from 50MHz to 870MHz. The RDA5888E is a true single-chip design, requiring no external SAW or ceramic filters, even high Q off-chip inductors to achieve full channel selectivity with an average current consumption of 100mA.

The RDA5888E utilizes a direct-conversion, zero-IF architecture that allows for extremely good image and adjacent channel signal rejection. The RDA5888E consists of a variable gain LNA, quadrature downconverter, variable low-pass filters, reference oscillator, VCOs, synthesizer, high performance ADC, DSP for decoder. The DSP provides final adjacent-channel rejection and audio/video carrier demodulation. The audio stream is FM-demodulated and passed to the audio output port, whereas the CVBS video stream is separated into component video and output onto the video data bus.

Based on RDA's some innovative technique, the RDA5888E offers excellent phase noise and very low implementation loss, required for NTSC/PAL/SECAM decoder. This tuner RF IC does not require a balun and its fully integrated design saves valuable board space and simplifies RF layout.

Features

1. Single-chip Tuner with NTSC/PAL/SECAM decoder
2. Worldwide FM radio reception
3. 100mA power consumption with digital output buffer
4. Minimal external passive components
5. Simple LNA matching components
6. 50M- 870MHz RF reception
7. 100dB dynamic range
8. <6 dB noise figure
9. Fully integrated digital AGC loop
10. Fully integrated channel selectivity
11. Fully integrated PLL (including loop filter)
12. > 35 dBc first-adjacent rejection
13. Internal blank-level clamping
14. Dynamic ghosting/fading compensation
15. Support 26/27MHz crystal
16. All-digital video timing generation
17. ITU-601 compliant
18. Analog and I2S digital audio output
19. I2C control port
20. On chip regulator voltage input 3V to 4.5V.
21. 40-pin 6x6 QFN package

Applications

1. Portable applications such as laptops, portable DVD players
2. Handheld applications such as cellular phones and PDAs

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