PRODUCT BRIEF

MxL203RF

Low-Power DVB-C Silicon Tuner

MxL203RF is a highly integrated low power silicon tuner targeting DVB-C digital cable broadcast standards (J.83 Annexes A & C). Based on MaxLinear's breakthrough implementation of a silicon tuner in pure digital CMOS technology, MxL203RF delivers exceptional performance, lowest power consumption, smallest footprint and the lowest total solution cost.

Consuming three to five times less power than other tuner solutions, the MxL203RF is uniquely suited for power sensitive applications, space constrained solutions and multi-tuner designs. This power savings enables tremendous design freedom in dissipation of heat and allows for form factors previously considered impossible.

The cost advantages of standard digital CMOS enable MxL203RF to be the most competitive solution in any digital TV market. All broadband input signal filtering and channel selection filtering have been completely integrated, reducing the external bill of materials (BOM) to a small number of standard value discrete components. SAW filters or any other external filters are not required for any application. The RF input is a single-ended 75Ω interface requiring no external transformers.

The IF output frequency of MxL203RF is SW configurable which provides a seamless interface to all commonly available demodulators on the market today.

All RF gain control settings are fully integrated and are automatically controlled by the MxL203RF without any interaction from the demodulator. This ensures a highly simplified AGC implementation without the need for any complicated take-over-point adjustments.

MxL203RF utilizes an API based SW architecture, reducing the programming of the device to a few simple commands and eliminating the need for complicated register calls. Additionally, MxL203RF requires no complicated spur avoidance algorithms commonly needed by other solutions. This SW simplicity enables quick and easy implementation of the driver source code on any SW platform.

MxL203RF is available in a 5x5mm QFN 32 package. Complete reference designs are available for a variety of applications and standards from MaxLinear as well as from MaxLinear's partners.

Supporting information is available upon request, including reference schematics, 2 and 4 layer PCB layouts, detailed bill of materials (BOM), HW and SW design guides, source code and standard specific performance test reports.

Applications

- Set-Top Boxes
- Cable DTAs
- Residential Gateways
- Digital Televisions
- Tuner Modules

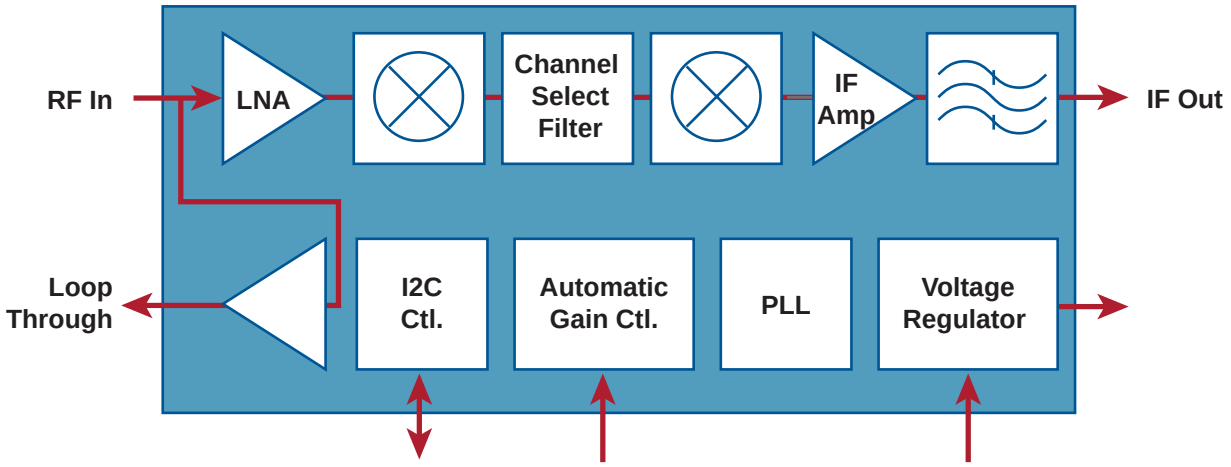
Features

- 44MHz to 880MHz tuning range
- Programmable IF output
- Programmable IF spectrum inversion
- Reference clock output for crystal sharing
- I2C compatible interface
- API based SW interface
- QFN 32 Package, 5x5mm

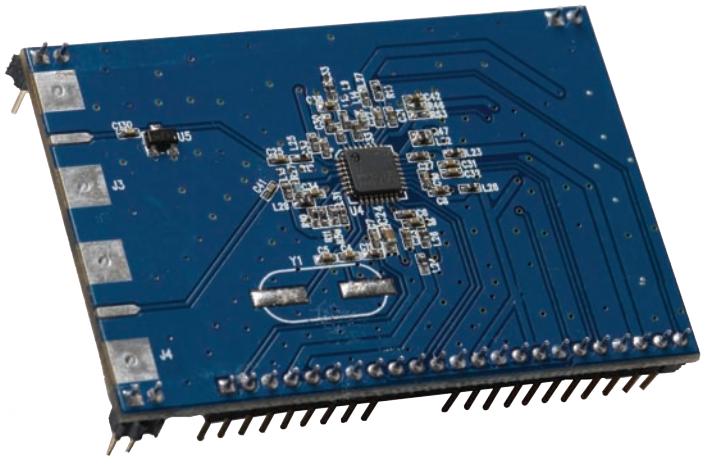
Benefits

- Ultra low power – 400mW
- No external SAW filters
- Low BOM cost
- Reference clock output
- Highly accurate input power level reporting

Block Diagram



Evaluation Board



Ordering Information

Product	Part Number	Description
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