Si3219x: ProSLIC® Single FXS Solution

ProSLIC® Single-Channel FXS Solutions

The Si3219x Single FXS ProSLIC® devices implement a complete foreign exchange station (FXS) telephony interface solution in a single package that conforms to all relevant global specifications. The Si3219x ProSLIC ICs operate from a 3.3 V supply and have a 3-wire ISI digital interface with 1.8 to 3.3 V I/O. The Si3219x devices are designed to operate with a capacitive boost tracking battery supply for lower power, cost, and footprint than other tracking supplies in the industry. Self-testing and metallic loop testing (MLT) are facilitated by the built-in DSP, monitor ADC, and test load. The devices are available with wideband audio for better-than-PSTN voice quality and DTMF detection. The Si3219x devices are available in a 4 x 6 mm, 38-pin QFN package.

Applications:
- VoIP Gateways and Routers
- xDSL IADs
- Optical Network Terminals/Units (ONT/U)
- Analog Terminal Adapters (ATA)
- Cable eMTA
- Wireless Fixed Terminals (WFT)
- Wireless Local Loop (WLL)
- WiMAX CPE

Si3219x
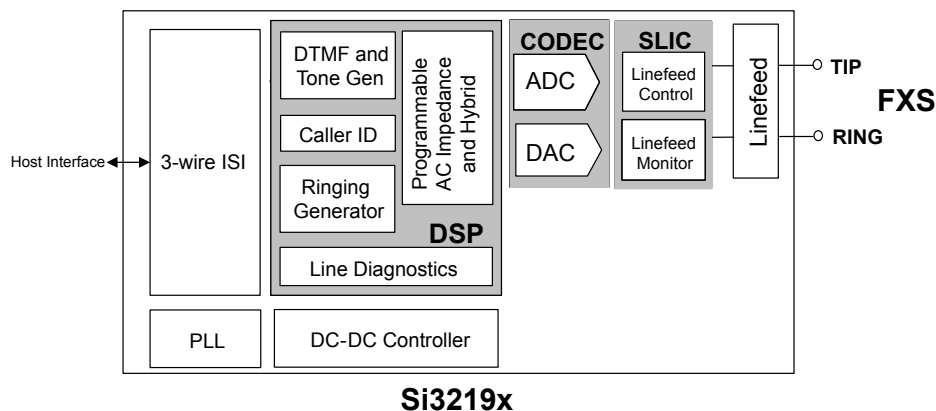
KEY FEATURES

- Complete FXS solution in a single 4 x 6 mm package
- Performs all BORSCHT functions
- Ideal for short- or medium-loop applications
- Ultra-low power consumption
- Patented low-power ringing
- Adaptive ringing
- Dynamic overhead control
- Ringing current limiting
- Simplified configuration and diagnostics
  - Supported by ProSLIC API
  - Audio diagnostics with loopback
  - Integrated test load
- Global programmability
- Wideband voice support
- On-hook transmission
- Loop or ground start operation
- Smooth polarity reversal
- A-Law/µ-Law companding, linear PCM
- Flexible integrated tracking dc-dc controller supporting patent-pending low-cost capacitive boost configuration
- Software-programmable parameters:
  - Ringing frequency, amplitude, cadence, and waveshape
  - Two-wire ac impedance
  - Transhybrid balance
  - DC current loop feed (10–45 mA)
  - Loop closure and ring trip thresholds
  - Ground key detect threshold
- Pulse metering
- DTMF generation
- DTMF detection (Si32193)
- 3.3 V operation
- Support for 1.8 V I/O
- Maximum battery up to –100 V
- Pb-free/RoHS-compliant packaging
- 3-wire Integrated Serial Interface (ISI)

1. Ordering Guide

Table 1.1. Si3219x Ordering Guide

P/N	Description	Package Type[2]	Max V_{BAT}	Temperature
Si32192-A-FM1	Wideband FXS, ISI interface, parametric MLT	QFN38	−100 V	0 to 70 °C
Si32192-A-GM1	Wideband FXS, ISI interface, parametric MLT	QFN38	−100 V	−40 to 85 °C
Si32193-A-FM1	Wideband FXS, ISI interface, parametric MLT, DTMF detection	QFN38	−100 V	0 to 70 °C
Si32193-A-GM1	Wideband FXS, ISI interface, parametric MLT, DTMF detection	QFN38	−100 V	−40 to 85 °C
Si32192-A-ZM1	Wideband FXS, ISI interface, parametric MLT, customer-specific	QFN38	−100 V	0 to 70 °C
Si32192-A-ZM2	Wideband FXS, ISI interface, parametric MLT, customer-specific	QFN38	−100 V	0 to 70 °C
Si32193-A-ZM1	Wideband FXS, ISI interface, parametric MLT, DTMF detection, customer-specific	QFN38	−100 V	0 to 70 °C
Si32193-A-ZM2	Wideband FXS, ISI interface, parametric MLT, DTMF detection, customer-specific	QFN38	−100 V	0 to 70 °C

Note:

1. Adding the suffix "R" to the part number (e.g. Si3219x-A-FMR) denotes tape and reel.
2. QFN - Quad-Flat No-leads.

Table 1.2. Ordering GuideSi3219x Evaluation Kits

Part Number	Description	V_{BAT} Max[1]
Si32193ACB10SL0EVB	ISI Wideband FXS with DTMF detection and low-cost capacitive boost dc-dc converter EVB	−100 V

Note:

1. EVB V_{BAT} max may be limited by BOM option.

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