



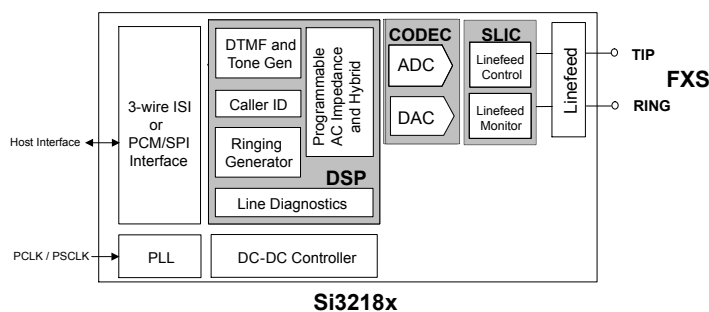
# THE DATASHEET OF SI32183-A-GM

# Si3218x Data Short: ProSLIC® Single-Chip FXS Solution

The Si3218x devices are pin-compatible single-channel ProSLIC® products that implement a complete foreign exchange station (FXS) telephony interface solution in accordance with all relevant global specifications. The Si3218x ProSLIC ICs operate from a 3.3 V supply and interface to standard PCM/SPI or 3-wire ISI digital interfaces with 3.3 V or 1.8 V I/O. The Si3218x integrated dc-dc controller automatically generates the optimal battery voltages required for each line state. Si3218x ICs are available with voltage rating of –106 V. The Si3218x devices are available in a 5x6 mm 36-pin QFN package and a 6x6 mm 40-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



**Si3218x**  
Functional Block Diagram

## KEY FEATURES

- Complete FXS solution in a single 5x6 mm or 6x6 mm package
- Performs all BORSCHT functions
- Ideal for short to medium loops
- Global programmability
- Patented low-power ringing
- Simplified configuration and diagnostics
  - Supported by ProSLIC API
  - Audio diagnostics with loopback
  - Integrated test load
- Ultra low power consumption
- Wideband voice support
- On-hook transmission
- Loop or ground start operation
- Smooth polarity reversal
- A-Law/ $\mu$ -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 (Si32181/3/5)
- 3.3 V operation
- Support for 1.8 V I/O
- Maximum battery up to –106 V
- Pb-free/RoHS-compliant packaging
- Two digital interface options
  - 3-wire Integrated Serial Interface (ISI) or PCM/SPI interface

**Table 1.1. Si3218x Ordering Guide**

| P/N          | Description                                                                                 | Package Type <sup>2</sup> | Max V <sub>BAT</sub> | Temperature  |
|--------------|---------------------------------------------------------------------------------------------|---------------------------|----------------------|--------------|
| Si32180-A-FM | Wideband FXS, selectable ISI/PCM interface, daisy-chain mode, practical MLT                 | QFN40                     | –106 V               | 0 to 70 °C   |
| Si32180-A-GM | Wideband FXS, selectable ISI/PCM interface, daisy-chain mode, practical MLT                 | QFN40                     | –106 V               | –40 to 85 °C |
| Si32181-A-FM | Wideband FXS, selectable ISI/PCM interface, daisy-chain mode, practical MLT, DTMF detection | QFN40                     | –106 V               | 0 to 70 °C   |
| Si32181-A-GM | Wideband FXS, selectable ISI/PCM interface, daisy-chain mode, practical MLT, DTMF detection | QFN40                     | –106 V               | –40 to 85 °C |
| Si32182-A-FM | Wideband FXS, ISI interface, parametric MLT                                                 | QFN36                     | –106 V               | 0 to 70 °C   |
| Si32182-A-GM | Wideband FXS, ISI interface, parametric MLT                                                 | QFN36                     | –106 V               | –40 to 85 °C |
| Si32183-A-FM | Wideband FXS, ISI interface, parametric MLT, DTMF detection                                 | QFN36                     | –106 V               | 0 to 70 °C   |
| Si32183-A-GM | Wideband FXS, ISI interface, parametric MLT, DTMF detection                                 | QFN36                     | –106 V               | –40 to 85 °C |
| Si32184-A-FM | Wideband FXS, PCM interface, parametric MLT                                                 | QFN40                     | –106 V               | 0 to 70 °C   |
| Si32184-A-GM | Wideband FXS, PCM interface, parametric MLT                                                 | QFN40                     | –106 V               | –40 to 85 °C |
| Si32185-A-FM | Wideband FXS, PCM interface, parametric MLT, DTMF detection                                 | QFN40                     | –106 V               | 0 to 70 °C   |
| Si32185-A-GM | Wideband FXS, PCM interface, parametric MLT, DTMF detection                                 | QFN40                     | –106 V               | –40 to 85 °C |

**Note:**

1. Adding the suffix "R" to the part number (e.g. Si3218x-A-FMR) denotes tape and reel.
2. QFN - Quad-Flat No-leads.

**Table 1.2. Ordering Guide—Si3218x Evaluation Kits**

| Part Number        | Description                                                                                   | V <sub>BAT</sub> Max |
|--------------------|-----------------------------------------------------------------------------------------------|----------------------|
| Si32183ACB10SL0EVB | ISI Wideband FXS with DTMF detection low-cost capacitive boost dc-dc converter EVB            | –100 V               |
| Si32185ACB10SL0EVB | PCM interface, wideband FXS with DTMF detection low-cost capacitive boost dc-dc converter EVB | –100 V               |

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

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