

Tsi205-CED:

Primary Side Monitor

Product Feature Sheet

Features

- Input voltage measurement (24 or 48 V)
- 10-bit analog-to-digital converter (ADC)
- Input voltage measurement accuracy 0.5%
- Fuse status monitoring, high and low side
- Primary current sensing and measurement
- Primary side undervoltage, overvoltage and brownout detection
- Input UV shutdown accuracy <1%
- Isolated PI-Link interface to secondary sidecontroller transmits primary voltage, current, fuse status and input status data
- Compatible with standard inrush limiters
- Self-powered from 24 V or 48 V nominal

Device Overview

The Tsi205-CED is designed to monitor parameters on the high voltage primary side of an on-card power system in a distributed power architecture.

In a 24 V or 48 V application, the Tsi205-CED measures input voltage and current and transmits the digitized values through a serial interface to the secondary side controller (Tsi257-CED). Input overvoltage (OV) and undervoltage (UV) detection are provided, with programmable thresholds set by external resistors.

The Tsi205-CED provides on-off control for an isolated power converter that supplies the intermediate bus voltage for the card. The Tsi205-CED monitors the status of up to four input fuses, both high side and low side. Fuse status information is transmitted to the secondary side through the serial PI-Link interface.

Typical Applications

- Telecom and datacom cards
- ATCA (Advanced Telecom Compute Architecture) systems
- Industrial controllers
- Single board computers

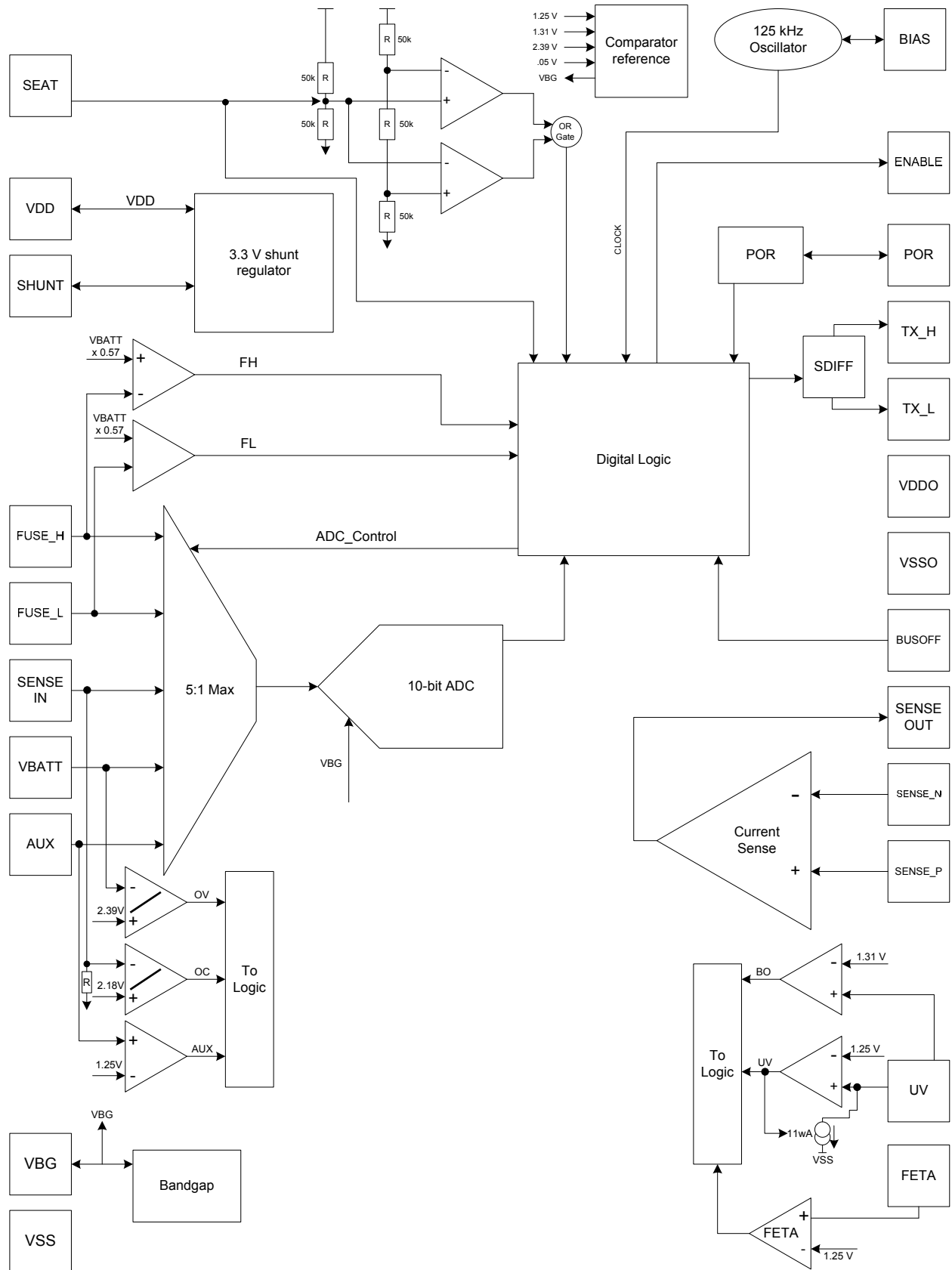
Packaging

- The Tsi205-CED is packaged in a 32-lead Low Profile Quad Flat Package (LQFP).

Absolute Maximum Ratings:

Maximum Input Voltage (analog pins)	-0.3 V to (V _{DD} + 0.3) V
Maximum Input Voltage (digital pins)	-0.3 V to 6 V
Current into any pin	5 mA
Power dissipation (continuous)	600 mW
Operating Temperature Range	-40 °C to +85 °C
Junction Temperature	+150 °C
Storage Temperature	-65°C to +150 °C
Lead Temperature	+300 °C
Soldering Temperature	260 °C
ESD Rating (JESD22-A114-B, HBM)	2000 V
Latch-up Testing per JEDEC	±100 mA

Tsi205-CED Primary Side Monitor



Functional Block Diagram