

Tsi206-CED:

Primary Side Monitor with Inrush Control

Product Feature Sheet

Features

- Input voltage measurement (24 or 48 V)
- 10-bit analog-to-digital converter (ADC)
- Input voltage measurement accuracy 0.5%
- Control of inrush current
- Fuse status monitoring, high and low side
- Primary current sensing and measurement
- Primary side undervoltage, overvoltage, and brownout detection
- Electronic circuit breaker function
- Enable control for intermediate bus power converter
- Isolated PI-Link interface to secondary side controller transmits primary voltage, current, fuse status, and input status data
- Input UV shutdown accuracy <1%
- Self-powered from 24 V or 48 V nominal

Packaging

- The Tsi206-CED is packaged in a 32-lead Low Profile Quad Flat Pack (LPQFP) package.

Typical Applications

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

Device Overview

The Tsi206-CED is designed to monitor parameters on the high voltage primary side of an on-card power system in a distributed power architecture.

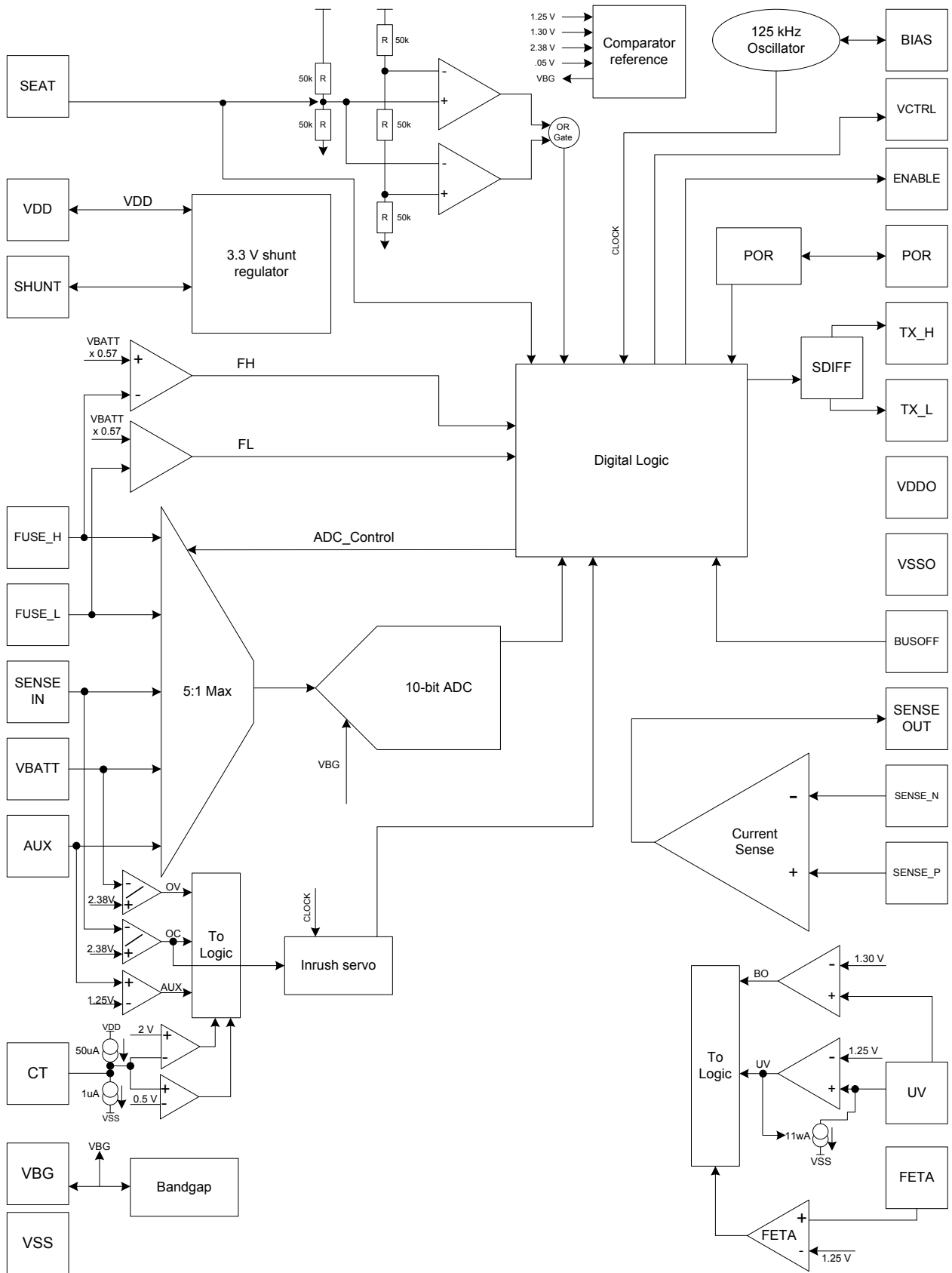
In a typical 24 V or 48 V application, the Tsi206-CED measures input voltage and current and transmits the digitized values through the PI-Link interface to the secondary side controller (Tsi257). It also controls an external MOSFET to limit card inrush current at startup. Programmable input overvoltage (OV) and undervoltage (UV) detection are provided.

The Tsi206-CED provides on-off control for an isolated power converter that supplies the intermediate bus voltage for the card. It 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.

Absolute Maximum Ratings:

Maximum Input Voltage	-0.3 V to ($V_{DD} + 0.3$) 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

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Functional Block Diagram