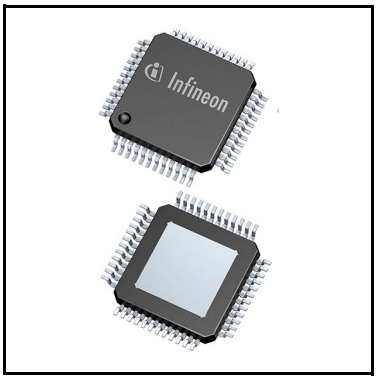
TLE9015QU BMS Transceiver IC - UART to iso UART

Datasheet



Features

- General
  - Two UART ports for serial communication to host microcontroller
  - Two iso UART interfaces for communication to other BMS ICs
  - 2 Mbit/s data rate for fast communication
  - Fully transparent communication scheme from UART to iso UART
  - Ring mode topology compatible
- Communication ports
  - Integrated internal logic to minimize pin count on the UART side
  - Differential current edge triggered iso UART communication interface
  - High robustness against external noise
- General purpose error pin
  - Two external fault inputs (EMM and ERRQ_ext)
  - Latching error output pin to trigger external microcontroller
- Supporting diagnosis features
  - Internal supply monitoring
- Green product (RoHS-compliant)

Product validation

Qualified for automotive applications. Product validation according to AEC-Q100.

Description

The TLE9015QU is a general purpose transceiver IC to be used in battery systems to enable the communication between the main host microcontroller and the cell supervision ICs which are usually connected to the battery module potential. The IC is designed for Li-Ion battery packs used in hybrid electric vehicles (HEV), plug-in hybrid electric vehicles (PHEV), battery electric vehicles (BEV) as well as stationary Lithium-Ion batteries.

Additionally to the physical layer translation, the TLE9015QU offers the possibility to communicate potential errors detected in a cell inside the battery pack to the main microcontroller.

Type	Package	Marking
TLE9015QU	PG-TQFP-48	TLE9015QU

1 Block diagram

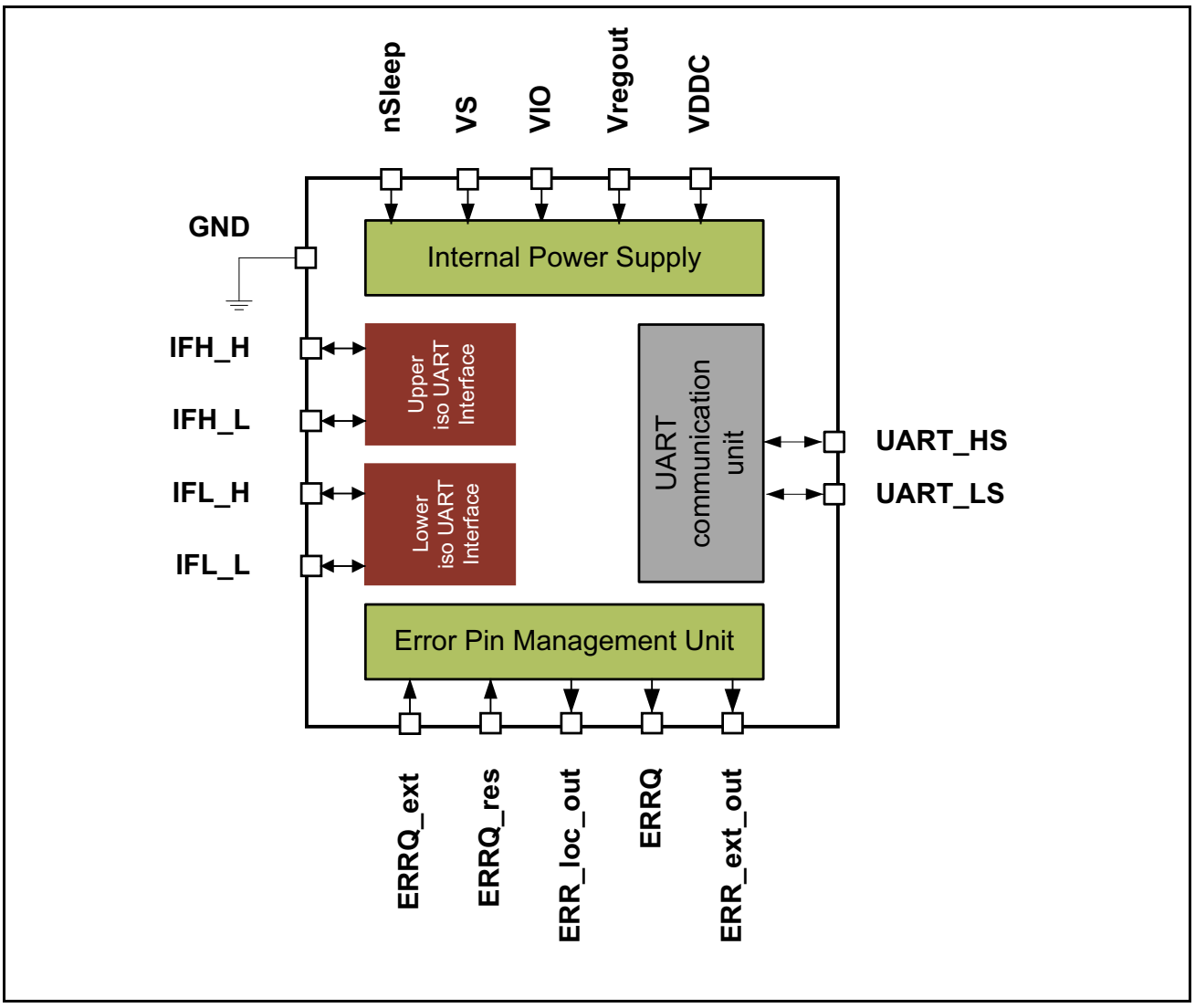


Figure 1-1 Block diagram

2 Pin configuration

2.1 Pin assignment

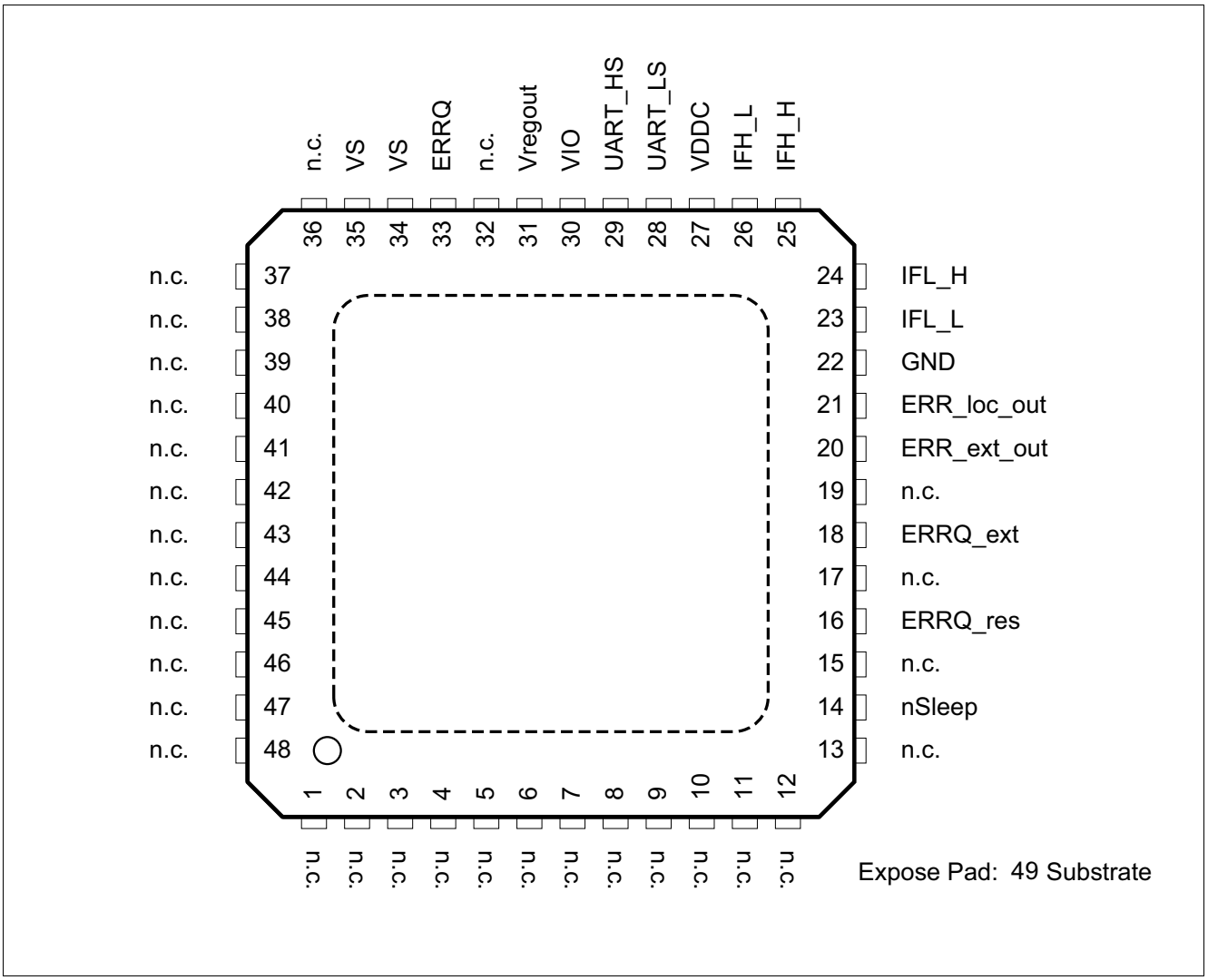


Figure 2-1 Pin configuration

3 Package outlines

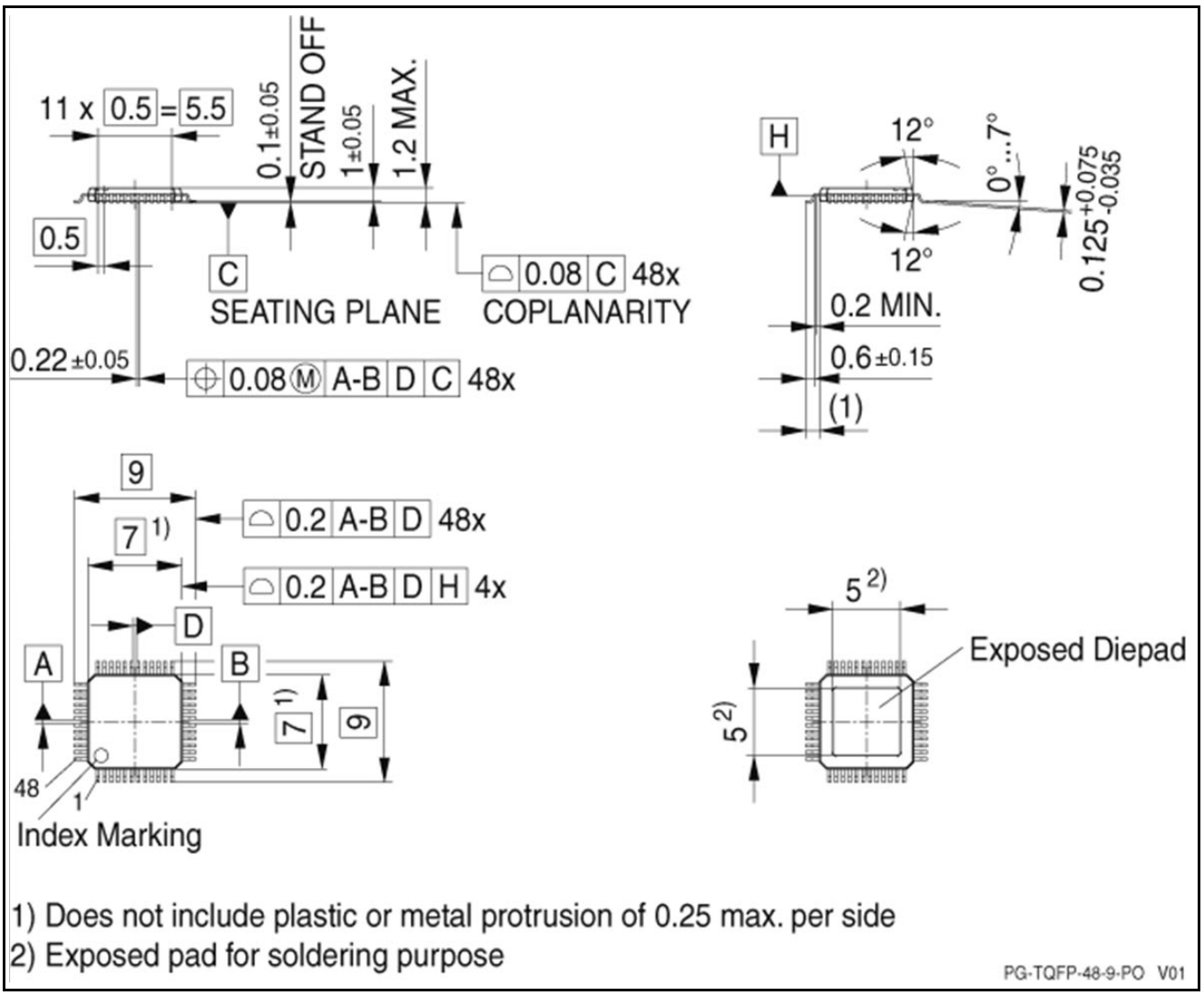


Figure 3-1 Package outlines and footprint PG-TQFP-48

Green product (RoHS-compliant)

To meet the world-wide customer requirements for environmentally friendly products and to be compliant with government regulations the device is available as a green product. Green products are RoHS-compliant (i.e Pb-free finish on leads and suitable for Pb-free soldering according to IPC/JEDEC J-STD-020).

For further information on alternative packages, please visit our website:
http://www.infineon.com/packages.

Dimensions in mm

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