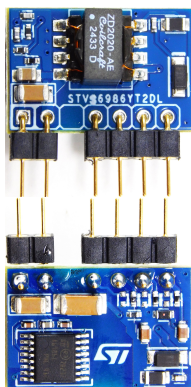


5 W dual isolated output, SIP7 compatible, isobuck-boost converter based on A6986I



Features

- Isobuck-boost topology
- Up to 24 V operating input voltage
- Compatible with SIP7 modules
- Up to 5 W isolated output capability
- 20 V/-5 V isolated output voltages
- Isolated outputs are available at pins 4-5-6 or 5-6-7 (selectable)
- 250 kHz switching frequency
- Protections against overvoltage, overcurrent, and overtemperature events

Description

The STEVAL-6986YT2DL is an evaluation board based on A6986I.

The STEVAL-6986YT2DL implements an isobuck-boost topology. The input voltage can go up to 24 V.

Thanks to the embedded two secondary windings transformer, a dual isolated output is available (around 20 V and around -5 V).

The isolated output power can reach 5 W.

The peculiarity of this board is its compatibility with a SIP7 module both in terms of pinout and concerning the size.

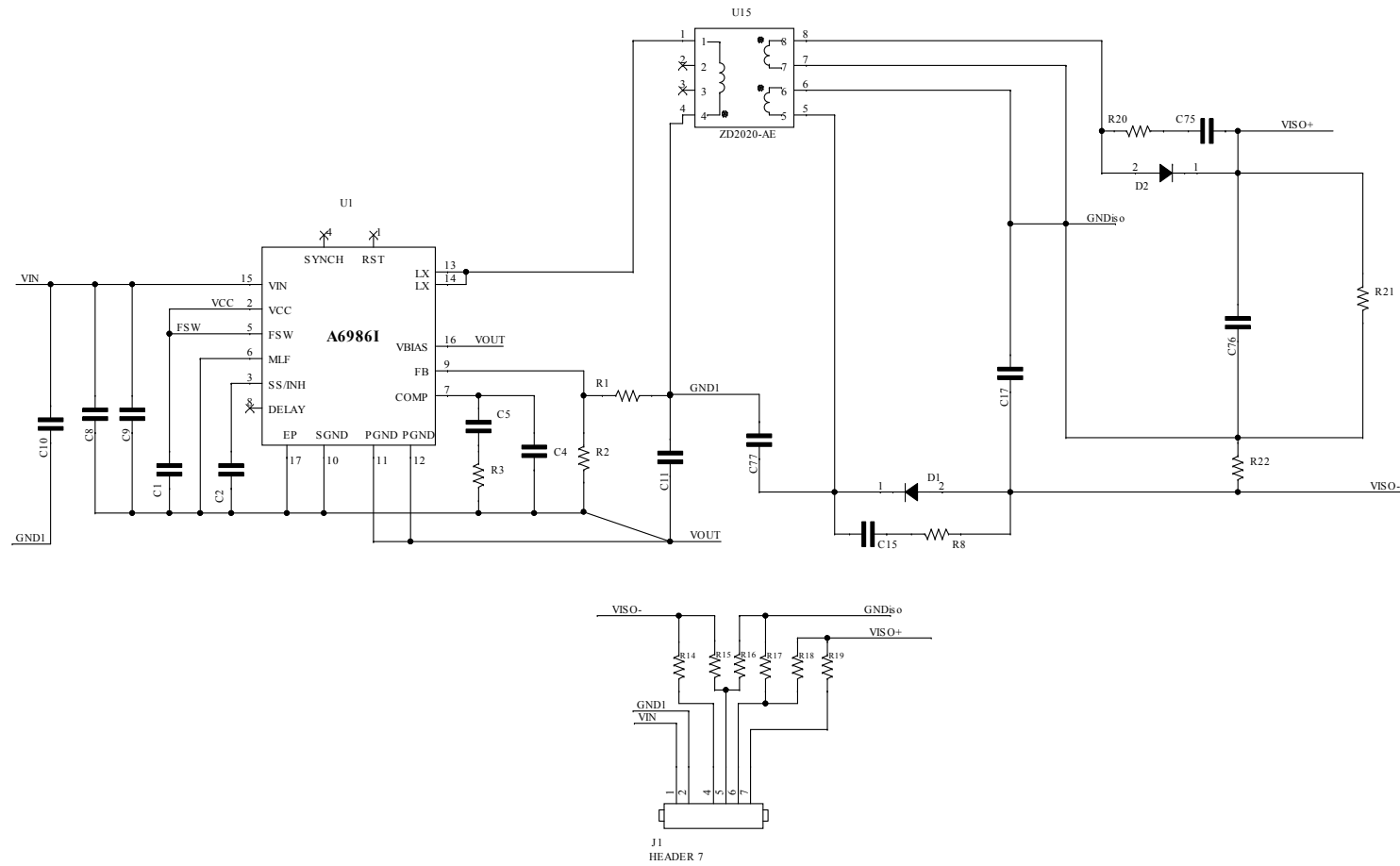
Further flexibility is achieved by matching SIP7 modules with different output voltage pinouts (available on pins 4-5-6 or 5-6-7)

The STEVAL-6986YT2DL works at 250 kHz switching frequency and embeds all the standard protections offered by the A6986I (against overvoltage, overcurrent and overtemperature events).

The embedded transformer offers 1.5 kV isolation.

Product summary	
5 W dual isolated output, SIP7 compatible, isobuck-boost converter based on A6986I	STEVAL-6986YT2DL
Automotive 38 V, 5 W synchronous iso-buck converter	A6986ITR
Applications	Main inverter (electric traction) On board charger (OBC)

Figure 1. STEVAL-6986YT2DL circuit schematic



2 Board versions

Table 1. STEVAL-6986YT2DL versions

Finished good	Schematic diagrams	Bill of materials
STV\$6986YT2DL ⁽¹⁾	STV\$6986YT2DL schematic diagrams	STV\$6986YT2DL bill of materials

1. This code identifies the STEVAL-6986YT2DL evaluation board first version.

Revision history

Table 2. Document revision history

Date	Revision	Changes
09-Apr-2025	1	Initial release.
18-Apr-2025	2	Updated Cover image, Title and Product summary.

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