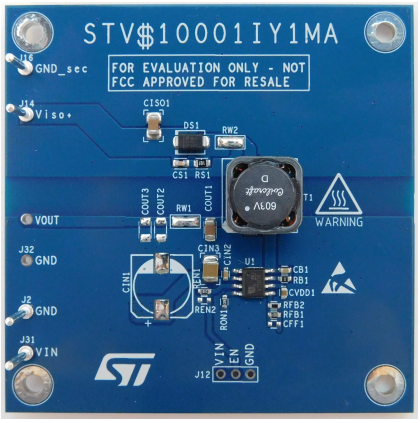
STEVAL-10001IY1M

Data brief

10 W isolated output, isobuck converter based on DCP10001IY



Product summary	
10 W isolated output, isobuck converter based on DCP10001IY	STEVAL-10001IY1M
Automotive 100 V, 10 W synchronous isobuck converter for isolated applications	DCP10001IPHRY
Automotive 150 V, 1 A Power Schottky Rectifier	STPS1150AY
Applications	Battery electric vehicle control supply EV GPS tracker

Features

- Iso-buck topology
- From 31 to 70 V operating input voltage
- Up to 10 W isolated output capability
- Around 500 kHz switching frequency
- Protections against overcurrent/short circuit and overtemperature events

Description

The STEVAL-10001IY1M is an evaluation board based on DCP10001IY.

The STEVAL-10001IY1M implements an isobuck topology. The input voltage of the device can go up to 100 V.

STEVAL-10001IY1M is optimized for an input voltage range 31-70 V.

The isolated output voltage is achieved by embedding a transformer with N= 1.3, which leads to a voltage range around 25-28 V, depending on the load.

Since the DCP10001IY is based on a V^2COT architecture, it does not contain an internal fixed frequency oscillator.

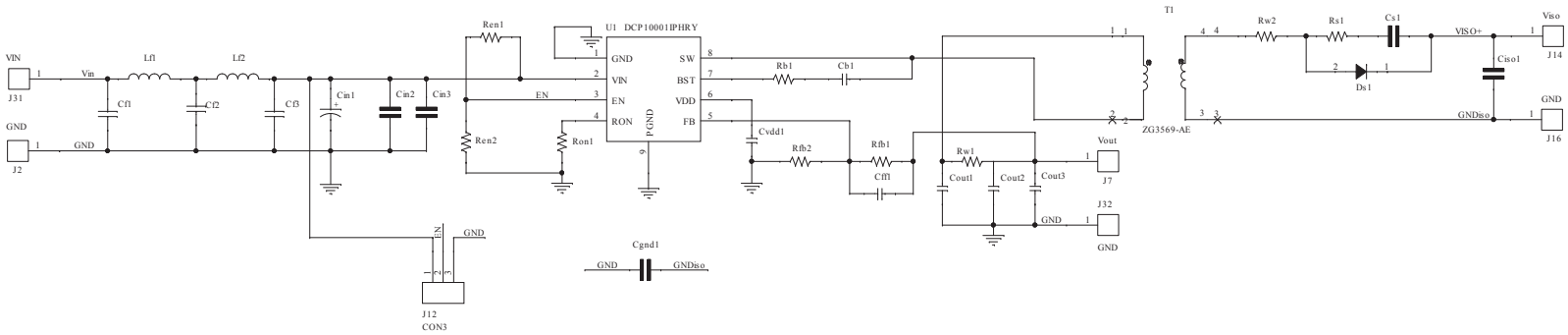
The STEVAL-10001IY1M shows an almost stable switching frequency.

Protections against overcurrent/short circuit and over temperature conditions are provided.

The embedded transformer offers 1.5 k V isolation.

1 Schematic diagrams

Figure 1. STEVAL-10001IY1M circuit schematic



2 Board versions

Table 1. STEVAL-10001IY1M versions

Finished good	Schematic diagrams	Bill of materials
STV$10001IY1MA(1)	STV$10001IY1MA schematic diagrams	STV$10001IY1MA bill of materials

1. *This code identifies the STEVAL-10001IY1M evaluation board first version.*

Revision history

Table 2. **Document revision history**

Date	Revision	Changes
03-Nov-2026	1	Initial release.

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