YX2665-Bidirectional Buck Controller EVM Demo Manual

1 Description and Features

This EVM is built to evaluate the performance of YX2665, which is a bidirectional buck controller. It has wide input and output range, compatible to drive GaN or Si FET. This is extremely suitable for wide input voltage range system such as battery powered system and bidirectional USB PD charger system. The main features of YX2665 are listed in bellow and can be evaluated on the demo board:

- Wide V_{IN}: 4V to 65V, Wide V_{OUT}: 2V to 65V
- Programmable soft start time
- Adjustable switching frequency and dead time
- Programmable input and output current limits
- Bidirectional power path control

2 Board Specifications

The YX2665 EVB features a two-switch buck converter based on YX2665 Wide VIN buck controller. This converter is designed to operate at input voltage 48V and provide a 12V regulated output with a load current of up to 10A in forward and reverse direction. The board specifications are listed in Table 1.

Table 1 Board specification

Parameter	Value	Unite
Input Voltage	48	V
Output Voltage	12	V
Maximum Output Current	10	A
Default Switching frequency	400	kHz
Board Size	60X75	mm

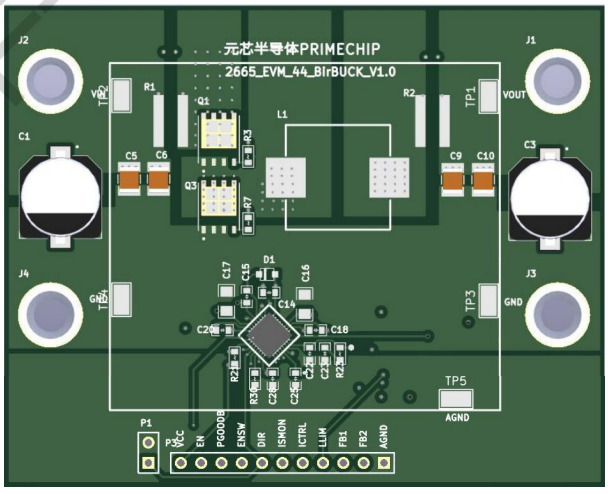

Figure 1 YX2645 Evaluation Board