

YX5301 5-42V Input, 5V Output Isolated Power EVB Manual

1 Description and Features

The YX5301 is an isolated flyback converter with high efficiency over a wide input voltage range of 3V to 42V. It directly measures output voltage from the primary side flyback waveform and no needs opto-coupler or third winding for regulation. Only a single resistor required to set the output voltage. Internal compensation and soft-start functions decreases the number of external components. To maintain the high efficiency and minimize the output voltage ripple, the YX5301 operates in Burst Mode at light load. The integrated 65V/1.2A power switch provides up to 6W of output power.

The YX5301 features under voltage lockout (UVLO), short circuit protection (SCP) and over temperature protection (OTP) to help the device operate safely and reliably.

The YX5301 is available in 5-lead TSOT-23 package.

Features

- Wide input voltage range of 3V to 42V
- Integrated 65V/1.2A power MOSFET
- Set VOUT with single external resistor
- No opto-coupler or third winding of transformer required for VOUT regulation
- High efficiency at light load mode (DCM)
- Low input quiescent current
- Internal compensation and soft-start function
- Shut down and Enable control
- Build-In UVLO and short circuit protection
- Over current and over temperature protection
- 5-Lead TSOT-23 Package
- AEC-Q100 qualified

2 Board Specifications

Table 1 Board specification

Parameter	Value	Unite
Input Voltage	5 to 42	V
Output Voltage	5	V
Maximum Output Current	0.4(Vin=5V) 0.7(Vin=12V) 1(42≥Vin≥24)	A
Rated switching frequency	129 @12Vin,0.7A Load	kHz
Board Size	7.0x6.5	mm

3 Test Setup

