

Introduction

The **STEVAL-VP26K01B** is a 15 V – 1.5 W power supply in buck topology featuring the **VIPER265KDTR** offline high voltage converter, specifically developed for ultra-wide input range solutions.

The evaluation board has the following characteristics:

- Ultra-wide range: 90–600 V_{AC} or 60–870 V_{DC}
- Meets IEC55022 Class B conducted EMI even with a reduced EMI filter, thanks to the frequency jittering feature
- RoHS compliant

Some of the main features of the VIPER265KDTR include:

- 1050 V avalanche rugged Power MOSFET
- Embedded HV start-up
- 60 kHz fixed switching frequency with jittering
- Embedded error amplifier internally referenced to 3.3 V
- Current mode PWM controller with drain current limit protection for easy compensation
- Several protection mechanisms:
 - delayed overload protection (OLP)
 - open loop failure protection
 - thermal shutdown with hysteresis

All protections are in auto restart mode

Table 1. STEVAL-VP26K01B electrical specifications

Parameter	Min.	Typ.	Max.	Unit
AC main input voltage	90	-	600	VAC
DC main input voltage	60	-	870	VDC
Main frequency (fL)	47	-	63	Hz
Output Voltage	13.5	15	16.5	V
Output Current	-	-	0.1	A
Rated output power	-	1.5	-	W
Output ripple voltage	-	-	100	mV
Ambient operating temperature	-	-	60	°C

Figure 3. Output voltage load regulation at minimum and maximum DC input voltage

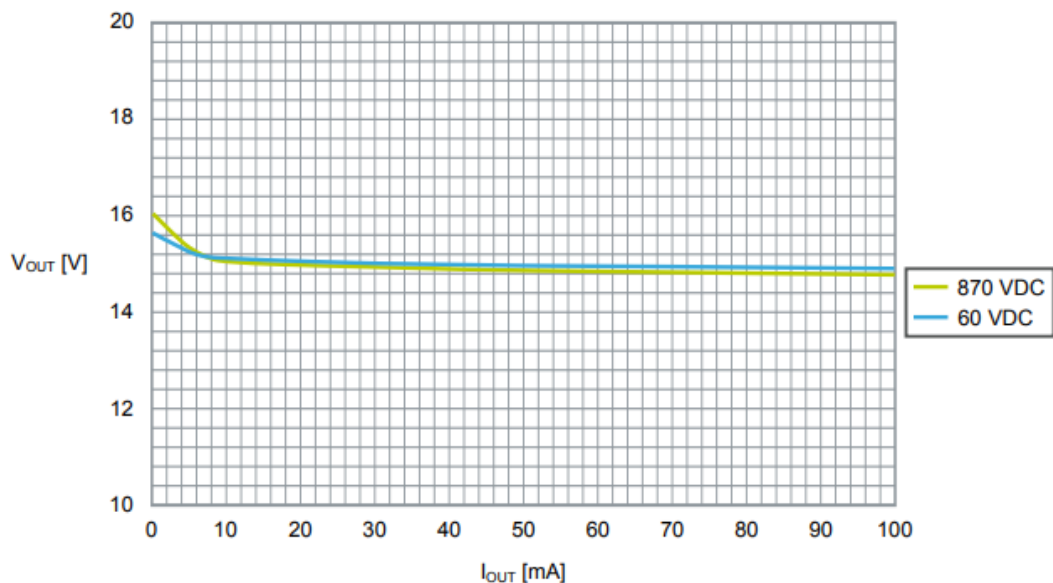


Figure 2. STEVAL-VP26K01B schematic diagram

