

LM3402HV Design Document

National Semiconductor
LM3402HV
September 2006



1.0 Design Specifications

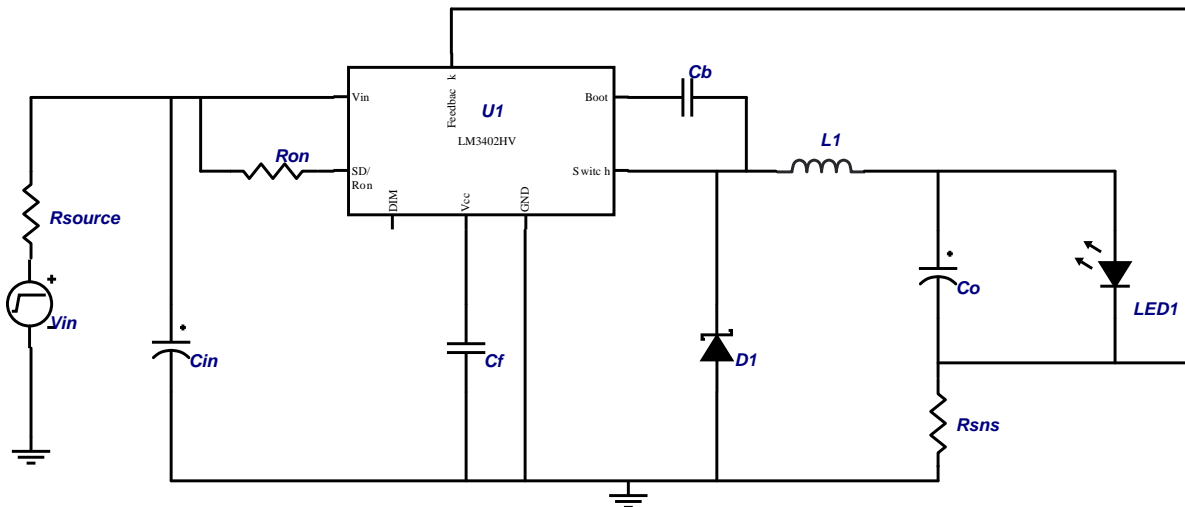
Inputs	Outputs #1
VinMin=6	Vout1=3.5
VinMax=75	Iout1=0.350

2.0 Design Description

This LM3402HV circuit and BOM have been designed to provide a constant forward current of 350 mA to a single LED with a forward voltage of approximately 3.5V. (Typical of white, blue, and green LEDs using InGaN technology.) When

powered from a 48V +-5% input the circuit will maintain the average LED current to within 10% of 350 mA. The ripple current will not exceed 70 mA peak-to-peak. Switching frequency for this design is 250kHz +-10% when the input is 6V to 75V.

3.0 Schematic



241689_7278_0

FIGURE 1. Example Schematic Showing Connection for all Components.

4.0 Bill Of Materials

Part	Manufacturer	Part#	Attributes
Cb	Vishay	VJ0805Y103KXXAT	10n F
Cf	Vishay	VJ0805Y104KXXAT	100n F
Cin	TDK	C3225X7R2A105M	NumCaps=1, 1u F
Co	TDK	C3216X7R2E225M	2.2u F
D1	Central Semiconductor	CMSH1-100M	0.5 V
L1	TDK	SLF10145T-151MR79	150u H, 0.2 Ohms
Ron	Vishay	CRCW08051303F	130k Ohms
Rsns	Panasonic	ERJ6BQFR68V	0.68 Ohms
U1	National Semiconductor	LM3402HV	

Notes

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