

LM3402 Design Document

National Semiconductor
LM3402
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1.0 Design Specifications

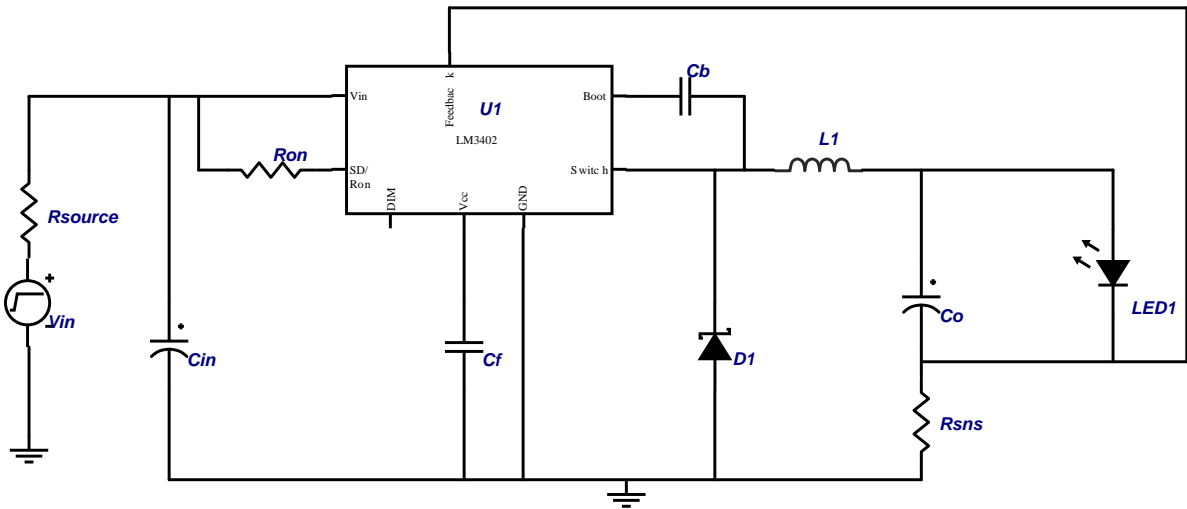
Inputs	Outputs #1
VinMin=9	Vout1=3.5
VinMax=16	Iout1=0.335

2.0 Design Description

These circuits are designed to drive a string of 1 or 2 InGaN LEDs at a forward current of 335 mA with a peak-to-peak ripple current of 100 mA or less. The input is 9V to 16V, with LED current and switching frequency (400 kHz) centered at Vin = 12.8V.

This circuit is rated to withstand input voltage surges up to 25V. This can be increased to 42V by changing Cin and D1 to ratings of 50V or more.

3.0 Schematic



689758_1357_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	C3225X7R1H225M	NumCaps=1, 2.2u F
Co	Vishay	VJ0805Y564KXXAT	560n F
D1	Central Semiconductor	CMSH1-40M	0.5 V
L1	TDK	SLF7045T-470MR75	47u H, 0.13 Ohms
Ron	Vishay	CRCW08056982F	69.8k Ohms
Rsns	Panasonic	ERJ6BQFR68V	0.68 Ohms
U1	National Semiconductor	LM3402	

Notes

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Email: europe.support@nsc.com
Deutsch Tel: +49 (0) 69 9508 6208
English Tel: +49 (0) 870 24 0 2171
Français Tel: +33 (0) 1 41 91 8790

**National Semiconductor Asia
Pacific Customer Support Center**
Email: ap.support@nsc.com

**National Semiconductor Japan
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Fax: 81-3-5639-7507
Email: jpn.feedback@nsc.com
Tel: 81-3-5639-7560