

# LM2623A Boost Converter LED Driver

## 1.1 Specifications

Vin: Min 1.8V Max 3.4V

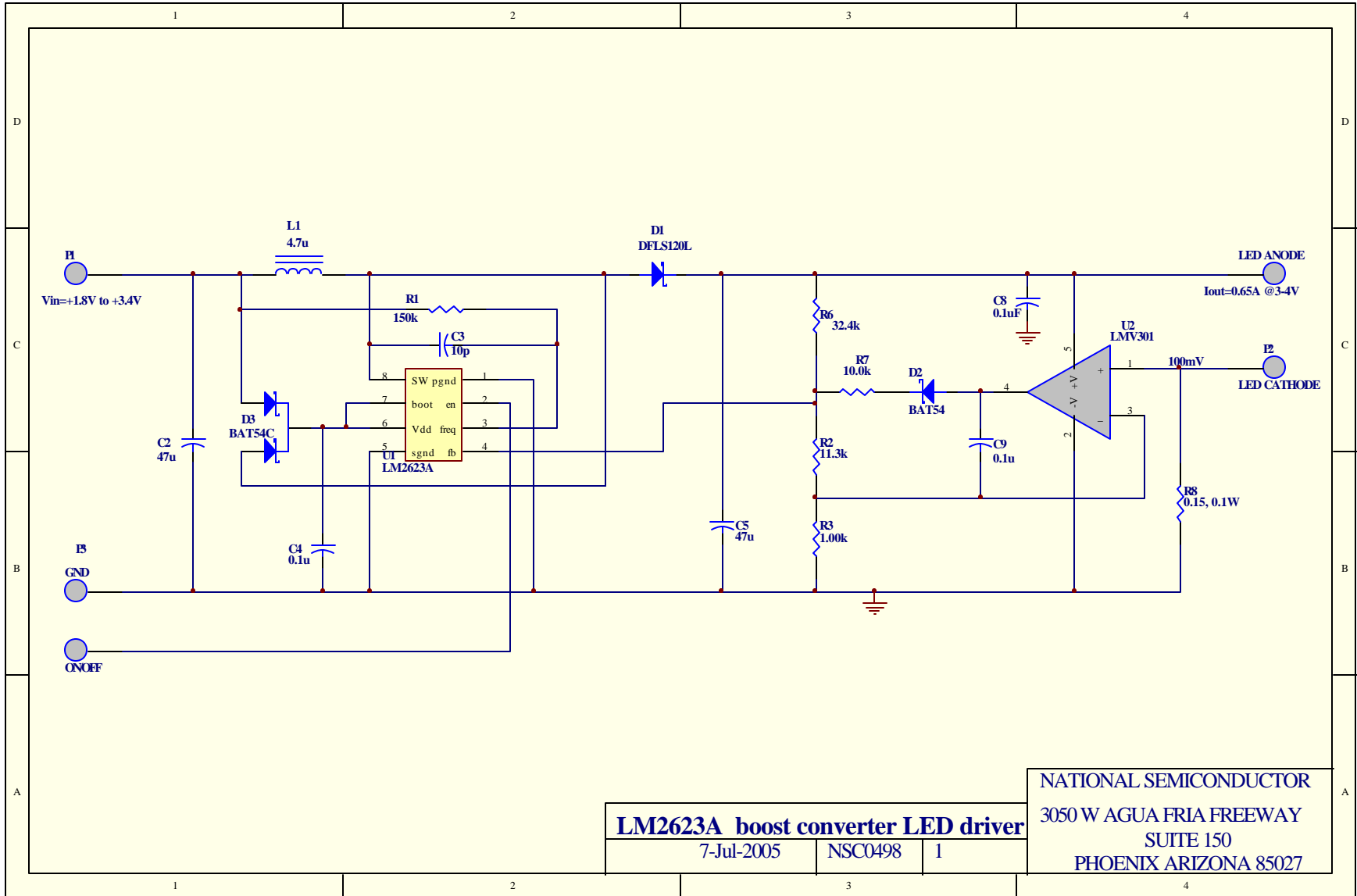
Vout: 3.5V

Iout: 0.65A

## 1.2 BOM

### NSC0498 LM2623 1.8-3.4Vin to 3.5Vout@0.65A Boost Converter LED driver

Designator	Part Type	Manufacturer	Description
C2	47u	TDK/C3216X5R0J476	Capacitor Ceramic X5R
C3	10p	Vitramon/VJ0603	Capacitor Ceramic X7R
C4	0.1u	Vitramon/VJ0603	Capacitor Ceramic X7R
C5	47u	TDK/C3216X5R0J476	Capacitor Ceramic X5R
C8	0.1uF	Vitramon/VJ0603	Capacitor Ceramic X7R
C9	0.1u	Vitramon/VJ0603	Capacitor Ceramic X7R
D1	DFLS120L	Diodes/DFLS120L	Surface mount Schottky diode
D2	BAT54	Vishay/BAT54	Small signal Schottky diode
D3	BAT54C	Vishay/BAT54C	Small signal Schottky diode
L1	4.7u	Coilcraft/MSS5131-472MX	Surface mount power inductor
R1	150k	DALE CRCW0402	1% Thick Film
R2	11.3k	DALE CRCW0402	1% Thick Film
R3	1.00k	DALE CRCW0402	1% Thick Film
R6	32.4k	DALE CRCW0402	1% Thick Film
R7	10.0k	DALE CRCW0402	1% Thick Film
R8	0.15, 0.1W	Vishay/WSL0805-18 0.1 1%	1% Power metal strip
U1	LM2623A	National/LM2623A	General purpose, gated oscillator boost converter
U2	LMV301	National/LMV301	Low input bias current, 1.8V op-amp with rail-to-rail output



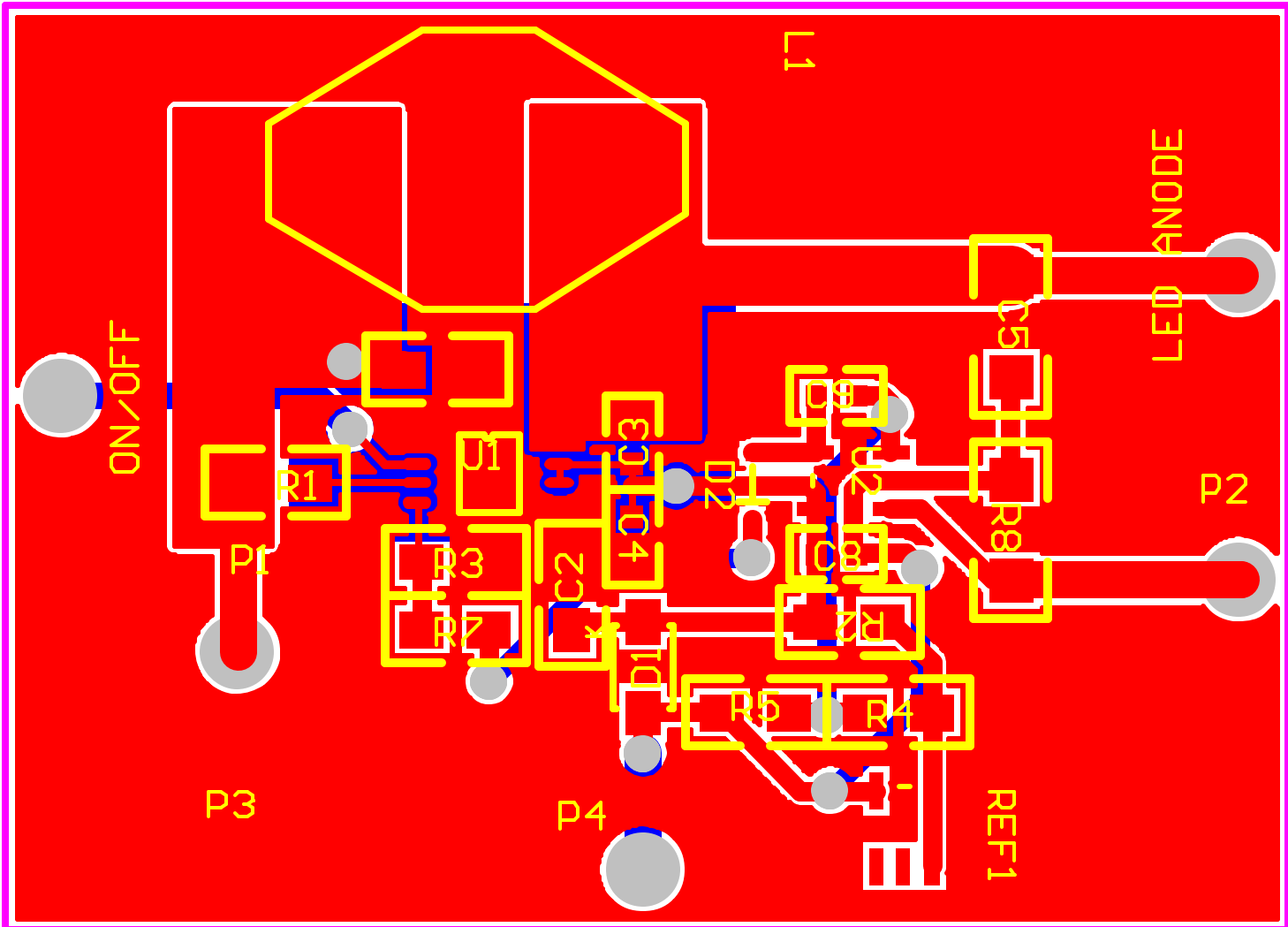
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7-Jul-2005

NSC0498

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NATIONAL SEMICONDUCTOR  
 3050 W AGUA FRIA FREEWAY  
 SUITE 150  
 PHOENIX ARIZONA 85027



## 1.4 Circuit Waveforms

**Vin = 1.9V**

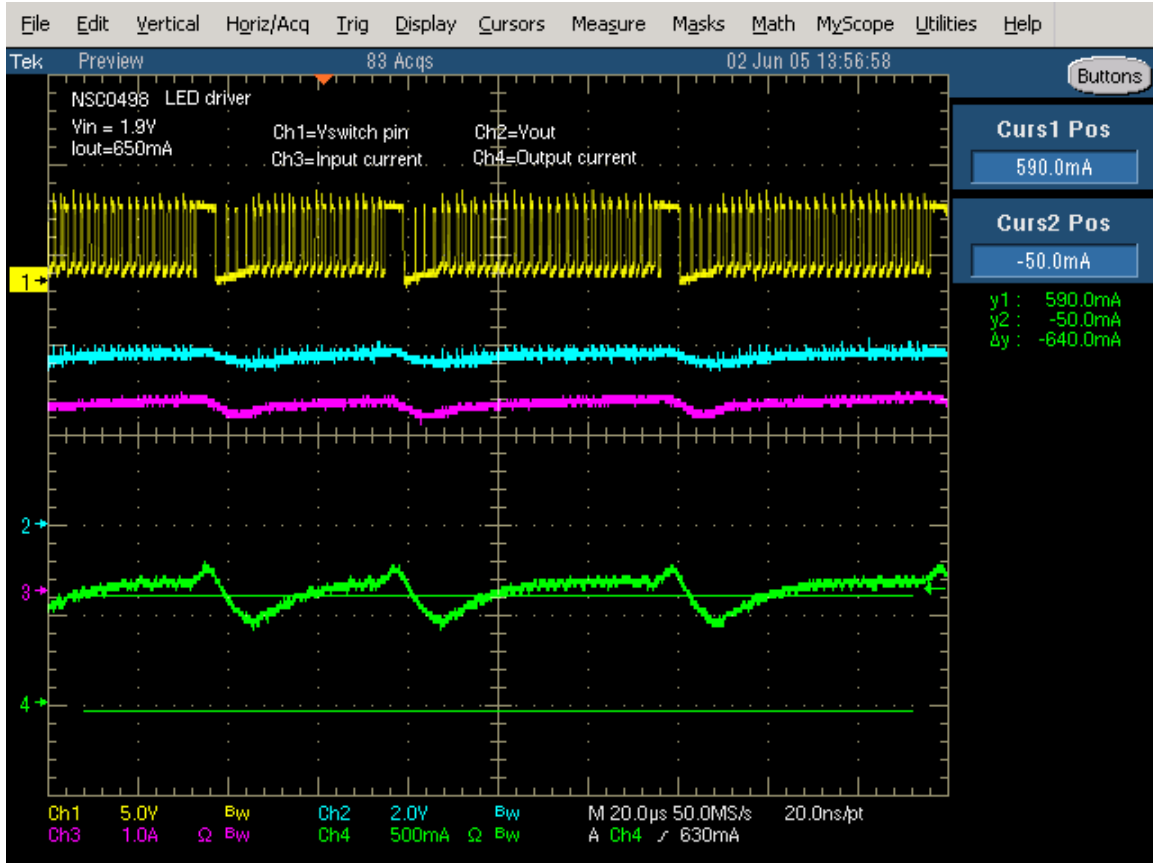
**Iout = 0.65A**

Ch1 = Vswitch pin

Ch2 = Vout

Ch3 = Iin

Ch4 = Iout



**Vin = 3.4V**  
**Iout = 0.65A**

Ch1 = Vswitch pin  
Ch2 = Vout  
Ch3 = Iin  
Ch4 = Iout

