

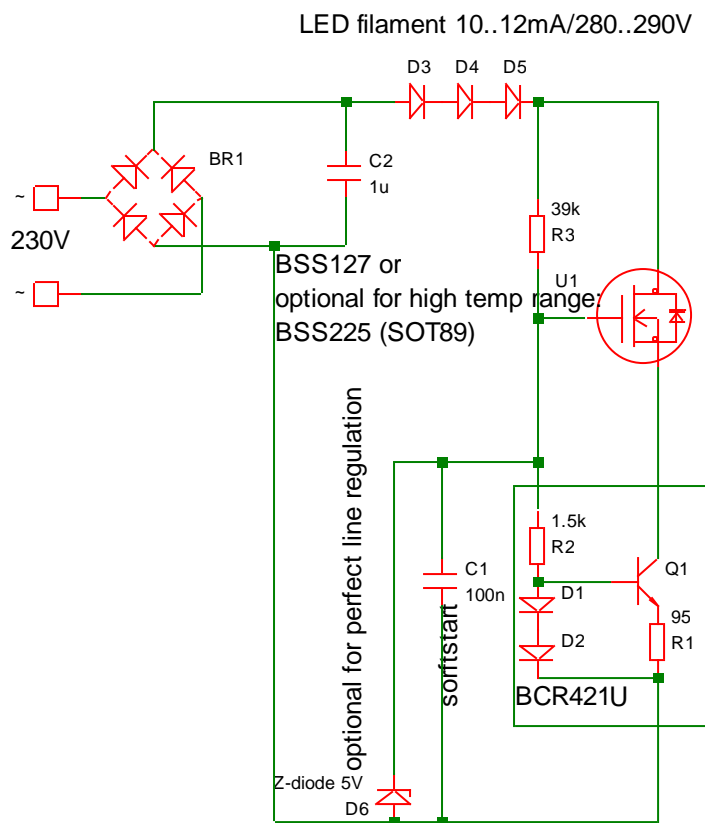
# LED Filament Driver

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# Schematic of LED Filament Lamp Driver



## Requirements:

Load:	LED filament: 10..12mA/280..290V
Line:	230V; no PFC

## Benefits:

Linear LED driver IC BCR421U guarantees current accuracy

Enhancement mode mosfet BSS127 in cascode topology to handle high voltage

Optionally BSS225 for higher current and higher temp range

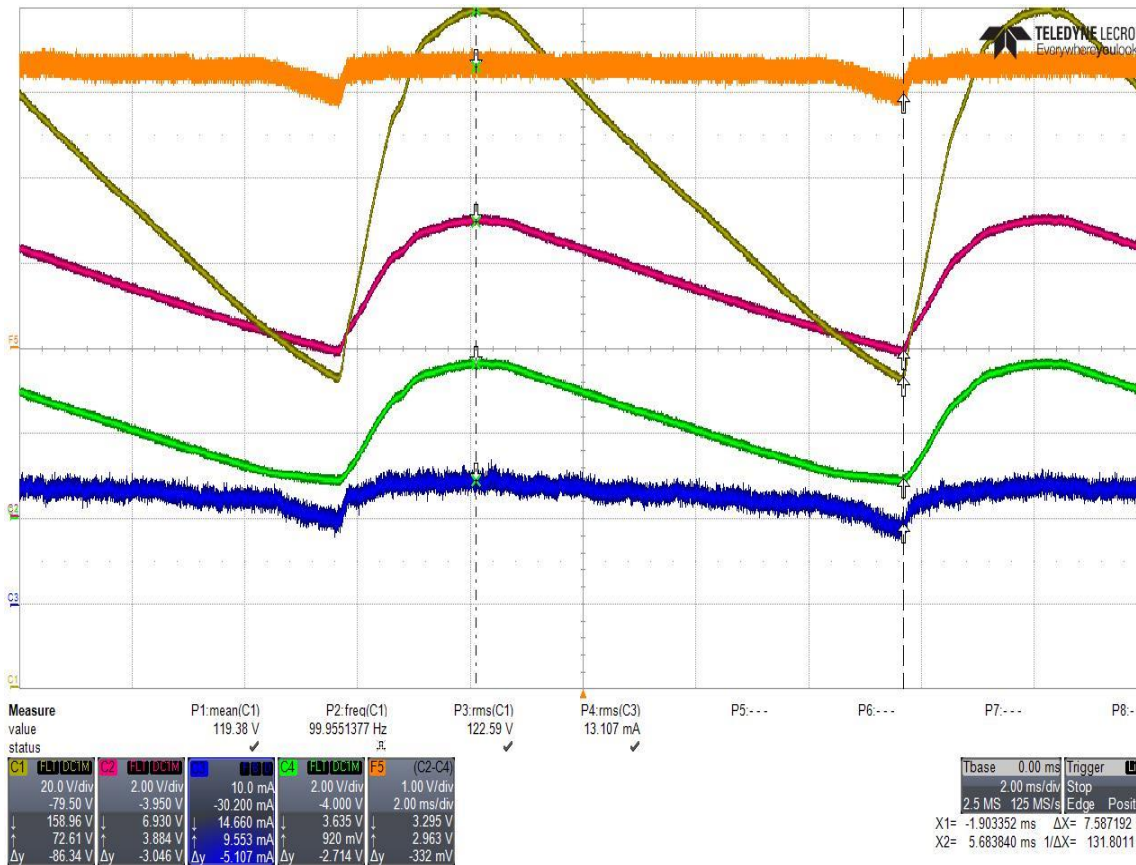
Surge immunity up to 600V (BSS127)+40V (BCR421U)+280V(LEDs)=**920V**

Extreme low BoM:

- > - no magnetics
- > - only 1 R, 1 C externally
- > - low cost semiconductors
- > - small packages, SOT-23 and SC74

Compatible to phase cut dimming, when adding Damper and Bleeder

# Measured Circuit voltages and LED current



- > Orange: V-gate/source
- > Yellow: converter voltage
- > Red: V-gate/gnd
- > Green: V-source/gnd
- > Blue: LED current

> 1uF at bridge rectifier sufficient for constant LED current, little 100Hz ripple



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