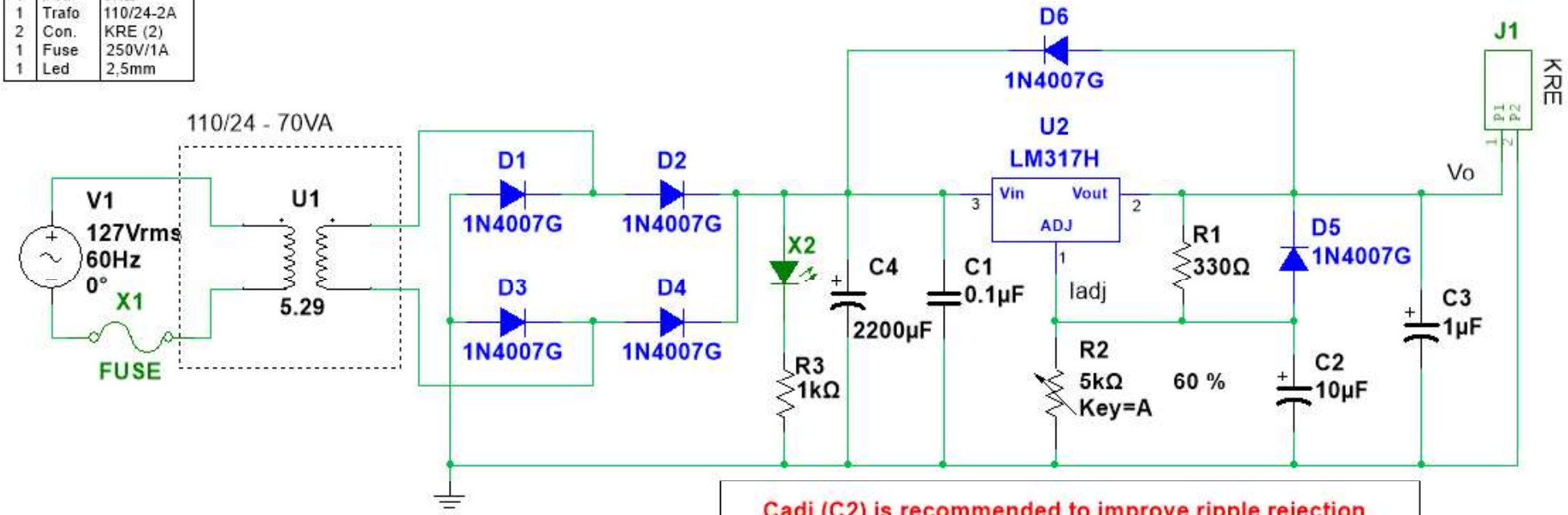
Fonte Ajustável com LM317

6	Diodo	1N4007
1	Cap.	10uF
1	Cap.	1uF
2	Cap.	0.1uF
1	Cap.	2200uF
1	CI	LM317
1	Res	1KΩ
1	Res.	220Ω
1	Pot.	5KΩ
1	Trafo	110/24-2A
2	Con.	KRE (2)
1	Fuse	250V/1A
1	Led	2,5mm



Cadj (C2) is recommended to improve ripple rejection. It prevents amplification of the ripple as the output voltage is adjusted higher.

Vo is calculated as shown in Equation 1.
Iadj is typically 50 µA and negligible in most applications.

(1) Vo = Vref (1 + (R2 / R1)) + (Iadj × R2)

(2) ΔT = 1/Freq

(3) Vripple = (I x ΔT) / C

(4) Vpeak(max) = Vrms * √2

(5) Vpeak(min) = Vpeak(max) - Vripple

(6) Vdcav = (Vpeak(max) + Vpeak(min)) / 2

(7) Vripple = (Vrms/Vdcav) * 100

(1.1) Vo(max) = 1,25(1+(5000/330)) + (0,00005*5000) = 20,44V

(1.2) Vo(min) = 1,25(1+(0/330)) + (0,00005*0) = 1,25V

(2) ΔT = 1/120 = 0,0083s

(3) Vripple = (1 * 0,0083) / 0,0022 = 3,772V

(4) Vpeak(max) = 24 * √2 = 33,94

(5) Vpeak(min) = 33,94 - 3,772 = 30,16V

(6) Vdcav = (33,94 + 30,16)/2 = 32,05

(7) Vripple = (24/32,05) * 100 = 74,88%

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