Minimum Output Current

Vin = 28.00V
Vout = 12.00V
Total power output = 181.24W

$$Iout = \frac{181.24W}{12V} = 15.1033A$$

Minimum Output Power

DC-DC η (efficiency) = 86%

$$Pin = \frac{Pout}{\eta}$$

$$Pin = \frac{181.24W}{0.86} = 210.74W$$

29.5W dissipated as heat

Minimum Input Current

DC-DC Input Current Iin (full load) = 19.36A

$$Iin = \frac{Pin}{Vin}$$

$$Iin = \frac{210.74W}{28V} = 7.53A$$

$$\textbf{\% of load} = \frac{7.53A}{19.36A} = 38.89\%$$

Maximum Output Current

Vin = 28.00V
Vout = 12.00V
Total power output = 326.9W

$$Iout = \frac{326.9}{12V} = 27.24A$$

Maximum Output Power

DC-DC η (efficiency) = 86%

$$Pin = \frac{Pout}{\eta}$$

$$Pin = \frac{326.9W}{0.86} 380.11W$$

53.2W dissipated as heat

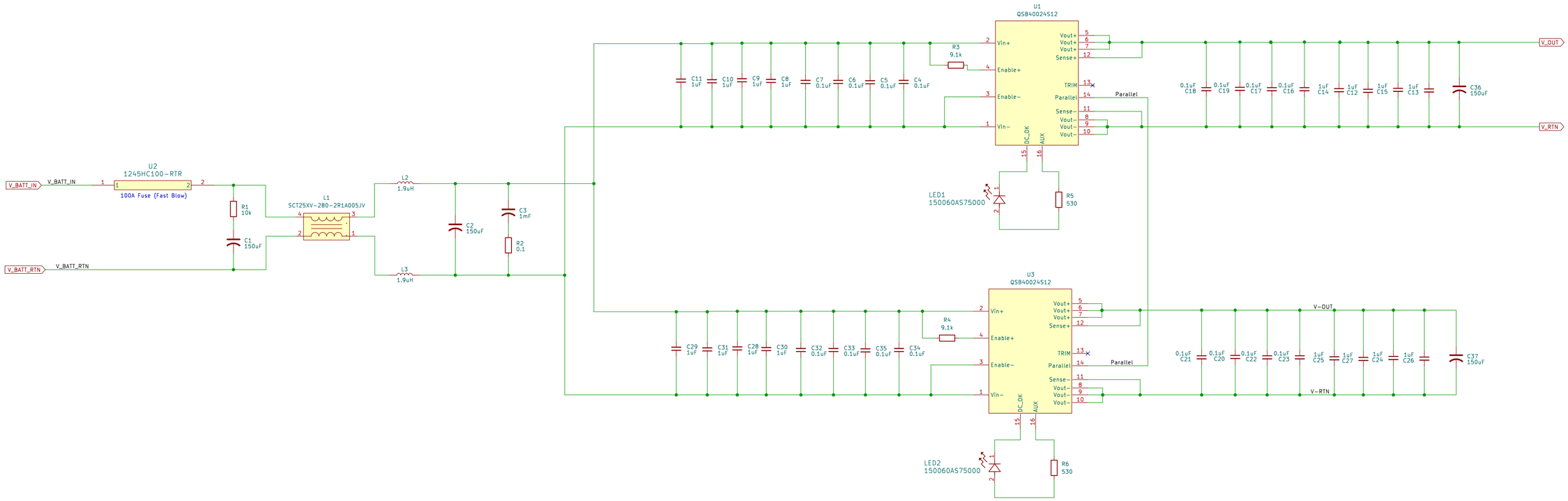
Maximum Input Current

DC-DC Input Current Iin (full load) = 19.36A

$$Iin = \frac{Pin}{Vin}$$

$$Iin = \frac{380.11w}{28V} 13.57A$$

$$\textbf{\% of load} = \frac{7.53A}{19.36A} = 70.12\%$$



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