5V, 100mV p-p, 2.4A rms, 3... $f_s = 1MH$...

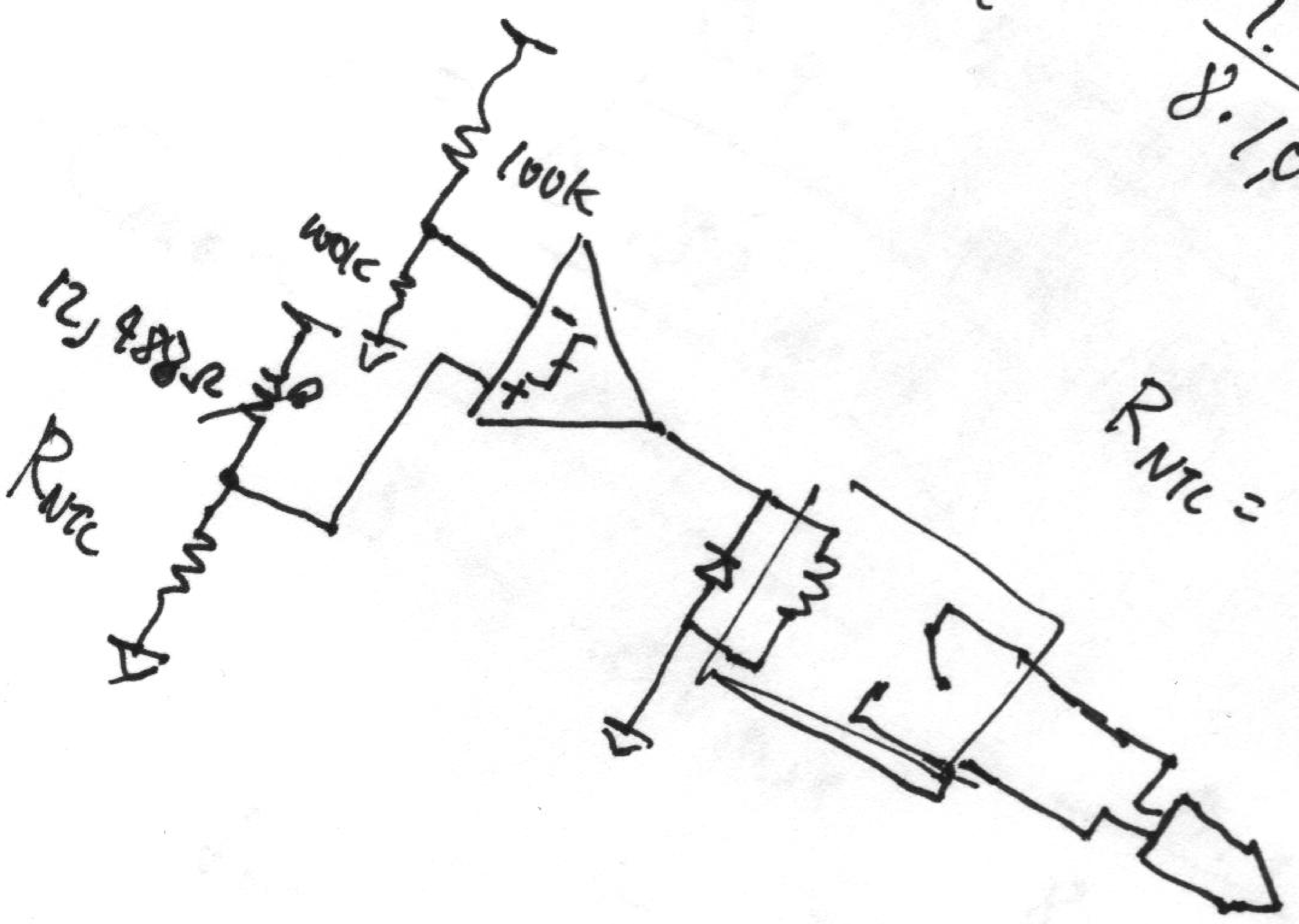
D = Duty cycle = $\frac{V_{out}}{V_{in} \cdot \eta} = \frac{5V}{12 \cdot 0.9} = 0.46296$

$\Delta I_L = \frac{V_{in} - V_{out} \cdot D}{f_s \cdot L}$ assume $0.3 \cdot I_{outmax} = 1.0182$

$L = \frac{V_{out} \cdot (V_{in} - V_{out})}{\Delta I_L \cdot f_s \cdot V_{in}} = \frac{5 \cdot (12-5)}{(1.0182) \cdot 1MHz \cdot 12}$ = 2.86 [illegible]H

$C_{out} = \frac{\Delta I_L}{8 \cdot f_s \cdot \Delta V_{out}} = \frac{1.0182}{8 \cdot 1{,}000{,}000 \cdot 100mV}$ = 1.273 μF

(5)



R_{NTC} = 12488 Ω @ 20°C

5V, 100mV p-p, 2.4A rms, 3…

$f_s = 1MH…$

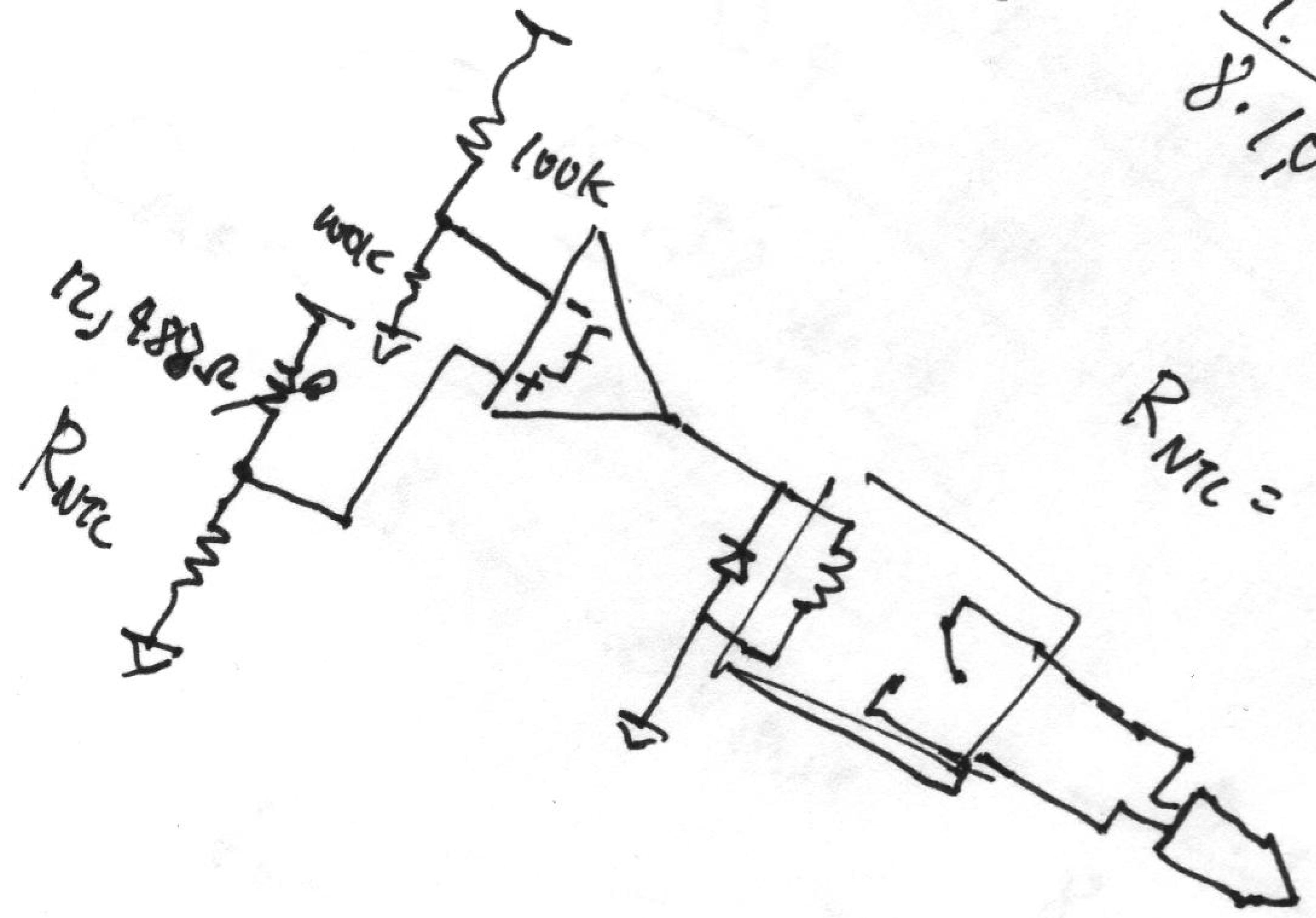
D = Duty cycle = $\frac{V_{out}}{V_{in} \cdot \eta} = \frac{5V}{12 \cdot 0.9} = 0.46296$

$\Delta I_L = \frac{V_{in} - V_{out}}{f_s \cdot L} \cdot D$ assume $0.3 \cdot I_{outmax} = 1.0182$

$L = \frac{V_{out} \cdot (V_{in} - V_{out})}{\Delta I_L \cdot f_s \cdot V_{in}} = \frac{5 \cdot (12-5)}{(1.0182) \cdot 1MHz \cdot 12} = 12.86$ [illegible]H

(5)

$C_{out} = \frac{\Delta I_L}{8 \cdot f_s \cdot \Delta V_{out}} = \frac{1.0182}{8 \cdot 1{,}000{,}000 \cdot 100mV} = 1.273\,\mu F$



$R_{NTC} = 12488\,\Omega$ @ 20°C

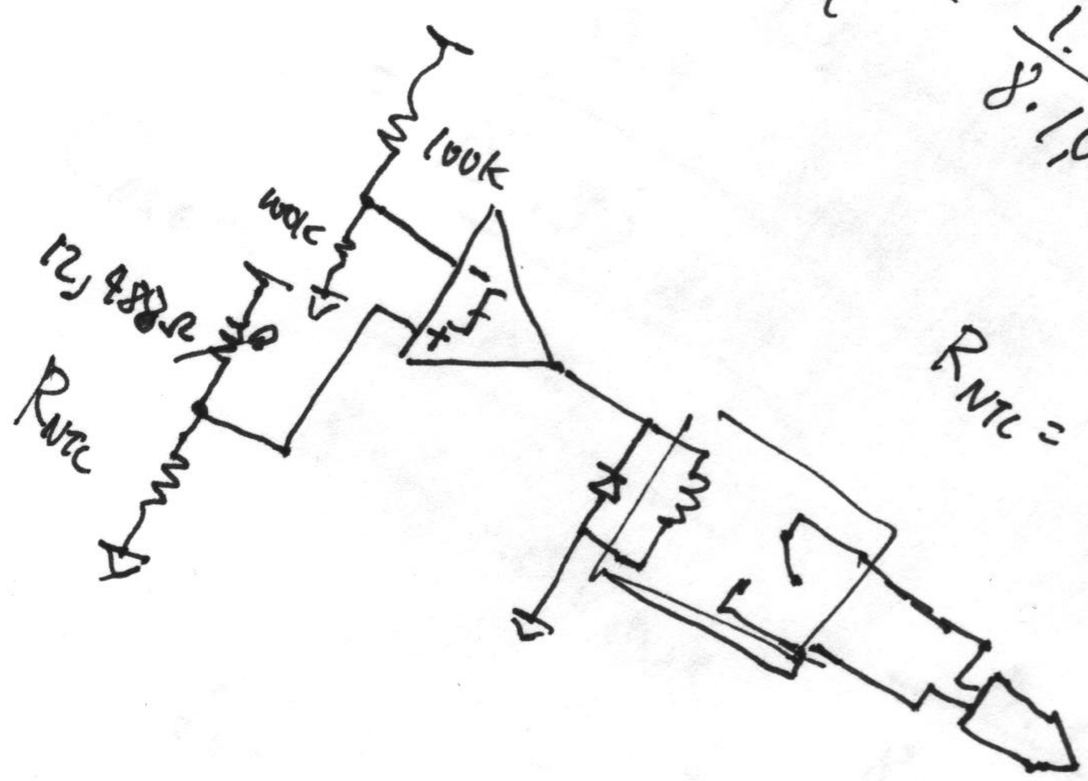
(5)

D = Duty Cycle $= \frac{V_{out}}{V_{in} \cdot \eta} = \frac{5V}{12 \cdot 0.9} = 0.46296$ assume 0.3 · I_{outmax} = 1.0182

$\Delta I_L = \frac{V_{in} - V_{out} \cdot D}{f_s \cdot L} = \frac{5 \cdot (12-5)}{(1.0182) \cdot 1MHz \cdot 12} = 12.86\,\mu H$

$L = \frac{V_{out} \cdot (V_{in} - V_{out})}{\Delta I_L \cdot f_s \cdot V_{in}}$

$C_{out} = \frac{\Delta I_L}{8 \cdot f_s \cdot \Delta V_{out}} = \frac{1.0182}{8 \cdot 1{,}000{,}000 \cdot 100mV} = 11.273\,\mu F$



$R_{NTC} = 12488\,\Omega$ @ 20°C