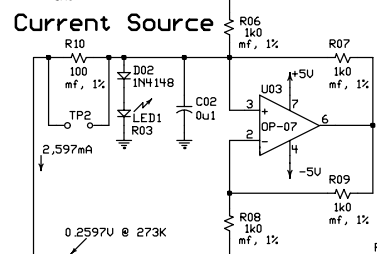
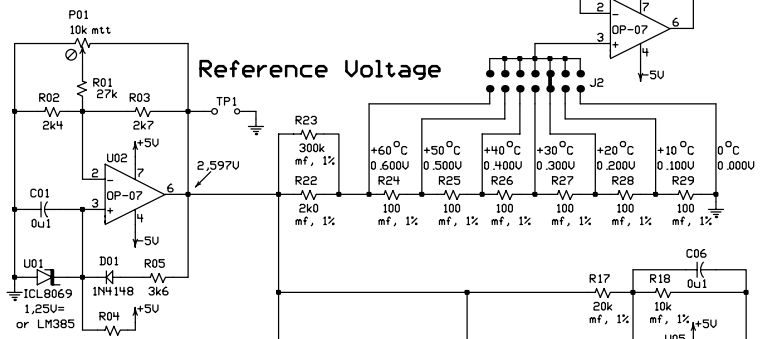
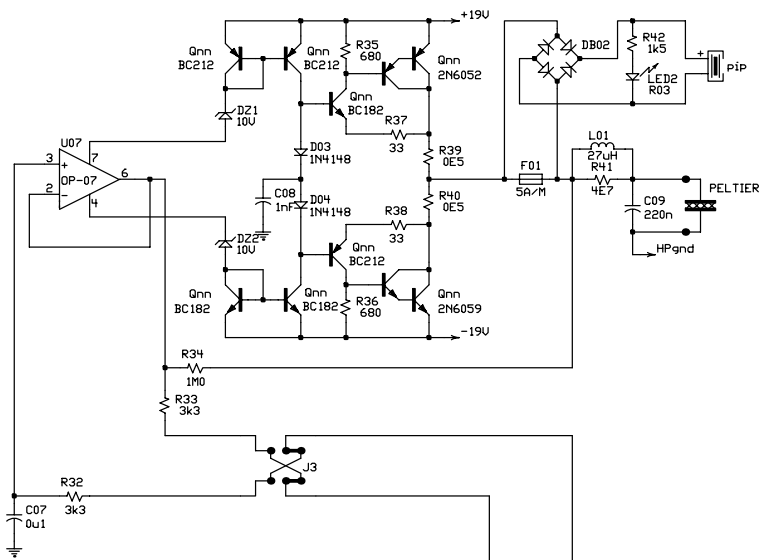


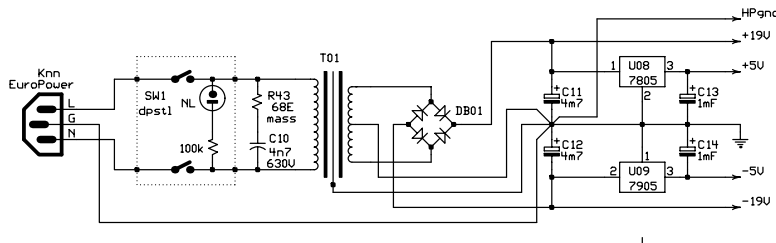
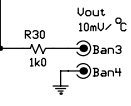
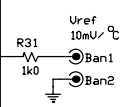
$t_c = 0,00385 / K$
 $R_o = 100 \text{ Ohm} @ 273 K$
 $R_t = R_o * (1 + \Delta T * t_c)$
 $R_{20} = 100 * (1 + 20 * 0,00385) = 107,7 \text{ Ohm}$
 $I_{ref} = U_{ref} / R_{ref}$
 $U_o = I_{ref} * R_o$
 $U_{20} = I_{ref} * R_{20}$
 $U_{ao} = A * U_o = A * U_{ref} * R_o / R_{ref}$
 $U_{a20} = A * U_{20} = A * U_{ref} * R_{20} / R_{ref}$
 $U_{do} = U_{ao} - U_{ref} = U_{ref} * (A * R_o / R_{ref} - 1)$
 $U_{d20} = U_{a20} - U_{ref} = U_{ref} * (A * R_{20} / R_{ref} - 1)$
 $t_k = 10 \text{ mV} / ^\circ C$
 $0,0 = U_{ref} * (A * R_o / R_{ref} - 1)$
 $0,2 = U_{ref} * (A * R_{20} / R_{ref} - 1)$
 $A = R_{ref} / R_o$
 $U_{ref} * (R_{ref} / R_o) * (R_{20} / R_{ref}) - 1 = 0,200$
 $U_{ref} * (R_{20} / R_o) - 1 = 0,200$
 $U_{ref} * (107,7 / 100) - 1 = 0,200$
 $U_{ref} * 0,077 = 0,200$
 $U_{ref} = 0,200 / 0,077 = 2,597 \text{ Udc}$



Pt100
 $t_c = 0,00385 / K$
 $R_o = 100 @ 273K$
 $R_t = R_o(1 + t_c)$
 $I = 0,0001 t_c = 2,597 \text{ mA}$
 $U_o = I * R_o$
 $U_t = I * R_t$
 $10 * (U_t - U_o) = 10 \text{ mV} / K$



Input Amplifier



Institut Jožef Stefan, Ljubljana

projekt/naloga : **Detector Temperature Control**
 sestavni del : **Peltier Reg.**
 pripombe : tolerance uporov 5 %
 tolerance kondenzatorjev 20 %

načrtoval	E. Margan
risal	E. Margan
datum	1996.08.21.
list	1/1
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