NTC Resistor

Constans:	
B-Constant	3977
R at 25°C	10000

Formulars:

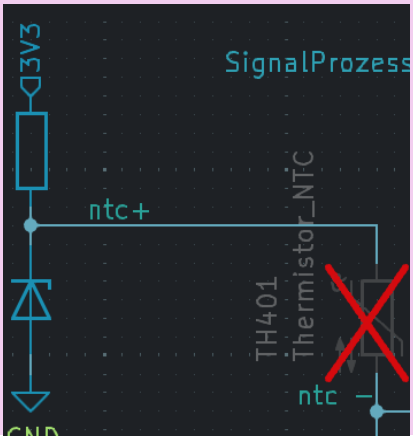
$$R_T = R_N \cdot e^{B\left(\frac{1}{T} - \frac{1}{T_N}\right)}$$

0 °C + 273,15 = 273,15 K

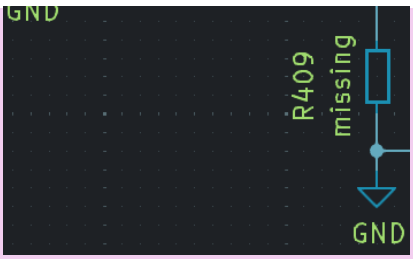
Temperature	Resistance
0	33900,4209
5	26093,9205
10	20271,5946
15	15886,9982
20	12554,7025
25	10000
30	8025,14518
35	6486,44088
40	5278,52005
45	4323,45404
50	3563,13194
55	2953,87922
60	2462,62387
65	2064,14174
70	1739,0614
80	1252,5298
100	684,938723
150	194,411188
200	72,0085807
250	32,2475864
300	16,6142994

Voltage Divider

Constants:	
VCC (ntc+)	3,00
R9	5100



Temperature	Voltage
0	0,39230346
5	0,49048019
10	0,6030366
15	0,72902279
20	0,86662463
25	1,01324503
30	1,16570139
35	1,32050905
40	1,47419863
45	1,62360849
50	1,76610493
55	1,89970567
60	2,02310736
65	2,13563614
70	2,23714909



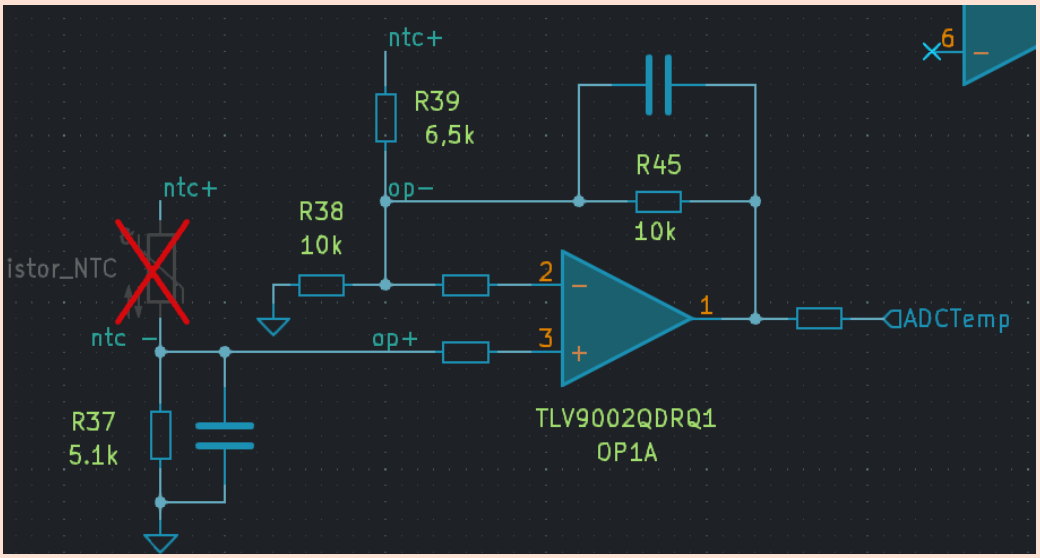
80	2,40848929
100	2,64479897
150	2,88983977
200	2,95823175
250	2,98115002
300	2,99025862

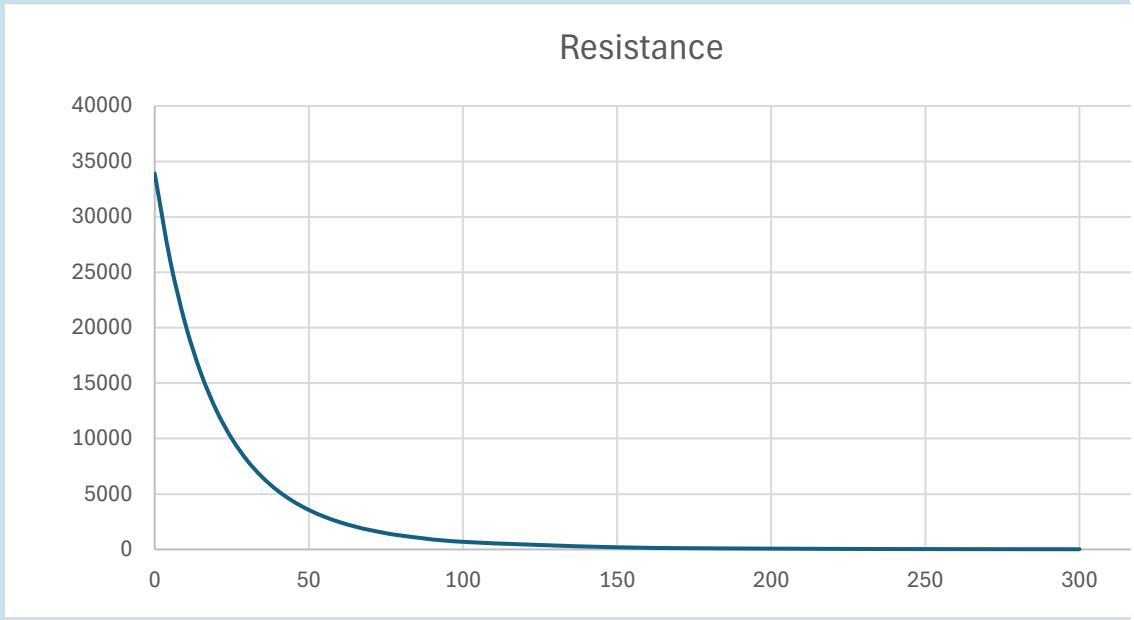
Signal Prozessing

Constans	
Gain	2
Voff	0,4
VCCoff (ntc+)	3
R1	5100
R2	10000
ADC Resul [bit]	12
ADC Vref	3

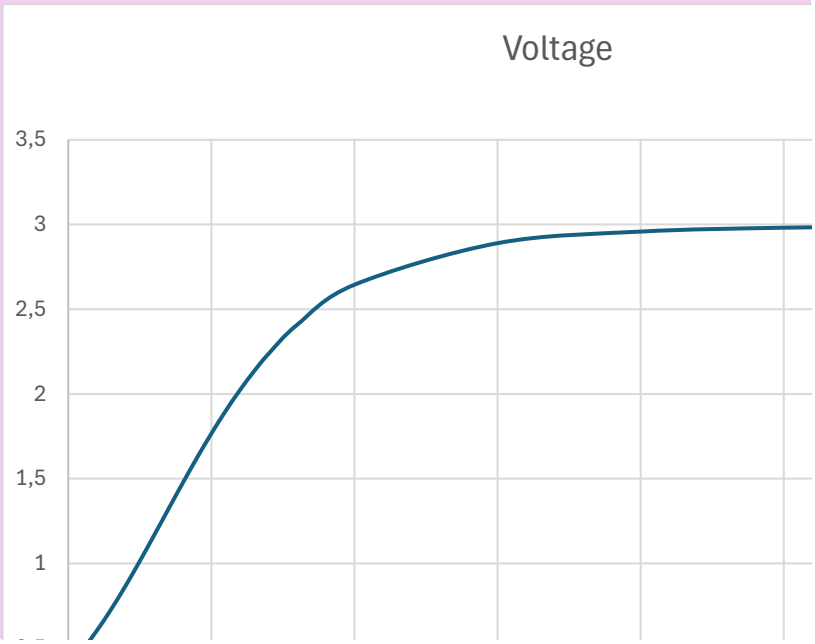
Vairables	
R3	65000
R4	10000

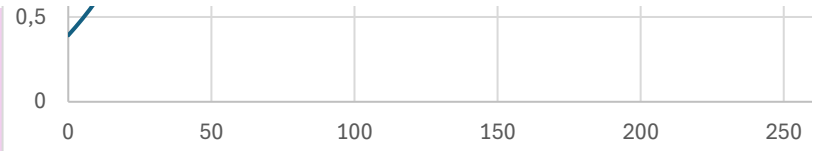
$$V_{out} = \left(1 + \frac{R_4}{R_2}\right)\left(\frac{v_{dd}}{1 + \frac{R_{ntc}}{R_1}} - \frac{V_{cc}}{1 + \frac{R_3}{R_2}}\right)$$





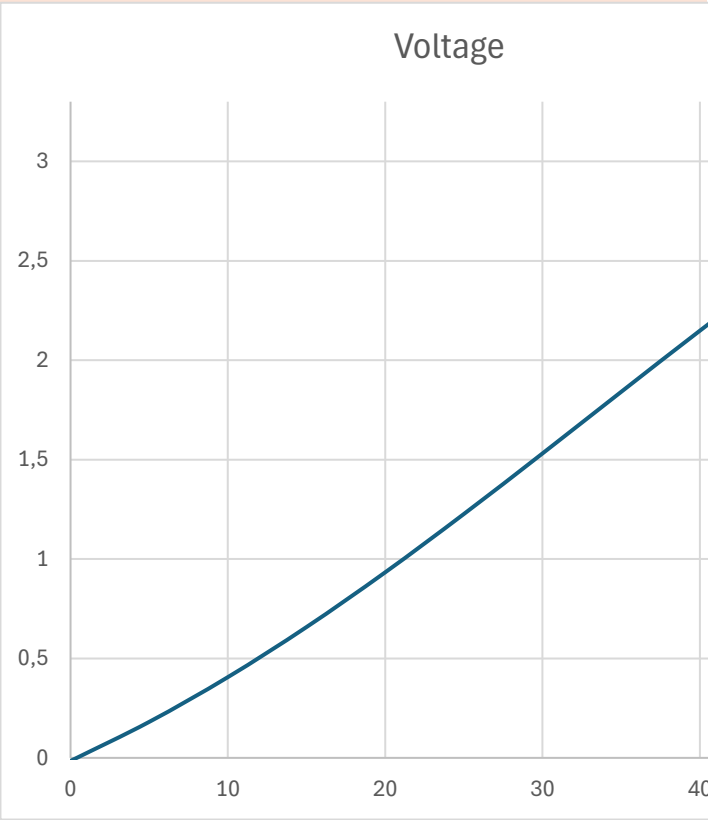
Imax [mA]	0,58632522
I at 30°C [mA]	0,2285689
d(mV)/dT at 30°C	30,7264014
mV/ADCstep	0,73242188
min Tres at 30°C	0,02383689

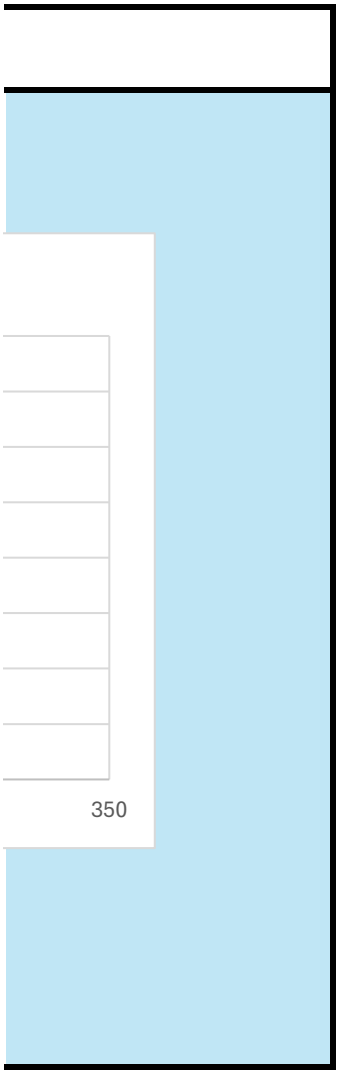


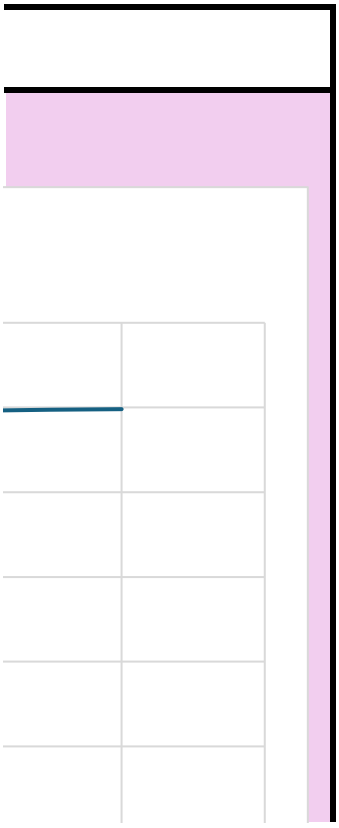


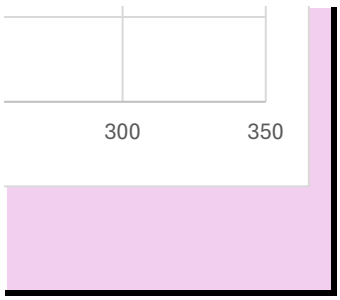
Temperature	Voltage
0	-0,0153931
5	0,18096038
10	0,40607319
15	0,65804558
20	0,93324925
25	1,22649007
30	1,53140278
35	1,84101809
40	2,14839725
45	2,44721698
50	2,73220985
55	2,99941133
60	3,24621472
65	3,47127227
70	3,67429818
80	4,01697859
100	4,48959795
150	4,97967954
200	5,1164635
250	5,16230004
300	5,18051723

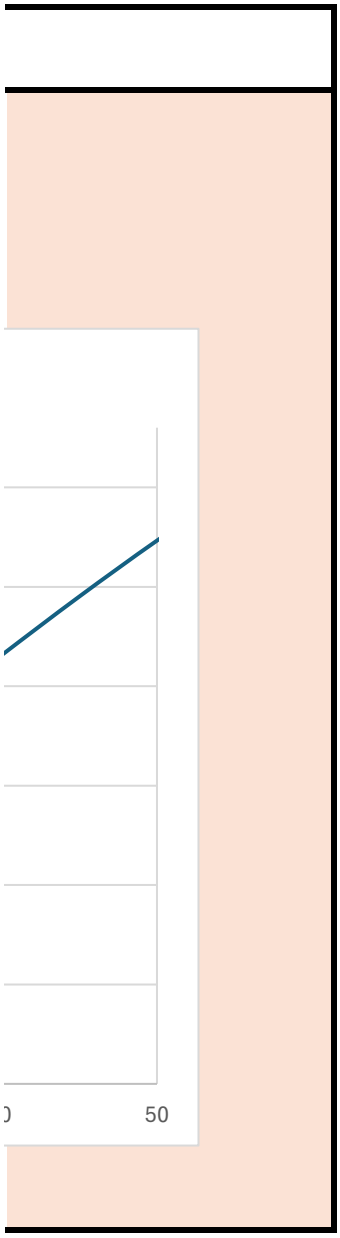
Imax	0	mA
I at 30°C	0	mA
d(mV)/dT at 30°C	61,4528027	mV/°C
mV/ADCstep	0,73242188	mV
minTempResoltion at 30°C	0,01191845	°C




350




300
350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