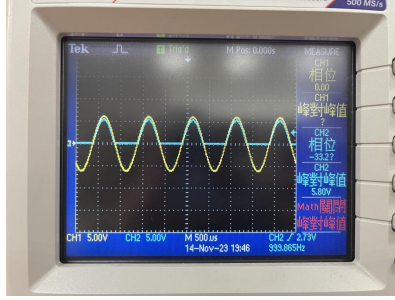


Diode Circuits Report

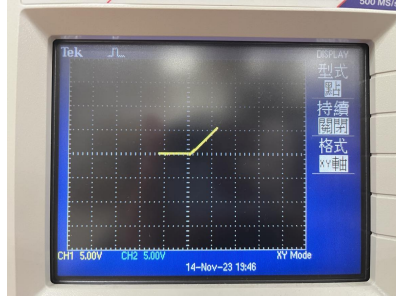
梁程捷(B11901136)，吴奕娃(B11901080)

1 Diode Circuits

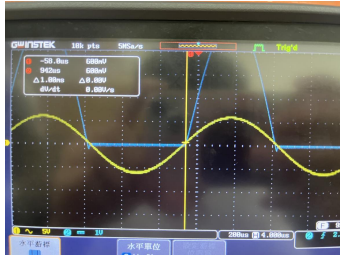
cut-in-voltage $v_D = 0.6\text{ V}$



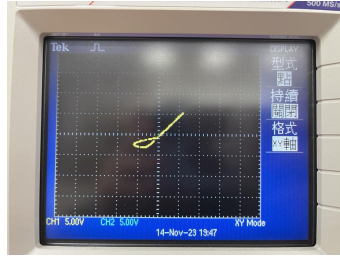
(a) Diode: Y-t mode



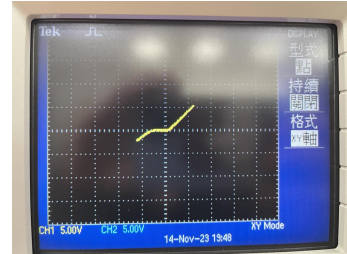
(b) Diode: X-Y mode, $f = 1\text{ kHz}$



(c) Diode: cut-in voltage measurement



(d) Diode: X-Y mode, $f = 200\text{ kHz}$



(e) Zener diode $i - v$ curve

2 Voltage regulator

$VR\text{ (k}\Omega\text{)}$	V_o	$I_1\text{ (mA)}$	$I_Z\text{ (mA)}$	$I_2\text{ (mA)}$
2	1.507	0.754	0.001	0.754
20	3.941	0.510	0.304	0.204
400	4.096	0.494	0.485	0.010
600	4.098	0.494	0.487	0.007
800	4.098	0.494	0.489	0.006
1000	4.098	0.494	0.475	0.002

Table 1: voltage regulator raw experimental data

Conclusion: output voltage V_o is very stable with large load resistance.