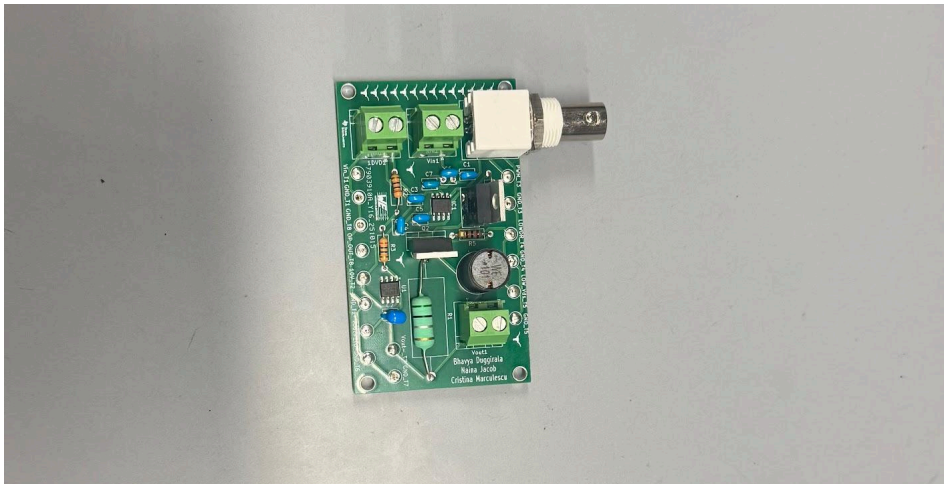
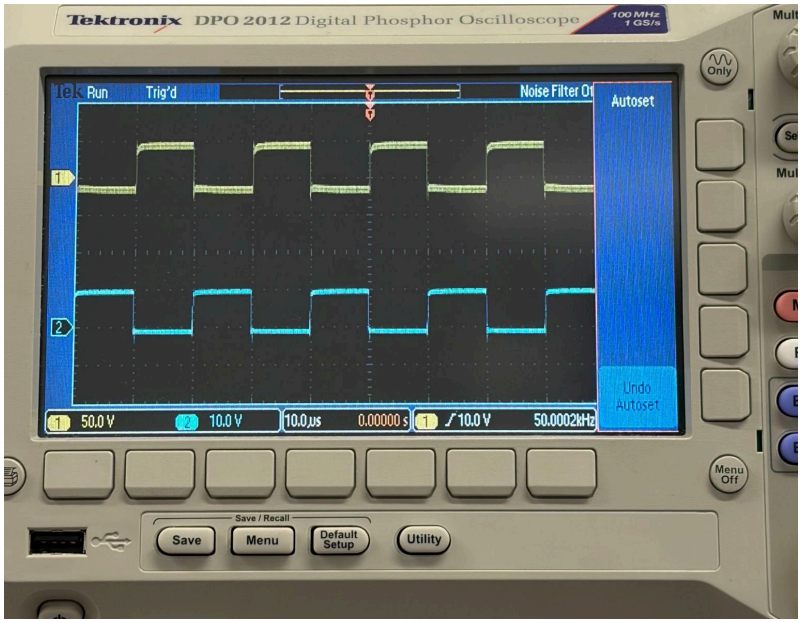
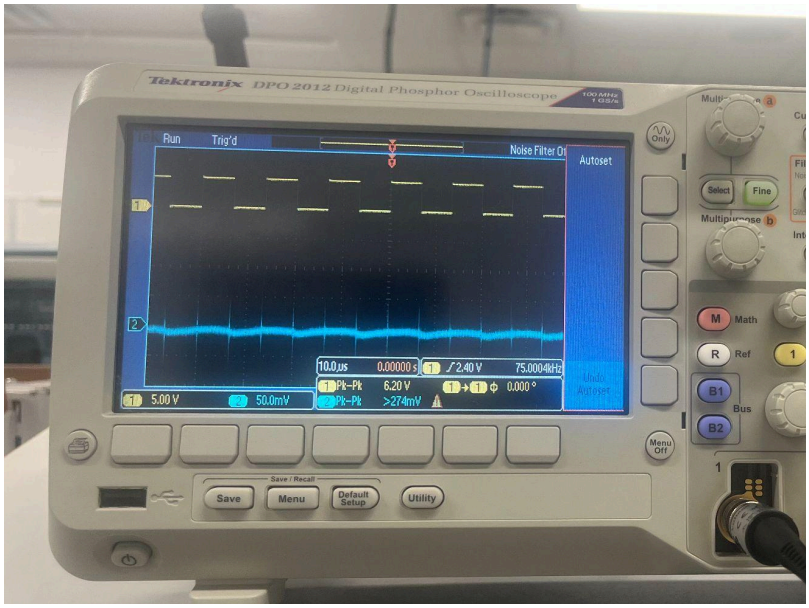
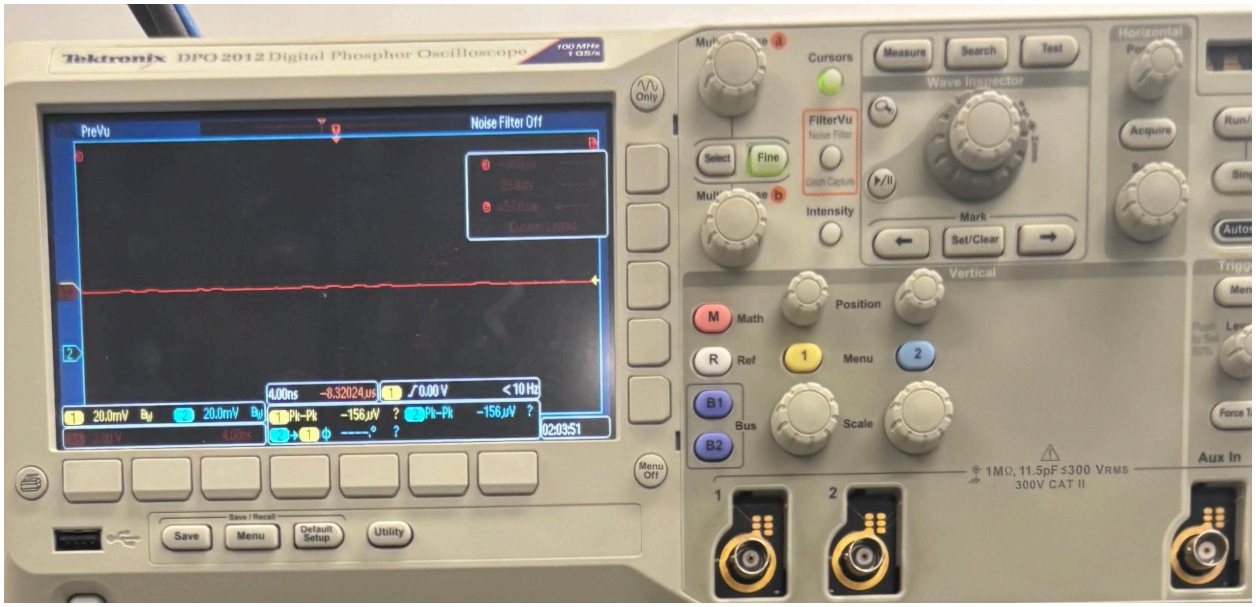
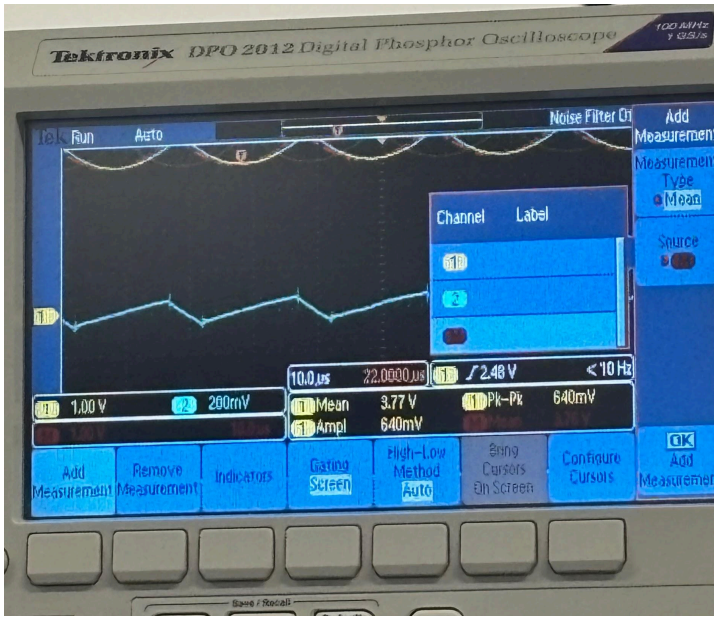

Vivek
Bhavya Doggirala
Naina Jacob
Cristina Marculescu


Tektronix DPO 2012 Digital Phosphor Oscilloscope
100 MHz
1 GS/s
Tek Run
Trig'd
Noise Filter Of
Autoset
Undo
Autoset
50.0 V
10.0 V
10.0 µs
0.00000 s
10.0 V
50.0002kHz
Only
Menu
Off
Save / Recall
Save
Menu
Default
Setup
Utility


Tektronix DPO 2012 Digital Phosphor Oscilloscope
Run
Trig'd
Autoset
Select
Fine
M Math
R Ref
B1
B2
Bus
Save
Menu
Default Setup
Utility


Tektronix DPO 2012 Digital Phosphor Oscilloscope
PreVu
Noise Filter Off
Cursors
Measure
Search
Test
Wave Inspector
FilterVu
Intensity
Mark
Set/Clear
Vertical
Position
Scale
M Math
R Ref
Menu
B1
B2
Bus
Save
Menu
Default Setup
Utility
1MΩ, 11.5pF ≤300 VRMS
300V CAT II
Aux In



Voltage in (V)	Dropped Voltage (V)	Voltage / 0.5 Ohms (A) [I = V/R]
16	0.008	0.016
6	0.0064	0.0128

For varying in frequency of PWM between 50 kHz to 100 kHz, Vout doesn't change much, but the ripple decreases at higher frequency. Higher switching frequency made the output smoother

For varying the duty cycle of PWM, increasing the duty cycle increased Vout. and decreasing the duty cycle decreased Vout.

Current = (measured voltage across 0.5 Ω) / 0.5. , as in, if we measured voltage, current is double as indicated in the table.

When Vin increases to 16V, both vout and the output current increase.

OPAMP_OUT adjusts the duty cycle. Thus, as OPAMP_OUT increases, Vout increases, but as OPAMP_OUT decreases, Vout decreases