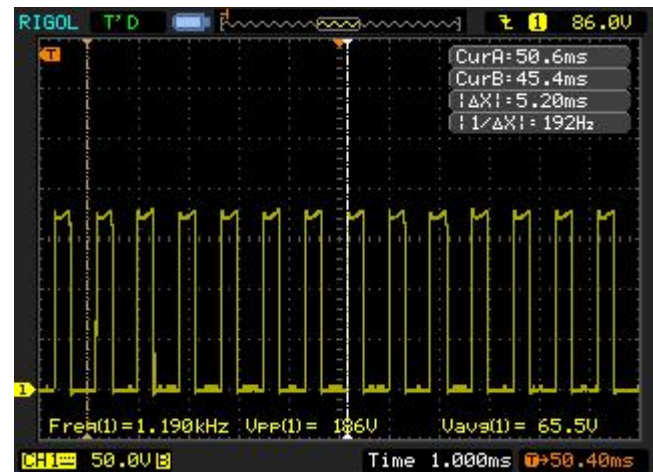
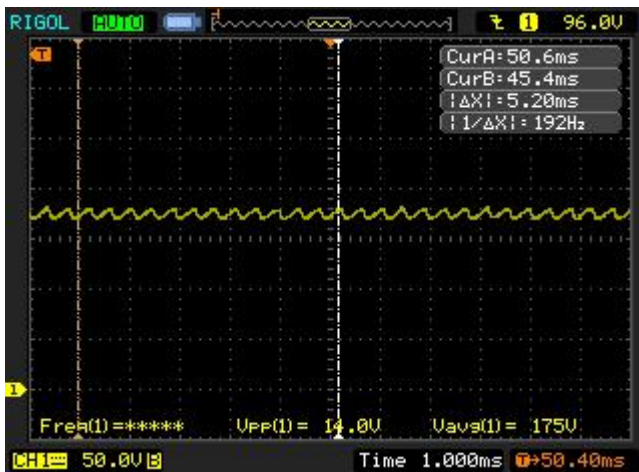


Silent EL Wire Inverter

Datasheet Revision B0 February 15, 2021

	Min	Typ	Max	Notes
Power Input	3.0V		5.0V	3V will lower the max EL wire length.
I _{cc}	250mA		300mA	V _{in} =5V & 9nF EL Load
DC Converter Output	180V	185V	190V	V _{in} =5V & 9nF EL Load
EL Voltage	160V _{pp}	370V _{pp}	380V _{pp}	V _{in} =5V & 9nF EL load
EL Frequency	1.1kHz	1.19kHz	1.25kHz	
Max EL Wire Load			9nF@5V _{input}	

Circuit Outputs



The two images above were taken while the PCB was powered with 5V and had 9nF of EL Wire load, this is approximately a 3M wire from Sparkfun Electronics. The left Image above shows the output voltage on C2, this is the output of the boost converter. The right picture shows one half of the EL wire driver outputs, left side of R4/R5.

The length and capacitance of the EL wire will dramatically effect the performance, longer wires and more capacitance will decrease both the Boost converter output and the peak to peak amplitude on the EL wire. This will ultimately reduce the brightness of the wire. The boost converter self regulates at about 180V with no EL wire load.

Wiring

Wires should be connected to the circuit using the strain relief holes provided to prevent tension on the solder joints. The positive power input is labeled as 5V, the gnd is right next to it. It is good practice to raise the power supply voltage slowly, just in case it is connected backwards. The EL wire polarity does not matter and is connected on the opposite end of the PCB.

