**Project Ozone PCB Details**

Clarifications:

* Chip in the corner is an h-bridge, it is NOT the chip that we will actually be using, but the connections are there just to show what lines we will need, just couldn’t find an Altium library file for the one we will be using at this time. Will update later. Part we are using is an L293D (see table in next section).
* 1150 ohm resistor is made with a 1k ohm and 150 ohm in series

Manufacturers and Part Numbers:

|  |  |  |
| --- | --- | --- |
| Part | Manufacturer | Part Number |
| All Op Amps | Texas Instruments | TL082  http://www.digikey.com/product-detail/en/texas-instruments/TL082CPWR/296-7208-1-ND/378292 |
| All Capacitors – 100nF | Lee’s Electronics | 844  http://leeselectronic.com/en/product/844.html |
| H-bridge | Texas Instruments | L293D  http://www.digikey.ca/product-detail/en/stmicroelectronics/L293D/497-2936-5-ND/634700 |
| 150 ohm resistor | Lee’s Electronics | 9522  http://leeselectronic.com/en/product/9522.html?search\_query=150+ohm+resistor&results=8 |
| 1k ohm resistor | Lee’s Electronics | 91901  <http://leeselectronic.com/en/product/91901.html> |
| PN2222 transistor | Digikey | Can be generic  <http://www.digikey.com/product-detail/en/on-semiconductor/PN2222/PN2222OS-ND/605301> |
| Diode | Digikey | Can be generic  <http://www.digikey.com/product-detail/en/fairchild-on-semiconductor/1N4148TR/1N4148FSTR-ND/458811> |

Mechanical Details:

Shape: Square

Side length: As large as necessary below 65mm, but as small as possible. Basically as small as you can make it, but it doesn’t really matter as long as its less than about 65mm.

Extra requirements:

* Need a hole at the center of diameter 7mm\*\* (to be updated)
* Need 2 holes for mounting screws, (M3 – diameter ~3mm), location can be anywhere as long as it is within 20mm radius from center

Connectors:

Was thinking of using these from digikey:

<http://www.digikey.ca/product-detail/en/amphenol-fci/10114826-00002LF/609-4391-ND/2658910>

(female)

<http://www.digikey.ca/product-detail/en/amphenol-fci/10114829-10102LF/609-4383-2-ND/2658929>

(male)

<http://www.digikey.ca/product-detail/en/amphenol-fci/10114828-10102LF/609-4387-2-ND/2658926>

(male – 90 deg)