

| Breakers | | | | | | | | | | | | | |
|----------------------------|----------------|----------|-----------|-------------|------------|------------------------|----------------|---------------------------|----------|-----------------------|----------------|-------------------------|-------------------------------------|
| Part | Vendor | Length | Width | Height | Unit Price | Price if ordering 1000 | Total for 1000 | Item Number | Quantity | Total for one Breaker | Total for 1000 | Location on Schematic | |
| Standard Clock Oscillators | Mouser | 20.86mm | | | \$1.87 | 1.16 | \$1,160.00 | ECX-100AX-3.579545 | 2 | \$3.74 | \$2,320.00 | NA | **Did not use these in final design |
| Solid State Relays | Mouser | 58.2mm | 45mm | 29mm | \$18.42 | 13 | \$13,000.00 | STH24D25 | 2 | \$36.84 | \$26,000.00 | To the right of S1 | **Exponential Trendline |
| 5pF SMD Cap | Mouser | 0.6mm | 0.3mm | 0.3mm | \$0.03 | 0.005 | \$5.00 | C0603C0G1E050C | 2 | \$0.06 | \$10.00 | C6, C7 | |
| Opto Isolator | Mouser | 13.97mm | 5.72mm | 5.72mm | \$3.03 | 1.76 | \$1,760.00 | OPI1264C | 4 | \$12.12 | \$7,040.00 | Just above S1 | |
| 3.579545MHz Crystal | Mouser | 11.4mm | 4.7mm | 4.2mm | \$0.63 | 0.35 | \$350.00 | ABLSG-3.579545MHZ-D-2-Y-T | 2 | \$1.26 | \$700.00 | To the right of C6 & C7 | |
| ADE7763 Chip | Analog Devices | 7.2mm | 7.4mm | 2mm | \$1.66 | 1.61 | \$1,610.00 | ADE7763ARSZ | 1 | \$1.66 | \$1,610.00 | To the left of C6 & C7 | |
| 1uF Cap | Mouser | 7mm | 4mm | | \$0.22 | 0.052 | \$52.00 | EEA-GA1H1R0 | 1 | \$0.22 | \$52.00 | C3 | |
| 100nF | Mouser | 7mm | 4mm | | \$0.22 | 0.052 | \$52.00 | EEA-GA1HR10 | 2 | \$0.44 | \$104.00 | C4, C5 | |
| 10uF Cap | Mouser | 7mm | 5mm | | \$0.25 | 0.059 | \$59.00 | EEA-GA1V100B | 2 | \$0.50 | \$118.00 | C1, C2 | |
| 255 KOhm Resistor | Mouser | 6.8mm | 2.5mm | | \$0.13 | 0.012 | \$12.00 | 271-255K-RC | 2 | \$0.26 | \$24.00 | R2, R3 | |
| 1 Kohm Resistor | Mouser | 3.5mm | 1.85mm | | \$0.15 | 0.017 | \$17.00 | 270-1K-RC | 1 | \$0.15 | \$17.00 | R4 | |
| 60 ohm Resistor | Mouser | 8.74mm | 3.68mm | | \$0.43 | 0.241 | \$241.00 | CMF6060R000BH-EB | 1 | \$0.43 | \$241.00 | R1 | |
| LED | Mouser | 12mm | 3mm | | \$0.04 | 0.04 | \$40.00 | SLX-LX3044HD | 1 | \$0.04 | \$40.00 | LED1 | |
| Switch | Mouser | 13mm | 7.9mm | 33.3mm | \$3.92 | 2.91 | \$2,910.00 | M2012SD3G01 | 1 | \$3.92 | \$2,910.00 | S1 | |
| Current Transformer | Digikey | 37.5mm | 14mm | 39mm | \$14.23 | 9.4 | \$9,400.00 | CR8350-2500-N | 2 | \$28.46 | \$18,800.00 | To the left of R1 | |
| Arduino Uno-ATmega328 | SparkFun | 75.2mm | 53.4mm | 14.7mm | \$29.95 | 23.96 | \$23,960.00 | DEV-09950 | 1 | \$29.95 | \$23,960.00 | | |
| SSOP to DIP Adapter 20-Pin | SparkFun | 18mm | 25.4mm | | \$3.95 | 3.16 | \$3,160.00 | BOB-00499 | 2 | \$7.90 | \$6,320.00 | | |
| Total for Final Design | For one: | \$124.21 | For 1000: | \$87,946.00 | | | | | | | | | |
| Total for purchased parts | \$127.95 | | | | | | | | | | | | |