

# Bill Of Materials for Sample And/Or Hold

**Design Title** Sample And/Or Hold  
**Author** Dustin Stroh (J3RK)  
**Document Number**  
**Revision** 1.4  
**Design Created** Wednesday, June 7, 2023  
**Design Last Modified** Wednesday, June 7, 2023  
**Total Parts In Design** 52

## 0 Modules

| <u>Quantity</u> | <u>References</u> | <u>Value</u> | <u>PCB Package</u> | <u>Notes</u> |
|-----------------|-------------------|--------------|--------------------|--------------|
|-----------------|-------------------|--------------|--------------------|--------------|

Sub-totals:

## 6 Capacitors

| <u>Quantity</u> | <u>References</u> | <u>Value</u> | <u>PCB Package</u> | <u>Notes</u> |
|-----------------|-------------------|--------------|--------------------|--------------|
|-----------------|-------------------|--------------|--------------------|--------------|

|   |        |       |       |  |
|---|--------|-------|-------|--|
| 1 | C1     | 100nF | CAP20 | Timing Capacitor - Polypropylene / Polystyrene / C0G/NP0 Ceramic (Low Drift) |
| 2 | C2, C4 | 10nF  | CAP10 | C0G/NP0 MLCC/ Ceramic / Film   |
| 1 | C3     | 330nF | CAP10 | C0G/NP0 MLCC/ Ceramic / Film   |
| 1 | C5     | 100nF | CAP10 | C0G/NP0 MLCC / Ceramic / Film  |
| 1 | C6     | 10uF  | CAP10 | X7R or Audio Grade Electrolytic for AC Coupling                              |

Sub-totals:

## 12 Resistors

| <u>Quantity</u> | <u>References</u> | <u>Value</u> | <u>PCB Package</u> | <u>Notes</u> |
|-----------------|-------------------|--------------|--------------------|--------------|
|-----------------|-------------------|--------------|--------------------|--------------|

|   |           |      |       |                                 |
|---|-----------|------|-------|---------------------------------|
| 1 | R1        | 4.7k | RES40 | 1% (100PPM / 50PPM Recommended) |
| 1 | R2        | 4.7R | RES30 | 1% (100PPM / 50PPM Recommended) |
| 3 | R3-R4, R7 | 100K | RES40 | 1% (100PPM / 50PPM Recommended) |
| 1 | R5        | 100R | RES40 | 1% (100PPM / 50PPM Recommended) |
| 1 | R6        | 330R | RES40 | 1% (100PPM / 50PPM Recommended) |
| 1 | R27       | 10K  | RES40 | 1% (100PPM / 50PPM Recommended) |
| 1 | R28       | 499K | RES40 | 1% (100PPM / 50PPM Recommended) |
| 1 | R29       | 91K  | RES40 | 1% (100PPM / 50PPM Recommended) |
| 1 | R30       | 5.6K | RES40 | 1% (100PPM / 50PPM Recommended) |
| 1 | R32       | 20K  | RES40 | 1% (100PPM / 50PPM Recommended) |

Sub-totals:

## 7 Integrated Circuits

| <u>Quantity</u> | <u>References</u> | <u>Value</u> | <u>PCB Package</u> | <u>Notes</u> |
|-----------------|-------------------|--------------|--------------------|--------------|
|-----------------|-------------------|--------------|--------------------|--------------|

|   |        |          |                   |  |
|---|--------|----------|-------------------|--|
| 2 | U1, U7 | OPA132U  | SO8               | Low Drift, Low Bias, Low Offset, High Slew (OPA132 or similar.)  |
| 1 | U2     | DG418    | SOIC127P600X175-8 | DG418LDY Recommended   |
| 1 | U3     | OPA2132U | SO8               | Low Drift, Low Bias, Low Offset, High Slew (OPA2132 or similar.) |
| 1 | U4     | LM8261M5 | SOT95P284X122-5   | Specifically to drive capacitive load. LM8261M5 required.        |
| 1 | U5     | 40106    | SO14              | CD40106 Hex Schmitt inverter                                     |
| 1 | U6     | 78L05    | TO92              | TO-92 Type   |

Sub-totals:

## 1 Transistors

| <u>Quantity</u> | <u>References</u> | <u>Value</u> | <u>PCB Package</u> | <u>Notes</u> |
|-----------------|-------------------|--------------|--------------------|--------------|
|-----------------|-------------------|--------------|--------------------|--------------|

|   |    |        |      |  |
|---|----|--------|------|--|
| 1 | Q3 | 2N3904 | TO92 | Any standard TO-92 NPN Transistor (EBC Pinout on board.) |
|---|----|--------|------|--|

Sub-totals:

## 5 Diodes

| <u>Quantity</u> | <u>References</u> | <u>Value</u> | <u>PCB Package</u> | <u>Notes</u> |
|-----------------|-------------------|--------------|--------------------|--------------|
|-----------------|-------------------|--------------|--------------------|--------------|

|   |       |            |           |  |
|---|-------|------------|-----------|--|
| 2 | D1-D2 | BAT46      | DIODE30   | Schottky Diodes (most BAT series are fine)         |
| 1 | D3    | 1N4148     | DIODE30   | Standard Small Signal Diode (1N4148 or Equivalent) |
| 1 | D4    | LED-YELLOW | CONN-SIL2 | 2 Lead LED   |
| 1 | D5    | 1N4738A    | DO41      | Zener Diode between 8.2V and 10V.                  |

Sub-totals:

## 21 Miscellaneous

| <u>Quantity</u> | <u>References</u>  | <u>Value</u> | <u>PCB Package</u> | <u>Notes</u>  |
|-----------------|--------------------|--------------|--------------------|---|
| 12              | BP1-BP12           | 100nF        | 0805               | Decoupling / Bypass SMT0805 Capacitors. C0G/NP0 Preferred |
| 3               | CLOCK,OUT,<br>SIGN | CONN-SIL1    | CONN-SIL1          | On PCB Solder Pads. (no component needed)                 |
| 2               | FB1-FB2            | 0R           | RES30              | Ferrite Beads Recommended                                 |
| 1               | J1                 | SIL-156-04   | SIL-156-04         | MTA-156 Friction Lock Power Header                        |
| 1               | NZ                 | CONN-SIL1    | CONN-SIL1          | On PCB Solder Pads. (no component needed)                 |
| 2               | PF1-PF2            | 10uF         | ELEC-RAD13         | Power Filtering Electrolytic Capacitors                   |

Sub-totals:

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Totals:

Wednesday, June 7, 2023 11:37:53 AM