PARTS LIST:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Part** | **Value** | **Device** | **Package** | **Library** |
|  |  |  |  |  |
| **8-WSON** | STORAGE | STORAGE | 8-WSON | heartLib |
| **AFE4490** | AFE4490 | AFE4490 | 40VQFN | heartLib |
| **AFE4490\_2** | AFE4490 | AFE4490 | 40VQFN | heartLib |
| **C1** | 2.2uF | C-USC0603 | C0603 | rcl |
| **C2** | 1uF | C-USC0603 | C0603 | rcl |
| **C3** | 10uF | C-USC0603 | C0603 | rcl |
| **C4** | 10uF | C-USC0603 | C0603 | rcl |
| **C5** | 10uF | C-USC0603 | C0603 | rcl |
| **C6** | 10uF | C-USC0603 | C0603 | rcl |
| **C7** | 1uF | C-USC0603 | C0603 | rcl |
| **C8** | .1uF | C-USC0603 | C0603 | rcl |
| **C9** | .1uF | C-USC0603 | C0603 | rcl |
| **C10** | .1uF | C-USC0603 | C0603 | rcl |
| **C11** | 2.2uF | C-USC0603 | C0603 | rcl |
| **C12** | .01uF | C-USC0805 | C0805 | rcl |
| **C13** | 18pF | C-USC0603 | C0603 | rcl |
| **C14** | 18pF | C-USC0603 | C0603 | rcl |
| **C15** | 2.2uF | C-USC0603 | C0603 | rcl |
| **C16** | .1uF | C-USC0603 | C0603 | rcl |
| **C17** | .1uF | C-USC0603 | C0603 | rcl |
| **C18** | .1uF | C-USC0603 | C0603 | rcl |
| **C19** | 2.2uF | C-USC0603 | C0603 | rcl |
| **C20** | .01uF | C-USC0805 | C0805 | rcl |
| **C21** | 18pF | C-USC0603 | C0603 | rcl |
| **C22** | 18pF | C-USC0603 | C0603 | rcl |
| **C23** | 1uF | C-USC0805 | C0805 | rcl |
| **C24** | 1uF | C-USC0805 | C0805 | rcl |
| **C25** | 4.7uF | C-USC0603 | C0603 | rcl |
| **C26** | 4.7uF | C-USC0603 | C0603 | rcl |
| **C27** | 100pF | C-USC0805 | C0805 | rcl |
| **C28** | 1uF | C-USC0805 | C0805 | rcl |
| **C29** | 2.2uF | C-USC0603 | C0603 | rcl |
| **C30** | 1.5pF | C-USC0603 | C0603 | rcl |
| **C31** | 1.5pF | C-USC0603 | C0603 | rcl |
| **J1** | FTSH-105-01-XXX-DV-K | FTSH-105-01-XXX-DV-K | FTSH-105-01-XXX-DV-K | FTSH-105-01-XXX-DV-K |
| **L2** | 4.7uH | INDUCTORCDRH | CDRH | RMSlib |
| **LEDGREEN** | 525nm | LEDCHIP-LED0603 | CHIP-LED0603 | RMSlib |
| **LEDRED1** | 631nm | LEDCHIP-LED0603 | CHIP-LED0603 | RMSlib |
| **LED\_IR** | 940nm | LEDCHIP-LED0805 | CHIP-LED0805 | RMSlib |
| **LED\_IR\_2** | SMD970 | SMD970 | IR\_PACKAGE | heartLib |
| **PHOTODIODE** | PHOTODIODE | PHOTODIODE | 2-SMD | heartLib |
| **Q1** | CRYSTALCTS406 | CTS406 |  | RMSlib |
| **Q2** | CRYSTALCTS406 | CTS406 |  | RMSlib |
| **R1** | 1k | R-US\_R0805 | R0805 | rcl |
| **R2** | 1k | R-US\_R0805 | R0805 | rcl |
| **R3** | 10k | R-US\_R0805 | R0805 | rcl |
| **R4** | 10k | R-US\_R0805 | R0805 | rcl |
| **R5** | 100k | R-US\_R0603 | R0603 | rcl |
| **R6** | 100k | R-US\_R0603 | R0603 | rcl |
| **R13** | 100k | R-US\_R0603 | R0603 | rcl |
| **R17** | 100k | R-US\_R0603 | R0603 | rcl |
| **R22** | 100k | R-US\_R0603 | R0603 | rcl |
| **S1** | DT | DT | PBSWITCH | RMSlib |
| **S2** | DT | DT | PBSWITCH | RMSlib |
| **U$1** | ACCELEROMETER | ACCELEROMETER | LGA-12 | heartLib |
| **U$2** | RSL10 | RSL10 | QFN48 | heartLib |
| **U$3** | PHOTODIODE | PHOTODIODE | 2-SMD | heartLib |
| **U$5** | JST-MOLEX | JST-MOLEX | JST-MOLEX | RMSlib |
| **U$6** | 2.2uH | 0603\_INDUCTOR | 0603\_INDUCTOR | heartLib |
| **U$7** | 3nH | 0603\_INDUCTOR | 0603\_INDUCTOR | heartLib |
| **U$8** | 1.8nH | 0603\_INDUCTOR | 0603\_INDUCTOR | heartLib |
| **U$9** | CX3225SB | CX3225SB | 4-SMD | heartLib |
| **U$10** | MC-306 | MC-306 | 4-SOJ | heartLib |
| **U$11** | ANT-CHIP-LINX2.4GHZ | ANT-CHIP-LINX2.4GHZ | ANTLINX2.4 | RMSlib |
| **VSON-10** | VOLTAGE\_REG | VOLTAGE\_REG | VSON-10 | heartLib |

Links to Component Data Sheets:

**Flash Storage**: <https://www.winbond.com/resource-files/w25n01gv%20revk%20020518%20unsecured.pdf>

**AFE4490**: <http://www.ti.com/lit/ds/symlink/afe4490.pdf>

**Photodiode**: <https://www.vishay.com/docs/81643/temd5080.pdf>

**Accelerometer**: <http://kionixfs.kionix.com/en/datasheet/KX126-1063-Specifications-Rev-1.0.pdf>

**Voltage Regulator:** <http://www.ti.com/lit/ds/symlink/tps61200.pdf>

**RSL10**: <https://www.onsemi.com/pub/Collateral/RSL10-D.PDF>

**940 nm LED**: <https://www.mouser.com/ds/2/427/vsmb1940-247517.pdf>

**631/525 nm LED:** <http://www.farnell.com/datasheets/2049966.pdf>

**970 nm LED**: <http://www.tech-led.com/wp-content/uploads/2013/10/SMT970-231.pdf>

Research Links:

<https://www.howequipmentworks.com/pulse_oximeter/>

<https://flashdba.com/2014/06/20/understanding-flash-blocks-pages-and-program-erases/>

<http://dosi.bli.uci.edu/research/>

[http://www.lboro.ac.uk/enterprise/carelight/#](http://www.lboro.ac.uk/enterprise/carelight/)

<http://publications.lboro.ac.uk/publications/all/collated/adsh.html>