

BOM for FW4-1350

| Designator | Comment | Description | Part number | Footprint | Manufacturer | Alternate | Digikey PN | Mouser PN | Qty |
|-------------------------|------------|----------------------|-------------------------|--------------|--------------|---------------------|--------------------|--------------------|-----|
| C1,C2,C6,C7,C8,C13,C14 | 0.1/25V | Ceramic X7R | CC0805KRX7R8BB104 | 0805 | Yageo | Kemet | 311-1141-1-ND | 80-C0805C104K3R | 5 |
| C3 | 1000/35 | Aluminum | UVZ1V102MHD | radial .2/.5 | Nichicon | | 493-1322-ND | 647-UVR1V102MHD | 1 |
| C4,C5 | 4.7/250 | Aluminum | UVZ2E4R7MPD | radial .1/.3 | Nichicon | | 493-1414-ND | 647-UVZ2E4R7MPD | 2 |
| C9 | 12pF | Ceramic NPO | CC0805JRNPO9BN120 | 0805 | Yageo | Kemet | 311-1100-1-ND | 80-C0805C120J5G | 1 |
| C10 | 0.33F/5.5V | Supercap | EECS0HD334H | S-CAP H | Panasonic | Cornell | P11064-ND | 598-EDLSD334H5R5C | 1 |
| C11 | 5-20pF | Trimmer cap | TZC3P200A310R00 | TZC3 | Murata | | 490-1993-1-ND | 81-TZC3Z060A310R00 | 1 |
| C12 | 0.01/200V | polyester | B32520C6103K | radial .3 | Epcos | AVX | 495-2430-ND | 581-BN074G0103K | 1 |
| D1 | | rectifier | S1D-13 | SMA | Diodes Inc | Fairchild | S1DDICT-ND | 512-S1D | 1 |
| D2 | | rectifier ultra fast | UF4007 | DO-41 | Fairchild | | UF4007CT-ND | 512-UF4007 | 1 |
| D3 | | Diode switching | BAV74 | SOT-23 | NXP | Fairchild | 568-1623-1-ND | 512-BAV74 | 1 |
| J1 | POWER | Power | B2PS-VH | 0.156 x 2 | JST | any 0.156 (3.96mm) | 455-1648-ND | | 1 |
| J2 | PIR | Header, 3-Pin | | 1 x 3 | | | | | 1 |
| J3 | ISP | Header, 6-Pin | | 2 x 3 | | | | | 1 |
| JP1 | BAT | Header, 2-Pin | | 1 x 2 | | | | | 1 |
| L1 | 248uH | Inductor | SWS-0.83-248 | Talema S4 | AlfaMag | | TE2058-ND | | 1 |
| L2 | | ferrite bead | HZ0805C202R-10 | 0805 | Steward | | 240-2396-1-ND | 81-BLM21A102S | 1 |
| Q1,Q2,Q3,Q4 | PNP | transistor | BTA92 | SOT-23 | ON Semi | | MMBTA92LT1OSCT-ND | 863-MMBTA92LT1G | 4 |
| Q5 | MOSFET | N-Channel MOSFET | IRL640PBF | TO220 | Vishay | Fairchild | IRL640PBF-ND | 512-IRLS640A | 1 |
| Q6,Q7,Q8,Q9 | NPN | transistor | BTA42 | SOT-23 | ON Semi | | MMBTA42LT1GOSCT-ND | 863-MMBTA42LT1G | 4 |
| R1,R2,R3,R4 | 10k | resistor 5% | | 0805 | Yageo | Xicon | 311-10KARCT-ND | 260-10K-RC | 4 |
| R5,R32,R33,R34,R35 | 1M | resistor 5% | | 0805 | Yageo | Xicon | 311-1.0MARCT-ND | 260-1.0M-RC | 5 |
| R6 | 4.7k | resistor 5% | | 0805 | Yageo | Xicon | 311-4.7KARCT-ND | 260-4.7K-RC | 1 |
| R7,R27,R28,R29,R30 | 100k | resistor 5% | | 0805 | Yageo | Xicon | 311-100KARCT-ND | 260-100K-RC | 5 |
| R8,R9 | 47k | resistor 5% | | 0805 | Yageo | Xicon | 311-47KARCT-ND | 260-47K-RC | 2 |
| R10 | 10R | resistor 5% | | 0805 | Yageo | Xicon | 311-10ARCT-ND | 260-10-RC | 1 |
| R11 | 2.2k | resistor 5% | | 0805 | Yageo | Xicon | 311-2.2KARCT-ND | 260-2.2K-RC | 1 |
| R12,R15 | 18k | resistor 5% | | 1206 | Yageo | Xicon | 311-18KERCT-ND | 263-18K-RC | 2 |
| R13,R14,R16,R17,R19,R23 | 27k | resistor 5% | | 1206 | Yageo | Xicon | 311-27KERCT-ND | 263-27K-RC | 6 |
| R18,R20,R22,R24 | 22k | resistor 5% | | 1206 | Yageo | Xicon | 311-22KERCT-ND | 263-22K-RC | 4 |
| R21,R25,R26 | 39k | resistor 5% | | 1206 | Yageo | Xicon | 311-39KERCT-ND | 263-39K-RC | 3 |
| R31 | 82k | resistor 5% | | 1206 | Yageo | Xicon | 311-82KERCT-ND | 263-82K-RC | 1 |
| S1 | OPTIONS | DIP Switch | 193-8MS (CTS) | DIP-SM16 | CTS | ITT Cannon | CT1938MS-ND | 611-BPA08SK | 1 |
| S2 | RESET | Switch PB | | SW-TAC | E-Switch | alps | EG1828-ND | 688-SKHHAJ | 1 |
| S3,S4 | SET1, SET2 | Switch PB RA | TL1105SF100Q | | E-Switch | ALPS | EG2501-ND | 688-SKHHLR | 2 |
| U1 | 78L05 | regulator | LM78L05ACM | SO-8 0.15 | National | ST Microelectronics | LM78L05ACM-ND | 511-L78L05ABD | 1 |
| U2 | HV5812 | HV driver | HV5812PJ | PLCC-28 | Supertex | | | 689-HV5812PJ-G | 1 |
| U3 | ATmega168 | microcontroller | ATmega168V-10AU | TQFP-32 | Atmel | | ATMEGA168V-10AU-ND | | 1 |
| V1,V2,V3,V4 | | pin contact | 0314-0-15-01-34-27-10-0 | 0.087 hole | Mill-Max | | ED5011-ND | 575-031400 | 72 |
| Y1 | 32.768kHz | Watch Crystal | | XTAL | Epson | Vishay Dale | SE3201-ND | 73-XT38T | 1 |