



Bill of Materials For F5X Speaker Protection Board

| Designator | Description | Comment | Footprint | Digikey Part Number | Quantity |
|--|--|--------------|------------------|-----------------------|----------|
| C1, C2 | Ceramic 3.3uF Capacitor - 1206 , 50V, X7R | 1206-3.3uF | 1206 | 445-4029-1-ND | 2 |
| C3 | Ceramic 0.1uF Capacitor - 1206, 50V, X7R | 1206-0.1uF | 1206 | 490-1775-1-ND | 1 |
| C4, C5, C6, C7, C8, C9, C11, C12, C13, C14, C19, C23, C24, C29, C33, C34 | Ceramic 1.0uF Capacitor -1206, 50V, X7R | 1206-1uF | 1206 | 455-4105-1-ND | 16 |
| C10 | Ceramic 100uF Capacitor - 1210, 50V, X5R | C1210-100uF | 1210 | 587-1965-1-ND | 1 |
| C15_L, C15_R, C16_L, C16_R, C17_L, C20 | Ceramic 10uFCapacitor - 1210, 35V, X7R | C1210-10uF | 1210 | 587-2779-1-ND | 14 |
| C20 | Ceramic 47uF Capacitor - 1210, 50V, X5R | C1210-47uF | 1210 | 490-5312-1-ND | 1 |
| C26, C27, C30, C31 | SMD-V Aluminum Electrolytic Capacitors, FT-Series 820uF 25V | 820uF/25V | EEE-G | PCE5011CT-ND | 4 |
| D1, D2, D3, D4, D7_L, D7_R, D8_L, D8_R | 1N4148 in SOD-323 package | 1N4148 | SOD-323 | 1N4148WSFSCT-ND | 8 |
| D5_L, D5_R, D6_L, D6_R | Red LED 0805 | HSMC-C170 | 2.0X1.25X0.8 | 516-1428-1-ND | 4 |
| D9 | Bi-color 3mm Common-Cathode R/B LED | N300TBR2D | R/B LED | | 1 |
| D10, D11 | 1A Schotky Bridge Rectifier, 60V - MB16S | MB16S | MBS-1 | MB16S-TPMSCT-ND | 2 |
| P1, P2, P4, P5, P6, P7 | MOLEX 530150410 board header right angle | 530150410 | MOLEX 53015410 | WM18981-ND | 6 |
| P3 | Momentary microswitch - Racon8 gullwing | Racon 8 | Racon 8 gullwing | CKN9363CT-ND | 1 |
| Q1, Q2, Q3, Q4 | N-Channel Enhancement Mode Vertical DMOS FET in SOT-23 | 2N7002 | SOT23 | 568-5981-1-ND | 4 |
| Q5, Q6, Q9 | HEXFET N-Channel Power MOSFET in TO220 | IRF610 | TO-220AB | IRF610PBF-ND | 3 |
| Q7_L, Q7_R, Q8_L, Q8_R | ZVP3310F - P-Channel Enhancement Mode Vertical DMOS FET | ZVP3310F | SOT23 | ZVP3310FCT-ND | 4 |
| R1, R3 | 1206, 499 ohm, chip resistor | 1206-499R | 8-1206 | 541-499FCT-ND | 2 |
| R2, R4, R5, R6, R12, R14, R23, R24, R25, R26, R27, R28, R29, R51 | 1206, 4.99K ohm, chip resistor | 1206-4.99K | 8-1206 | 541-4.99KFCT-ND | 14 |
| R7, R16, R17, R18, R19, R20, R21, R22, R35_L, R35_R, R36_L, R36_R, R37_L, R37_R, R38_L, R38_R, R44 | 1206, 100K ohm, chip resistor | 1206-100K | 8-1206 | 541-100KFCT-ND | 17 |
| R8, R9, R42, R43 | 1206, 2.49K ohm, chip resistor | 1206-2.49K | 8-1206 | 541-2.49KFCT-ND | 4 |
| R10 | 1206, 24.9K ohm, chip resistor | 1206-24.9K | 8-1206 | 541-24.9KFCT-ND | 1 |
| R11, R13, R30, R31, R45, R48, R49, R50 | 1206, 10.0K ohm, chip resistor | 1206-10K | 8-1206 | 541-10.0KFCT-ND | 8 |
| R15 | 1206, 3.3K ohm, chip resistor | 1206-3.3K | 8-1206 | 541-3.32KFCT-ND | 1 |
| R32_L, R32_R | 1206, 2.7K ohm, chip resistor | 1206-2.7K | 8-1206 | 541-2.67KFCT-ND | 2 |
| R33_L, R33_R, R34_L, R34_R | 1206, 300 ohm, chip resistor | 1206-300R | 8-1206 | 541-300FCT-ND | 4 |
| R39_L, R39_R, R40_L, R40_R | 1206, 1.24K ohm, chip resistor | 1206-1.21K | 8-1206 | 541-1.21KFCT-ND | 4 |
| R41 | 1206, 412K ohm, chip resistor | 1206-390K | 8-1206 | 541-392KFCT-ND | 1 |
| R46, R47 | 1206, 619 ohm, chip resistor | 1206-620R | 8-1206 | 541-620FCT-ND | 2 |
| U1 | 74HC367 - Hex Bus Driver with 3-State Outputs - TSSOP | SN74HC367PW | TSSOP-16L | 296-28456-1-ND | 1 |
| U2, U13 | 74HC02 - Quadruple 2-Input Positive-NOR Gate - TSSOP | SN74HC02PW | TSSOP-14L | 296-8206-1-ND | 2 |
| U3, U6 | 74HC74 - Dual D-Type Positive-Edge-Triggered Flip-Flop - TSSOP | SN74HC74PW | TSSOP-14L | 296-8372-1-ND | 2 |
| U4 | 74HC1G14 - Schmitt-Trigger Inverter SOT-353-5L | 74HC1G14GW | SOT353-5L | 568-2641-1-ND | 1 |
| U5, U11 | LT1716 - Precision rail-to-rail Comparator SOT-23-5L | LT1716 | SOT95P285X100-5L | LT1716HS5#TRMPBFCT-ND | 2 |
| U7, U8, U9, U10 | 74HC4002 - Dual 4-Input Positive-NOR Gate TSSOP | CD74HC4002PW | TSSOP-14L | 595-CD74HC4002PWR | 4 |
| U12 | 7805 - +5V 1A Regulator - TO220 | L7805ABV | TO220ABN | 497-2947-5-ND | 1 |
| U14 | 7812 - +12V 1A Regulator - TO220 | L7812ABV | TO220ABN | 497-1449-5-ND | 1 |
| U15 | 7912 - -12V 1A Regulator - TO220 | L7912ABV | TO220V | 497-1475-5-ND | 1 |
| | | | | | 147 |