Bill Of Materials for Flex Filter

Design Title	Flex Filter
Author	Dustin Stroh (J3RK)
Document Number	
Revision	1.2
Design Created	Thursday, July 13, 2023
Design Last Modified	Thursday, July 13, 2023
Total Parts In Design	186

0 Modules

Quantity	References	Value	PCB Package	Notes

Sub-totals:

13 Capacitors

Quantity	References	Value	PCB Package	Notes
1	C1	10nF	CAP10	C0G/NP0 MLCC/ Ceramic / Film
3	C2,C6,C10	1nF	CAP10	C0G/NP0 MLCC/ Ceramic / Film
6	C3-C4,C7-C8,C11-C12	330pF	CAP20	Polypropylene Film HIGHLY RECOMMENDED HERE (Styrene or Silve Mica also good)
3	C5,C9,C13	10uF	CAP10	C0G/NP0 MLCC/ Ceramic / Film

Sub-totals:

80 Resistors

Quantity	References	Value	PCB Package	Notes
1	R1	820R	RES30	1% Resistor (100PPM / 50PPM Recommended) Anything between 470R and 820R here.
2	R2-R3	10K	RES30	1% Resistor (100PPM / 50PPM Recommended)
3	R4,R22,R57	33K	RES30	1% Resistor (100PPM / 50PPM Recommended)
20	R5,R9,R23,R27,R42-R53,R58,R63,R80-R81	100K	RES30	1% Resistor (100PPM / 50PPM Recommended)
3	R6,R24,R59	110K	RES30	1% Resistor (100PPM / 50PPM Recommended)
3	R7,R25,R61	390R	RES30	1% Resistor (100PPM / 50PPM Recommended)
3	R8,R26,R62	5.6K	RES30	1% Resistor (100PPM / 50PPM Recommended)
15	R10-R11,R15,R20,R28-R29,R33,R38,R40-R41,R64-R65,R69,R74,R76	100k	RES30	1% Resistor (100PPM / 50PPM Recommended)
12	R12-R13,R17,R19,R30-R31,R35,R37,R66-R67,R71,R73	10k	RES30	1% Resistor (100PPM / 50PPM Recommended)
6	R14,R18,R32,R36,R68,R72	15k	RES30	1% Resistor (100PPM / 50PPM Recommended)
6	R16,R34,R54,R70,R78-R79	100R	RES30	1% Resistor (100PPM / 50PPM Recommended)
3	R21,R39,R75	20K	RES30	1% Resistor (100PPM / 50PPM Recommended)
3	R55-R56,R77	499K	RES30	1% Resistor (100PPM / 50PPM Recommended)

Sub-totals:

19 Integrated Circuits

Quantity	References	Value	PCB Package	Notes
1	U1	LM4040-10	TO92	A, B, or C type ok here.
1	U2	LF353	DIL08	TLE2062 highly recommended here. (for wide swing for 12V rails, good current output, etc.)
3	U3,U6,U15	LM13700	DIL16	DIL LM13700 Dual OTA
8	U4-U5,U7-U8,U11-U12,U16-U17	TL072	DIL08	U4, U16, and U7 should be good audio op amps (OPA2134 for example) Low bias, Fast Slew, Low Offset, Low Distortion
3	U9-U10,U18	SSM2220	SO8	SSM2220 / LS358 Recommended (LS358 perform very well, and lower price)

3	U13-U14,U19	TL071	DIL08	Use good audio op amps (OPA134 for example) Low bias, Fast Slew, Low Offset, Low Distortion

Sub-totals:

0 Transistors

Quantity	References	Value	PCB Package	Notes

Sub-totals:

0 Diodes

Quantity	References	Value	PCB Package	Notes

Sub-totals:

74 Miscellaneous

Quantity	References	Value	PCB Package	Notes
3	1OTA1,2OTA1,3OTA1	2K	3362P	Use REAL Bourns 3362P Trims, not knockoffs.
3	1OTA2,2OTA2,3OTA2	2k	3362P	Use REAL Bourns 3362P Trims, not knockoffs.
32	BP1-BP32	100nF	0805	Decoupling / Bypass SMT0805 Capacitors C0G/NP0
2	FB1-FB2	0R	RES30	Ferrite Beads
15	FML1-FML3,INIT1-INIT3,MIX1-MIX3,RES1-RES3,TUNE1-TUNE3	100K	CONN-SIL3	Panel Pots (Use Linear for all but RES1, RES2, and RES3, use Log for these three)
3	INL1-INL3	100k	CONN-SIL3	Panel Pots (Use Lin or Log)
1	J1	SIL-156-04	SIL-156-04	MTA-156 Friction Lock Power Header
2	PF1-PF2	10uF	ELEC-RAD13	Power Filtering Electrolytic Capacitors
3	SCALE1-SCALE3	100R	3362P	Use REAL Bourns 3362P Trims, not knockoffs.
1	SW1	SW-ROT-3	CONN-SIL4	SP3T Toggle Wired as a 3-way selector. (Recommend NKK or TE/Alco)
3	TC1-TC3	2K	RES30	2K Tempco Resistors (not absolutely required, but help with temp stability for V/Oct tracking)
6	ZD1-ZD6	1N4733A	DO41	5.1V Zener Diodes

Sub-totals:

Totals:

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