

Bill Of Materials for PHASE

Design Title	PHASE
Author	Dustin Stroh J3RK
Document Number	
Revision	1.2
Design Created	Friday, March 29, 2024
Design Last Modified	Friday, March 29, 2024
Total Parts In Design	110

0 Modules

Quantity	References	Value	PCB Package	Notes
----------	------------	-------	----------------	-------

Sub-totals:

14 Capacitors

Quantity	References	Value	PCB Package	Notes
----------	------------	-------	----------------	-------

1	C1	10pF	CAP10	C0G/NP0 MLCC / Ceramic / Film
1	C2	1.5nF	CAP10	C0G/NP0 MLCC / Ceramic / Film
1	C3	100pF	CAP10	C0G/NP0 MLCC / Ceramic / Film
4	C4-C6,C13	47pF	CAP10	C0G/NP0 MLCC / Ceramic / Film
2	C7-C8	330nF	CAP10	C0G/NP0 MLCC / Ceramic / Film
3	C9-C10,C14	10nF	CAP10	C0G/NP0 or Film
1	C11	3.9nF	CAP20	C0G/NP0 MLCC / Ceramic / Film
1	C12	22pF	CAP10	C0G/NP0 MLCC / Ceramic / Film

Sub-totals:

40 Resistors

Quantity	References	Value	PCB Package	Notes
----------	------------	-------	----------------	-------

10	R1-R2,R4-R6,R11-R15	100K	RES40	1% Resistor (50PPM Recommended)
3	R3,R10,R40	49.9K	RES40	1% Resistor (50PPM Recommended)
3	R7-R9	47K	RES40	1% Resistor (50PPM Recommended)
4	R16,R24,R33,R35	100R	RES40	1% Resistor (50PPM Recommended)
1	R17	14K	RES40	1% Resistor (50PPM Recommended)
7	R18,R20,R29,R36-R39	10K	RES40	1% Resistor (50PPM Recommended)
1	R19	9.1K	RES40	1% Resistor (50PPM Recommended)
1	R21	150K	RES40	1% Resistor (50PPM Recommended)
2	R22-R23	40.2K	RES40	1% Resistor (50PPM Recommended)
1	R25	75K	RES40	1% Resistor (50PPM Recommended)
2	R26,R30	2.2K	RES40	1% Resistor (50PPM Recommended)
2	R27-R28	4.7K	RES40	1% Resistor (50PPM Recommended)
2	R31-R32	12K	RES40	1% Resistor (50PPM Recommended)
1	R34	3.3K	RES40	1% Resistor (50PPM Recommended)

Sub-totals:

11 Integrated Circuits

Quantity	References	Value	PCB Package	Notes
----------	------------	-------	----------------	-------

3	U1,U7,U9	TL071	SO8	Choose op amp for function and preference. (This circuit works much better with nice op amps)
5	U2-U5,U8	TL072	SO8	Choose op amp for function and preference. (This circuit works much better with nice op amps)
1	U6	SSM2212	SO8	Matched NPN Pairs for Sine Shaping. LS318 / LS38 / SSM2212
1	U10	7805	TO220	TO220 (1.5A used to support extra function sub PCBs)
1	U11	7905	P1	TO220 (1.5A used to support extra function sub PCBs)

Sub-totals:

1 Transistors				
Quantity	References	Value	PCB Package	Notes
1	Q1	2N3904	TO92	2N3904 or Equivalent NPN (EBC Pinout on PCB)
Sub-totals:				
1 Diodes				
Quantity	References	Value	PCB Package	Notes
1	D1	DIODE	DIODE30	Signal Diode / 1N4148 or Equivalent
Sub-totals:				
43 Miscellaneous				
Quantity	References	Value	PCB Package	Notes
5	+5,+12,-5,-12,0V	CONN-SIL1	CONN-SIL1	On PCB Solder Pads. (no component needed)
22	BP1-BP22	100nF	0805	Decoupling / Bypass 0805 Capacitors C0G/NP0
2	FB1-FB2	0R	RES40	Ferrite Beads
1	J1	SIL-156-04	SIL-156-04	MTA-156 Friction Lock Power Header
8	NP11,P1-P2,PS1,PSM1,PSW1,PTRIANGLE1,VSI1	CONN-SIL1	CONN-SIL1	These are SIL Pads on the PCB. No component required.
2	PF1-PF2	10uF	ELEC-RAD13	Electrolytic Power Filter Capacitors
2	PHASE1,PMLVL1	100K	CONN-SIL3	Panel Pots
1	SSPH1	SW-SPDT	CONN-SIL3	SPDT Phase Modulated Waveform Select Switches. Recommend NKK SPDT Toggles.
Sub-totals:				
Totals:				

Friday, March 29, 2024 11:38:08 AM