Bill Of Materials for Dual Linear SSI2164 VCA 2.0 - STROH - 2023

Design Title Dual Linear SSI2164 VCA 2.0 - STROH - 2023

Author Dustin Stroh

Document Number

Revision 2.0

Design Created Thursday, March 30, 2023 **Design Last Modified** Thursday, March 30, 2023

Total Parts In Design 61

LME49720) 1 U5 LM4040-5 TO92 5V LM4040 (A, B, or C type.)									
Sub-totals	0 Modul	es							
Sub-totals:			<u>Value</u>	PCB	Notes				
11 Capacitors				<u>Package</u>					
Cuantity References Value PCB Package									
Backage C1,C4-C5,C7, 100pF CAP10 COG/NP0 MLCC / Ceramic / Film C10-C11	·								
C10-C11	-			Package					
1 C9 10nF CAP10 COG/NP0 MLCC / Ceramic / Film Sub-totals: 27 Resistors Quantity References Value PCB Package 8 R1,R3,R11-R14, 100K RES40 1% Resistor (100PPM / 50PPM Recommended) R26-R27 4 R2,R5,R9-R10 220R RES40 1% Resistor (100PPM / 50PPM Recommended) 4 R4,R6-R8 20K RES40 1% Resistor (100PPM / 50PPM Recommended) 2 R15-R16 100R RES40 1% Resistor (100PPM / 50PPM Recommended) 8 R1,R2,R24- 10K RES40 1% Resistor (100PPM / 50PPM Recommended) 8 R17-R22,R24- 10K RES40 1% Resistor (100PPM / 50PPM Recommended) 8 R17-R22,R24- 10K RES40 1% Resistor (100PPM / 50PPM Recommended) 8 R16-R16 100R RES40 1% Resistor (100PPM / 50PPM Recommended) 8 R17-R22,R24- 10K RES40 1% Resistor (100PPM / 50PPM Recommended) 8 R17-R23 820R RES40 1% Resistor (100PPM / 50PPM Recommended) 9 References Value PCB Package 1 U1 J2164 SO16 Sound Semiconductor SSI2164 (SSI Only) 3 U2-U4 OPA2134UA SO8 Choose good op amps (OPA2132 / OPA2134 / OP1656 / ALME49720) 1 U5 LM4040-5 TO92 5V LM4040 (A, B, or C type.) 1 U6 TLE2062 SO8 Dual op amp. Needs to supply decent current, and decent swing for 12V power. (TLE2062 is best.) Sub-totals: O Transistors Quantity References Value PCB Package Sub-totals: 17 Miscellaneous Quantity References Value PCB Package Sub-totals: 17 Miscellaneous Quantity References Value PCB Package Package 10 BP1-BP10 100nF O805 Decoupling / Bypass 0805 Capacitors COG/NP0	6		100pF	CAP10	C0G/NP0 MLCC / Ceramic / Film				
Sub-totals Sub	4	C2-C3, C6, C8	1200pF	CAP10	COG/NP0 MLCC / Ceramic / Film				
Notes			10nF	CAP10	COG/NP0 MLCC / Ceramic / Film				
References Value PCB Package									
8 R1,R3,R11-R14, 100K RES40 1% Resistor (100PPM / 50PPM Recommended) R26-R27 4 R2,R5,R9-R10 220R RES40 1% Resistor (100PPM / 50PPM Recommended) 4 R4,R6-R8 20K RES40 1% Resistor (100PPM / 50PPM Recommended) 2 R15-R16 100R RES40 1% Resistor (100PPM / 50PPM Recommended) 8 R17-R22,R24- 10K RES40 1% Resistor (100PPM / 50PPM Recommended) R25 1 R23 820R RES40 1% Resistor (100PPM / 50PPM Recommended) R25 1 R23 820R RES40 1% Resistor (100PPM / 50PPM Recommended) Sub-totals: 6 Integrated Circuits Quantity References Value PCB Package 1 U1 J2164 SO16 Sound Semiconductor SSI2164 (SSI Only) 3 U2-U4 OPA2134UA SO8 Choose good op amps (OPA2132 / OPA2134 / OP1656 / A LME49720) 1 U5 LM4040-5 TO92 5V LM4040 (A, B, or C type.) 1 U6 TLE2062 SO8 Dual op amp. Needs to supply decent current, and decent swing for 12V power. (TLE2062 is best.) Sub-totals: 0 Transistors Quantity References Value PCB Package Sub-totals: 17 Miscellaneous Quantity References Value PCB Package Sub-totals: 17 Miscellaneous Quantity References Value PCB Package Package 10 BP1-BP10 100nF 0805 Decoupling / Bypass 0805 Capacitors COG/NP0									
R26-R27	<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>Package</u>	<u>Notes</u>				
4 R4,R6-R8 20K RES40 1% Resistor (100PPM / 50PPM Recommended) 2 R15-R16 100R RES40 1% Resistor (100PPM / 50PPM Recommended) 8 R17-R22,R24-R25 10K RES40 1% Resistor (100PPM / 50PPM Recommended) 1 R23 820R RES40 1% Resistor (100PPM / 50PPM Recommended) Sub-totals: 6 Integrated Circuits Quantity References Value PCB-Package 1 U1 J2164 SO16 Sound Semiconductor SSI2164 (SSI Only) 3 U2-U4 OPA2134UA SO8 Choose good op amps (OPA2132 / OPA2134 / OP1656 / ALME49720) 1 U5 LM4040-5 TO92 5V LM4040 (A, B, or C type.) 1 U6 TLE2062 SO8 Dual op amp. Needs to supply decent current, and decent swing for 12V power. (TLE2062 is best.) Sub-totals: O Diodes Quantity References Value PCB-Package Notes Sub-totals: Package Notes 17 Miscellaneous Package Notes BP1-BP10 100nF PCB-PCB-Package N	8		100K	RES40	1% Resistor (100PPM / 50PPM Recommended)				
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8 R17-R22,R24-R25 10K RES40 1% Resistor (100PPM / 50PPM Recommended) 1 R23 820R RES40 1% Resistor (100PPM / 50PPM Recommended) Sub-totals: 6 Integrated Circuits Quantity References Value PCB Package 1 U1 J2164 SO16 Sound Semiconductor SSI2164 (SSI Only) 3 U2-U4 OPA2134UA SO8 Choose good op amps (OPA2132 / OPA2134 / OP1656 / A LME49720) 1 U5 LM4040-5 TO92 5V LM4040 (A, B, or C type.) 1 U6 TLE2062 SO8 Dual op amp. Needs to supply decent current, and decent swing for 12V power. (TLE2062 is best.) Sub-totals: Ouantity References Value PCB Package Notes Sub-totals: 17 Miscellaneous Value PCB Package Notes 10 BP1-BP10 100nF 0805 Decoupling / Bypass 0805 Capacitors COG/NP0	4	R4,R6-R8	20K	RES40	1% Resistor (100PPM / 50PPM Recommended)				
R25	2	R15-R16	100R	RES40	1% Resistor (100PPM / 50PPM Recommended)				
R23	8	·	10K	RES40	1% Resistor (100PPM / 50PPM Recommended)				
Sub-totals:	1		820R	RES40	1% Resistor (100PPM / 50PPM Recommended)				
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Package 10 BP1-BP10 100nF 0805 Decoupling / Bypass 0805 Capacitors C0G/NP0	17 Miscellaneous								
10 BP1-BP10 100nF 0805 Decoupling / Bypass 0805 Capacitors C0G/NP0	Quantity	References	<u>Value</u>		<u>Notes</u>				
2 FB1-FB2 0R RES40 Ferrite Beads	10	BP1-BP10	100nF	_	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	1	J1	SIL-156-04	SIL-156-04	MTA-156 Friction Lock Power Header				

2	OFFSET1- OFFSET2	100K	CONN- SIL3	Panel Pot			
2	PF1-PF2	10uF	ELEC- RAD13	Electrolytic Power Filtering Capacitors			
Sub-totals:							

Totals:

Thursday, March 30, 2023 2:10:53 PM