

## pHSim2 Bill of Materials

Item	Description	Manuf	Part	Distributor	Cost	Qty	Exp
C1	Electrolytic capacitor, 100uF 35V 6x12mm	Nichicon	UHV1V101MED	Digikey	\$0.291	1	\$0.29
		Würth Elektronik	860010573007	Digikey	\$0.150		
C2, C3, C4, C5	Ceramic capacitor, 10nF 50V 1206	Kemet	C1206C103M5RAC7800	Digikey	\$0.102	4	\$0.41
		Würth Elektronik	885012208081	Digikey	\$0.115		
		Stackpole	CML1206X7R103KT50V	Digikey	\$0.120		
		Yageo	CC1206KRX7R9BB103	Digikey	\$0.138		
D1	Rectifier diode, 50V 1A SMA	Diodes Inc	S1A-13-F	Digikey	\$0.172	1	\$0.17
		Vishay	S1A-E3	Digikey	\$0.248		
D2		Würth Elektronik	151033BS03000	Digikey	\$0.260	1	\$0.26
		Inolux	INL-3AB30	Digikey	\$0.279		
J3	BNC connector, PCB mount RA	TE Connect	CONBNC002	Digikey	\$2.120	1	\$2.12
		Adam	RF1-01K-D-00-50-BK-HDW	Digikey	\$2.340		
R1, R2, R6, R7	10.0kΩ 1% resistor, 1/4W 1206	Stackpole	RMCF1206FT10K0	Digikey	\$0.024	4	\$0.10
		Bourns	CR1206-FX-1002ELF	Digikey	\$0.028		
		Yageo	RC1206FR-0710KL	Digikey	\$0.038		
		Vishay Dale	CRCW120610K0FKEA	Digikey	\$0.048		
R3, R4, R5	1.00kΩ 1% resistor, 1/4W 1206	Stackpole	RNCP1206FTD1K00	Digikey	\$0.024	3	\$0.07
		Bourns	CR1206-FX-1001ELF	Digikey	\$0.028		
		Yageo	RC1206FR-071KL	Digikey	\$0.038		
		Vishay Dale	CRCW12061K00FKEBC	Digikey	\$0.048		
R8, R9	1kΩ trimpot, 20 turn, top adjust	Bourns	PV36W102C01B00	Digikey	\$1.550	2	\$3.10
		TT Electronics	67YR1KLF	Digikey	\$1.690		
		Bourns	3296Y-1-102LF	Digikey	\$2.130		
R10, R11	330Ω 1% resistor, 1/4W 1206	Stackpole	RMCF1206FT330R	Digikey	\$0.024	2	\$0.05
		Yageo	RC1206FR-07330RL	Digikey	\$0.038		
		Bourns	CR1206-FX-3300ELF	Digikey	\$0.044		
		Vishay Dale	CRCW1206330RFKEAC	Digikey	\$0.045		
R12, R13	20.0kΩ 1% resistor, 1/4W 1206	Stackpole	RMCF1206FT20K0	Digikey	\$0.024	2	\$0.05
		Bourns	CR1206-FX-2002ELF	Digikey	\$0.028		
		Yageo	RC1206FR-0720KL	Digikey	\$0.038		
		Vishay Dale	CRCW120620K0FKEAC	Digikey	\$0.045		
R14	10kΩ potentiometer	Alps Alpine	RK0971110D88	Digikey	\$3.670	1	\$3.67
R15, R16	10MΩ 5% resistor, 1/4W 1206	Stackpole	RMCF1206FT10M0	Digikey	\$0.030	2	\$0.06
		Yageo	RC1206JR-0710ML	Digikey	\$0.035		
		Bourns	CR1206-JW-106ELF	Digikey	\$0.046		
		Vishay Dale	CRCW120610M0FKEA	Digikey	\$0.048		
SW2	2P4T rotary switch	Alpha	SR10010F-0204-20F0B-C7-N-0027	Mouser	\$0.000	1	\$0.00
TP0, TP1	Test point	Keystone	5263	Digikey	\$0.198	2	\$0.40
		Keystone	5267	Mouser	\$0.190		
U1	LM324 quad opamp, SOIC14	TI	LM324LVIDR	Digikey	\$0.299	1	\$0.30
		ST	LM324DT	Digikey	\$0.333		
		Onsemi	LM324EDR2G	Digikey	\$0.350		
U2, U3	TL431 voltage reference, SOIC8	TI	TL431QDR	Digikey	\$0.308	2	\$0.62
		ST	TL431CDT	Digikey	\$0.358		
		On Semi	TL431ACDR2G	Digikey	\$0.439		
PCB	pHSim2 PCB			JLPCB	\$1.187	1	\$1.19
						Total	\$12.84

### Notes

- Pricing as of May, 2024
- Pricing for a quantity of 10 assemblies, prices increase dramatically for lower quantities
- Additional manufacturer and parts numbers listed under the same item are alternate sources