

Bill Of Materials for Basic Angle

Design Title Basic Angle
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Document Number
Revision 3.2
Design Created Thursday, July 13, 2023
Design Last Modified Thursday, July 13, 2023
Total Parts In Design 60

0 Modules

Quantity	References	Value	PCB Package	Notes
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Sub-totals:

4 Capacitors

Quantity	References	Value	PCB Package	Notes
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1	C1	4.7uF	CAP20	C0G/NP0 MLCC/ Ceramic / Film (Timing Capacitor)
1	C2	10nF	CAP10	C0G/NP0 MLCC/ Ceramic / Film
1	C3	470pF	CAP10	C0G/NP0 MLCC/ Ceramic / Film
1	C4	100pF	CAP20	C0G/NP0 MLCC/ Ceramic / Film

Sub-totals:

18 Resistors

Quantity	References	Value	PCB Package	Notes
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1	R1	14k	RES40	1% Resistor (100PPM / 50PPM Recommended)
2	R2-R3	4.99k	RES40	1% Resistor (100PPM / 50PPM Recommended)
1	R4	10K	RES40	1% Resistor (100PPM / 50PPM Recommended)
5	R5-R8,R13	10k	RES40	1% Resistor (100PPM / 50PPM Recommended)
1	R9	100R	RES40	1% Resistor (100PPM / 50PPM Recommended)
1	R10	2K	RES40	1% Resistor (100PPM / 50PPM Recommended)
1	R11	330R	RES40	1% Resistor (100PPM / 50PPM Recommended)
2	R12,R14	49.9K	RES40	1% Resistor (100PPM / 50PPM Recommended)
1	R15	49.9k	RES40	1% Resistor (100PPM / 50PPM Recommended)
1	R16	100K	RES40	1% Resistor (100PPM / 50PPM Recommended)
2	R17-R18	470R	RES40	1% Resistor (100PPM / 50PPM Recommended)

Sub-totals:

5 Integrated Circuits

Quantity	References	Value	PCB Package	Notes
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1	U1	4001	DIL14	CMOS CD4001
2	U2-U3	DG418	SOIC127P600X175-8	SMT SOIC8 DG418 Switches (DG418LDY recommended)
1	U4	TL071	DIL08	LED Driver op amp, any single op amp fine here.
1	U5	LF347	DIL14	Quad op amp (choose something low offset / low bias / stable / fast slew / decent current output) LF347 is a good choice.

Sub-totals:

3 Transistors

Quantity	References	Value	PCB Package	Notes
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3	Q1-Q3	2N3904	TO92	Any TO-92 NPN Transistor (PCB uses EBC pinout)
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Sub-totals:

11 Diodes

Quantity	References	Value	PCB Package	Notes
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11	D1-D11	1N4148	DIODE30	Standard Small Signal Switching Diode (1N4148 or equivalent)
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Sub-totals:

19 Miscellaneous

Quantity	References	Value	PCB Package	Notes
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9	BP1-BP9	100nF	0805	Decoupling / Bypass SMT 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	LED1	LED-BIRG	CONN-SIL2	2 Lead single color LED

2	PF1-PF2	10uF	ELEC-RAD10	Power Filtering Electrolytic Capacitors
2	RV1-RV2	1M	CONN-SIL3	Panel Pots (Use Log Type)
2	SW1-SW2	SW-SPST	CONN-SIL2	SPDT Toggle Switch (NKK or TE/Alco Recommended)

Sub-totals:

Totals: