

DUAL DEFECT PROCESSOR MODEL 289**BILL OF MATERIALS REV 1.0****PCB1****SEMICONDUCTORS**

VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#
BAT54S	D3, D4, D5, D6, D7, D8	6		512-BAT54S
TL072	IC1	1		595-TL072CP
TL074	IC3, IC4, IC5, IC12, IC15, IC16, IC23	7		595-TL074CN

CAPACITORS

VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#
0.1uF	F1, F2, F3, F4, F5, F7, F12, F14, F15, F16, F17, F18, F19, F20, F21, F22	16	CERAMIC 5MM LS	581-SA105E104M

RESISTORS

VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#
150R	R119, R120	2	1% 1/4W	271-150-RC
470R	R123, R124	2	1% 1/4W	271-470-RC
1K	R51, R52, R62, R99, R100, R110	6	1% 1/4W	271-1K-RC
2K7	R18, R19, R20, R21, R22, R23, R24, R25, R43, R44, R45, R46, R47, R48, R49, R50	16	1% 1/4W	271-2.7K-RC
10K	R17, R42, R55, R67, R68, R85, R86, R103, R111, R112, R117, R118	12	1% 1/4W	271-10K-RC
11K	R113, R114	2	1% 1/4W	271-11K-RC
22K1	R53, R63, R64, R81, R82, R101	6	1% 1/4W	271-22.1K-RC
33K	R54, R56, R57, R59, R60, R61, R65, R66, R69, R70, R71, R72, R75, R76, R77, R78, R79, R80, R83, R84, R87, R88, R89, R90, R93, R94, R95, R96, R97, R98, R102, R104, R105, R107, R108, R109	36	1% 1/4W	271-33K-RC
33K2	R121, R122	2	1% 1/4W	271-33.2K-RC
43K	R58, R73, R74, R91, R92, R106	6	1% 1/4W	271-43K-RC
47K5	R16, R41	2	1% 1/4W	271-47.5K-RC
49K9	R1, R2, R3, R4, R26, R27, R28, R29	8	1% 1/4W	271-49.9K-RC
100K	R5, R6, R7, R8, R13, R14, R15, R30, R31, R32, R33, R38, R39, R40	14	1% 1/4W	271-100K-RC
121K	R115, R116	2	1% 1/4W	271-121K-RC
910K	R11, R12, R36, R37	4	1% 1/4W	271-910K-RC
100K LIN		2	16MM ANGLED	http://smallbear-electronics.mybigcommerce.com/alpha-single-gang-16mm-right-angle-pc-mount/
10-100K LIN		14	9MM	http://smallbear-electronics.mybigcommerce.com/alpha-single-gang-9mm-right-angle-pc-mount/

MISC

VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#
SPDT (ON)-ON	SW1, SW2	2	TOGGLE SWITCH	633-M201501
	PBD1, PBD2, PBD3, PBD4	4	PLD 20 PIN (FEMALE)	517-929975-01-10-RK
	LED1-LED18	18	RED 3MM LED	630-HLMP-K101
		6	BANANA JACK BLACK	530-108-0903-1
		2	BANANA JACK ORANGE	530-108-0906-1
		2	BANANA JACK BLUE	530-108-0910-1
	J1, J2, J3, J5, J6, J7, J8, J9	8	TINY JAX	502-41
	J4, J10	2	TINY JAX NORMALIZED	502-42A
		2	NUT FOR 16MM POT	http://smallbear-electronics.mybigcommerce.com/nut-for-alpha-16mm-potentiometers
		2	YELLOW SWITCH CAP	

PCB2**SEMICONDUCTORS**

VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#
1N457	D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33, D34	28		512-1N457
LM1117-3.3V	IC1	1		926-LM1117IDT3.3NOPB
CD4009	IC2	1		595-CD4009UBE
CD4017	IC3, IC9	2		595-CD4017BE
SPIN FV-1	IC6, IC17	2	DSP	http://smallbear-electronics.mybigcommerce.com/ic-spin-semi-fv-1/
24LC32A	IC8, IC19	2	EEPROM	INCLUDED
2N3904	IC10A, IC10B, IC10C, IC21A, IC21B, IC21C, Q3, Q6	8		610-2N3904
2N3906	Q1, Q2, Q4, Q5	4		610-2N3906
TL074	IC11, IC13, IC22, IC24	4		595-TL074CN

CAPACITORS

VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#
10uF	C9, C10, C11, C12, C13, C14, C15, C24, C36	9	ELECTROLYTIC 2MM LS	667-ECA-1HHG100
1nF	C19, C20, C21, C23, C31, C32, C33, C35	8	FILM 5MM LS	871-B32529C1102J289
100nF	C1, C4	2	FILM 5MM LS	871-B32529C3104J189
1uF	C16, C17, C18, C22, C28, C29, C30, C34	8	FILM 5MM LS	80-R82DC4100AA60J
100pF	C3, C7	2	CERAMIC 5MM LS	581-SA102A101J
220pF	C2, C5	2	CERAMIC 5MM LS	581-SA101A221JAR
1000pF	C6, C8	2	CERAMIC 5MM LS	581-SA105A102JAR
0.1uF	C25, C26, C27, C37, C38, C39, C40, C41, F1, F2, F3, F4, F5, F6, F7, F8, F11, F12, F13, F14, F29, F32	22	CERAMIC 5MM LS	581-SA105E104M

RESISTORS

VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#
10R	R105, R119	2	1% 1/4W	271-10-RC
220R	R101, R115	2	1% 1/4W	271-220-RC
470R	R96, R97, R98, R100, R110, R111, R112, R114	8	1% 1/4W	271-470-RC
1K	R1, R4	2	1% 1/4W	271-1K-RC
5K6	R2, R5	2	1% 1/4W	271-5.6K-RC
10K	R3, R6, R17, R18, R19, R143, R144, R145	8	1% 1/4W	271-10K-RC
20K	R102, R103, R104, R106, R116, R117, R118, R120	8	1% 1/4W	271-20K-RC
30K	R93, R94, R95, R99, R107, R108, R109, R113	8	1% 1/4W	271-30K-RC
43K2	R200, R201, R202, R203	4	1% 1/4W	271-43.2K-RC
47K	R122, R123, R133, R134	4	1% 1/4W	271-47K-RC
82K5	R7, R8, R20, R21	4	1% 1/4W	271-82.5K-RC
100K	R9, R10, R11, R12, R13, R14, R15, R16, R22, R23, R24, R25	12	1% 1/4W	271-100K-RC

MISC

VALUE	DESIGNATOR	QTY	DESCRIPTION	MOUSER PART#
	PLD1, PLD2, PLD3, PLD4	4	PLD 20 PIN (MALE)	517-929836-01-10-RK
		1	POWER CONNECTOR	587-306-50-010