

miniBrute DRSSTC Parts List

PARTS LIST

Date: March 8, 2007
Rev: A

Item	Ref Des	Part No.	Description	Distributor	Qty	Price	Total
1	R1	560QBK-ND	Resistor, 560 ohm, 1/4W, 5%	DIGIKEY	1	\$ 0.06	\$ 0.06
2	R2	15KQBK-ND	Resistor, 15k, 1/4W, 5%	DIGIKEY	1	\$ 0.06	\$ 0.06
3	R3,R25,R81,R85,R125	1.0KQBK-ND	Resistor, 1k, 1/4W, 5%	DIGIKEY	5	\$ 0.06	\$ 0.30
4	R21	P1.6W-3BK-ND	Resistor, 1.6 ohm, 3W	DIGIKEY	1	\$ 0.51	\$ 0.51
5	R22	100QBK-ND	Resistor, 100 ohm, 1/4W, 5%	DIGIKEY	1	\$ 0.06	\$ 0.06
6	R24,R29	10KQBK-ND	Resistor, 10k, 1/4W, 5%	DIGIKEY	2	\$ 0.06	\$ 0.12
7	R26,R84	100KQBK-ND	Resistor, 100k, 1/4W, 5%	DIGIKEY	2	\$ 0.06	\$ 0.12
8	R27,R43,R61,R86	470QBK-ND	Resistor, 470 ohm, 1/4W, 5%	DIGIKEY	4	\$ 0.06	\$ 0.24
9	R28	NOT USED					
10	R41	634XBK-ND	Resistor, 634 ohm, 1/4W, 1%	DIGIKEY	1	\$ 0.10	\$ 0.10
11	R44,R62	1.5KQBK-ND	Resistor, 1.5k, 1/4W, 5%	DIGIKEY	2	\$ 0.06	\$ 0.12
12	R82	13.0KXBK-ND	Resistor, 13k, 1/4W, 1%	DIGIKEY	1	\$ 0.10	\$ 0.10
13	R101,R102	5.1W-2-ND	Resistor, 5.1 ohm, 2W	DIGIKEY	2	\$ 0.18	\$ 0.36
14	R103,R104,R105,R106	10MH-ND	Resistor, 10Meg, 1/2W, 5%	DIGIKEY	4	\$ 0.06	\$ 0.24
15	R121,R122	20J6K0E-ND	Resistor, 6k, 10W, Vitreous Enamel	DIGIKEY	2	\$ 2.66	\$ 5.32
16	R123	20J500E-ND	Resistor, 500 ohm, 10W	DIGIKEY	1	\$ 1.70	\$ 1.70
17	R124,R125	25J25KE-ND	Resistor, 25k, 5W, Vitreous Enamel	DIGIKEY	2	\$ 2.86	\$ 5.72
18	R23,R30	3296W-103LF-ND	Potentiometer, 10k, 10 Turn	DIGIKEY	2	\$ 2.50	\$ 5.00
19	R42,R83	3295W-502LF-ND	Potentiometer, 5k, 10 Turn	DIGIKEY	2	\$ 2.50	\$ 5.00
20	C1,C3,C7,C8,C9,C10,C23 C25,C27,C29,C41,C62 C64,C66,C68,C81,C83 C84,C86	BC1101CT-ND	Capacitor, 0.1uF, 50V, Ceramic	DIGIKEY	19	\$ 0.08	\$ 1.52
21	C2	BC1089CT-ND	Capacitor, 1000pF, 50V, Ceramic	DIGIKEY	1	\$ 0.07	\$ 0.07

22	C4,C5,C6,C24,C26,C28 C31,C42,C63,C67	399-3654-ND	Capacitor, 10uF, 35V, Tantalum	DIGIKEY	10	\$ 1.50	\$ 15.00
23	C21,C82,C85	445-2647-ND	Capacitor, 1uF, Ceramic	DIGIKEY	3	\$ 1.18	\$ 3.54
24	C22,C32	BC1013CT-ND	Capacitor, 100pF, Ceramic	DIGIKEY	2	\$ 0.08	\$ 0.16
25	C30	BC1001CT-ND	Capacitor, 10pF, Ceramic	DIGIKEY	1	\$ 0.08	\$ 0.08
26	C61,C65	P5172-ND	Capacitor, 4700uF, 35V, Electrolytic	DIGIKEY	2	\$ 2.42	\$ 4.84
27	C101	41L4471	Capacitor, 4.7uF, 600V, Poly	ALLIED	1	\$ 5.10	\$ 5.10
28	C102,C103,C104,C105	42L3332	Capacitor, 0.33uF, 2000V, Poly	ALLIED	4	\$ 5.91	\$ 23.64
29	C123	BC2172-ND	Capacitor, 0.47uF, 250V, Metallized	DIGIKEY	1	\$ 1.27	\$ 1.27
30	C121,C122	507-0018	Capacitor, 2800uF, 200V, Electrolytic	ALLIED	2	\$ 20.55	\$ 41.10
31	CR1,CR2,CR5,CR6,CR7 CR8,CR9,CR10,CR25 CR51,CR101,CR102	1N5819DICT-ND	Diode, Schottky, 40V, 1A	DIGIKEY	12	\$ 0.39	\$ 4.68
32	CR3,CR4	1N5337BGOS-ND	Diode, Zener, 4.7V, 1W	DIGIKEY	2	\$ 0.59	\$ 1.18
33	CR21-CR24	1N4148DICT-ND	Diode, Switching, 500mW, 70V	DIGIKEY	4	\$ 0.23	\$ 0.92
34	CR61-CR64,CR123	1N4002DICT-ND	Diode, Rectifier, 100V, 1A	DIGIKEY	5	\$ 0.26	\$ 1.30
35	CR121,CR122	20ETF08-ND	Diode, Rectifier, 800V, 20A, TO-220	DIGIKEY	2	\$ 4.13	\$ 8.26
36	D21,D55-D61,D81	505-9999	LED, Red, High Brightness, T1	ALLIED	9	\$ 0.17	\$ 1.53
37	D41-D54,D63,D64,D121	505-5245	LED, Green, High Brightness, T1	ALLIED	17	\$ 0.22	\$ 3.74
38	VR61	1.5KE7V5CADICT-ND	TVS, 7.5V, Bi-directional	DIGIKEY	1	\$ 0.74	\$ 0.74
39	VR62	1.5KE18CADICT-ND	TVS, 18V, Bi-directional	DIGIKEY	1	\$ 0.74	\$ 0.74
40	VR101-VR104	1N4752ADICT-ND	Diode, Zener, 33V, 1W	DIGIKEY	4	\$ 0.36	\$ 1.44
41	VR105,VR106	1.5KE33CADICT-ND	TVS, 33V, Bi-directional	DIGIKEY	2	\$ 0.74	\$ 1.48
42	VR107-VR110	1.5KE220CADICT-ND	TVS, 220V, Bi-directional	DIGIKEY	4	\$ 0.74	\$ 2.96
43	U1	296-1577-5-ND	SN74HC14N, Schmidt Trigger Hex	DIGIKEY	1	\$ 0.53	\$ 0.53
44	U2	296-1602-5-ND	SN74HC74N, Dual D-Type Flip-Flop	DIGIKEY	1	\$ 0.53	\$ 0.53
45	U3	296-1570-5-ND	SN74HC08N, Quad 2-Input AND Gate	DIGIKEY	1	\$ 0.53	\$ 0.53
46	U4	296-13689-5-ND	UCC37322, Gate Driver w/ ENA, 9A	DIGIKEY	1	\$ 2.48	\$ 2.48
47	U5	296-13686-5-ND	UCC37321, Gate Driver w/ ENA, 9A	DIGIKEY	1	\$ 2.48	\$ 2.48
48	U21,U82	LM311NNS-ND	LM311N, General Purpose Comp	DIGIKEY	2	\$ 0.96	\$ 1.92
49	U22	LM555CNNS-ND	555 Timer IC	DIGIKEY	1	\$ 1.24	\$ 1.24
50	U23	LT1630CN8-ND	Op-Amp, Rail-to-Rail Input / Output	DIGIKEY	1	\$ 6.50	\$ 6.50
51	U41	LM3914N-1-ND	Dot / Bar LED Display Driver	DIGIKEY	1	\$ 2.87	\$ 2.87
52	U42	TLP372-ND	Optocoupler, Darlington Driver Output	DIGIKEY	1	\$ 0.90	\$ 0.90
53	U81	LM35DT-ND	Precision Centigrade Temp Sensor	DIGIKEY	1	\$ 2.82	\$ 2.82
54	U61	LM340T-5.0-ND	Voltage Regulator, 5V, TO-220	DIGIKEY	1	\$ 1.66	\$ 1.66
55	U62	LM340T-15-ND	Voltage Regulator, 15V, TO-220	DIGIKEY	1	\$ 1.66	\$ 1.66

56	T1,T21	237-1096-ND	CST206-1A, Current Transformer	DIGIKEY	2	\$ 6.11	\$ 12.22
57	T61	166L24	Filament Transformer, 24VAC, 48VA	ALLIED	1	\$ 24.65	\$ 24.65
58	T101	5978006401	Ferrite Core, Type 78, Fair-rite	FAIR-RITE	1		
59	Q61,Q62	HGT1N40N60A4D	IGBT, 600V, Isopak	FAIRCHILD	2		
60	B121	CR126-ND	Fan, Muffin XL, 120VAC	DIGIKEY	1	\$ 25.60	\$ 25.60
61	K121	850-0353	Relay, Flange Mount, 120VAC, 30A	ALLIED	1	\$ 7.79	\$ 7.79
62	S121	870-0579	Toggle Switch, Locking, NKK S1AL	ALLIED	1	\$ 11.35	\$ 11.35
63		MHB14K-ND	14-Pin Socket Header (0.100" pitch)	DIGIKEY	2	\$ 1.41	\$ 2.82
64		C3AAG-1406G-ND	14-Pin Socket to Socket Cable, 6"	DIGIKEY	1	\$ 3.59	\$ 3.59
65		7701K-ND	Screw Terminal	DIGIKEY	13	\$ 0.26	\$ 3.38
66		ED1514-ND	Terminal Block, 2-pos	DIGIKEY	11	\$ 0.45	\$ 4.95
67		ED1515-ND	Terminal Block, 3-pos	DIGIKEY	1	\$ 0.67	\$ 0.67
68		ED3108-ND	IC Socket, 8-pin	DIGIKEY	7	\$ 0.36	\$ 2.52
69		ED3114-ND	IC Socket, 14-pin	DIGIKEY	3	\$ 0.63	\$ 1.89
70		ED3118-ND	IC Socket, 18-pin	DIGIKEY	1	\$ 0.81	\$ 0.81
71		345-1087-ND	Heatsink, TO-220	DIGIKEY	4	\$ 0.39	\$ 1.56

Notes:

1. ALLIED - Allied Electronics <http://www.alliedelec.com>
2. DIGIKEY - Digikey Electronics, <http://www.digikey.com>
3. EVR - Eastern Voltage Research, <http://www.eastervoltageresearch.com>
4. FAIR-RITE - Fair-Rite Magnetics, <http://www.fair-rite.com>
5. FAIRCHILD - Fairchild Semiconductor, <http://www.fairchildsemi.com>
6. VR61,VR62 are optional for additional transient voltage protection. They are not required for normal operation.
7. U61 and U62 may be replaced with 7805 and 7815 type voltage regulators.
8. S121 can be any SPST switch rated for 120VAC and 3A. This particular switch is compatible with the custom miniBrute front panel.
9. Depending on layout, you may wish to order a longer cable than the 6" C3AAG-1406G-ND which connects control board to display board.

Click below for the ordering page for the miniBrute DRSSTC kit, custom DRSSTC front panels, and other kits.

<http://www.eastervoltageresearch.com>