ACROBAT ISO H-BRIDGE MOTOR CONTROL UNIT Revised: August 13, 2004
MOTOR.SCH Revision: A
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Item	Quantity	Reference	Part	Value	Tol	Rating	Type	Manufacturer	Part Number	Supplier	
1	2	C15,C16	470uF,,50V,ALUMINUM	470uF		50VDC	Aluminum Electrolytic, Tubular/Radial	Panasonic	EEUFC1H471	Digi-Key	800-344-4539
2	1	C18	100uF,,16V,ALUMINUM	100uF		16VDC	Aluminum Electrolytic, Tubular/Radial	Panasonic	EEUFC1C101	Digi-Key	800-344-4539
3	1	C14	0.022,,,EMI_FILTER	0.022uF	-	50VDC	EMI Filter, 3 Lead, Pi-Type w/ Beads	Murata Erie	DSS9NC51H223Q55B		
4	1	R20	1.47,,3W,	1.47	1%	3W	Metal Film, Axial				
5	2	JP1,JP2	JUMPER,,,	-	-	-	20AWG Metal Bus Wire				
6	4	R1,R2,R3,R4	CAL,,,	TBD	5%	1/8W	Metal Film, +/-100 ppm TC, Mini Axial				
7	6	R24,R25,R31,R33,R35,R37	100,,,	100	5%	1/8W	Metal Film, +/-100 ppm TC, Mini Axial				
8	4	R9,R26,R27,R29	470,,,	470	5%	1/8W	Metal Film, +/-100 ppm TC, Mini Axial				
9	1	R5	619,,,	619	5%	1/8W	Metal Film, +/-100 ppm TC, Mini Axial				
10	1	R22	4k,,,	4k	5%	1/8W	Metal Film, +/-100 ppm TC, Mini Axial				
11	15	R6,R7,R8,R10,R11,R13,R17, R18,R21,R23,R28,R30,R32, R34,R36	10k,,,	10k	5%	1/8W	Metal Film, +/-100 ppm TC, Mini Axial				
12	1	R19	12k,,,	12k	5%	1/8W	Metal Film, +/-100 ppm TC, Mini Axial				
13	4	R12,R14,R15,R16	100k,,,	100k	5%	1/8W	Metal Film, +/-100 ppm TC, Mini Axial				
14	1	RV1	50,,,3296P	50	10%	0.5W	Trimpot, Cermet, 3/8" sq, 25T Side Adj	Bourns	3296P-1-500	Digi-Key	800-344-4539
15	1	RV4	1k,,,3296P	1k	10%	0.5W	Trimpot, Cermet, 3/8" sq, 25T Side Adj	Bourns	3296P-1-102	Digi-Key	800-344-4539
16	1	RV3	10k,,,3296P	10k	10%	0.5W	Trimpot, Cermet, 3/8" sq, 25T Side Adj	Bourns	3296P-1-103	Digi-Key	800-344-4539
17	1	RV2	10k,,,LINEAR_SLIDE	10k	20%	0.1W	Slide Potentiometer, 45mm Travel	Panasonic	EWAP12C15B14	Digi-Key	800-344-4539
18	1	D3	LED,,,RED	-	-	60mW	Red LED, SMD	Panasonic	LN1261C	Digi-Key	800-344-4539
19	2	D1,D2	LED,,,GREEN	-	-	60mW	Green LED, SMD	Panasonic	LN1361C	Digi-Key	800-344-4539
20	1	Z3	1.5KE30CA,,,	25.6VDC	5%	1.5kW pk	BiDirection Transient Voltage Supressor	General Semi	1.5KE30CA	Digi-Key	800-344-4539
21	2	Z1,Z2	1.5KE6.8CA,,,	5.8VDC	5%	1.5kW pk	BiDirection Transient Voltage Supressor	General Semi	1.5KE6.8CA	Digi-Key	800-344-4539
22	2	Q2,Q1	SI4435,,,	SI4435	-	-30VDC	P-Channel, Id 9A, Rds 20 mOhm, SO8	Vishay	Si4435BDY	ClassicIC	800-952-4440
23	2	Q3,Q4	SI4412,,,	SI4412	-	+30VDC	N-Channel, Id 8A, Rds 24 mOhm, SO8	Vishay	Si4412ADY	ClassicIC	800-952-4440
24	1	U4	74HCT1G08,,,	74HCT108	-	-	Single AND Gate, 5 Pin, SOT-23	TI	SN74AHCT1G08DBV	Digi-Key	800-344-4539
25	2	U7,U8	74HCT1G86,,,	74HCT186	-	-	Single XOR Gate, 5 Pin, SOT-23	TI	SN74AHCT1G86DBV	Digi-Key	800-344-4539
26	1	U3	LTC1487,,,	LTC1487	-	-	Lo Pwr RS485 Transciever, 8 Pin DIP	Linear Technology	LTC1487CN8	Digi-Key	800-344-4539
27	1	U2	DS87C520,,,	DS87C520	-	-	High Speed Microcontroller, 40 Pin DIP	Dallas Semi	DS87C520-MCL	Digi-Key	800-344-4539
28	1	Y1	22.118MHz,,,	22.118MHz		-	Crystal, +/-50ppm TC, HC-49 Series	CTS Freq Controls	MP221	Digi-Key	800-344-4539
29	1	U6	LM393,,,	LM393	-	-	Low Power Dual Comparator, 8 Pin DIP	National	LM393N	Digi-Key	800-344-4539
30	1	A1	TLC274,,,	TLC274	2mV	-40/85C	Precision Quad Op Amp, 8 Pin DIP	TI	TLC274BIN	Digi-Key	800-344-4539
31	1	A2	AD620A,,,	AD620A	30uV	-40/85C	Low Pwr Instrumentation Amp, 8 Pin DIP	Analog Devices	AD620AN	Digi-Key	800-344-4539
32	1	U1	LTC1298,,,	LTC1298	-	0/70C	MicroPower 12Bit A/D, 8 Pin DIP	Linear Tech	LTC1298CN8	Digi-Key	800-344-4539
33	3	ISO1,ISO2,ISO3	PS2701-1,,,	PS2701-1	-	-	Optocoupler-Xistor Output, 4 Pin SOP	NEC	PS2701-1	Digi-Key	800-344-4539
34	1	J1	MOLEX_5,,,HORZ	5 Pin	-	-	0.1in Horizontal Connector Header	Molex	22-12-2054	Digi-Key	800-344-4539
35	1	J2	MOLEX_4,,,HORZ	4 Pin	-	-	0.1in Horizontal Connector Header	Molex	22-12-2042	Digi-Key	800-344-4539
36	2	J4,J3	MSTBA_2,,,HORZ	2 Pin	-	12A	5.0mm Horizontal Connector Header	Phoenix	1757475	Digi-Key	800-344-4539
37	8	TP1,TP2,TP3,TP4,TP5,TP6, TP7,TP8	PAD,,,	Test Point							
38	1	U5	AA05E-024L-050S,,,	5VDC	-	5W	Isolated DC/DC, Reg +5VDC Output	Astec	AA05E-024L-050S	Digi-Key	800-344-4539
39	1	F1	RXE075,,,	1.5 A	-	-	Fuse, Resettable	Raychem	RXE075	Digi-Key	800-344-4539
40	9	C1,C2,C3,C4,C9,C10,C11, C12,C13	10uF,,16V,	WARNING: Part is not in INCLUDE file							
41	3	C5,C6,C19	33pF,,,	WARNING: Part is not in INCLUDE file							
42	3	C7,C8,C17	1uF,,50V,CERAMIC	WARNING: Part is not in INCLUDE file							