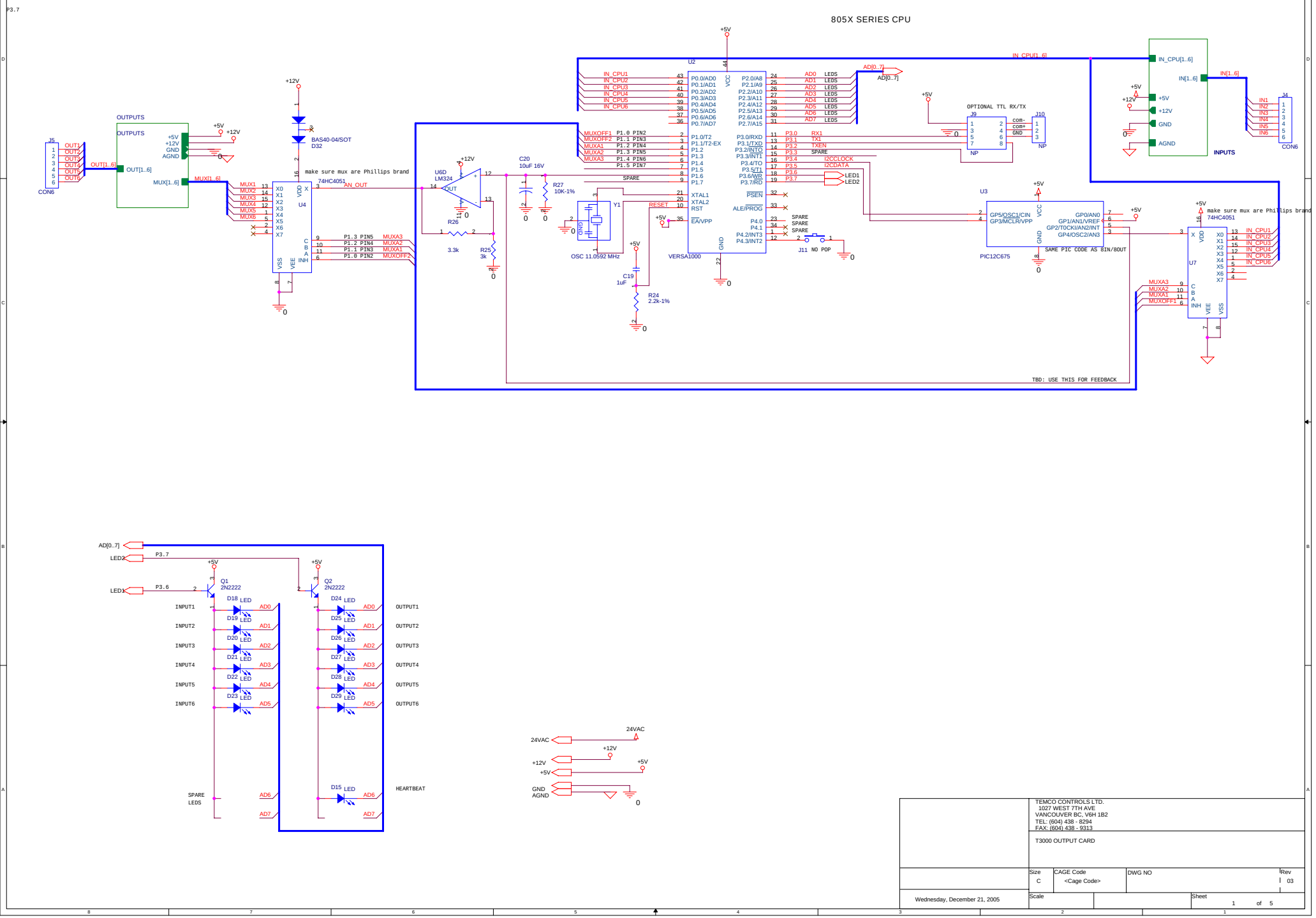
PWM Transducer Volts Rev3

Temco Builld pcs: 340

Item	Qty	Reference	Part	PCB Footprint	Qty Required	Qty On Hand
1	1	C7	50V 330uF X7R	CPCYLHORIZ/D.300/LS.200/.034		
2	1	C8	0.1uF	SM/C_0805		
3	2	C9,C17	120pF	SM/C_0805		
4	1	C10	25V 100uF X7R	CPCYLHORIZ/D.300/LS.200/.034		
5	6	C11,C12,C13,C14,C15,C16	100uF 16V	CPCYLHORIZ/D.200/LS.100/.034		
6	1	C18	10V 330uF	CPCYLHORIZ/D.200/LS.100/.034		
7	1	C19	1uF	SM/C_0805		
8	1	C20	10uF 16V	CPCYLHORIZ/D.200/LS.100/.034_REV2		
9	1	D1	1N4007	SM/D_MLL41_21		
10	13	D2,D3,D4,D5,D6,D7,D8,D9,	BAS40-04/SOT	SM/SOT23_123_BAS40-04		
		D10,D11,D12,D13,D32				
11	1	D14	40V zener	DAX1/.450X.100/.034		
12	15	D15,D16,D17,D18,D19,D20,D21,	LED	SM/D_1206_21_2		
		D22,D23,D24,D25,D26,D27,D28,D29				
13	2	D30,D34	1N5819	SM/D_MLL41_21		
14	1	D31	1N4745	SM/D_1206_21_2		
15	1	D33	1N4735	SM/D_1206_21_2		
16	1	F1	RUE-065	RAD/.250X.125/LS.200/.034		
17	6	F2,F3,F4,F5,F6,F7	RXE010	RAD/.250X.125/LS.200/.034_REV1		
18	1	J7	Grounds	GROUNDS		
19	2	L2,L1	330uH 1A	L/330UH_SMALL		
20	1	MOV1	47V	CPAX/MOV.100/LS.300/.031		
21	2	Q1,Q2	2N2222	SM/SOT23_213		
22	6	Q3,Q4,Q5,Q6,Q7,Q8	2N2222	SM/SOT23_213_2N2222		
23	6	R1,R2,R3,R4,R5,R6	1M-1%	SM/R_0805		
24	3	R7,R8,R9	RNET 10K	SM/R_1608_NET4		
25	2	R10,R11	1K-1%	SM/R_0805		
26	2	R22,R12	0.5 ohm, 1/2W thruhole	AX/.350X.100/.034		
27	2	R13,R23	5.9K -1%	SM/R_0805		
28	1	R14	51k 1%	SM/R_0805		
29	6	R15,R16,R17,R18,R19,R20	POT	VRESLOCAL		
30	1	R21	1.82K-1%	SM/R_0805		
31	1	R24	2.2k-1%	SM/R_0805		
32	1	R25	3k	SM/R_0805		
33	1	R26	3.3k	SM/R_0805		
34	1	R27	10K-1%	SM/R_0805		
35	6	SW1,SW2,SW3,SW4,SW5,SW6	SP3T	SWDP3T		
36	2	U1,U5	MC34063A/SO	8SOP150		
37	1	U2	VERSA1000	PLCC44		
38	1	U3	PIC12C675	DIP.100/8/W.300/L.400		
39	2	U7,U4	74HC4051	16SOP150		
40	1	U6	LM324	14SOP150		
41	2	U9,U8	LM324/SO	14SOP150		
42	1	Y1	OSC 11.0592 MHz	SM/X_OSC_REV1		
CONNECTORS						
43	1	J2	CON4	ETB4INCH		
44	2	J5,J4	CON6	ETB6INCH		
no populate						
45	6	C1,C2,C3,C4,C5,C6	NP	SM/C_0805		
46	1	J9	NP	BLKCON.100/VH/TM2OE/W.200/8		
47	1	J10	NP	ETB3INCH		
48	1	J11	NP	SIP/TM/L.200/2		
49	4	J1,J3,J6,J8	MOUNTING HOLE	MTHOLEGROUND		
50	2	MH1,MH3	Screw Hole	hole		
51	1	MH2	Screw Hole	SCREW		

PWM transducer Relay



TEMCO CONTROLS LTD.
1027 WEST 7TH AVE
VANCOUVER BC, V6H 1B2
TEL: (604) 438 - 8294
FAX: (604) 438 - 9313

T3000 OUTPUT CARD

Size	CAGE Code	DWG NO	Rev
C	<Cage Code>		03

Wednesday, December 21, 2005

Scale

Sheet 1 of 5

Rev0

Original Rev for Memco

Took T3-8I8O design rev14 and reworked it for PWM project

Rev1

Done: fix mux select lines

Done: require a TXEN line for RS485 com, pin3.2

Done: remove 470 current limitting resistors

Done: flip D33

Done: output feedback to pic should come from 5V side of OPamp

Done: One pin of each "hand" potentiometer must be tied to GND.

Done: Each "hand" potentiometer must be tied to 12V not 5V

Done: Connect analog GND to INPUT page

Done: update footprint of packet resistors

Done: R18 and R22 to move for cpu socket

Done: Outputs out of order on PCB

Done: Make sure all thru-holes have thermal relief

Done: move D33 to make space for pic socket

Done: crystal footprint updated

Done: move IN_CPU2 to Port0 given the internal pull-ups may affect Analog input reads

Done: remove pull up on P0 lines

Rev2

Done: added diode to decrease 5V line for 485 module, it would overheat otherwise

Done: timing cap for power chip changed to 120pF to reduce noise

Done: changed jumper select to switches

Done: changed the resistance for power to 1.89 and 5.96 for the 5V supply

Rev3

Done: rectify connection with Input Con. Was mis-labelled

Done: change cap by op-amp to 10uF. 100uF too slow

Done: fix footprint of switches

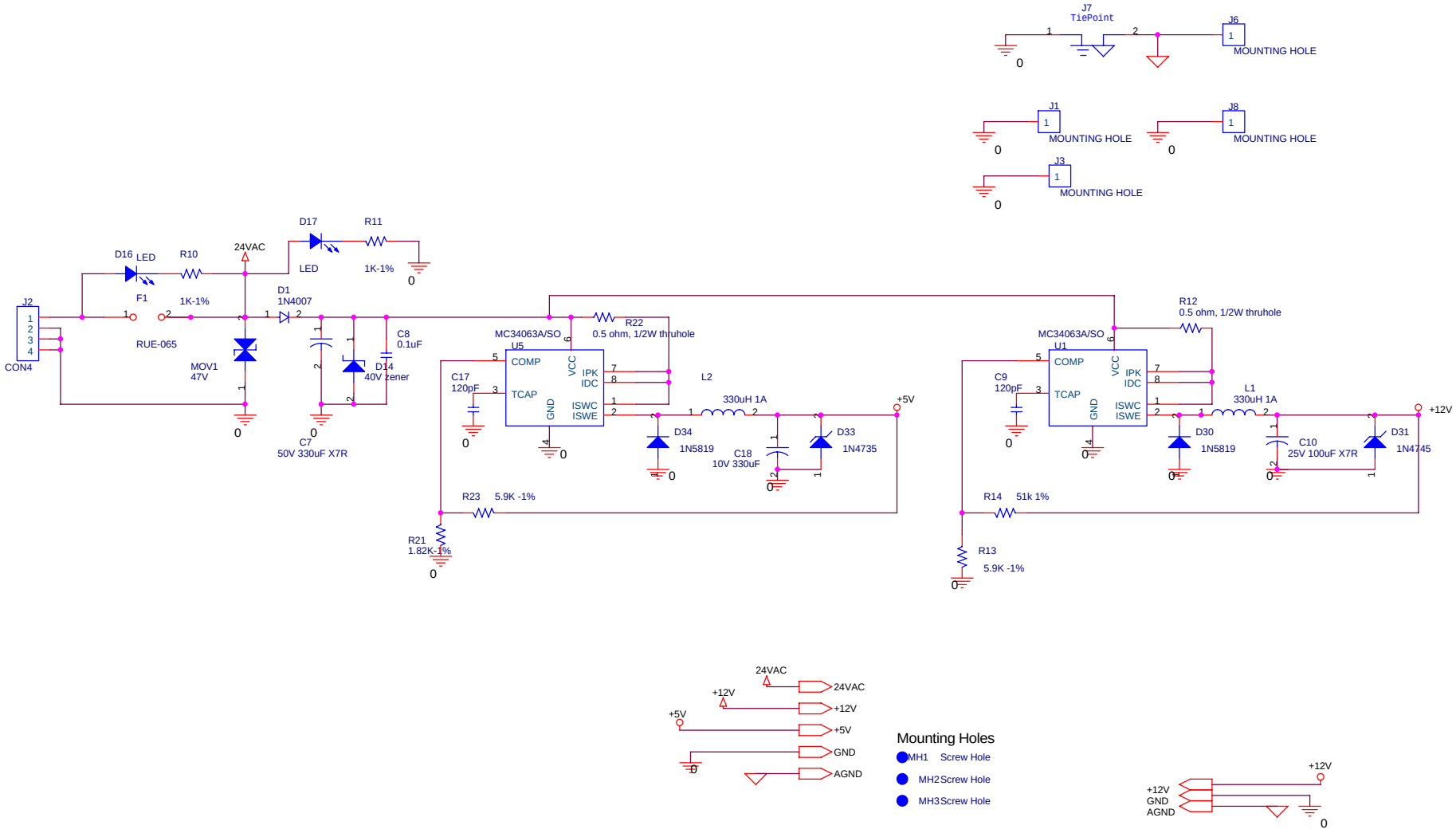
TBD: rectify footprint names of 2N2222, Q1, Q2 for BOM purposes

Slick Screen on Board was mislabelled. Still reads Rev2

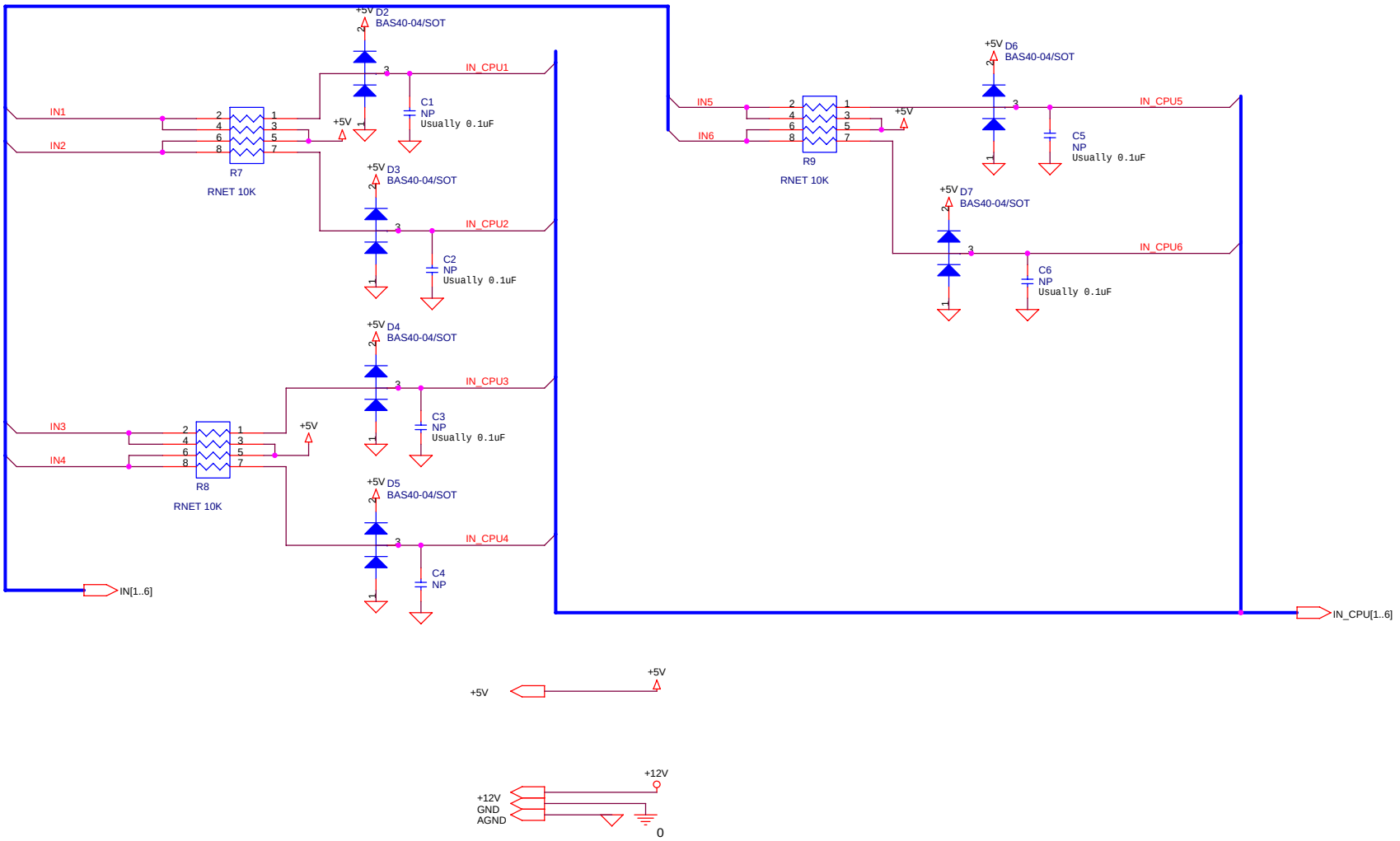
note: make sure muxes are phillips brand. Does not
work with Texas chips

Title <Title>		
Size B	Document Number <Doc>	Rev <RevCode>
Date: Monday, February 27, 2006	Sheet 2 of 5	

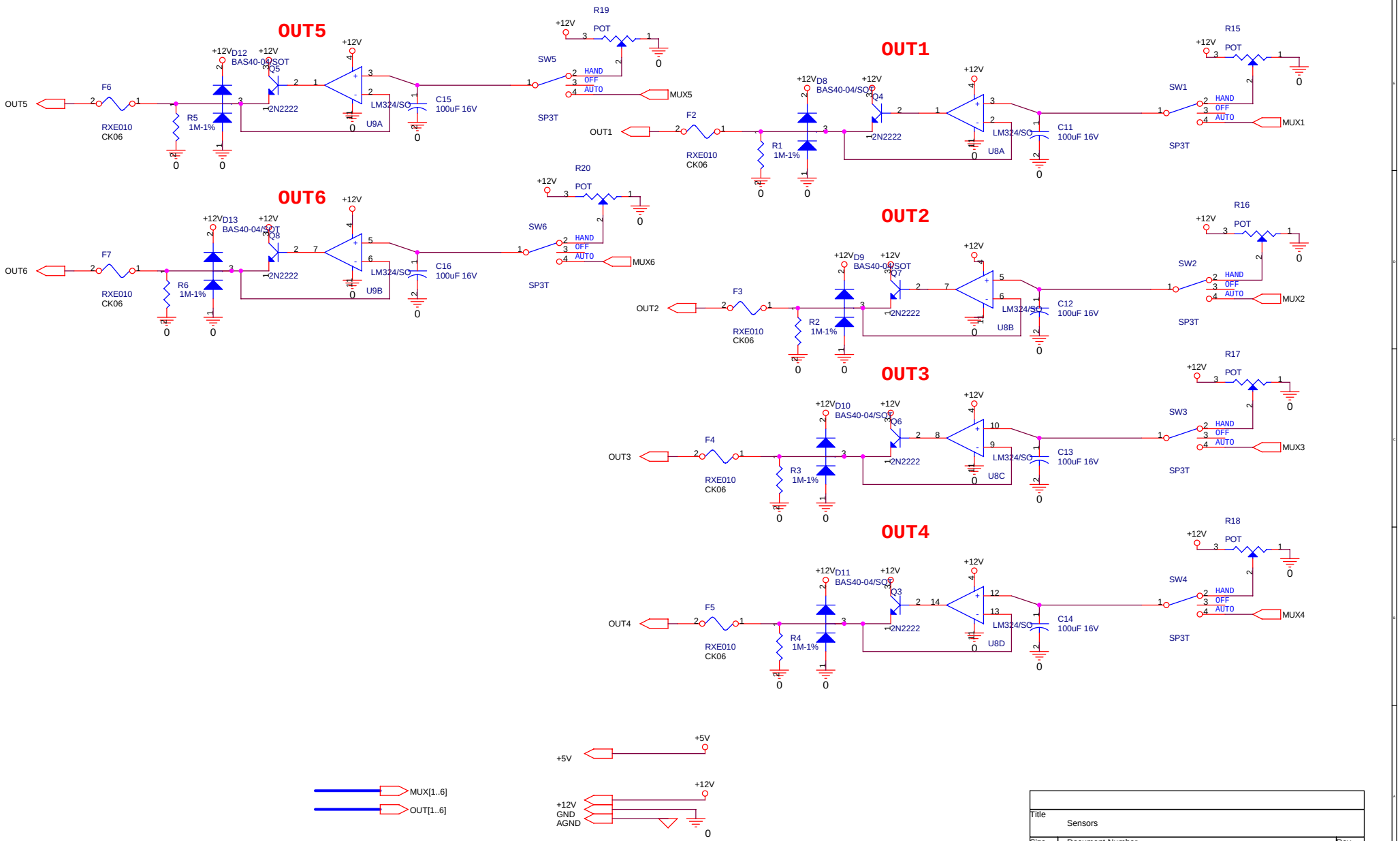
POWER



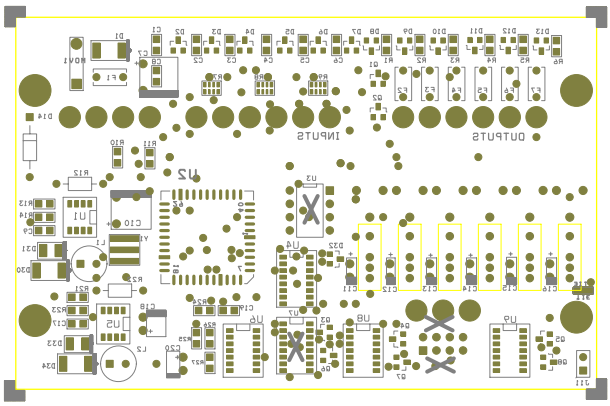
Title	<Title>	
Size B	Document Number <Doc>	Rev <RevCode>
Date: Wednesday, December 21, 2005	Sheet 3 of 5	

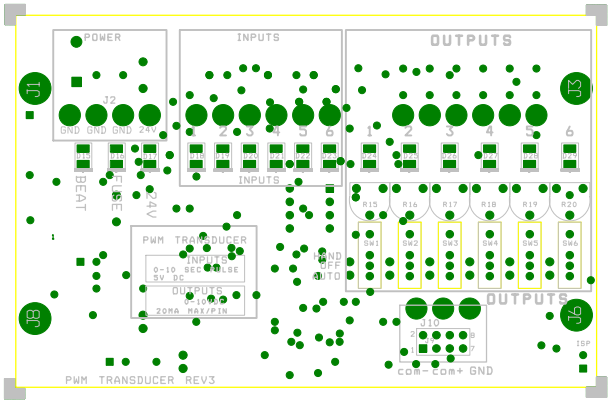


Title	Sensors	
Size B	Document Number <Doc>	Rev <RevCode>
Date: Wednesday, October 26, 2005	Sheet 4 of 5	



Title	Sensors	
Size B	Document Number <Doc>	Rev <RevCode>
Date: Thursday, October 27, 2005	Sheet 5 of 5	


INPUTS
OUTPUTS
U2


POWER
INPUTS
OUTPUTS
J1
J2
J3
J8
J4
GND GND GND 24V
1 2 3 4 5 6
INPUTS
1 2 3 4 5 6
BEAT
24V
PWM TRANSDUCER
INPUTS
0-10 SECOND PULSE
5V DC
OUTPUTS
0-10V
20MA MAX/PIN
GND
OFF
AUTO
R15 R16 R17 R18 R19 R20
SW1 SW2 SW3 SW4 SW5 SW6
OUTPUTS
com- com+ GND
ISP
PWM TRANSDUCER REV3