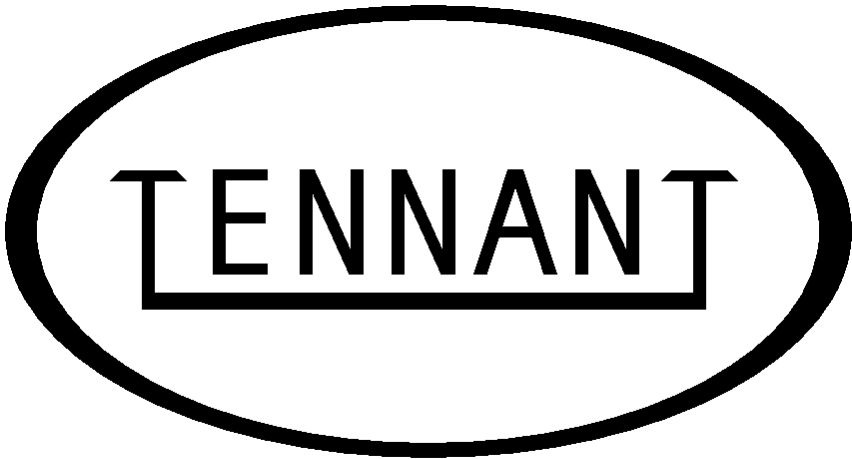




T7

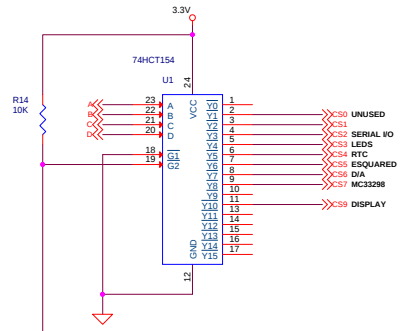
- PAGE 1: COVER SHEET, INDEX
- PAGE 2: DSP, FLASH, EEPROM, RTC, RS232, RS485, IR, DISPLAY
- PAGE 3: POWER SUPPLIES, INPUTS, LED DRIVERS KEYPAD, ANALOG
- PAGE 4: LOWSIDE DRIVERS / DIGITAL INPUTS
- PAGE 5: ACTUATOR (SQUEEGE OR HEAD)
- PAGE 6: BATTERY CONNECTION
- PAGE 7: SCRUB BRUSHES VAC FAN
- PAGE 8: PROPEL

Componant Ref #	T5	Prowler	Gator
	Value, QPL#	Value, QPL#	Value, QPL#
R33	2.00K, Q10002-222	499, Q10002-164	499, Q10002-164
R38	1.0K, Q10002-193	499, Q10002-164	499, Q10002-164
R76	30.1K, Q10002-335	15.0K, Q10002-306	15.0K, Q10002-306
R77	64.9K, Q10002-367	30.1K, Q10002-335	30.1K, Q10002-335
Q1	IRFR3518, Q19033-005	IRFR3518, Q19033-005	STD35NF06, Q19033-007
Q19,Q20,Q21,Q46	NOT USED	NOT USED	IRF3205S, Q19033-002
R249,R216,R251,R250	NOT USED	NOT USED	45.3, Q10002-064
C203,C204	NOT USED	NOT USED	0.0330UF, Q11003-008
J9, J10	NOT USED	42820-2212	NOT USED
J12, J14	42819-2212	NOT USED	NOT USED
J17, J18	NOT USED	NOT USED	39425-0002
J13	42819-4212, Q15020-004	NOT USED	NOT USED
J8	NOT USED	42820-4212, Q15020-001	42820-4212, Q15020-001

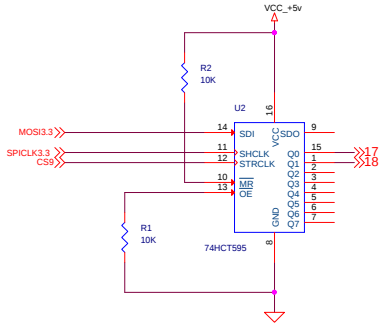
MATERIAL SPECIFICATIONS		SEE NOTES		PROPRIETARY INFORMATION		13	GXXXX	RFM/01-05-2006
TREATMENTS AND FINISHES		NONE		THE INFORMATION IN THIS DOCUMENT IS PROPERTY OF TENNANT COMPANY. IT IS SUBJECT TO RETURN UPON DEMAND AND MAY NOT BE REPRODUCED OR DISCLOSED TO OTHERS WITHOUT WRITTEN PERMISSION OF TENNANT COMPANY		REV	ECO	BY/DATE
SCALE: N/A	DO NOT SCALE DWG	DATE	TOLERANCES UNLESS OTHERWISE SPECIFIED	GENERAL NOTES		OrCAD Center 		
DWN: XXXXXX XXXXXXXX	XX-XXX-XXXX		METRIC TOLERANCES	INCH EQUIVALENT				
MDR: XXXXXX XXXXXXXX	XX-XXX-XXXX		LINEAR	+/- X.XX	+/- X.XX	DWG D SIZE		
DES: XXXXXX XXXXXXXX	XX-XXX-XXXX		SLOT WIDTH	N/A	N/A			
PART NAME:			HOLE DIA	N/A	N/A	PART NUMBER		
			ANGULAR	N/A	N/A			
			MACH SURFACES	N/A	N/A			
PCB CIRCUITBOARD [PROWLER]				SHEET 1 of 8				

1073762

CHIP SELECT DECODER



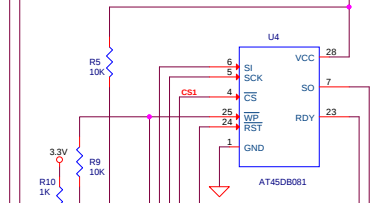
DISPLAY



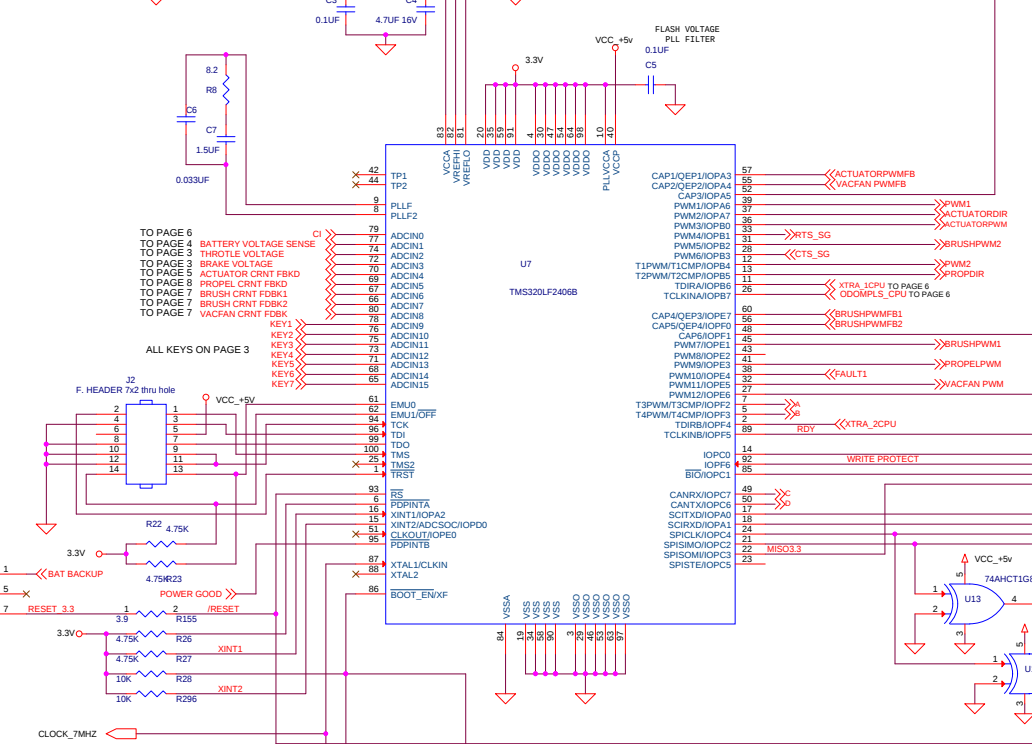
SERIAL STUFF



FLASH MEMORY



DSP



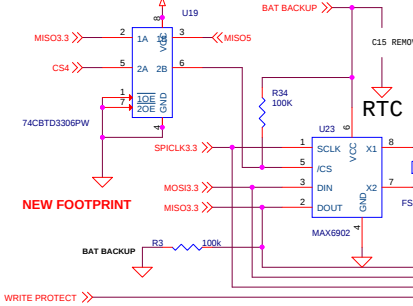
RS232



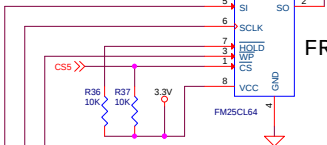
RS232



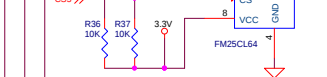
LEVEL TRANSLATION



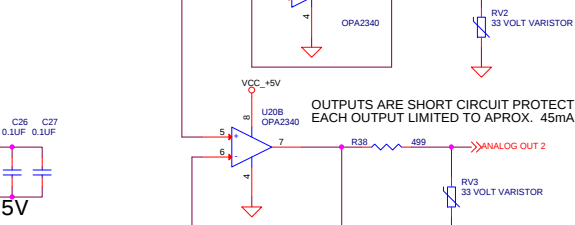
RTC



FRAM



D/A



DECOUPLING, +5V

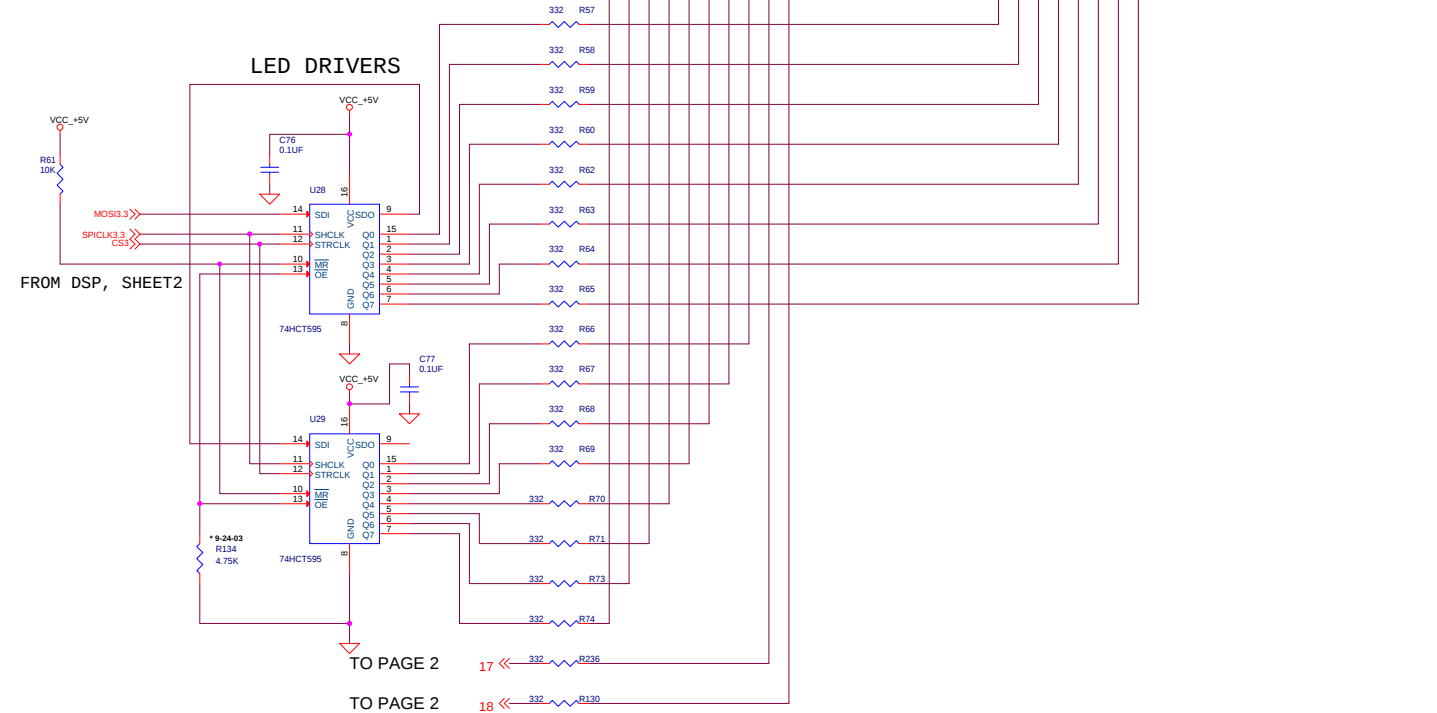
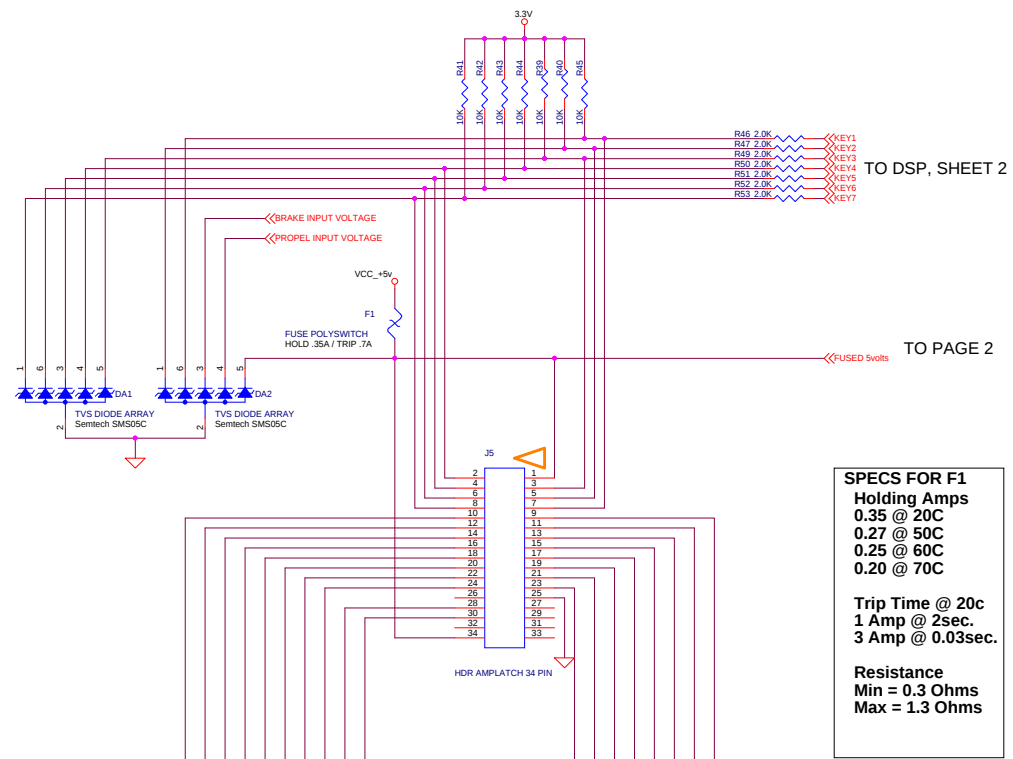


DECOUPLING, +3.3V



HEARTBEAT LED
component side
PLACE D4
as shown

MATERIAL SPECIFICATIONS		SEE NOTES		PROPRIETARY INFORMATION		13	GXXXX	RFM/01-05-2006
TREATMENTS AND FINISHES		NONE		THE INFORMATION IN THIS DOCUMENT IS PROPERTY OF TENNANT COMPANY. IT IS SUBJECT TO RETURN UPON DEMAND AND MAY NOT BE REPRODUCED OR DISCLOSED TO OTHERS WITHOUT WRITTEN PERMISSION OF TENNANT COMPANY		REV	ECO	BY/DATE
SCALE:	N/A	DO NOT SCALE DWG	DATE	TOLERANCES UNLESS OTHERWISE SPECIFIED		OrCAD Center TENNANT		
DWN:	XXXXXX	XXXXXXX		METRIC TOLERANCES	INCH EQUIVALENT			
MCR:	XXXXXX	XXXXXXX		LINEAR	+/- X.XX			
DES:	XXXXXX	XXXXXXX		SLOT WIDTH	N/A			
				HOLE DIA	N/A	GENERAL NOTES DIMENSIONS WITHOUT BRACKETS ARE INCH UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE AFTER TREATMENTS AND FINISHES.		
				ANGULAR	N/A			
				MACH SURFACES	N/A	DWG D SIZE		
						PART NUMBER 1073762		
						SHEET 2 OF 8		
						PCB CIRCUITBOARD [PROWLER]		



MATERIAL SPECIFICATIONS			SEE NOTES			PROPRIETARY INFORMATION THE INFORMATION IN THIS DOCUMENT IS PROPERTY OF TENNANT COMPANY. IT IS SUBJECT TO RETURN UPON DEMAND AND MAY NOT BE REPRODUCED OR DISCLOSED TO OTHERS WITHOUT WRITTEN PERMISSION OF TENNANT COMPANY			13	GXXXX	RFM/01-05-006
TREATMENTS AND FINISHES			NONE			OrCAD Center 			REV	ECO	BY/DATE
SCALE:	N/A	DO NOT SCALE DWG	DATE	TOLERANCES UNLESS OTHERWISE SPECIFIED					DWG D SIZE		
DWN	XXXXXXXX XXXXXXXX	xx-xxx-xxxx		METRIC TOLERANCES LINEAR +/- .XX SLOT WIDTH .N/A HOLE DIA .N/A ANGULAR .N/A MACH SURFACES .N/A			INCH EQUIVALENT +/- .XX .N/A .N/A .N/A .N/A			GENERAL NOTES DIMENSIONS WITHOUT BRACKETS ARE METRIC. DIMENSIONS WITH BRACKETS ARE INCH UNLESS OTHERWISE SPECIFIED. ALL DIMENSIONS ARE AFTER TREATMENTS AND FINISHES.	
MDR	XXXXXXXX XXXXXXXX	xx-xxx-xxxx									
DES	XXXXXXXX XXXXXXXX	xx-xxx-xxxx									
PART NAME:				PCB CIRCUITBOARD [PROWLER]				SHEET 3 OF 8			PART NUMBER 073762

MUST WIDEN TRACES
* "FLYBACK / FUSED POWER"
* "VBAT"

If output is used for Main Contactor, D16 must be used.

*Use D16 for flyback, when high side of load is connected to "1AMP LOWD"
*Use D21 for flyback, when high side of load is connected to "FLYBACK / FUSED POWER"

Locate C166 next to Q1, Q2, Q3.
Locate C167 next to Q4, Q5, Q6.

Q19009-001
Q19001-001

Locate C121, C163 next to U34 PIN 28.
Ground side directly to Signal GND.

TO J6 -13 ON PAGE 4

D21 NOT POPULATED

TRACES FROM FETs Q1 - 12 DRAIN TO J6 MUST HAVE 10 AMP CAPACITY.
CONNECT TO POWER GROUND PLAIN MOSFET's SOURCE PIN 15 OF U34 & 35 C85, C88, R91, R100

CONN 35POS V AMPSEAL

J6

1	DIGITAL INPUT 1 ODOMETER PULSE
2	EXTRA DIGITAL INPUT
3	FUSED SWOLs
4	WATER SOLENOID
5	MAIN CONTACTOR
6	UNUSED OUTPUT 5 AMP
7	SEAT SWITCH
8	REC. FULL
9	SQUEEGEE ACTUATOR B
10	HORN SWITCH
11	FORWARD SWITCH
12	SQUEEGEE ACTUATOR A
13	FLYBACK PATH
14	HOOR METER
15	HORN / BEEPER
16	UNUSED OUTPUT 1 AMP
17	E-STOP INPUT
18	CHARGER INTERLOCK
19	UNUSED OUTPUT 1 AMP
20	REC. FULL
21	HEAD ACTUATOR B
22	REVERSE SWITCH
23	HEAD ACTUATOR A
24	FAST PUMP
25	UNUSED
26	LOW SIDE OUTPUT
27	LOW SIDE OUTPUT
28	LOW SIDE OUTPUT
29	LOW SIDE OUTPUT
30	LOW SIDE OUTPUT
31	LOW SIDE OUTPUT
32	LOW SIDE OUTPUT
33	LOW SIDE OUTPUT
34	LOW SIDE OUTPUT
35	LOW SIDE OUTPUT

NOT POPULATED

INDUCTOR FERRITE 4A

Grounding path for "SENSOR GROUND RETURN".
J5-35 through ferrite to power ground, instead of directly to SIGNAL GROUND.

GND_POWER

NOT POPULATED

INDUCTOR FERRITE 4A

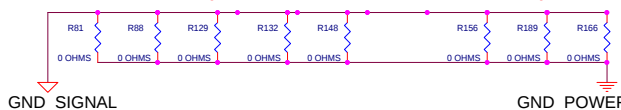
ORIGINAL Grounding path for "SIGNAL GROUND PLAIN".

GND_SIGNAL

GND_POWER

Located on pin 35 side of J6

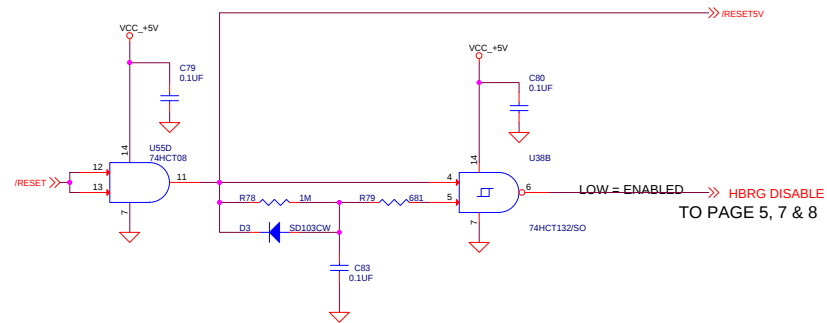
Located on pin 1 side of J6



GND_SIGNAL

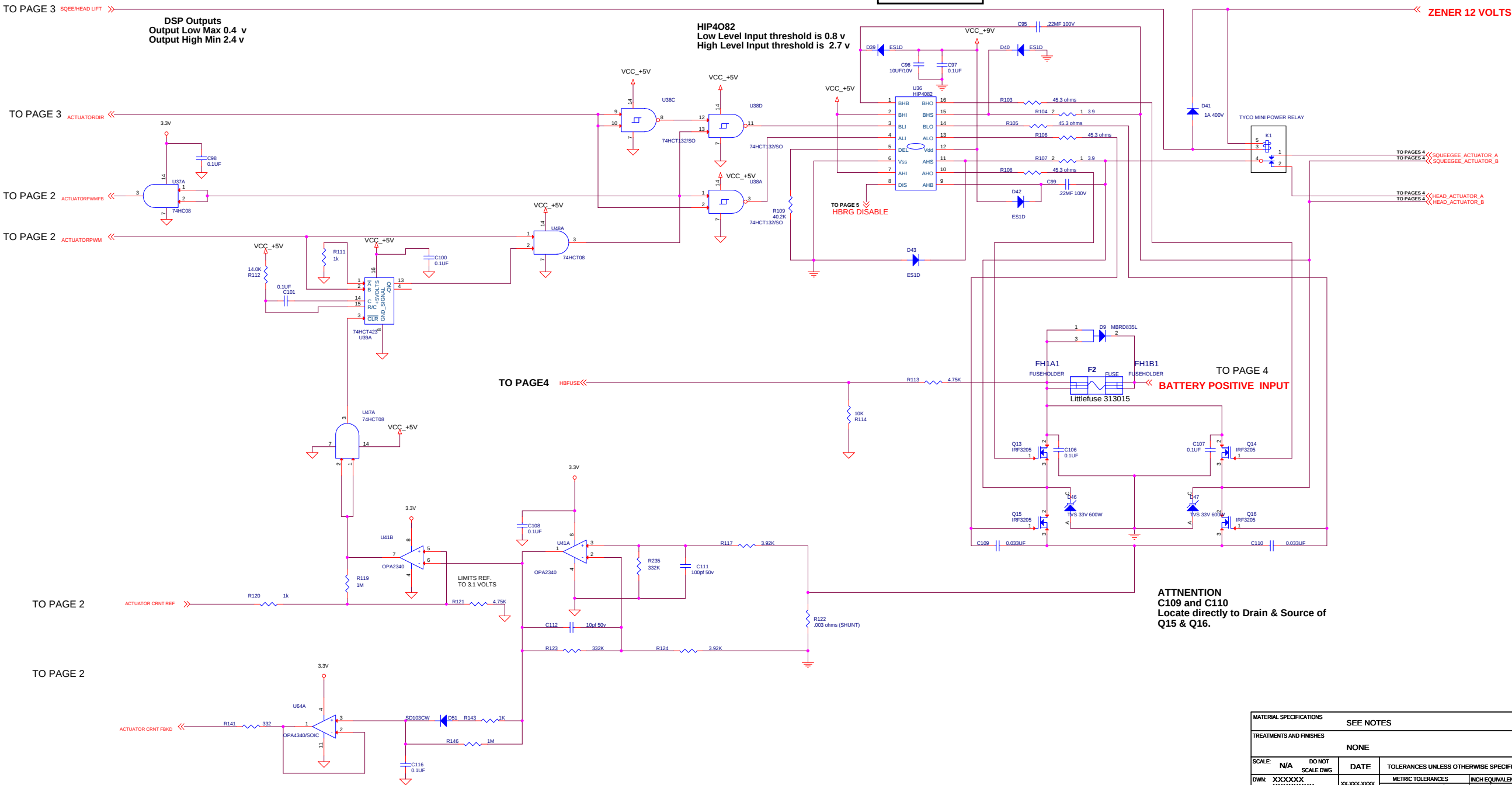
GND_POWER

MATERIAL SPECIFICATIONS		SEE NOTES		11		GXXXX	RFM/08-09-2005
TREATMENTS AND FINISHES		NONE		REV	ECO	BY/DATE	
SCALE: N/A		DO NOT SCALE DWG		OrCAD Center			
DWN: XXXXXXXX		DATE: XX-XXX-XXXX		TENNANT			
MDR: XXXXXXXX		DATE: XX-XXX-XXXX		PART NUMBER			
DES: XXXXXXXX		DATE: XX-XXX-XXXX		1073762			
PART NAME:		PCB CIRCUITBOARD [PROWLER]		SHEET 4 OF 8			
GENERAL NOTES		DIMENSIONS WITHOUT BRACKETS ARE METRIC. DIMENSIONS WITH BRACKETS ARE INCH. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE AFTER TREATMENTS AND FINISHES.		DWG D SIZE			



5V RESET & H-BRIGE DISABLE

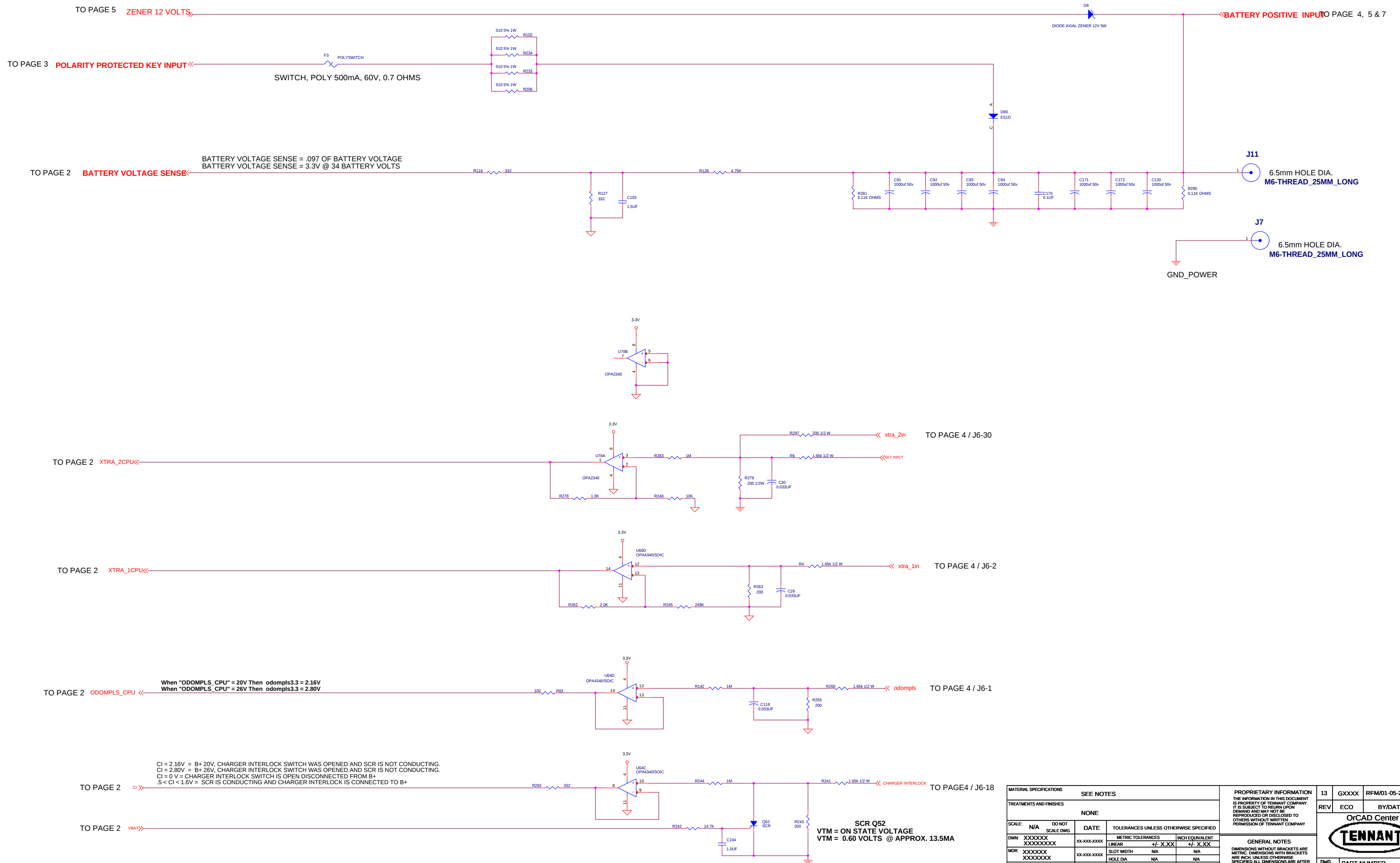
LOCATE C96 & C97 CLOSE TO PINS 6 & 12. ALSO CONNECT DIRECTLY TO PINS 6 & 12.



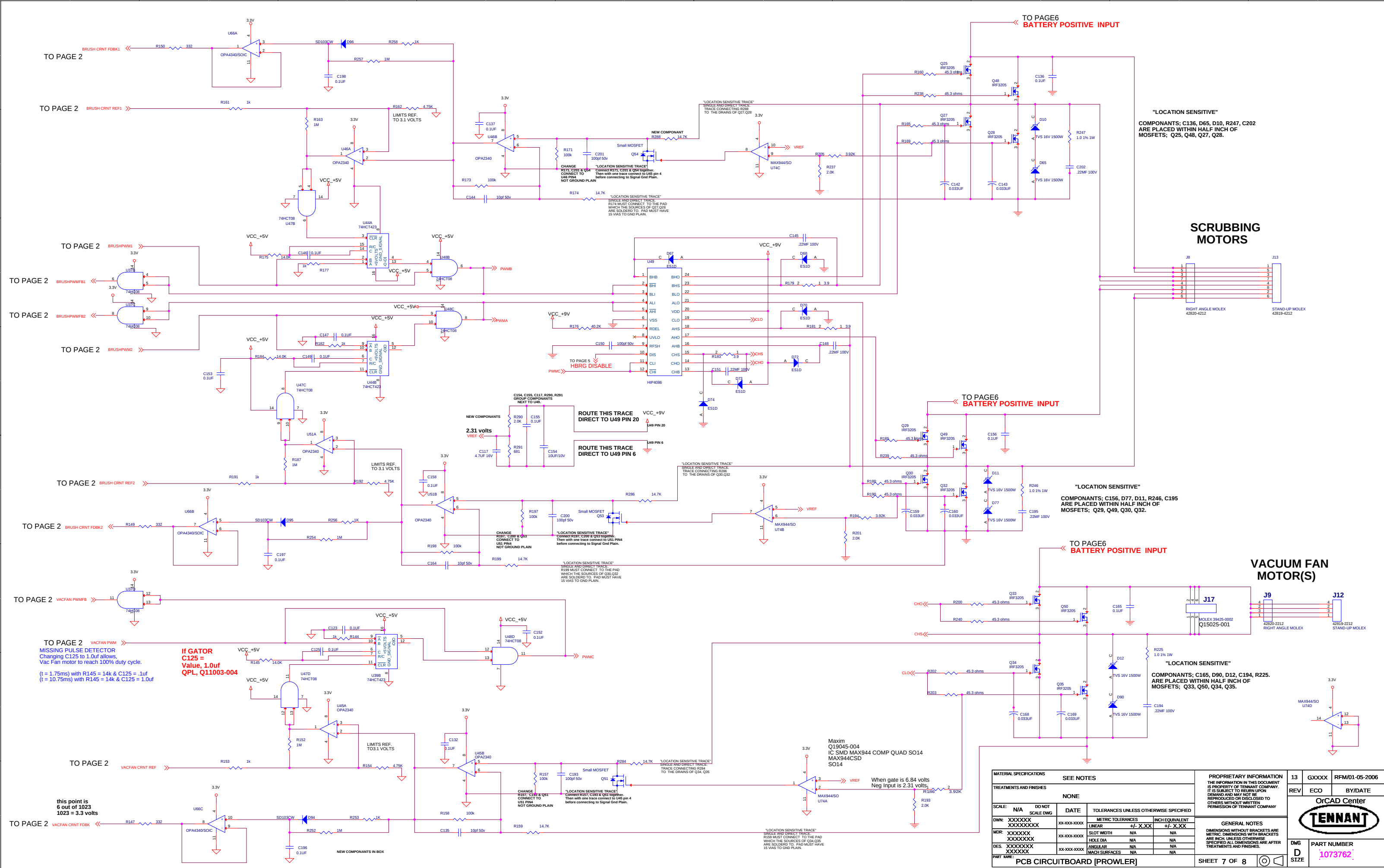
ACTUATOR LIFT /LOWER SQUEEGEE / BRUSH

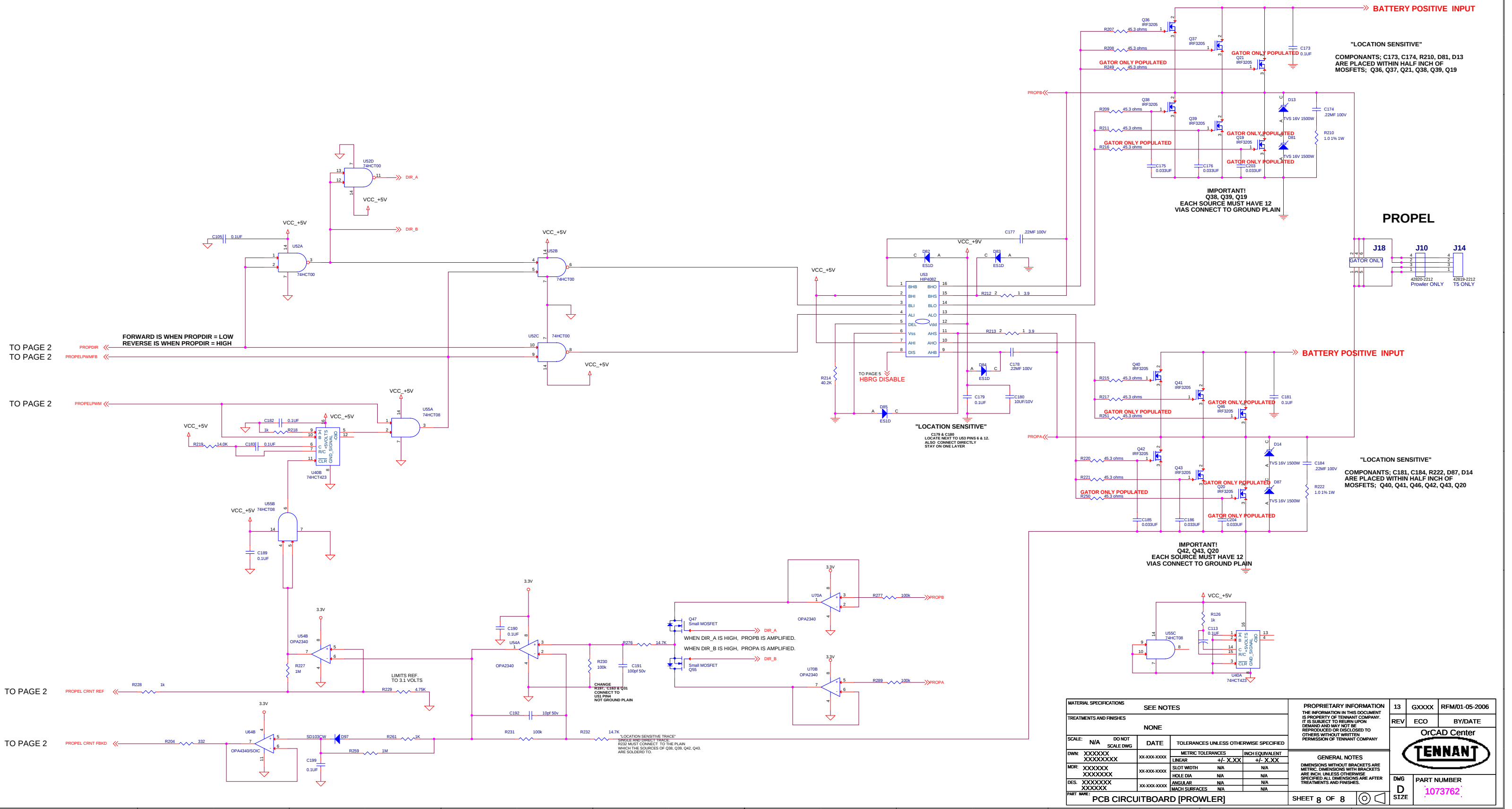
ATTENTION
C109 and C110
Locate directly to Drain & Source of
Q15 & Q16.

MATERIAL SPECIFICATIONS		SEE NOTES		PROPRIETARY INFORMATION THE INFORMATION IN THIS DOCUMENT IS PROPERTY OF TENNANT COMPANY. IT IS SUBJECT TO RETURN UPON DEMAND AND MAY NOT BE REPRODUCED OR DISCLOSED TO OTHERS WITHOUT WRITTEN PERMISSION OF TENNANT COMPANY		13	GXXXX	RFM/01-05-2006
TREATMENTS AND FINISHES		NONE				REV	ECO	BY/DATE
SCALE: N/A		DO NOT SCALE DWG		TOLERANCES UNLESS OTHERWISE SPECIFIED		OrCAD Center TENNANT		
DWN: XXXXXXXX		XX-XXX-XXXX		METRIC TOLERANCES LINEAR +/- .X.XX INCH EQUIVALENT +/- .X.XX				
MCR: XXXXXXXX		XX-XXX-XXXX		SLOT WIDTH N/A N/A		GENERAL NOTES DIMENSIONS WITHOUT BRACKETS ARE METRIC. DIMENSIONS WITH BRACKETS ARE INCH. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE AFTER TREATMENTS AND FINISHES.		
DES: XXXXXXXX		XX-XXX-XXXX		HOLE DIA N/A N/A				
				ANGULAR N/A N/A		DWG D SIZE PART NUMBER 1073762		
				MACH SURFACES N/A N/A				
PART NAME:		PCB CIRCUITBOARD [PROWLER]		SHEET 5 OF 8				



MATERIAL SPECIFICATIONS		SEE NOTES		PROPRIETARY INFORMATION		13	GXXXX	RFM/01-05-2006
TREATMENTS AND FINISHES		NONE		THE INFORMATION IN THIS DOCUMENT IS PROPERTY OF TENNANT COMPANY. IT IS SUBJECT TO RETURN UPON DEMAND AND MAY NOT BE REPRODUCED OR DISCLOSED TO OTHERS WITHOUT WRITTEN PERMISSION OF TENNANT COMPANY		REV	ECO	BY/DATE
SCALE: N/A DO NOT SCALE DWG		DATE		TOLERANCES UNLESS OTHERWISE SPECIFIED		OrCAD Center 		
DWN: XXXXXX XXXXXXXXXX		XX-XXX-XXXX		METRIC TOLERANCES LINEAR +/- .X XX +/- .X XX SLOT WIDTH N/A N/A HOLE DIA N/A N/A ANGULAR N/A N/A MACH SURFACES N/A N/A				
MOR: XXXXXX XXXXXXXXXX		XX-XXX-XXXX		GENERAL NOTES		DIMENSIONS WITHOUT BRACKETS ARE METRIC. DIMENSIONS WITH BRACKETS ARE INCH. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE AFTER TREATMENTS AND FINISHES.		
DES: XXXXXX XXXXXXX		XX-XXX-XXXX						
PART NAME:		PCB CIRCUITBOARD [PROWLER]		SHEET 6 OF 8		DWG D SIZE	PART NUMBER 1073762	





TO PAGE 2
TO PAGE 2

TO PAGE 2

TO PAGE 2

TO PAGE 2

MATERIAL SPECIFICATIONS				SEE NOTES		PROPRIETARY INFORMATION THE INFORMATION IN THIS DOCUMENT IS PROPERTY OF TENNANT COMPANY. IT IS SUBJECT TO RETURN UPON DEMAND AND MAY NOT BE REPRODUCED OR DISCLOSED TO OTHERS WITHOUT WRITTEN PERMISSION OF TENNANT COMPANY		13	GXXXX	RFM/01-05-2006		
TREATMENTS AND FINISHES				NONE				REV	ECO	BY/DATE		
SCALE: N/A		DO NOT SCALE DWG		DATE		TOLERANCES UNLESS OTHERWISE SPECIFIED		OrCAD Center TENNANT PART NUMBER 1073762				
DWN: XXXXXXXX XXXXXXXXXX		XX-XXX-XXXX				METRIC TOLERANCES					INCH EQUIVALENT	
MDR: XXXXXXXX XXXXXXXXXX		XX-XXX-XXXX				LINEAR					+/- X.XX	
DES: XXXXXXXX XXXXXXXXXX		XX-XXX-XXXX				SLOT WIDTH					N/A	
						HOLE DIA					N/A	
								ANGULAR		N/A		
								MACH SURFACES		N/A		
PART NAME: PCB CIRCUITBOARD [PROWLER]						SHEET 8 OF 8				DWG D SIZE		