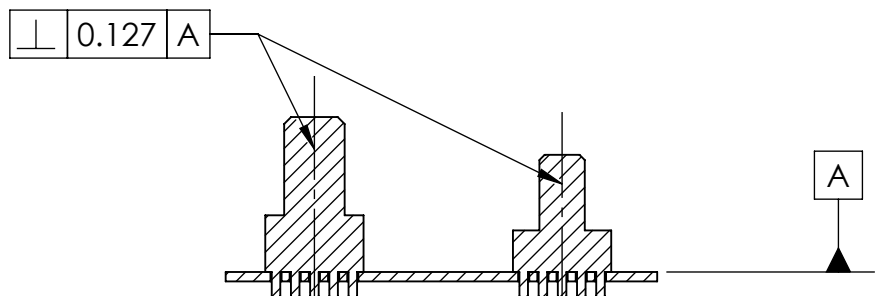
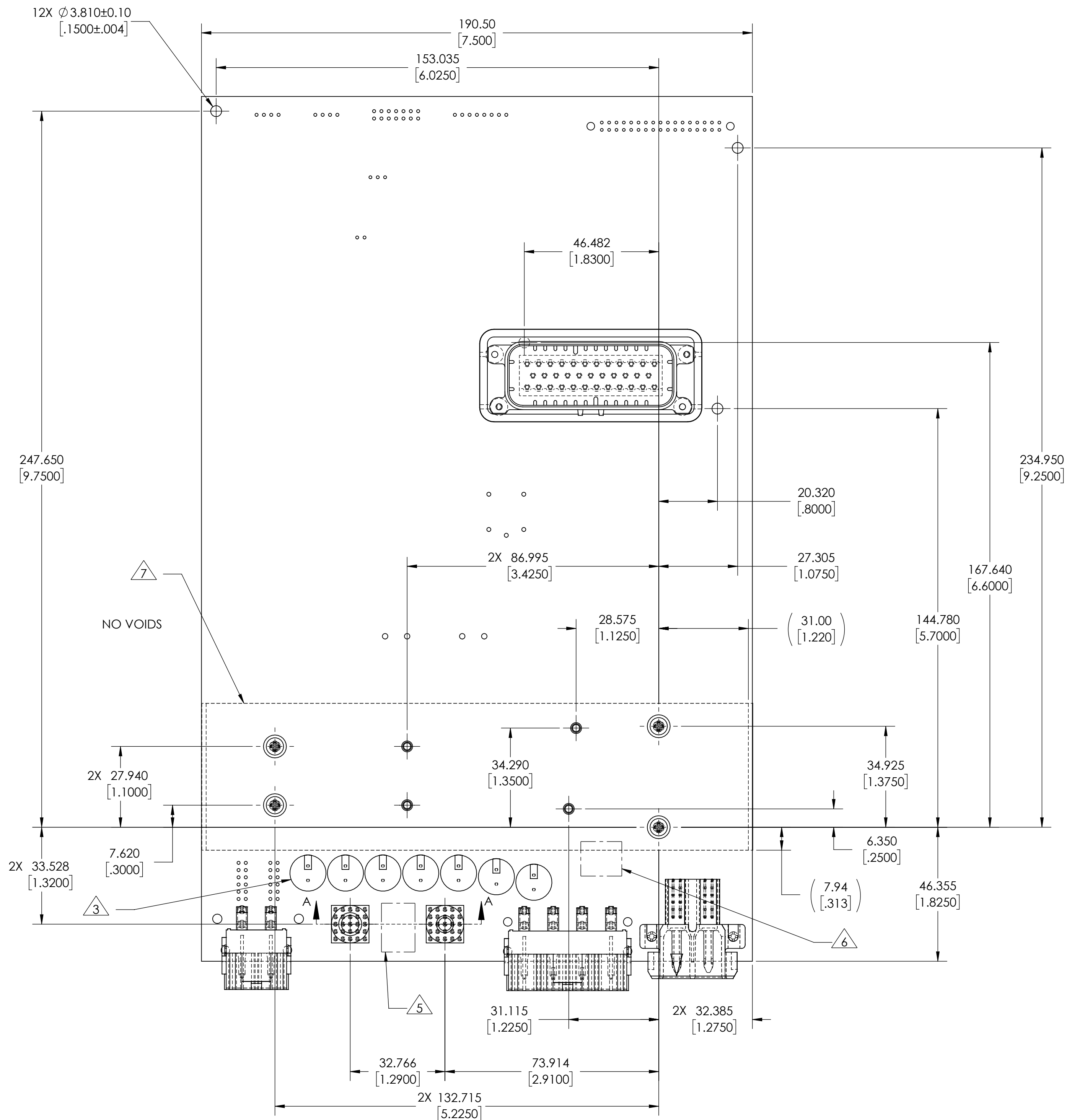
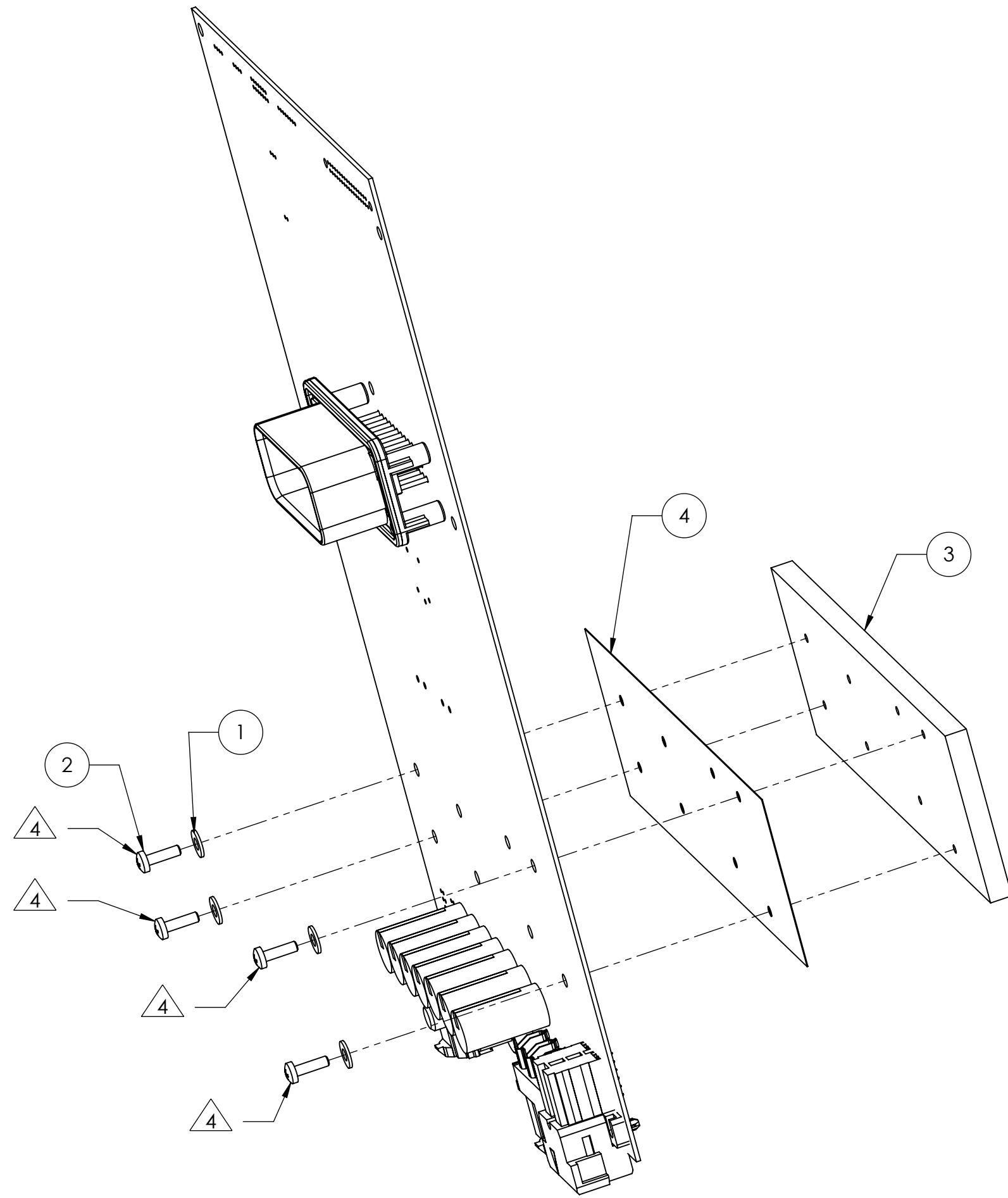
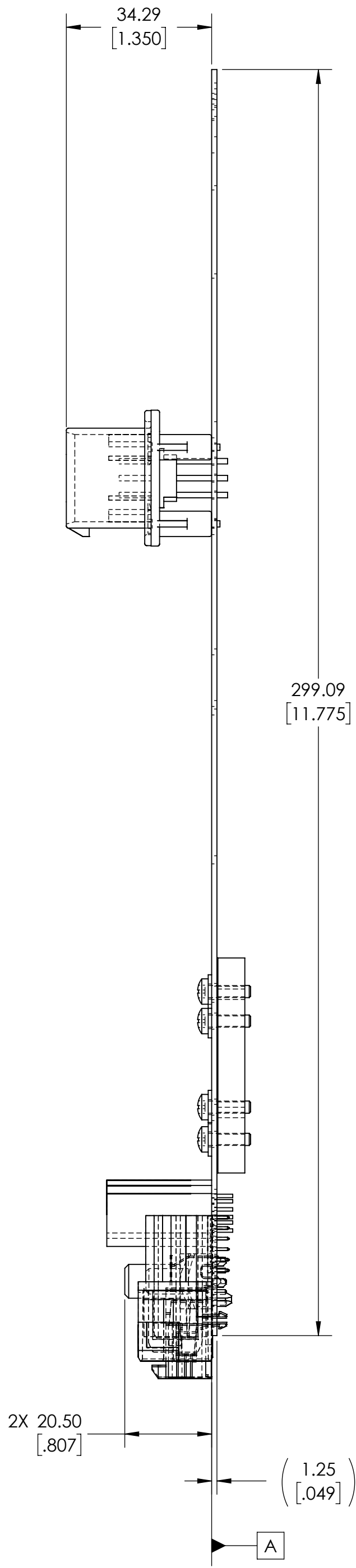


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1019218	WASHER, FLAT, 0.14B 0.31D .03, NYL	4
2	6920	SCREW, PAN, PHL, M3 X 0.50 X 10, 4.8	4
3	1015127	PLATE, SINK, HEAT	1
4	1016816	PAD, THERMAL, HEAT SINK	1

REVISIONS		
REV.	DESCRIPTION	DATE



SECTION A-A



NOTES:

- WORKMANSHIP STANDARD PER: IPC-J-STD-001D, IPC-A-610. SOLDERING AND ELECTRICAL CONNECTIONS: IPC-S-815B.
- MASKED AREA WILL HAVE NO CONFORMAL COATING ON THESE AREAS.
 - COMPONENTS: J2, J5, J6, J8, J9, J10, J11, J15, J16, CR2, F2, J7.
 - (12) MOUNTING HOLES AND UNDER SCREW HEADS AND WASHERS.
 - AREA UNDER HEAT SINK SIL PAD ON BOTTOM OF PCB.
- APPLY RTV SILICONE FOR MECHANICAL STRENGTH ON BOTH SIDES OF CAPACITORS, EXCEPT BETWEEN POWER LUGS J7 AND J11.
- TORQUE SCREWS FOR HEAT SINK TO MIN 0.4519-.5084 Nm [63.99-71.99 OZ. INCH, 4.0-4.5 IN-LBS].
- LABEL MUST CONTAIN THE FOLLOWING INFORMATION AND BE LOCATED BETWEEN J7 AND J11
 - TENNANT'S ASSEMBLY PART NUMBER WITH CURRENT DRAWING REVISION P/N: 1278135 REV00
 - TENNANT'S QPL BOM PART NUMBER WITH CURRENT ALPHA REVISION. (BOM1278135revA.xlsx)
 - MANUFACTURER PART NUMBER
 - MANUFACTURER SERIAL NUMBER
 - TO BE IN A POSITION WHERE RTV DOES NOT MASK THE PRINT ON THIS LABEL
 - MANUFACTURERS PART NUMBER MUST FACILITATE TRACEABILITY OF PARTS USED TO CREATE THE POPULATED BOARD
- LABEL MUST HAVE MACHINE MODEL LISTED. SEE "PART NAME" CELL BETWEEN [] FOR MACHINE MODEL.
- NO VOIDS IN BOTTOM SIDE SOLDERMASK IN THIS AREA (HEAT SINK AREA).
- BUILD USING QPL BILL OF MATERIALS: BOM1278135revA.xlsx
- PROGRAM USING FIRMWARE FILE: Q30006-016_PROWDISK081017.OUT

CHANGELOG:

REV 00: REPLACES 1076602, NEW VAC FAN CONNECTOR

DEVELOPMENT PART

MATERIAL SPECIFICATIONS: NOTED		OTHER TREATMENTS AND FINISHES NOTED		PAINT - COLOR		CHANGED BY:		DATE:	
PART NAME: CIRCUITBOARD, LOGIC [DISK T7/SSR]		GLOSS		PERFORMANCE		ACCEPTANCE		DES:	
								10/28/2008	

REV	ECO
-C	

GENERAL NOTES	
PRIMARY DIMENSIONS ARE METRIC. REFERENCE DIMENSIONS WITH BRACKETS ARE INCH, UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE AFTER TREATMENTS AND FINISHES.	
PROPRIETARY INFORMATION	
MAY NOT BE REPRODUCED OR DISCLOSED TO OTHERS WITHOUT WRITTEN PERMISSION OF TENNANT COMPANY.	
SHEET	1 OF 3

DWG D SIZE	PART NUMBER 1278135

FUNCTIONAL TEST INSTRUCTIONS

- 1. Plug in the following connectors; J5, J6, J8, J10,J17
- 2. Connect power supply ground to J7(Stud).
- 3. Connect power supply 24 Volts to J11(Stud).
- 4. Perform the five Operation Models to complete test.

1st Display Software Revision Mode:

To Begin Testing in Display Software Revision

- 1. CLOSE switch SW 1.
- 2. COLSE switch SW 9 (Turn ON Power)
- 3. Confirm all panel LED's illuminate momentarily after power up(D1through D17)
- 4. Confirm the blinking illumination, either LED D4 or LED D7.
- 5. OPEN switch SW1.
- 6. Open SW9.(Turn OFF Power)

2nd Normal Mode:

To Begin Testing in Normal Mode:

- 1. Insure all input signals are in start positions.
 - SW10 =CLOSED
 - SW8 =CLOSED
 - SW11=CLOSED
 - SW12=OPEN
 - SW13=CLOSED
 - SW15=OPEN
 - SW14=OPEN
 -
 -
- 2. SW 9=CLOSE (Turn on Power)
- 3. All panel LED's illuminate momentarily after power up.(D1 through D17)
- 4. Turn OFF D2 if it remains illuminated. Do this by momentarily closing SW2.
- 5. Monentarily close SW6
- 6. Monentarily close SW7. One of three LEDs(D7,D8,D9)must turn OFF.
- 7. Monentarily close SW4
- 8. Monentarily close SW5. One of three LEDs(D4,D5,D6)must turn OFF.
- 9. Open SW10
- 10.Confirm the beeper is repeating an EIGHT beep sequence.
- 11.Close SW10. EIGHT beep sequences continue.
- 12.Turn ON D2. Do this by momentarily closing SW2.
- 13.Open SW9.(Turn off Power)

Self Test Mode:

To Begin Test in Self Test Model:

- 1. CLOSE switchs SW2 and SW3
 - 2. SW9=CLOSE (Turn on Power)
 - 3. Two seconds after Main contactor turns on, OPEN switches SW2 and SW3.
 - 4. Wait,while Self-Test operates automatically. Test takes about 40-sec.
 - 5. After Self- Test has finished ,one of two things will happen.
a,System OK=D1 will light also LED's D12 through D16 remain on
b,System NOT OK = Error Codes will be displayed using other panel LEDs
 - 6. If System NOT OK-See Error Codes below
 - 7. If System OK, Open SW 9.(Turn off Power)
- Error Codes will be displayed with either flashing or solid illuminated LED.
- Flash LED =OPEN fault
- Solid LED = SHORT fault
- Self Test Error Codes
- LED (Flashing = OPEN, Solid = SHORT)System at Fault
- 1.D2 Fast Pump
 - 2.D3 Vacuum- Fan
 - 3.D4 Right Brush
 - 4.D5 Left Brush
 - 5.D6 Head Actuator
 - 6.D1 Water Valve
 - 7.D8 Squeegee Actuator
 - 8.D9 Brake
 - 9.D11 Beeper/Horn

Input Display Mode

TO Begin Testing in Input Display Mode:

- 1. CLOSE switch SW7
- 2. CLOSE SW9 switch
- 3. Open switch SW7 after LED D13 starts to blink.
- 4. Confirm that HOUR METER light turns on momentarily after power up.
- 5. OPEN SW 11= LED D12 is ON
- 6. CLOSE SW 11 = LED D12 is OFF
- 7. CLOSE SW 12 for 5-7 seconds. = LED D11 latches ON
- 8. OPEN SW 12 = LED 11 remains ON
- 9. OPEN SW 13 for 5-7 seconds.= LED D10 latches ON
- 10.CLOSE SW 13 = LED D10 ramains ON
- 11.CLOSE SW 14 = Beeper ON (sounds)
- 12.OPEN SW 14 =Beeper OFF (slient)
- 13.CLOSE SW 15 =Beeper ON (One second and one off.)
- 14.If silent. Jump to:(Enable Reverse Alarm) and then restart Input Display Mode.
- 15.OPEN SW 15 = Beeper OFF (silent)
- 16.OPEN Forward Switch = NOT USED
- 17.CLOSE Forward Switch = NOT USED
- 18.Confirm that SW 8 is CLOSED and LED D2 is ON
- 19.OPEN SW 8 = LED D2 must turn OFF and Beeper repeats a NINE beep sequence.
- 20.CLOSE SW 8 = LED D2 remains off and beeper continues.
- 21.Open SW9. (Turn off Power)

Enable Reverse Alarm

- 1. Power up machine in REVERSE while holding the HORN button.
- 2. Continue to hold the HORN button:
 - If HORN sounds,reverse alarm is enabled
 - If HORN is silent, reverse alarm is disabled
- 3. Shut off machine, setting is stored.

Propel Test Mode:

To Begin Testing in Propel Test Mode:

- 1. CLOSE Switches SW2 and SW4.
- 2. CLOSE SW9 switch
- 3. Two seconds after main relay is energized, OPEN switches SW2 and SW4
- 4. Momentarily increase voltage on J6-34 for two seconds, from 0.9 volts to 2.0 volts.
- 5. Observe Two LEDs Illuminate, (D15 and D16). Power Supply AMP draw must measure Between, 5 &10 AMPS of current.
- 6. Return voltage on J6-34 to 0.9 volts.
- 7. monetarily increase voltage on J6-33 for 3 seconds,from 0.9 volts to 3.0 volts.
- 8. Observe LED's illuminate in sequence(D6,D5,D4) No LED's indicates the pedal is released 3 LED's indicates that the pedal is fully depressed.
- 9. Return voltage on J6-33 back to 0.9 volts and observe LED's turn off in sequence (D4,D5,D6).
- 10.Open SW9.(Turn off Power)
- 11.End of Test.

DEVELOPMENT PART

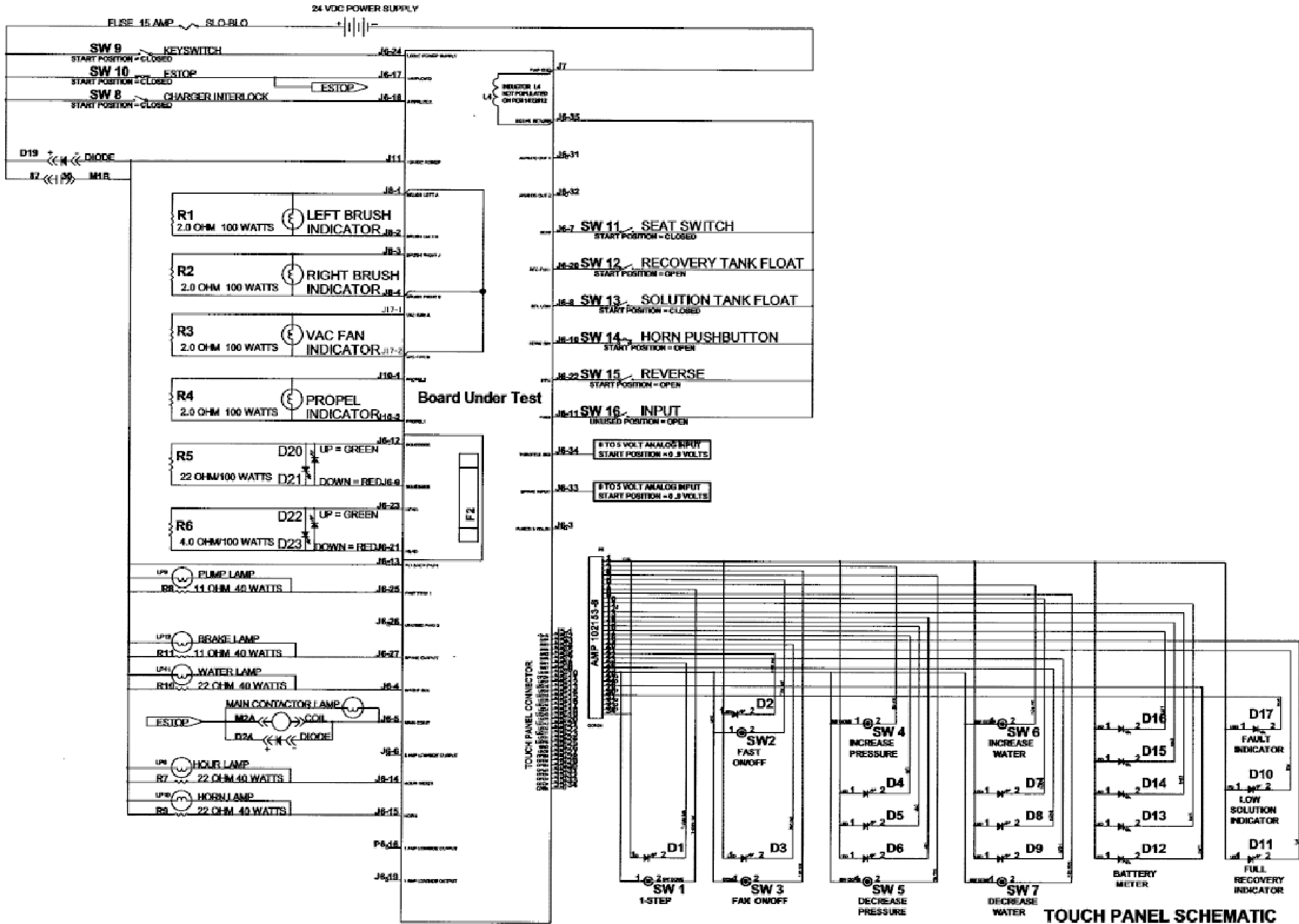
MATERIAL SPECIFICATIONS: NOTED		OTHER TREATMENTS AND FINISHES NOTED		PAINT - COLOR		MOR:	
PART NAME: CIRCUITBOARD, LOGIC [DISK T7/SSR]		GLOSS		PERFORMANCE	ACCEPTANCE	DES: STACEY CLEMENS	10/28/2008

REV	ECO
-C	

WELDING NOTATION IN ACCORDANCE WITH AWS A2.4-95		
UNLESS OTHERWISE SPECIFIED DIMENSION TOLERANCING IN ACCORDANCE WITH ASME Y14.5-2009 ALL UNTOLERANCED DIMENSIONS ARE CONTROLLED BY:		
X.X	±1.5	±[.06]
X.XX	±0.75	±[.030]
X.XXX	±0.250	±[.0098]
ANGLES	±20°	

GENERAL NOTES	
PRIMARY DIMENSIONS ARE METRIC. REFERENCE DIMENSIONS WITH BRACKETS ARE INCH. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE AFTER TREATMENTS AND FINISHES.	
PROPRIETARY INFORMATION	
MAY NOT BE REPRODUCED OR DISCLOSED TO OTHERS WITHOUT WRITTEN PERMISSION OF TENNANT COMPANY.	
SHEET 2 OF 3	

DWG D SIZE	PART NUMBER 1278135



TOUCH PANEL SCHEMATIC

DEVELOPMENT PART

MATERIAL SPECIFICATIONS: NOTED		OTHER TREATMENTS AND FINISHES NOTED		PAINT - COLOR		MOR:		CHANGED BY:		DATE:		WELDING NOTATION IN ACCORDANCE WITH AWS A2.4:05		GENERAL NOTES		PROPRIETARY INFORMATION		MAY NOT BE REPRODUCED OR DISCLOSED TO OTHERS WITHOUT WRITTEN PERMISSION OF TENNANT COMPANY.		SHEET 3 OF 3		DWG D		PART NUMBER	
CIRCUITBOARD, LOGIC [DISK T7/SSR]				GLOSS PERFORMANCE ACCEPTANCE		DES: STACEY CLEMENS		10/28/2008		09/11/2025		X.X ±1.5 ±[.06] X.XX ±0.75 ±[.030] X.XXX ±0.250 ±[.0098] ANGLES ±20°		PRIMARY DIMENSIONS ARE METRIC. REFERENCE DIMENSIONS WITH BRACKETS ARE INCH. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE AFTER TREATMENTS AND FINISHES.		TENNANT								1278135	