

Test procedure

Saturn_PS Initial

- 1) Carefully inspect the board, looking for any wrong components, backward components, bad solder connections, shorts, etc.
- 2) Verify heatsink legs are cut on **U1, U2, Q4, Q9, & Q11**
- 3) Verify there is thermal / isolation material between **Q4, Q9 & Q11** and their heatsinks
- 4) Verify all heatsinks are tight and properly mounted
- 5) Adjust trimpots **R26, R30**, and **R52** to the halfway point
- 6) Install board into test fixture, connecting all Transformer cables correctly. **Do not** connect ribbon cable for Front Panel Board. Using Variac, slowly bring up and check Voltages @ 20%, 50%, 100%
- 7) Active state is after checking @ 100% Voltage. Turn off unit, **Do** connect ribbon cable for FP Board, and then bring out of standby to check the **active** state Voltages

| Name | Test point | Ground | ~20% V | ~50% V | ~100% V | 100% Active |
|----------|------------------|---------------|--------|--------------|------------------------------|------------------------------|
| HV B1+ | B1+ | HV Gnd | +100 V | ~ +200-330 V | Adjust R26 for +330 V | Adjust R30 for +400 V |
| HV B2+ | B2+ | HV Gnd | +50 V | +150 V | +230 V | x |
| HV B1- | B1- | HV Gnd | -10 V | -50 V | -100 V | x |
| LV B2- | B2- | LV Gnd | -5 V | -15 V | Adjust R52 for -22 V | x |
| LV Vdd | Vdd | LV Gnd | +4.5 V | +5 V | +5 V | x |
| LV Vee | Vee | LV Gnd | -4.5 V | -5 V | -5 V | x |
| LV Vcc | U3 casing | R3 Gnd | +0.5 V | +5 V | +5 V | x |
| Heater 1 | U1 casing | R3 Gnd | 0 | 0 | 0 | +6.3 V |
| Heater 2 | U2 casing | R3 Gnd | 0 | 0 | 0 | +6.3 V |

- 8) Insert draining plug, wait for voltages to drain. Sign PCB and remove all the connections at safe voltage levels. End procedure.