

PROCESSOR TECHNOLOGY CORPORATION

Sol POWER SUPPLY

SECTION II

- (✓) Position Q1 (T1P41), with component nomenclature up, on heat sink so hole in Q1 package is aligned with the holes in sink and PC board. Observe how the leads of Q1 must be bent down to fit the pads for Q1 and bend them accordingly. Place rectangular mica insulator between heat sink and Q1, insert leads (emitter lead to right) and fasten Q1, insulator and heat sink to board with a 6-32 x $\frac{1}{2}$ Nylon screw, lockwasher and nut. Insert screw from back (solder) side of board and drive nut finger tight.
- (✓) Position FWB1 (MDA970-1), with "+" lead to the right, on heat sink, determine how leads must be bent as you did for Q1, and bend leads. Insert leads ("+" lead to right) and fasten FWB1 and heat sink to PC board with a 4-40 x $\frac{5}{8}$ screw, lockwasher and nut. Insert screw from back (solder) side of board and drive nut finger tight.
- (✓) Position SCR1 (IR106B2 or MCR106-2) on heat sink with component nomenclature up and prepare it for installation as you did Q1 and FWB1. Place circular mica insulator between heat sink and SCR1, insert leads and fasten SCR1, insulator and sink to PC board with a 4-40 x $\frac{7}{16}$ screw, lockwasher and nut. Insert screw from back (solder) side of board and drive nut finger tight.
- (✓) Check alignment of heat sink, SCR1, Q1 and FWB2 and tighten the three mounting screws. Solder all leads and trim if required.

NOTE

✓ The heat sink may have to be repositioned when you mount the Sol-REG on the power supply subchassis. This will require that you loosen the mounting screws for SCR1, Q1 and FWB2 and retighten them after repositioning the heat sink.

- (✓) Step 21. Connect two wire cable assembly (C8 to Regulator Board cable) to regulator. Tin ends without lugs and solder green (+) lead to pad X2 and white (-) lead to pad X3.
- (✓) Step 22. Test Sol-REG for short circuits. Check for continuity between FWB1 (MDA970-1) mounting screw and the following points: (The resistance should be greater than 20 ohms in all cases.)

✓ X2	✓ Q1, Base	D3, top lead
✓ T2	✓ Q1, Collector	D4, top lead
✓ T1	D1, right-hand lead	*D3, bottom lead
✓ Q1, Emitter	R1, left-hand lead	*D4, bottom lead

*Resistance will be initially low due to C4 and C5, but it should increase to greater than 20 ohms after a few seconds.