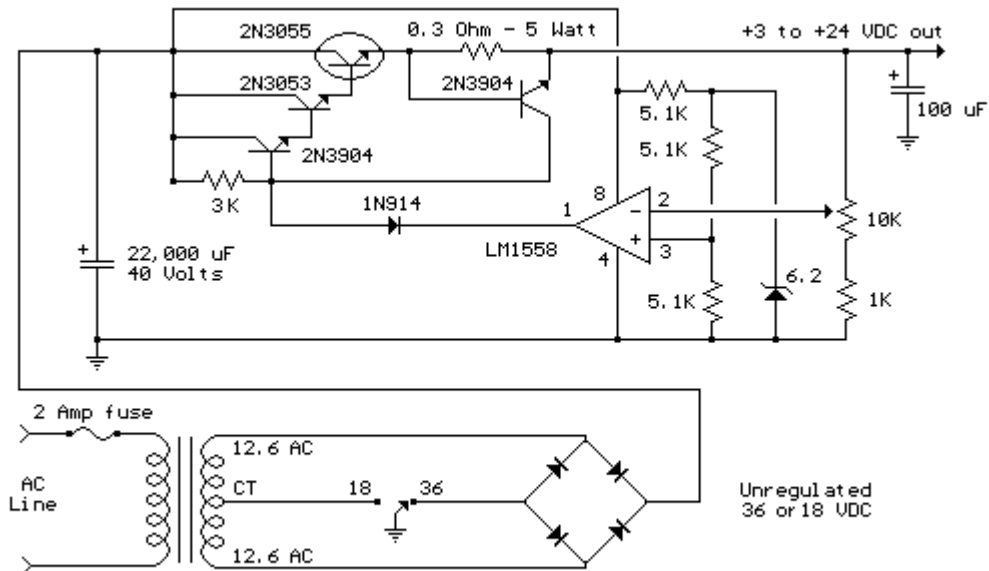


Variable 3 - 24 Volt / 3 Amp Power Supply

This regulated power supply can be adjusted from 3 to 25 volts and is current limited to 2 amps as shown, but may be increased to 3 amps or more by selecting a smaller current sense resistor (0.3 ohm). The 2N3055 and 2N3053 transistors should be mounted on suitable heat sinks and the current sense resistor should be rated at 3 watts or more. Voltage regulation is controlled by 1/2 of a 1558 or 1458 op-amp. The 1458 may be substituted in the circuit below, but it is recommended the supply voltage to pin 8 be limited to 30 VDC, which can be accomplished by adding a 6.2 volt zener or 5.1 K resistor in series with pin 8. The maximum DC supply voltage for the 1458 and 1558 is 36 and 44 respectively. The power transformer should be capable of the desired current while maintaining an input voltage at least 4 volts higher than the desired output, but not exceeding the maximum supply voltage of the op-amp under minimal load conditions. The power transformer shown is a center tapped 25.2 volt AC / 2 amp unit that will provide regulated outputs of 24 volts at 0.7 amps, 15 volts at 2 amps, or 6 volts at 3 amps. The 3 amp output is obtained using the center tap of the transformer with the switch in the 18 volt position. All components should be available at Radio Shack with the exception of the 1558 op-amp.



Drawn by - Bill Bouden - 07/15/97