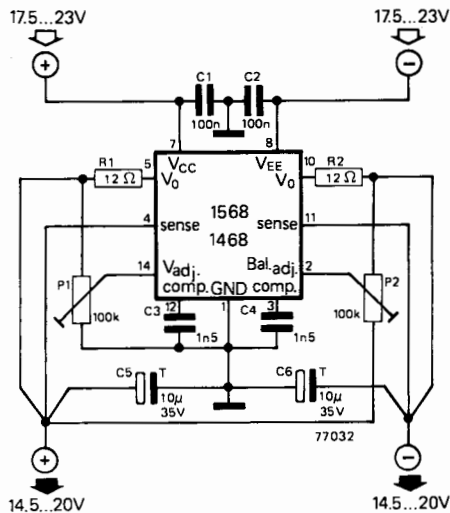


± 15 volt regulator

Using IC 1568 or 1468 (from, among others, EXAR) and only a small number of external components, it is possible to produce a symmetrical, current-regulated supply voltage of plus and minus 15 volts.

The circuit is intended as an 'on card' supply, and is not particularly suited for experimentation, since the maximum dissipation of the IC is not particularly high (max. 1 W). With the circuit arrangement as shown in the figure, it is not advisable, in view of this dissipation value, to select input voltages much greater than those indicated (i.e. 3 V above the output voltage). It goes without saying that the IC will not be able to tolerate shorting the outputs for long. The current is limited as soon as the voltage drop across either of the two resistors R1 and R2 exceeds 0.6 V. By means of P1 the output voltage may be varied between 14.5 and 20 V (always assuming that the input voltage is sufficiently high). The positive and negative voltage can be matched exactly using P2. Capacitors C1 . . . C4 are needed to guarantee the stability of the supply, and should be positioned as near as possible to the IC. Some further details: the 1568 differs from the 1468 in having a slightly narrower tolerance with respect to the value (0.2 compared to 0.5 V) and match of the output voltages (150 compared to 300 mV).

The maximum input voltage is 30 V, and the



max. current 100 mA. A change in the load of 50 mA causes a variation of approx. 3 mV in the output voltage. For a current of 50 mA the minimum voltage drop across the regulator is at least 2.5 V. The noise suppression is then around 75 dB, and the stability of the output voltage is better than 1% for a variation in temperature of 75°C. The noise at both outputs is less than 0.1 mV.