NOVEL STABILISER CIRCUIT

IF an *n*-channel field effect transistor is used to drive an *n.p.n.* bipolar device, benefit can be derived from the fact that, for normal operation within the characteristics of both devices, the gate of a low- or medium-tolerance f.e.t. will lie some volts negative to the bipolar emitter.

One useful application of such a combination is an adaptation of the familiar source-resistor-biased f.e.t. constant current device, when more current is required than the f.e.t. alone would provide.

A conventional *n.p.n.* series voltage stabiliser suffers the disadvantage that its base must be positive to the stabilised output and must therefore be fed either from the crude d.c. at the reservoir capacitor or from a separately controlled supply. An f.e.t. driving the series element overcomes this disadvantage and enables a novel circuit (Fig. 1) to be constructed with both the gate and the reference diode fed from the output.

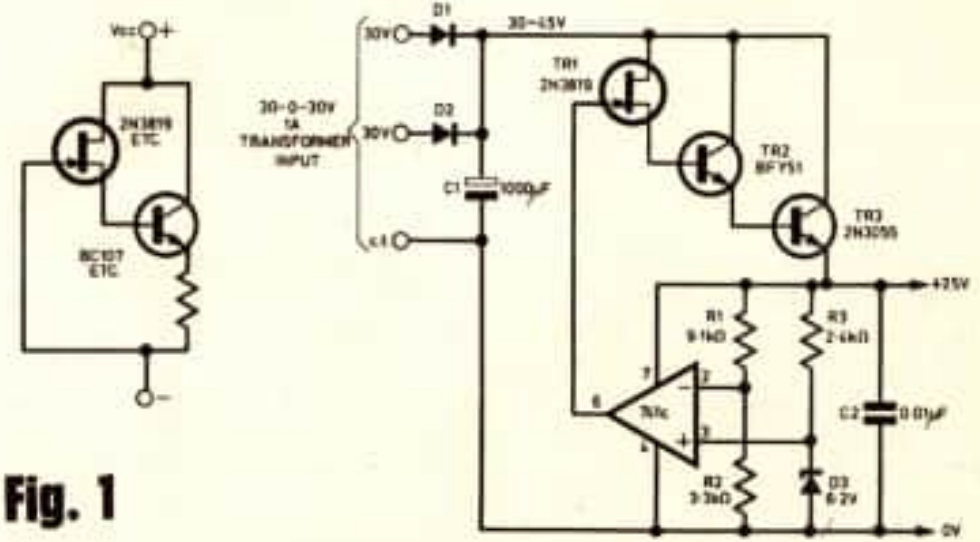

Fig. 1

The simple arrangement shown will provide 1A at an output impedance of 50 milliohms.

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