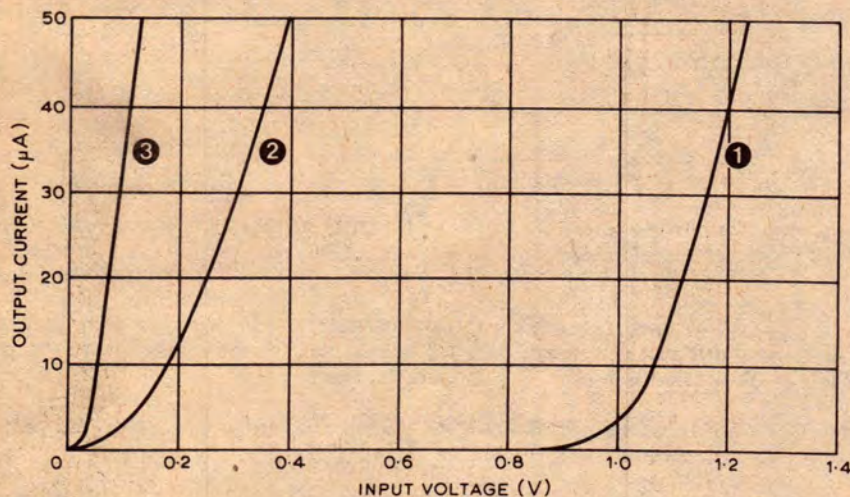
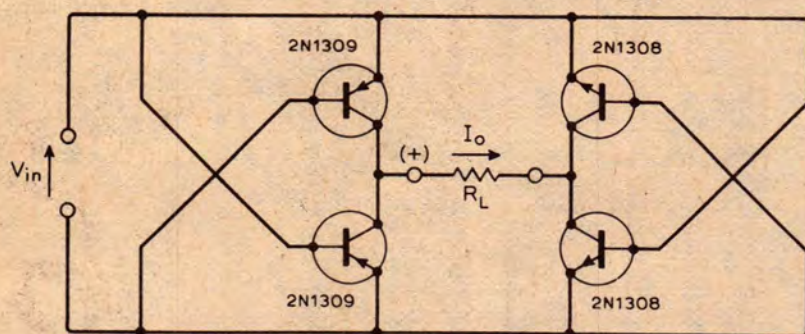


## Cross coupled transistor rectifier bridge



This circuit shows a full wave rectifying bridge which has an offset voltage an order smaller than conventional diode bridges.

The graph shows transfer characteristics for a conventional full wave silicon diode bridge in curve 1, a germanium diode bridge in curve 2, and the cross coupled transistor bridge in curve 3. The off-set voltage of the transistor is about 30mV with good linearity above the knee.

The circuit was developed for use in a simple but sensitive field strength meter. The meter is protected by the base-emitter junctions of the transistors. With the devices shown, the frequency response is up to 30MHz and the optimum value of  $R_L$  is about 2k.

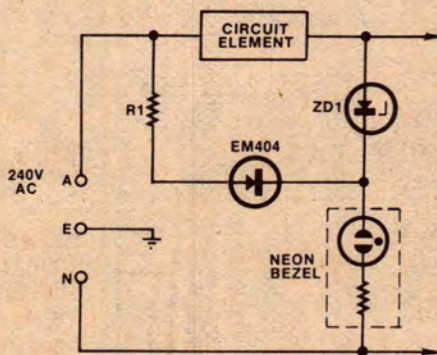
(By L. D. Thomas, in "Wireless World".)

## Dual function neon indicator

Where it is desired to have "standby" and "operate" indication and it is undesirable to have two separate neon lamps, this circuit can be added to an existing neon indicator.

"Circuit element" may be a switch, fuse, thermostat, etc. ZD1 may be a 400mW zener diode rated at about 100V. R1 should be of such a value to give a dull glow. Values between 1M and 3M could be tried.

With "circuit element" open, one electrode of the neon lamp will glow weakly, when closed it will operate at full brilliance. If ZD1 is replaced by an EM404, two levels of indication will be given but the neon lamp will not operate at full brilliance.



(By Mr R. A. Vickers, 31 Aylmer Street, North Balwyn, Vic 3104.)

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