

KB 2 Indirectly-heated double-diode

The KB 2 is an indirectly-heated double-diode valve for battery receivers. The current consumption is very low indeed, being only about 95 mA on 2 V.

As the cathode is indirectly heated, sets in which this valve is used may be equipped with delayed automatic gain control; the delay may be regulated as desired by applying a positive potential from the H. T. battery to the cathode. The KB 2 can be employed as a detector preceding a stage of A.F. amplification using a valve such as the KF 4, or a driver, e.g. the KC 3, or it can be coupled directly to a pentode output valve.

The strong signals which in the latter case would inevitably occur on the KB 2 can be quite easily handled by this diode.

The capacitance between the two diodes has been kept as low as possible, as this is of importance when the second anode is used for the delayed A.G.C., and is accordingly connected to the primary side of the preceding band-pass filter. The characteristics of the D.C. voltage gain (ΔV) across the load resistor as a function of the unmodulated R.F. signal, as well as that of the A.F. voltage (V_{LF}) across the resistor of 0.5 megohm as plotted against the 30% modulated R.F. voltage on one of the diodes, are identical with those relating to the EB 4, to which reference may be made for details.

HEATER RATINGS

Heating: indirect by battery, parallel supply.

Heater voltage $V_f = 2.0$ V

Heater current $I_f = 0.095$ A

CAPACITANCES

$C_{d_1 d_2} < 0.25 \mu\mu\text{F}$

$C_{k d_1} = 2.1 \mu\mu\text{F}$

$C_{k d_2} = 1.7 \mu\mu\text{F}$

MAXIMUM RATINGS

Voltage on diode (peak value) $V_{d_1} = V_{d_2} = \text{max. } 125$ V

Diode current $I_{d_1} = I_{d_2} = \text{max. } 0.5$ mA

Voltage between heater and cathode $V_{fk} = \text{max. } 50$ V

External resistance between heater and cathode $R_{fk} = \text{max. } 20,000$ ohms

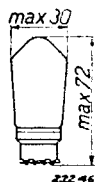


Fig. 1
Dimensions in mm.

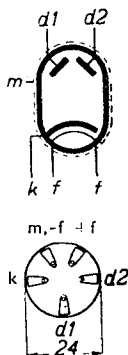


Fig. 2
Arrangement of electrodes and base connections.