# CY 1 Rectifying valve

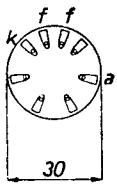




Fig. 2
Arrangement of electrodes and base connections.

Philips CY 1 is a half-wave rectifying valve taking a heater current of 200 mA at 20 volts. The internal resistance is very low and the anode current therefore produces only a very slight decrease in the voltage. In the applications of the CY 1, it is well to bear in mind that the peak voltage between filament and cathode must not exceed 450 V; on high mains voltages, when large-capacitance smoothing capacitors are used, a resistor should be included in the anode circuit to safeguard the valve. The minimum value of this resistor will be found in the following table:

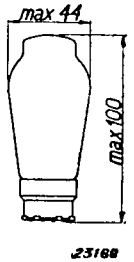



Fig. 1
Dimensions in mm

| Mains voltage | Smoothing capacitor | Series resistor |
|---|---|---|
| Max. 250 V | 32 μF | Min. 125 ohms |
| | 16 μF | Min. 75 ohms |
| | 8 μF | 0 ohms |
| Max. 170 V | 32 μF | Min. 75 ohms |
| | 16 μF | Min. 30 ohms |
| | 8 μF | 0 ohms |
| Max. 127 V | 32 μF | 0 ohms |
| | 16 μF | 0 ohms |
| | 8 μF | 0 ohms |

## HEATER RATINGS

Heating: indirect, A.C. or D.C., series supply.
Heater voltage . . . $V_f$ = 20 V
Heater current . . . . $I_f$ = 0.200 A

## MAXIMUM RATINGS

Anode voltage, A.C.
$V_i$ = max. 250 $V_{(eff)}$
Direct current $I_o$ = max. 80 mA
Voltage between heater and cathode . . . $V_{fk}$ = max. 450 V

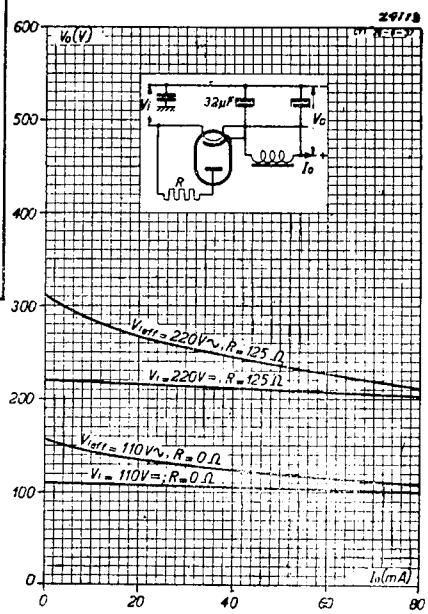
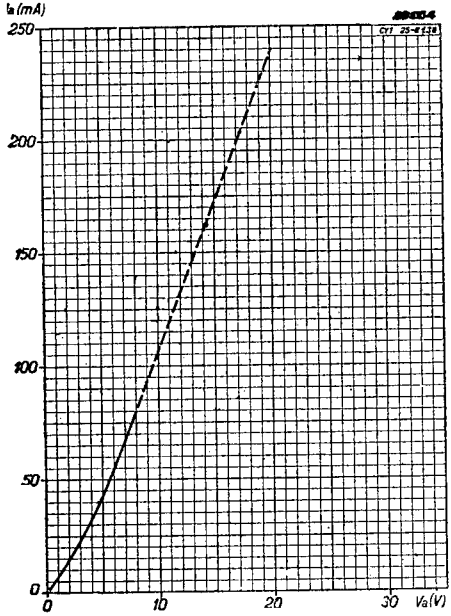
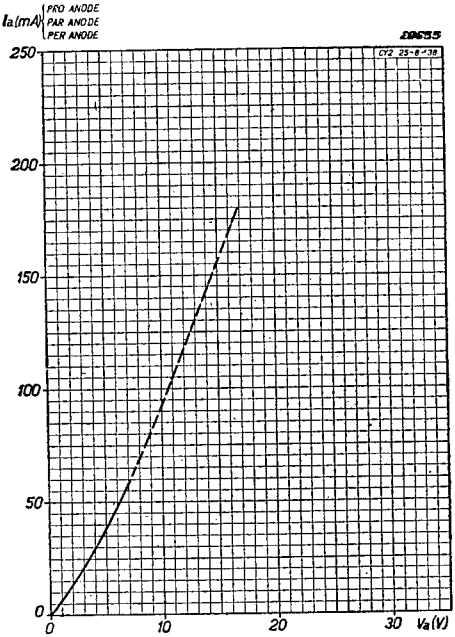



Fig. 3
Loading characteristics of the CY 1.




CY 1

Fig. 4
Anode current as a function of the applied voltage.




CY 2

Fig. 5
Anode current as a function of the applied direct voltage, per anode.