UY 21 Half-wave rectifier valve

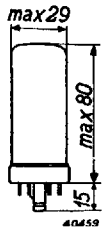
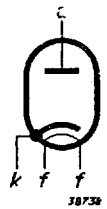


Fig. 1
Dimensions in mm.

This is an indirectly-heated high vacuum rectifier for AC/DC operation on 100 mA heater current. Endeavours have been made in the design of this valve to effect a compromise between the highest possible anode current and the lowest practicable heater power. The first of these requirements is connected with the use of a single valve for the power side of receivers with high output (push-pull output stages); the purpose underlying the second stipulation is the connection, in series with the heater of the UY 21, of a larger number of heaters of other valves, at a given mains voltage. The best compromise proved to be a maximum direct current in the anode circuit of 140 mA at a heater voltage of 50 V. On the basis of this current it is possible to feed almost any type of receiver, even when fitted with two UBL 21 output valves in a push-pull circuit.



HEATER RATINGS

Heating: indirect, AC/DC, series feed.

Heater voltage	V_f	= 50 V
Heater current	I_f	= 0.100 A

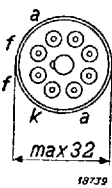


Fig. 2
Arrangement and sequence of connections.

MAXIMUM RATINGS

Alternating anode voltage on the valve	V_i	= max. 250 V_{eff}
Direct current output	I_o	= max. 140 mA
Voltage between heater and cathode	V_{fk}	= max. 550 V
Input capacitance of smoothing filter	C	= max. 60 μF

On high mains voltages, when high capacitance smoothing condensers are employed, a limiting resistance should be included in the anode circuit, for which resistance a minimum value is indicated in the following table:

Mains voltage	Smoothing condenser	Series resistance
170—250 V	60 μF	min. 175 Ohms
	32 μF	min. 125 Ohms
	16 μF	min. 75 Ohms
	8 μF	0
127—170 V	60 μF	min. 100 Ohms
	32 μF	min. 75 Ohms
	16 μF	min. 30 Ohms
Maximum 127 V	60 μF	0

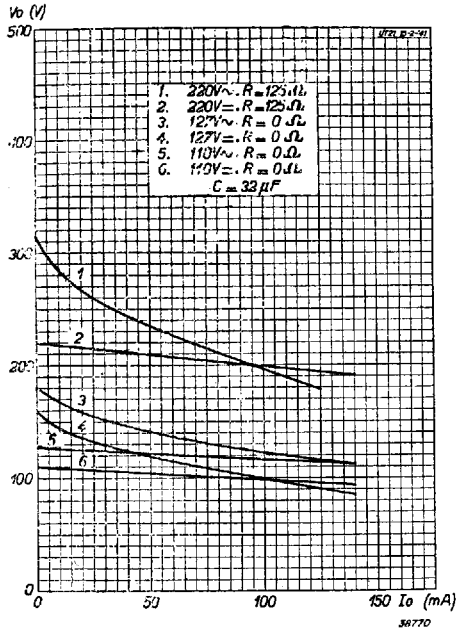


Fig. 3
Load lines for the UY 21

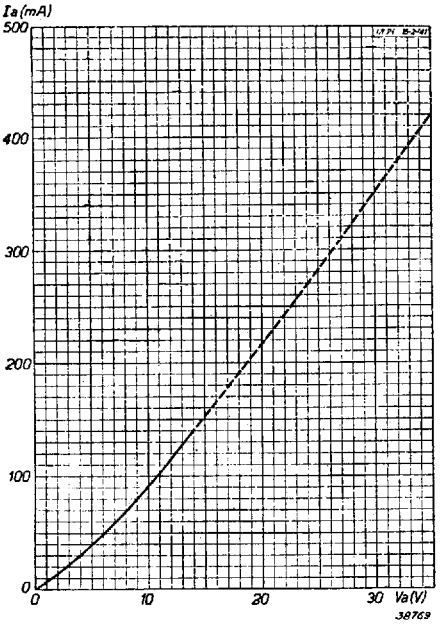


Fig. 4
Anode current as a function of direct voltage.