MAZDA

PA.20

DIRECTLY HEATED MAINS OUTPUT TRIODE

RATING.

Filament Voltage	2·0
Filament Current (Amps.)	2·0
Maximum Anode Voltage	300
*Mutual Conductance (mA/V)	6·5
*Amplification Factor	6·5
*Anode A.C. Resistance (Ohms)	1,000
Maximum Continuous Anode Dissipation (Watts)	15

* at Ea=100 v. ; Eg=0.

TYPICAL OPERATION.

	Straight.			Push-Pull.	
Anode Volts	250	250	300	250	300
Anode Current (Quiescent) (mA)	42	50	48	84	84
Grid Bias for A.C. Filament Heating	29	27·2	36	29	37·2
Self-Bias Resistance (Ohms) ...	690	545	750	345	440
Anode A.C. Resistance (Ohms) ...	1,200	1,150	1,200	1,200	1,200
Mutual Conductance (mA/V) ...	5·0	5·4	5·4	5·0	5·0
*Optimum Anode Load (Ohms) ...	2,750	2,220	3,000	—	—
*Optimum Anode to Anode Load (Ohms)	—	—	—	4,600	5,300
*R.M.S. Input Grid Volts per Valve...	19·8	18·5	24·8	19·8	25·6
*Anode Current at M.U.P.O., with fixed Bias	48	57·5	57·5	96	112
*Power Output (Watts)	2·65	2·75	4·2	5·6	9·0

* For a total harmonic content not exceeding 5 per cent.

DIMENSIONS.

Maximum overall length	140 mm.
Maximum diameter	58 mm.

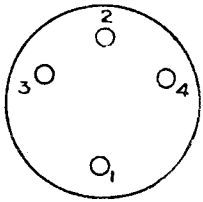
GENERAL.

The PA.20 is a directly heated power output triode for use in A.C. mains receivers. The characteristics of this valve with the exception of filament voltage are identical with the PP3/250. It has been designed to reduce hum level present with 4-volt directly heated valves when these are used in other than push-pull circuits. The valve is fitted with a standard 4-pin base, the connections to which are given overleaf.

APPLICATION.

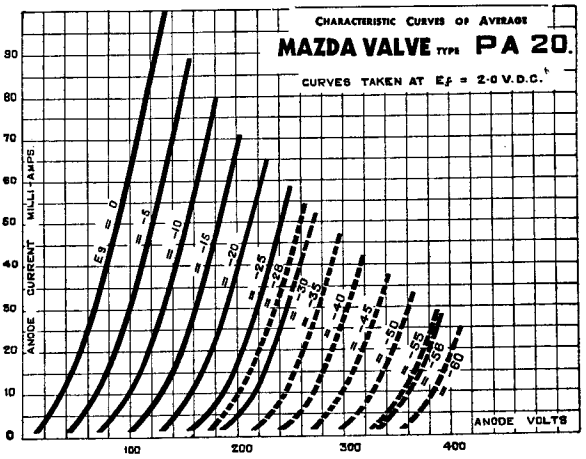
It is recommended that the bias voltage be obtained by means of a self-bias circuit, the resistance being by-passed with a large condenser. Approximately 50 μF. is a suitable value. The grid-filament circuit resistance should not exceed 0·5 megohms with 12 watts dissipation, or 0·25 megohms with 15 watts dissipation, with each valve individually self-biased. This same resistance should not exceed 0·25 megohms with 12 watts dissipation and 0·05 megohms with 15 watts dissipation with fixed or common bias.

BASING.



Pin No. 1. Anode.
2. Grid.
3. Filament.
4. Filament.

Viewed from the free end of the base.



Mazda Radio Valves are manufactured in Great Britain for the British Thomson-Houston Co. Ltd., London and Rugby.