



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 $E_a=100$ v. ; $E_g=0$.

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.

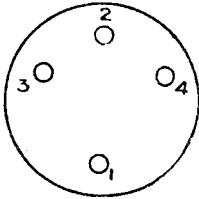
The PA.20 is a directly heated power output triode for use in A.C. mains receivers. The characteristics of this valve with the exception of filament voltage are identical with the PP3/250. It has been designed to reduce hum level present with 4-volt directly heated valves when these are used in other 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 μ F. 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.

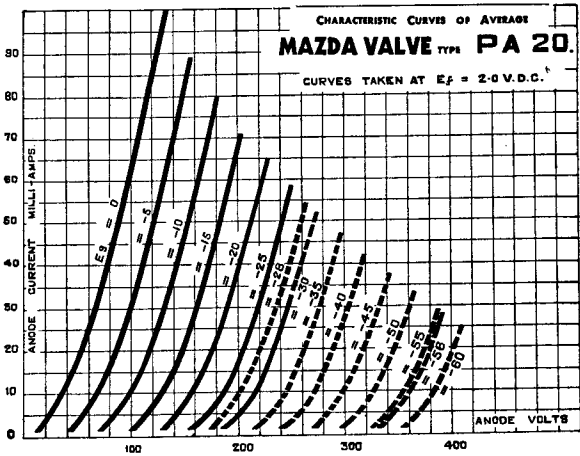


BASING.



- 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.