MAZDA

QP.230

BATTERY DOUBLE PENTODE OUTPUT VALVE

RATING.

Filament Voltage	2·0
Filament Current (amps)	0·3
Maximum Anode Volts	150
Maximum Screen Volts	150
*Mutual Conductance (mA/V)	3·0

*At Ea=100 ; Es=100 ; Eg=0.

TYPICAL OPERATION.

Anode Volts	100	110	120
Screen Volts	100	110	120
Grid Bias Volts	7·65	8·6	9·6
Total Quiescent Anode Current (mA) ...	3·85	4·25	4·65
Total Quiescent Screen Current (mA) ...	0·9	1·05	1·15
Anode to Anode Load (ohms)	16,000 to 18,000		
R.M.S. Swing per Valve	5·4	6·0	6·8
Power Output (watts) (for 5% total Harmonic)	0·57	0·7	0·85

DIMENSIONS.

Maximum Overall Length	108 mm.
Maximum Diameter	39 mm.

GENERAL.

The QP.230 combines in one valve two accurately matched high efficiency pentodes for quiescent push-pull operation. It is intended for use in the output stage of battery receivers.

The valve is based in a standard 7-pin base, the connections to which are given overleaf.

APPLICATION.

The valve has been primarily designed for use under self-bias operation, thus reducing to a large extent the variation in the useful life of the H.T. battery due to incorrect running down of the bias battery. The power output is approximately two-thirds of that available from the QP.240, but both the H.T. and L.T. current consumption are more economical. Ample power output is available for normal conditions with a H.T. battery having a total voltage of 120 volts.

The screens are connected to a common pin and should be operated at the full H.T. voltage. With self-bias operation, in order to prevent distortion, the total current for both anodes should never be less than $3\frac{1}{2}$ mA with a screen voltage of 110 volts. The bias should be obtained by means of a resistance in the common H.T. negative lead, and this resistance should be by-passed with a large condenser of 50 μF. or more. The output transformer should be of the normal Q.P.P. design and the usual forms of stabilisation against parasitic oscillations will be necessary.

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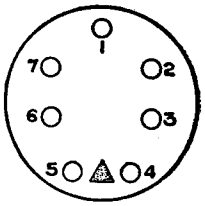
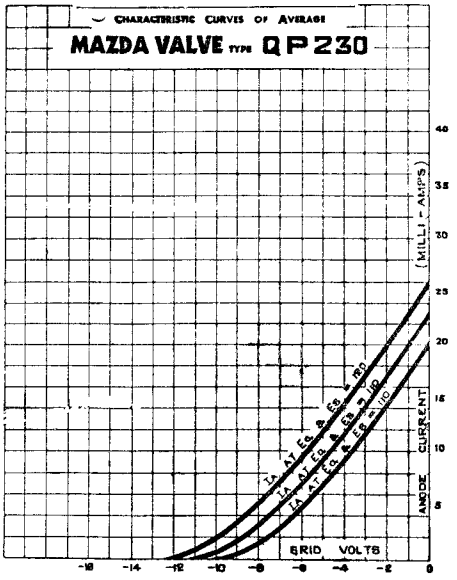
BASING.



Viewed from the free end of the base.

Pin No. 1. Control Grid (B)
2. Control Grid (A)
3. Anode (A)
4. Filament.
5. Filament.
6. Screens (A & B)
7. Anode (B)



Note—The diagram indicates the anode current characteristic of one half of the valve only

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