MAZDA

VP.23

BATTERY ECONOMY H.F. PENTODE

RATING.

Filament Voltage	2·0
Filament Current (amps.)	0·05
Maximum Anode Voltage	150
Maximum Screen Voltage	150
*Mutual Conductance	1·3

*At Ea=120 ; Es=60 ; Eg=0.

TYPICAL OPERATION.

Anode Voltage	120	120
Screen Voltage	60	60
Grid Bias (initial)	—1·5	—2·0
Anode Current (mA)	1·45	1·0
Screen Current (mA)	0·5	0·35
Mutual Conductance (mA/V)	1·08	0·8
Mutual Conductance (μA/V) at Eg—9½ ; Es=60 ...	10	10
*Signal Handling Capacity Peak Carrier Volts at —15 Vg.	4	4

*For 5 per cent. total audio harmonic distortion and 60 per cent. modulated carrier, and for screen volts rising to the anode voltage.

INTER-ELECTRODE CAPACITIES.

*Anode to Earth	11·0	$\mu\mu$F.
*Grid to Earth	8·0	$\mu\mu$F.
Anode to Grid	0·006	$\mu\mu$F.

*" Earth " denotes the remaining earthy potential electrodes and metallising joined to cathode.

DIMENSIONS.

Maximum Overall Length	95 mm.
Maximum Diameter	32 mm.

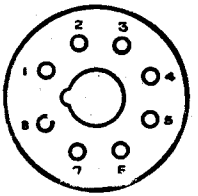
GENERAL.

The VP.23 is a variable-mu screened pentode for use in battery operated receivers. The special feature of this valve is that it has been designed for battery economy, and due to the exceptionally low filament consumption is therefore particularly recommended for use in battery portable receivers. The bulb is of small dimensions and metallised. The valve is based in a British Octal Base, the connections to which are given overleaf.

APPLICATION.

The valve may be used in the H.F. and I.F. stages of a receiver, and also as a frequency changer if a separate oscillator is employed. For this purpose the HL.23 will be found suitable. When used as an H.F. or I.F. valve in superheterodyne receivers, it is recommended that the screen voltage should be obtained by means of a series dropping resistance connected to the full H.T. supply. By this means a large input and output signal handling capacity is obtained without sacrificing the mutual conductance for a given anode current at the point of maximum gain. An initial bias of 1½ volts (with an initial screen voltage of 60) is recommended, and this will form part of the delay voltage in receivers provided with A.V.C. A saving of anode current for a given gain may be obtained by reducing the initial bias and screen voltage. To avoid instability, the metal coating should be always connected to earth.

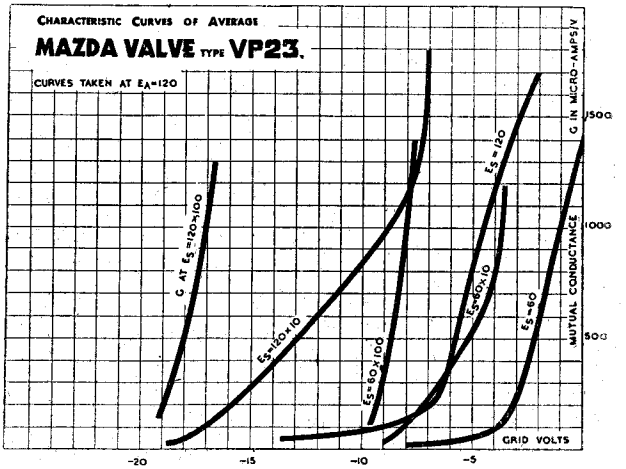
BASING.

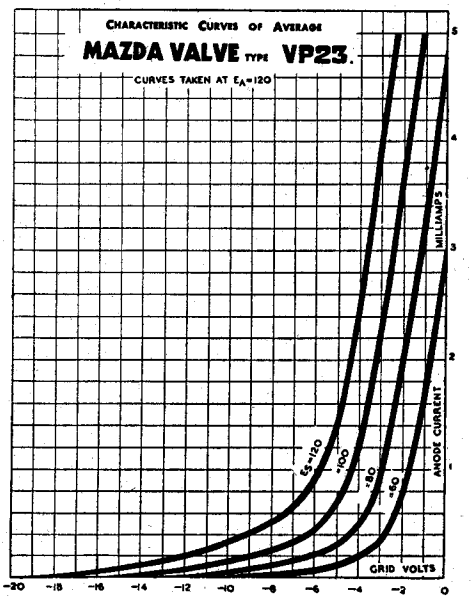


Viewed from the free end of the base.

Pin No. 1. Filament.
2. Omitted.
3. Anode.
4. Screen.
5. Suppressor Grid.
6. Metallising.
7. Omitted.
8. Filament.

Top Cap. Control Grid.





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