



VP. 22

BATTERY VARIABLE-MU H.F. PENTODE

RATING.

Filament Voltage	2.0
Filament Current (Amps.)	0.1
Maximum Anode Voltage	150
Maximum Screen Voltage	150
*Mutual Conductance (mA/V)	1.4
*at $E_a=120$; $E_s=60$; $E_g=0$.	

OPERATING CONDITIONS.

Anode Voltage	120
Screen Voltage (initial)	60
Grid Bias	1.5
Mutual Conductance (mA/V)	0.8
Anode A.C. Resistance (megohms)	1.3
Anode Current (mA)	1.2
Screen Current (mA)	0.32
Mutual Conductance ($\mu A/V$)	10
at $E_s=60$; $E_g=-8$.	
Mutual Conductance ($\mu A/V$)	28
at $E_s=120$; $E_g=-15$.	

INTER-ELECTRODE CAPACITIES.

*Anode to Earth	12.5 $\mu\mu F$
*Grid to Earth	7.0 $\mu\mu F$
Anode to Grid	0.0045 $\mu\mu F$

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

DIMENSIONS.

Maximum Overall Length	103 mm.
Maximum Diameter	32 mm.

GENERAL.

The VP.22 is a variable-mu screened Pentode for use as an H.F. amplifier in battery operated receivers. The characteristics of the valve are identical except for the inter-electrode capacities, with those of the VP.210. The bulb is of small dimensions and metallised. The valve is fitted with a British Octal Base, the connections to which are given overleaf.

APPLICATION.

When used as a high frequency amplifier, the screen volts can be obtained from a separate tapping on the high tension battery. It is preferable, however, to connect the screen to the full H.T. voltage through a series dropping resistance. In calculating the value of this resistance, the screen current may be taken to be one-quarter of the anode current. An initial screen voltage of the order of 60 volts is recommended with a minimum bias of 1.5 volts, this will rise to practically the full H.T. voltage as the control grid is biased back to reduce mutual conductance. The advantage of this method of screen supply, is that large signal handling capacity is provided when the amplifier is operating at low gain, whilst the total high tension consumption is relatively low when the valve is being operated at minimum bias. In receivers provided with A.V.C. the initial bias voltage of 1.5 volts will form part of the delay voltage. If desired, this voltage may be slightly increased or decreased provided the initial screen volts are suitably adjusted to give the required maximum gain. The suppressor grid should be connected to earth (H.T. negative), or to a potential negative to earth. The metallising should be connected to H.T. negative.

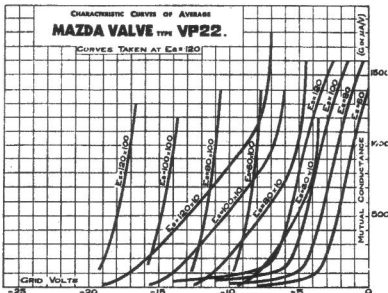
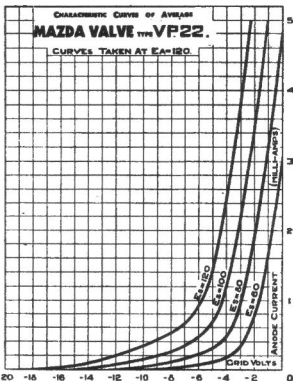


BASING.

- Pin No. 1. Filament.
- 2. Omitted.
- 3. Anode.
- 4. Screen Grid.
- 5. Suppressor Grid.
- 6. Metal Coating.
- 7. Omitted.
- 8. Filament.
- Top Cap. Control Grid.



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