



## VP.1321 and VP.1322

### A.C./D.C. MAINS VARIABLE-MU H.F. PENTODES

#### RATINGS.

Heater Voltage ... ..	13
Heater Current (amps.) ... ..	0.2
Maximum Anode Voltage ... ..	250
Maximum Screen Voltage ... ..	250
*Mutual Conductance (mA/V) ... ..	3

\*Ea=250 ; Es=200 ; Eg=0.

#### TYPICAL OPERATION.

Anode Voltage ... ..	200	250	250
Screen Voltage ... ..	100	200	250
Grid Bias Voltage ... ..	-1.0	-2.8	-4
Anode Current (mA) ... ..	3.3	7.4	8.8
Screen Current (mA) ... ..	0.85	1.85	2.2
Impedance (megohms) ... ..	> 2.0	1.0	0.85
Mutual Conductance (mA/V) ... ..	1.7	2.0	2.0
Grid Bias for Mutual Conductance (10 $\mu$ A/V) ... ..	-15	-34.5	-43
Maximum Input Signal Handling Capacity Voltage (approx.) ... ..		8	10
Bias for Maximum Input Signal Handling Capacity Voltage (approx.) ... ..		33	41

#### INTER-ELECTRODE CAPACITIES.

	VP.1321	VP.1322
*Anode to Earth ... ..	8.5	9.5 $\mu\mu$ F.
*Grid to Earth ... ..	9.75	7.0 $\mu\mu$ F.
Anode to Grid ... ..	0.005	0.0025 $\mu\mu$ F.

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

#### DIMENSIONS.

Maximum Overall Length ... ..	122 mm.	122 mm.
Maximum Diameter ... ..	39 mm.	38 mm.

#### GENERAL.

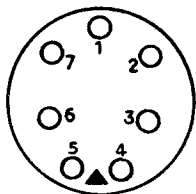
The VP.1321 and VP.1322 are indirectly heated variable-mu H.F. pentodes for use in D.C., A.C./D.C., or car radio receivers. The screen may be operated at 200 or 250 volts potential and a screen potentiometer is therefore unnecessary. Either will handle a modulated signal of 10 volts peak carrier without distortion. The characteristics are identical for both types. The valves are based in standard 7-pin bases, the connections to which are given overleaf.

#### APPLICATION.

The valves are designed for H.F. or I.F. amplification and are also suitable for use in A.V.C. circuits. When a supply voltage exceeding 200 is available it is advantageous to limit the screen voltage to this figure at minimum bias by the use of a series resistance in the screen circuit. The value of this resistance may be calculated by assuming the screen current to be 25 per cent. of the anode current. Self-bias is recommended for the control grid.

The A.V.C. line must be decoupled to the cathode.

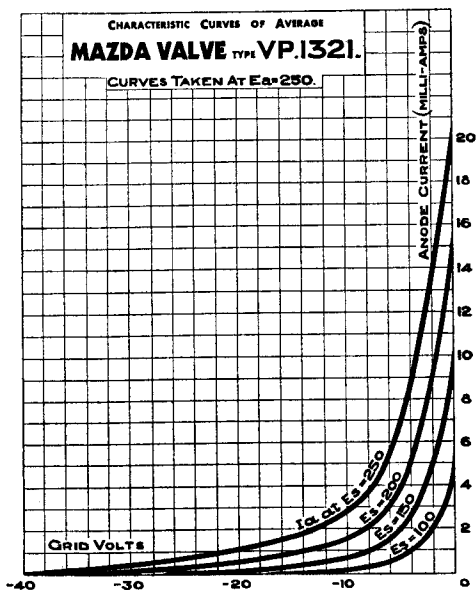
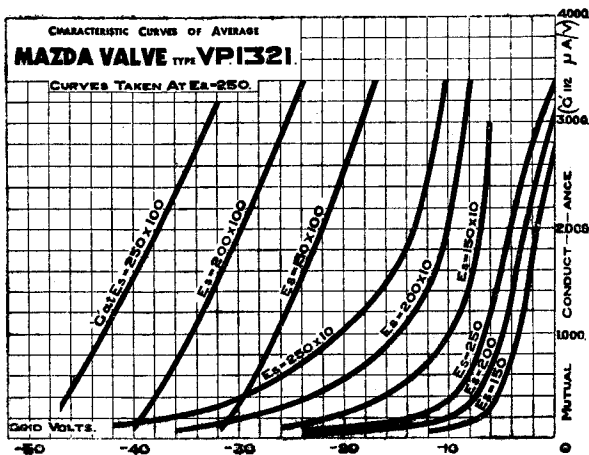
The valves may also be used as frequency changers in conjunction with the HL.1320 as an oscillator. A heterodyne voltage of 3-volt peak is suitable with an initial bias of 4-volt at a screen potential of 200.



Viewed from the free end of the base.

### BASING.

	VP.1321	VP.1322
Pin No. 1.	Metallising.	Metallising.
2.	Control Grid.	Anode.
3.	Suppressor Grid.	Suppressor Grid.
4.	Heater.	Heater.
5.	Heater.	Heater.
6.	Cathode.	Cathode.
7.	Screen Grid.	Screen Grid.
Top Cap.	Anode.	Control Grid.



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