

MAZDA

VP 1321

AC/DC Variable-Mu Screened H.F. Pentode

RATING.										
Heater Voltage	...	...	...	...	...	...	...	...	...	13.0
Heater Current Amps.	...	...	...	...	...	...	...	...	...	0.2
Maximum Anode Voltage...	...	...	...	...	...	...	...	...	...	250
Maximum Screen Voltage	...	...	...	...	...	...	...	...	...	250
*Mutual Conductance (mA/V)	...	...	...	...	...	...	...	...	...	3.0

*at $E_a=250$; $E_s=200$; $E_g=0$.

TYPICAL OPERATING CONDITIONS.											
Anode Voltage	...	...	...	...	...	...	...	...	...	200	250
Screen Voltage	...	...	...	...	...	...	...	...	...	200	250
Grid Bias Voltage	...	...	...	...	...	...	...	...	...	-2.8	-4
Anode Current (mA)	...	...	...	...	...	...	...	...	...	7.4	8.8
Screen Current (mA)	...	...	...	...	...	...	...	...	...	1.85	2.2
Impedance (ohms)	...	...	...	...	...	...	...	...	...	1,100,000	1,000,000
Mutual Conductance (mA/V)	...	...	...	...	...	...	...	...	...	2.0	2.0
Grid Bias for Mutual Conductance (10 μ A/V)	...	...	...	...	...	...	...	...	...	-34.5	-43
Maximum Input Signal Handling Capacity Voltage (approx.)	...	...	...	...	...	...	...	...	...	7	8.5
Bias for Maximum Input Signal Handling Capacity Voltage (approx.)	...	...	...	...	...	...	...	...	...	-27	-34

INTER ELECTRODE CAPACITIES.											
Input	...	...	...	...	...	...	...	...	...	9.75	μ F.
Output	...	...	...	...	...	...	...	...	...	8.5	μ F.
Grid to Anode	...	...	...	...	...	...	...	...	...	0.005	μ F.
DIMENSIONS.											
Maximum overall length	...	...	...	...	...	...	...	...	...	125	m.m.
Maximum diameter	...	...	...	...	...	...	...	...	...	39	m.m.

PRICE 17/6

GENERAL.

The Mazda VP1321 is an indirectly heated variable mu screened pentode for high or intermediate frequency amplification, for use in AC/DC or automobile receivers. It will accept a modulated signal of over 8 volts peak carrier at bias without distortion and has a high working impedance. The variable mu characteristic has been specially shaped to give very small cross modulation at all values of bias. The screen may be operated at a potential of 200 to 250 volts and a potentiometer is therefore unnecessary.

APPLICATION.

The Mazda VP1321 is designed for operation as a radio frequency amplifier in the signal or intermediate frequency stages, and it is particularly suitable with diode or amplified automatic volume control. The screen may be operated at 250 volts, but it is recommended that the voltage at maximum gain should be limited to 200 volts by a series resistance. Minimum cross modulation and maximum signal handling capacity is thus achieved without excessive initial anode currents. Under these conditions a carrier of 8.5 volts peak, modulated at 60%, can be accepted at a bias of approximately -34 volts, without exceeding 5% distortion.



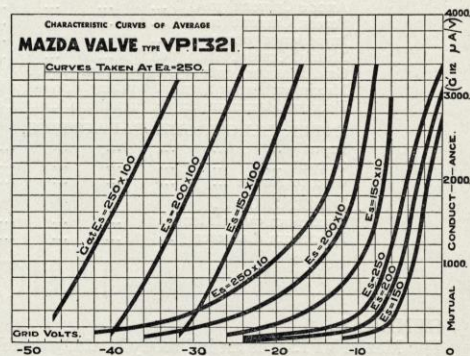
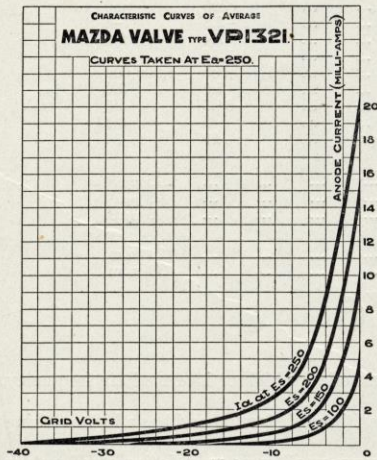
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 Mazda Valves are manufactured in Great Britain for
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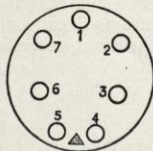
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In AC/DC receivers the grid to cathode resistance should be as low as possible and it is recommended that the resistance in this circuit should not exceed 2.5 megohms. The maximum output signal is dependent on the impedance of the anode circuit and it is recommended that this should not be less than 100,000 ohms for the last I.F. stage. The suppressor grid should be connected to cathode or a negative potential and the metal coating to earth. The valve may be used as a variable mu frequency changer with a separate oscillator and for a heterodyne voltage of 3 volts and a bias of approximately -38 volts a carrier of 9 volts peak, modulated at 60%, can be accepted.



HEATERS.

The heaters of Mazda AC/DC valves are designed to operate at a constant current of 0.2 amp., and when the heaters are wired in series the ballast resistance should be such that the current has this value at the average line voltage. If a resistance is employed to control the heater current it is recommended that it be tapped every 10 volts in the 200—250 volt range. When used in automobile receivers the heater should be connected across the battery without appreciable series resistance.



CONNECTIONS TO BASE.

Pin No. 1.—Metal Coating.
Pin No. 2.—Control Grid.
Pin No. 3.—Suppressor Grid.
Pin No. 4.—Heater.

Pin No. 5.—Heater.
Pin No. 6.—Cathode.
Pin No. 7.—Screen Grid.
Top Cap.—Anode.

