MAZDA

SP.42

A.C. MAINS H.F. PENTODE

RATING.

Heater Voltage	4·0
Heater Current (amps.)	0·95
Maximum Anode Voltage	200
Maximum Screen Voltage	200
*Mutual Conductance (mA/V)	9·0

*At Ea=200 ; Es=100 ; Eg=0.

TYPICAL OPERATION.

Screen Cathode Voltage (approx.)	140	115	95	100
Grid Bias Voltage	1·25	1·25	1·0	1·25
Quiescent Anode Current (mA)	27·0	20·0	16·0	16·0
Quiescent Screen Current (mA)	6·75	5·0	4·0	3·75
Bias and Feed-Back Resistance (ohms.)	37	50	50	67
Anode Load Resistance (ohms.)	1,850	2,600	4,000	4,000
Total Cathode Resistance (ohms)	37	50	1,000	2,000

INTER-ELECTRODE CAPACITIES.

†Anode to Earth	7·0$\mu\mu$F
†Grid to Earth	10·0$\mu\mu$F
Anode to Grid	0·004$\mu\mu$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 SP.42 is an A.C. Mains screened pentode for use in the video output stage in television receivers. 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 the valve is used with common D.C. restoring circuits it is recommended that a screen voltage of 115 should be used, the anode load being of the order of 3,000 ohms. When the synchronising separator is fed off a resistance in the cathode of the video output valve, and a D.C. connection is employed between the cathode ray tube shield and the anode of the video output valve, the screen should be connected directly to the 115 volt stabiliser. If in addition the time base supply is also obtained from this stabiliser, the synchronising becomes independent of mains voltage variations. Under these conditions an initial bias of 1 to $1\frac{1}{4}$ volts will be required for an anode load of the order of 4,000 ohms and a total cathode resistance of the order of 1,000 ohms. Under certain circuit conditions it is desirable to increase the amount of synchronising output available from the above arrangement, and this may be achieved by increasing the total cathode load resistance to 2,000 ohms, the extra screen voltage required being obtained by inserting a resistance in series with the stabiliser.

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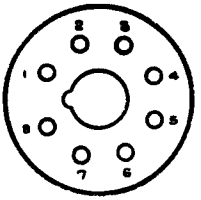
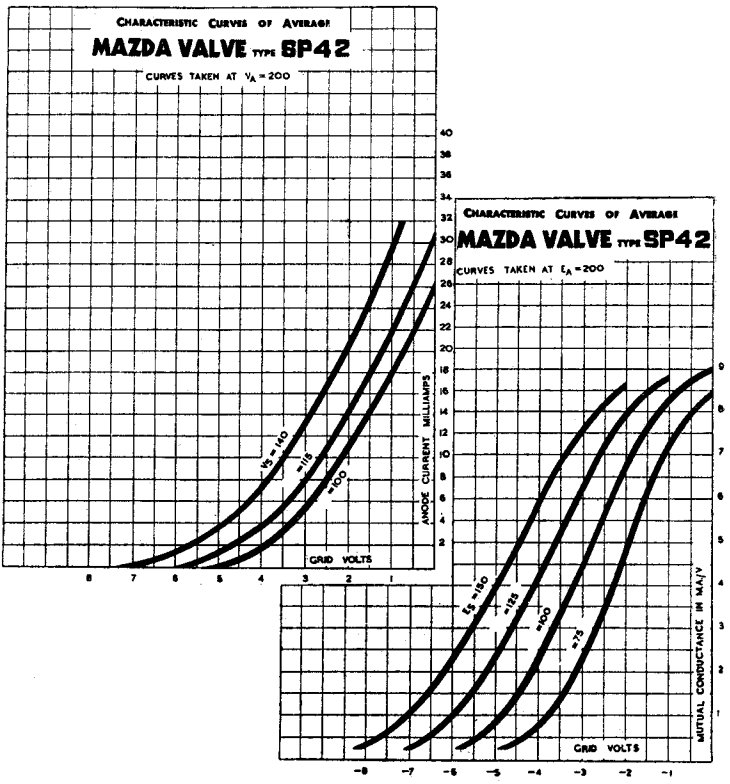


BASING.

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

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.