



## PEN.25

### BATTERY ECONOMY OUTPUT PENTODE

#### RATING.

Filament Voltage ... ..	2.0
Filament Current (amps.) ... ..	0.15
Maximum Anode Voltage ... ..	150
Maximum Screen Voltage ... ..	150
*Mutual Conductance (mA/V) ... ..	4.5

\*At  $E_a=100$  ;  $E_s=100$  ;  $E_g=0$ .

#### TYPICAL OPERATION.

Anode Voltage ... ..	90	100	120
Screen Voltage ... ..	90	100	120
Grid Bias Voltage ... ..	2.45	2.85	3.6
Anode Current (Quiescent) (mA) ... ..	3.75	4.2	5.0
Screen Current (Quiescent) (mA) ... ..	0.75	0.84	1.0
Anode Load (ohms) ... ..	*15,000	*14,000	†14,000
Power Output (mW) ... ..	*195	*260	†400
Input Swing (volts RMS) ... ..	*1.65	*1.9	†2.25
Input Swing (volts RMS) for 50 mW ... ..	0.66	0.65	0.58

\*For 10 per cent. Third and not exceeding 11 per cent. Second Harmonic.

†For 11 per cent. Third and not exceeding 11 per cent. Second Harmonic.

#### DIMENSIONS.

Maximum Overall Length ... ..	87 mm.
Maximum Diameter ... ..	32 mm.

#### GENERAL.

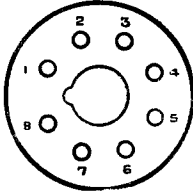
The Pen.25 is a high sensitivity output pentode for use in battery operated receivers. The special feature of this valve is that it has been designed for battery economy, and due to the exceptionally low filament consumption is therefore particularly recommended for use in battery portable receivers. The bulb is of small dimensions. The valve is fitted with a British Octal Base, the connections to which are given overleaf.

#### APPLICATION.

The Pen.25 is suitable for use in all battery receivers where the large power output available from a Q.P.P. valve is not required, and output of 400 mW can be obtained with a 120-volt H.T. battery. The valve should be biased by means of a resistance connected in the common negative H.T. lead. An anode load of the order of 14,000 ohms will be found suitable, and this should be the load transferred to the anode circuit of the valve at medium frequencies. When operating in receivers employing variable- $\mu$  valves, the quiescent anode current may be made lower than that specified above, provided that it rises to the recommended value when the receiver is operated on a powerful carrier.

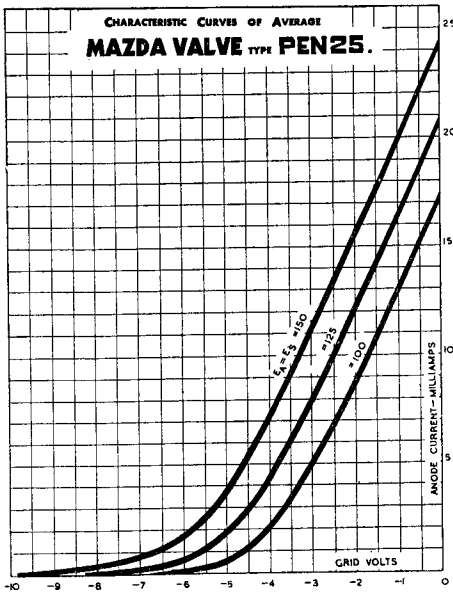


**BASING.**



- Pin No. 1. Filament.
- 2. Omitted.
- 3. Anode.
- 4. Screen.
- 5. Control Grid.
- 6. ———
- 7. Omitted.
- 8. Filament.

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.*