MAZDA

TP.25

BATTERY ECONOMY TRIODE PENTODE

RATING.

Filament Voltage	2·0
Filament Current (Amps.)	0·2
Pentode Section.	
Maximum Anode Voltage	150
Maximum Screen Voltage	150
*Mutual Conductance (mA/V)	1·0
*Taken at Ea=120 ; Es=60 ; Eg=0.	
Triode Section.	
Maximum Anode Voltage	150
*Mutual Conductance (mA/V)	1·7
*Amplification Factor	18
Maximum Peak Anode Current (mA)	15
*Taken at Ea=100 ; Eg=0.	

TYPICAL OPERATION.

Anode Voltage	120
Screen Voltage	60
Fixed Bias	1·5
Anode Current (mA)	0·5
Screen Current (mA)	1·0
Peak Heterodyne Volts	8·0
Conversion Conductance (μA/V)	225
Grid Leak from Go, G3 to L.T. +ve (ohms)	50,000

INTER-ELECTRODE CAPACITIES.

Pentode Section.		
*Anode to Earth	8·0	$\mu\mu$F.
*Grid to Earth	6·5	$\mu\mu$F.
Anode to Grid	0·01	$\mu\mu$F.
Triode Section.		
*Anode to Earth (less Go to Ao)	4·0	$\mu\mu$F.
*Grid to Earth (less Go to Ao)	9·0	$\mu\mu$F.
Anode to Grid	2·0	$\mu\mu$F.

*" Earth " denotes the electrodes of any second valve section and the remaining earthy potential electrodes of the section under measurement, H and M joined to filament.

DIMENSIONS.

Maximum Overall Length	... 103 mm.
Maximum Diameter	... 32 mm.

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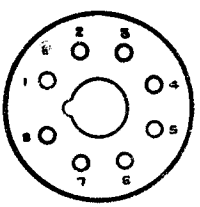
GENERAL.

The TP.25 is a triode pentode for use as a self-oscillating frequency changer in battery operated all-wave receivers. The special feature of this valve is that it has been designed for battery economy, and due to the low filament consumption is therefore particularly suitable for use in battery portable receivers. The frequency changer has variable-mu characteristics, i.e., the gain can be controlled by applying bias to the input grid. The oscillator grid and the suppressor grid of the pentode are joined internally. The bulb is of small dimensions and metallised, and the valve is fitted with a Mazda Octal Base, the connexions to which are given below.

APPLICATION.

The valve may be used with either suppressor grid injection or combined cathode and suppressor grid injection. In all-wave receivers when used with suppressor-grid injection the triode anode should be parafed and a tuned anode circuit employed. The coupling condenser should have a value of ·0001 mfd. A wave-wound coil should be inserted between the H.T. supply and the parafed resistance in order to remove the damping effect of this resistance on the long and medium wave oscillator tuned circuit. This coil should have a natural resonance outside the oscillator band and a small self-capacity. A grid leak of 50,000 ohms and grid condenser of ·0005 mfd. should be used and the grid should be returned to L.T. positive. The circuit diagram shows a suggested arrangement.

BASING.



Pin No. 1. Filament.
2. ——
3. Pentode Anode.
4. Oscillator Anode
5. Oscillator Grid.
6. Metallising.
7. Pentode Screen.
8. Filament.

Top Cap. Pentode Control Grid.

Viewed from the free end of the base.

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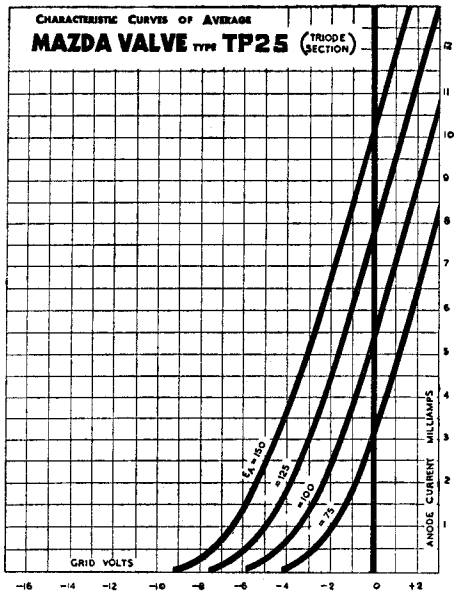

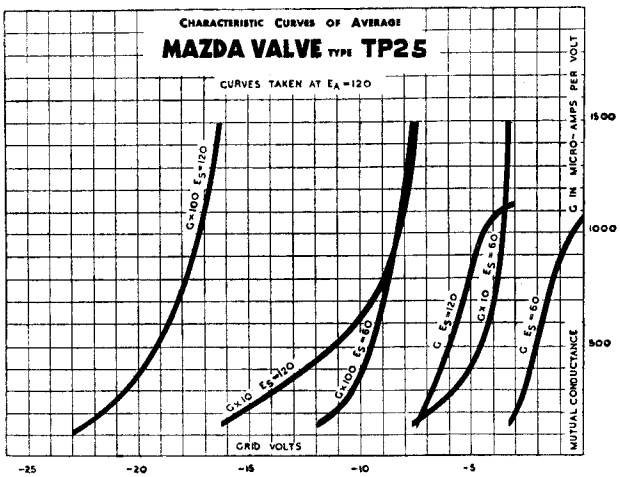

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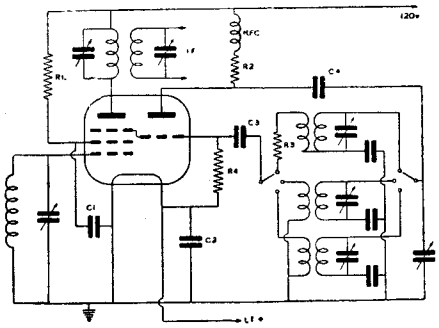
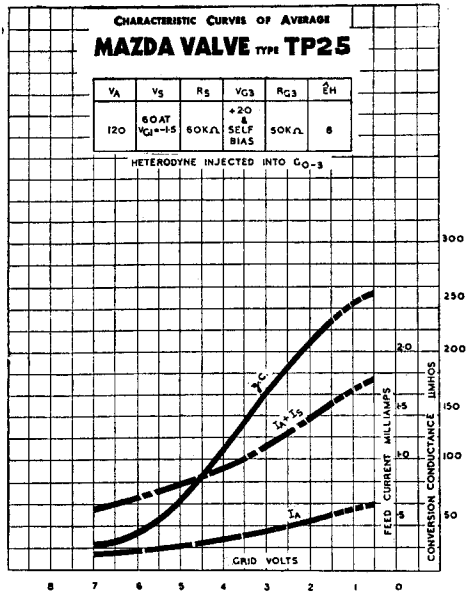
SUGGESTED CIRCUIT DIAGRAM USING TP.25



Values.

R.1	60,000.	C.1	·05 mfd.
R.2 }	Depend	C.2	·01 mfd.
R.3 }	on coils	C.3	·0005 mfd.
R.4	50,000.	C·4	·0001 mfd.



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

THE EDISON SWAN ELECTRIC CO., LTD.
155, CHARING CROSS ROAD, LONDON, W.C.2