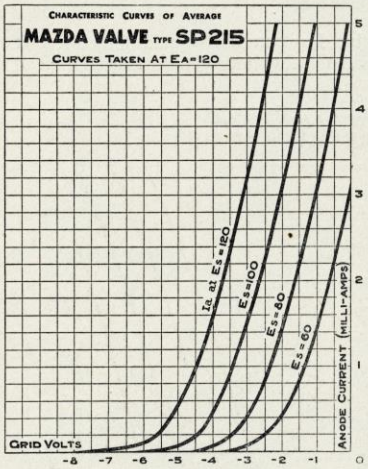
MAZDA

SP 215



Screened H.F. Pentode

RATING.

Filament Voltage	2.0
Filament Current (Amps.)	0.15
Maximum Anode Volts	150
Maximum Screen Volts	150
*Mutual Conductance (mA/V)	2.3

* *at* $Ea=120$; $Es=80$; $Eg=0$.

PRICE **13/6**

OPERATING CONDITIONS.

(*a*) As an Amplifier :

Anode Volts	120	120
Screen Volts	60	70
Grid Bias	—1.5	—1.5
Anode Current (mA)	0.8	1.35
Screen Current (mA)	0.28	0.47
Mutual Conductance (mA/V) ...	0.9	1.3

(*b*) As a Frequency Changer :

Anode Volts	120	150
Screen Volts	60	80
Heterodyne Volts (Peak)	3	3.5
Bias Volts	* Self	3.5
Anode Current	1.3	1.7
Screen Current	0.45	0.6
Conversion Conductance (mA/V)	.65	.825

*Self Biased through a 2 meg. Resistance returned to LT—ve.

INTER ELECTRODE CAPACITIES.

Grid—Anode	0.007	$\mu\mu$F.	
Input	11.0	$\mu\mu$F.	
Output	8.5	$\mu\mu$F.	
Grid to Filament+Suppressor Grid ...	5.5	$\mu\mu$F.	

DIMENSIONS.

Maximum Overall Length ... ... 114 m.m. Maximum Diameter ... ... 45 m.m.

GENERAL.

The Mazda Valve Type SP 215 is a screened pentode valve for battery operation and is suitable for use as a frequency changer, high frequency amplifier or a detector. The valve is supplied with a metal coating to reduce undesirable coupling to a minimum.

THE EDISON SWAN ELECTRIC CO. LTD.
Radio Division Showrooms :
155 Charing Cross Road, London, W.C.2
Showrooms in all the Principal Towns
Mazda Valves are manufactured in Great Britain for
The British Thomson-Houston Co., Ltd.,
London and Rugby

EDISWAN

R723–62

MAZDA

SP 215

APPLICATION.

The Mazda Valve Type SP215 is suitable for use either as an anode bend or cumulative grid detector. It may also be employed as a radio frequency amplifier in circuits where an aerial volume control is used instead of bias control, or as an I.F. amplifier with fixed bias.

The Mazda SP215 is particularly suitable for use as a self-oscillating frequency changer. Cathode injection is recommended—a suitable circuit is indicated in Fig. 1—though other forms of injection may be employed. The total resistance of the cathode coupling coils should not exceed two thirds of an ohm.

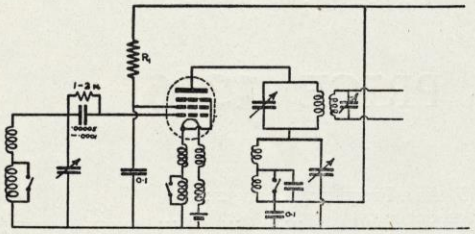
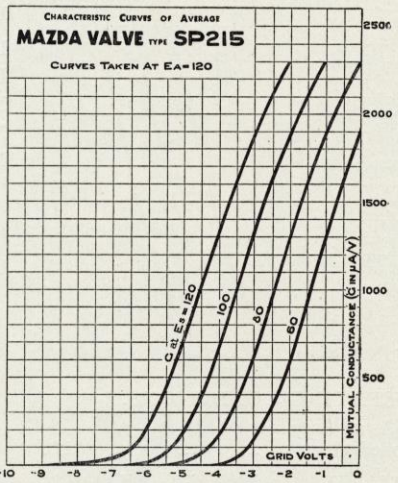


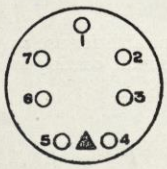
Fig. 1



The actual value of the initial heterodyne voltage employed will depend to a large extent upon the variation in the dynamic resistance of the oscillator coil over the frequency band covered by each wavelength range, and also on the percentage of the initial H.T. voltage at which the battery will be replaced. The values given in the table of operating conditions are representative only.

The screen volts may be obtained from a separate tapping on the H.T. battery, but it is recommended that they should be obtained through a series resistance from the anode voltage as this method gives greater uniformity in performance and anode current feed between valves and reduces to a minimum the effect of wide fluctuations in H.T. voltage. For calculating the screen resistance, the screen current may be assumed to be approximately 35% of the anode current.

The metal coating has a separate pin which should be connected to earth.



CONNECTIONS TO BASE.

The valve is fitted with a standard B.V.A. 7-pin base with the following connections.

Pin No. 1.—Metallising.
Pin No. 2.—Control Grid.
Pin No. 3.—Suppressor Grid.
Pins Nos. 4 & 5.—Filament.
Pin No. 6.—Blank.
Pin. No. 7.—Screen.
Top Cap.—Anode.

BRITISH RADIO VALVE MANUFACTURERS' ASSOCIATION BVA