

MAZDA

S.215 VM.

Variable-Mu Screen-Grid Valve



RATING.

Filament Volts	2.0
Filament Amps.	0.15
Maximum Anode Volts	150
Maximum Screen Volts	80
Mutual A.C. Conductance (mA/V)...	2.0
at Ea=120 Es=80 Eg=0	
*Amplification Factor	700
*Mutual A.C. Conductance (mA/V)...	1.4
† " " (μA/V)	10
† * Ea=120 Es=60 Eg=0	
† Ea=120 Es=60 Eg=-8	

INTER-ELECTRODE CAPACITIES.

Anode to Grid (μF)	0.002
Anode to Cathode (μF)	12.5
Grid to Cathode (μF)	10.5

DIMENSIONS.

Maximum overall length	128 m.m.
Maximum overall diameter	45 m.m.

PRICE ~~16/6~~ ~~15/6~~ 12/6

GENERAL.

The S.215 VM is a Variable-Mu screen-grid battery operated valve for use in receivers employing frame aerial reception. The volume is controlled by potentiometer adjustment of the grid bias. Its characteristics are such that with an increase of negative bias the anode current and mutual conductance curves follow a shape which minimises cross-modulation and amplitude distortion. When used with an external aerial some method of controlling the aerial input should be provided and a screen voltage of 80 should preferably be used.

The bulb of the S.215 VM. is metal coated, which ensures a low anode-control-grid capacity and simplifies screening. This coating is connected to the filament pin marked "3" on the base, which should be earthed or connected to earth through a non-inductive condenser (see diagram overleaf).



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APPLICATION.

The S.215 VM. is suitable for H.F. amplification with either tuned-anode, tuned-grid or transformer coupling. It may also be used as a first detector in super-heterodyne receivers, in which position it improves the control of volume.

The most satisfactory method of obtaining volume control is to connect a potentiometer of 50,000 ohms. across a 9-volt grid bias battery (for a screen voltage of 60) and connect the control grid circuit to the slider.

OPERATING CONDITIONS.

The S.215 VM. requires an anode voltage of 150 and a screen voltage of 60-80. The attached curves show the variation of mutual conductance and amplification factor with grid bias. A non-inductive condenser of at least 0.1 mfd. should be connected between the screen and earth.

