



VP.210

BATTERY H.F. SCREENED PENTODE

RATING.

Filament Voltage ...	...	...	...	...	...	2.0
Filament Current (amps.) ...	...	...	...	...	...	0.1
Maximum Anode Volts ...	...	...	...	...	...	150
Maximum Screen Volts ...	...	...	...	...	...	150
Mutual Conductance (mA/V) ...	...	...	...	...	...	†1.40
†Ea=120; Es=60; Eg=0.						

OPERATING CONDITIONS.

Anode Voltage ...	...	...	...	...	120	120
Screen Voltage ...	...	...	...	...	60	70
Grid Bias ...	...	...	...	...	1.5	1.5
Anode Current (mA) ...	...	...	...	...	1.1	1.8
Screen Current (mA) ...	...	...	...	...	0.385	0.63
Mutual Conductance (mA/V) ...	...	...	...	...	0.82	1.03
Anode AC Resistance (megohms) ...	...	...	...	...	1.45	0.89

INTER-ELECTRODE CAPACITIES.

*Anode to Earth ...	...	...	...	...	11.0 $\mu\mu\text{F}$
*Grid to Earth ...	...	...	...	...	8.75 $\mu\mu\text{F}$
Anode to Grid ...	...	...	...	...	0.004 $\mu\mu\text{F}$

*"Earth" denotes the remaining earthy potential electrodes and metallising joined to cathode.

DIMENSIONS.

Maximum Overall Length ...	...	...	...	...	125 mm.
Maximum Diameter ..	...	...	...	...	39 mm.

GENERAL.

The VP.210 is a variable-mu H.F. Pentode for use in battery operated receivers. The valve is based in a standard 7-pin base, the connections to which are given overleaf.

APPLICATION.

The valve has variable-mu characteristics with high signal handling capacity, suitable for use in H.F. amplifiers, or as a frequency changer with a separate oscillator. The screen volts should preferably be obtained by means of a dropping resistance from the full H.T. supply, as this reduces detector overloading to a great extent. When used as an H.F. amplifier, an initial screen voltage of the order of 60 volts is recommended at the minimum bias of 1.5 volts, and when used under these conditions will form part of the delay voltage in receivers provided with A.V.C. If desired, this voltage may be slightly increased or decreased, provided the initial screen volts are suitably re-adjusted to give the maximum gain. The suppressor grid and metallising should be connected to earth. When used as a frequency changer, cathode injection is recommended, and a suitable valve for the oscillator stage is the HL.2. A heterodyne voltage of 3 volts peak is suitable, and an initial screen voltage of 40 to 70 according to whether the valve is self-biased by its own grid current or provided with separate grid bias.

