The VP13A is a variable-mu H.F. Pentode for use in D.C./A.C. mains operated receivers and for car radios.

**HEATER CHARACTERISTICS**
- Heater Voltage \( V_f = 13.0 \) volts
- Heater Current \( I_f = 0.2 \) amp
- Heating Time—60 seconds

**DIMENSIONS**
- Overall Length \( = 109 \) mm.
- Overall Diameter \( = 42 \) mm.
- Bulb Finish—Metallised

**OPERATING CHARACTERISTICS**
- Normal Anode Voltage \( V_{aw} = 200 \) volts
- Normal Auxiliary Grid Voltage \( V_{g2w} = 100 \) volts
- Anode Current \( (Vg1 = 2V) \) \( I_{aw} = 4.0 \) mA
- Auxiliary Grid Current \( I_{g2w} = 1.4 \) mA
- Control Grid Voltage \( -Vg1 \) \( = 2 \) volts
- Mutual Conductance \( (Ia = 4 \) mA) \( S_w = 2.2 \) mA/V
- Amplification Factor \( G_w = 2,200 \)

**LIMITS**
- Maximum Anode Voltage \( V_{amax} = 200 \) volts
- Maximum Auxiliary Grid Voltage \( V_{g2max} = 100 \) volts
- Maximum Resistance in Grid Circuit \( R_{g1max} = 1.5 \) megohms
- Maximum Voltage Heater to Cathode \( V_{fkmax} = 125 \) volts
- Range of Grid Voltage for 1 \( \mu \)A Grid Current... \( Vg1 = -0.5 \) to \(-1.0 \) volt

**CONNECTIONS**
- Contact No. 1 Metallising
- 2 Heater
- 3 Heater
- 4 Cathode
- 5 Suppressor Grid (G3)
- 6 —
- 7 Auxiliary Grid (G2)
- 8 Anode

Viewed from underside of base.