Ferranti

HIGH VOLTAGE CONTROL TRIODE

HL25

A triode with an indirectly heated cathode designed for use as a control valve in voltage regulators in high voltage, low current, DC. power supplies.

PHYSICAL DETAILS.

Base	International Octal
Top Cap	TC. 1 (flanged)
Max. Overall Length ...	132 mm
Max. Seated Height ...	118 mm
Max. Diameter	33 mm
Mounting Position ...	Any
Envelope	Silicone coated clear glass

HEATER.

Heater Voltage	4·0 volts
Heater Current	1·0 amp

RATINGS (Absolute).

Max. Anode Voltage	15 kV
Max. Mean Anode Current	1·0 mA
Max. Peak Anode Current	5 mA
Max. Mean Anode Dissipation	4 watts
*Max. Peak Heater Cathode Voltage ...	150 volts
Max. Negative Grid Voltage	150 volts
Max. Grid Circuit Resistance	5 megohms
Minimum Cathode Heating Time ...	45 secs

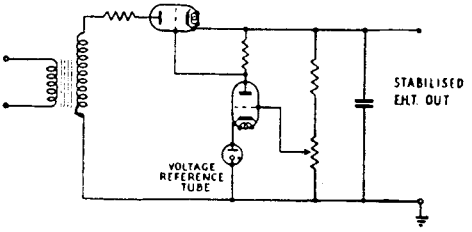
CHARACTERISTICS.

Control Characteristics:

Anode Voltage	15 kV
Grid Voltage for cut-off...	−32 volts
Grid Voltage for Ia=5μA	−25 volts
Amplification Factor	800

TYPICAL OPERATION.

A typical circuit for a stabilised High Voltage Supply is shown below.



The voltage reference tube supplies stabilised bias to the HL25 which provides automatic control of the grid controlled rectifier. Variation of the stabilised output voltage is achieved by adjustment of the HL25 grid supply.

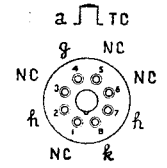
CAPACITANCES.

C_{a-k}	<0·1 pF
C_{g-k}	1·0 pF
C_{a-g}	0·6 pF

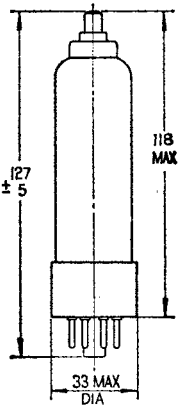
WARNING

The high voltages normally applied to this valve can be very dangerous and particular care should be taken when making any circuit adjustments. It is recommended that before any part of the circuit is touched the supply should be switched off and the terminals of any capacitor grounded

*The heater may be either positive or negative with respect to cathode.



Base Connections Underside View of Base



All dimensions shown are in millimetres

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AVERAGE Ia/Vg CHARACTERISTIC