



OUTPUT PENTODE

An indirectly heated output pentode suitable for use in Television Receivers as a Line Time Base Output Valve.

PHYSICAL DETAILS.

Base	...	...	B9A—Noval.
Top Cap	...	...	CT1.
Max. Overall Length	...	...	83 mm. (3 $\frac{1}{4}$ in.).
Max. Seated Height	...	...	76 mm. (3in.).
Max. Diameter	...	...	22.2 mm. ($\frac{7}{8}$ in.).
Mounting Position	...	...	Any.

BASE CONNECTIONS.

Pin 1—Internal Connection.	Pin 6—Internal Connection.
Pin 2—Control Grid.	Pin 7—Internal Connection.
Pin 3—Cathode.	Pin 8—Screen Grid
Pin 4—Heater.	Pin 9—Suppressor Grid.
Pin 5—Heater.	Top Cap—Anode.

Heater

Heater Voltage	...	...	6.3 volts.
Heater Current	...	...	1.05 amp.

RATINGS

Max. D.C. Supply Voltage	...	...	550 volts.
Max. Anode Voltage	...	...	300 volts.
*Max. Peak Anode Voltage	...	...	7 kV.
†Max. Anode Dissipation	...	...	8 watts.
Max. Screen Voltage	...	...	300 volts.
†Max. Screen Dissipation	...	...	4.5 watts.
Max. Cathode Current	...	...	180 mA.
‡Min. Neg. Grid Voltage	...	...	-1.3 volts.
Max. Vh-k	...	...	100 volts.
Max. Rh-k	...	...	20 k Ω
§Max. Rg1-k	...	...	500 k Ω

CHARACTERISTICS.

Pentode Connected.

Anode Voltage	...	...	250 volts.
Screen Voltage	...	...	250 volts.
Suppressor Grid Voltage	...	...	0 volts.
Control Grid Voltage	...	...	-38.5 volts.
Anode Current	...	...	3.2 mA.
Screen Current	...	...	2.4 mA.
Mutual Conductance	...	...	4.6 mA/V.
Anode Impedance	...	...	15 k Ω
Inner μ (μ_{g1-g2})	...	...	5.1

Triode Connected.

Anode Voltage	...	...	250 volts.
Grid Bias Voltage	...	...	-38 volts.
Anode Current	...	...	40 mA.
Mutual Conductance	...	...	5.5 mA/V.
Anode Impedance	...	...	1.0 k Ω
μ	...	...	5.5

CAPACITANCES (Measured without external shield).

Pentode Connected.

C _{in}	...	...	14.7 pF.
C _{out}	...	...	6.0 pF.
C _{a-g1}	...	...	<0.8 pF.
C _{a-k}	...	...	<0.1 pF.
C _{g1-h}	...	...	<0.2 pF.

Triode Connected.

C _{in}	...	...	8.7 pF.
C _{out}	...	...	11.4 pF.
C _{a-g}	...	...	6.6 pF.

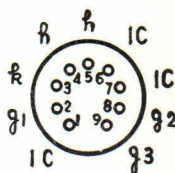
*Max. pulse duration of 22% of one cycle, with a maximum of 18 μ secs.

†pa+pg₂ should not exceed 8.5 watts.

‡For grid current of +0.3 μ A.

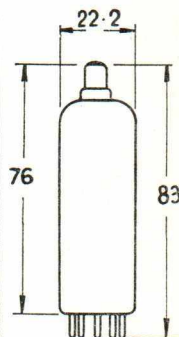
§For line output operation the max. value of R_{g1-k} may be 3.3 M Ω

EL81



Base Connections

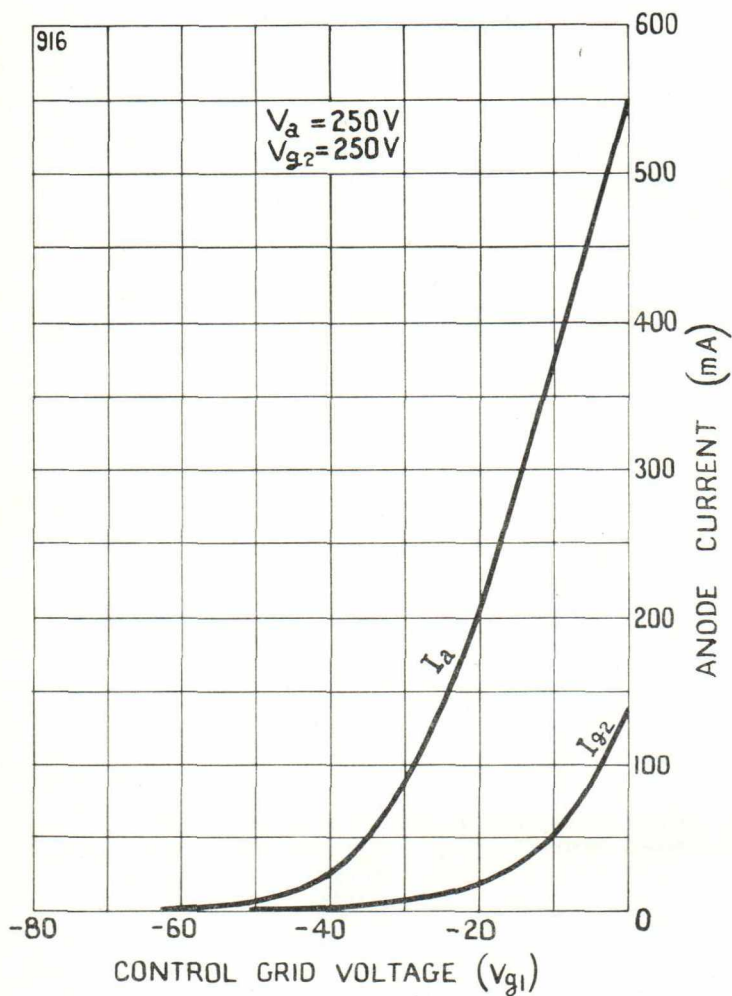
Underside View of Base



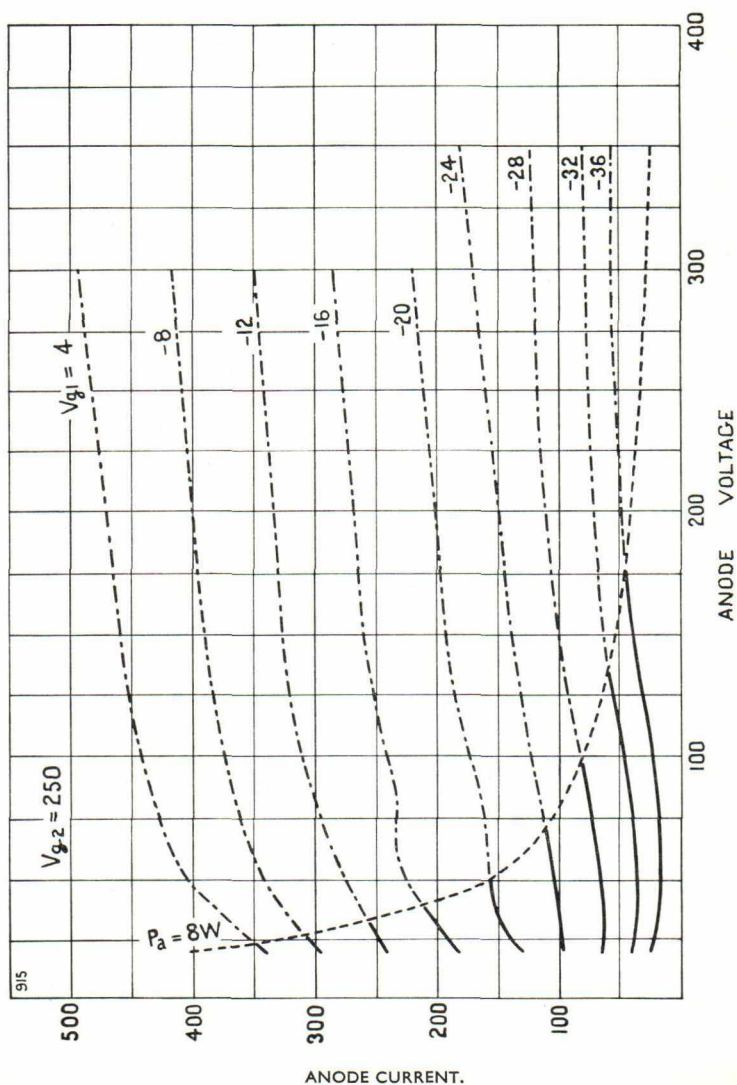
All Dimensions shown are in millimetres (max.).



TYPICAL ANODE CURRENT/GRID VOLTAGE CHARACTERISTICS.



TYPICAL ANODE CURRENT/ANODE VOLTAGE CHARACTERISTICS.



TYPICAL ANODE CURRENT/ANODE VOLTAGE CHARACTERISTICS.
TRIODE CONNECTED.(g₂ to a, g₃ to k).