



DOUBLE TRIODE

A double triode with separate cathodes. Designed for use as an R.F. Amplifier or self oscillating Mixer in F.M. and A.M. receivers.

PHYSICAL DETAILS.

Base	...	...	B9A—Noval.
Max. Overall Length	...	...	56 mm. ($2\frac{1}{2}$ in.).
Max. Seated Height	...	...	49 mm. ($1\frac{1}{2}$ in.).
Max. Diameter	...	...	22.2 mm. ($\frac{7}{8}$ in.).
Mounting Position	...	...	Any.

BASE CONNECTIONS.

Pin 1—Anode Triode 2.	Pin 5—Heater.
Pin 2—Grid Triode 2.	Pin 6—Anode Triode 1.
Pin 3—Cathode Triode 2.	Pin 7—Grid Triode 1.
Pin 4—Heater.	Pin 8—Cathode Triode 1.
Pin 9—Shield.	

HEATER.

Heater Voltage	...	...	6.3 volts.
Heater Current	...	...	0.435 amp.

RATINGS.*

Max. Anode Supply Voltage	...	550 volts.
Max. Anode Voltage	...	300 volts.
†Max. Anode Dissipation	...	2.5 watts.
Max. Cathode Current	...	15 mA.
Max. Negative Grid Voltage	...	100 volts.
Max. R_{g-k}	...	1 mΩ.
Max. R_{h-k}	...	20 kΩ.
Max. V_{h-k}	...	90 volts.

CHARACTERISTICS.*

Anode Voltage	...	...	250 volts.
Grid Voltage	...	...	-2.2 volts.
Anode Current	...	...	10 mA.
Amplification Factor	...	...	57 mA.
Mutual Conductance	...	...	6.0 mA/V.

TYPICAL OPERATION.

As R.F. Amplifier in F.M. or A.M. receivers.

Anode Supply Voltage	...	250 volts.
Anode Load Resistance	...	1.2 kΩ.
Anode Voltage	...	240 volts.
Anode Current	...	10 mA.
Grid Voltage	...	-2 volts.
Cathode Bias Resistor	...	200 Ω.
Mutual Conductance	...	6.2 mA/V.
Anode Impedance	...	9.4 kΩ.
Equivalent Noise Resistance	...	500 Ω.
Input Resistance (at 100 Mc/s.)	...	6.0 kΩ.

As a self-oscillating Frequency Changer for F.M./A.M.

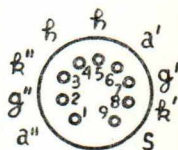
Anode Supply Voltage	...	250 volts.
Anode Load Resistance	...	12 kΩ.
Grid Resistor	...	1.0 MΩ.
Oscillator Voltage	...	3.0 volts.
Anode Current	...	5.3 mA.
Conversion Conductance	...	2.7 mA/V.
Anode Impedance	...	20 kΩ.
Input Resistance (at 100 Mc/s.)	...	15 kΩ.

*Each section.

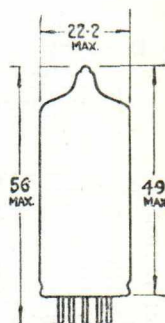
†Max. Total Anode Dissipation ($pa' + pa''$) = 4.5 watts.

ECC85

6AQ8



Base
Connections
Underside View
of Base



All dimensions
shown are in
millimetres.

Ferranti

ECC85

6AQ8

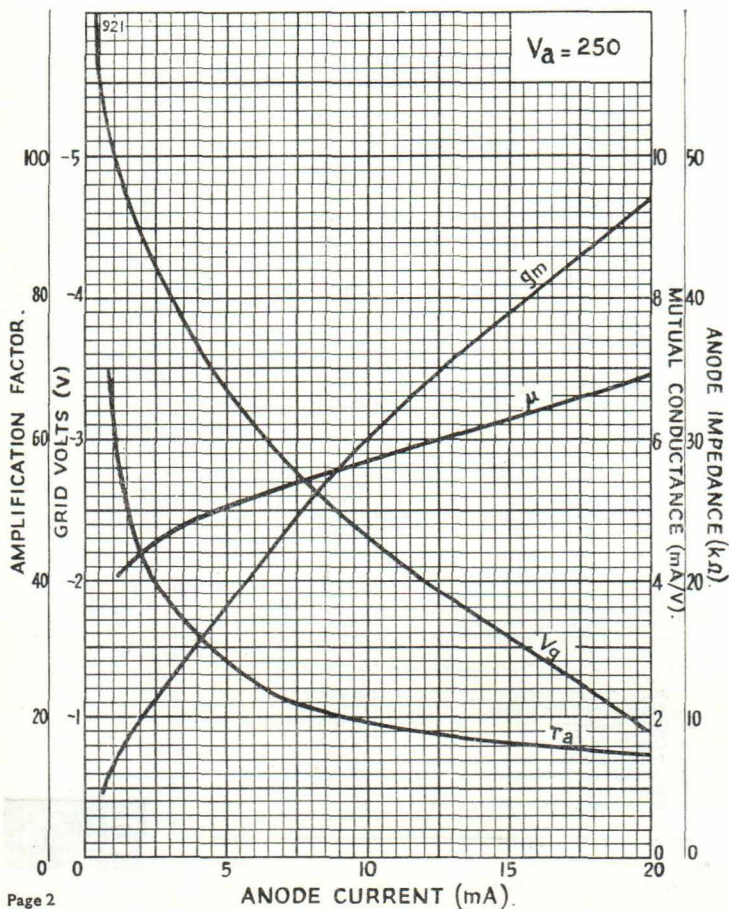
Ferranti

CAPACITANCES (measured without external shield).

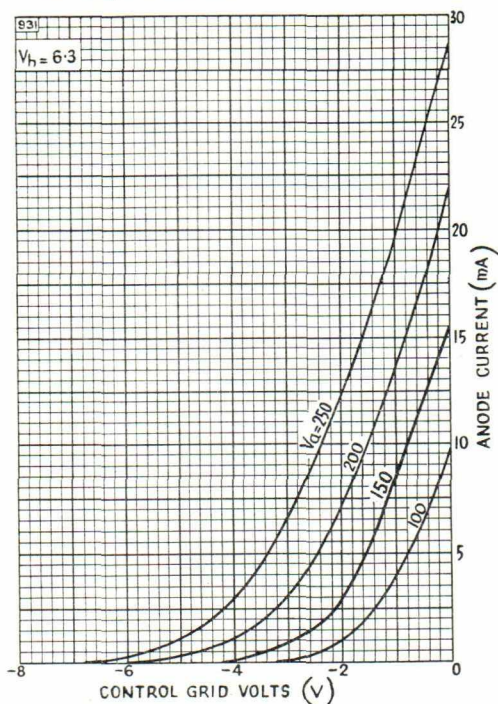
*C _{in}	...	...	...	3.0 pF.
*C _{out}	...	...	...	1.2 pF.
†*C _{out}	...	...	...	1.9 pF.
*C _{a-k}	...	...	...	0.18 pF.
*C _{a-g}	...	...	...	1.6 pF.
*C _{a'-a''}	...	...	...	<0.04 pF.
†C _{a'-a''}	...	...	...	<0.008 pF.
C _{a'-g''}	...	...	...	<0.003 pF.
C _{a'-g''} = C _{a''-g'}	...	...	...	<0.008 pF.
C _{a'-k''} = C _{a''-k'}	...	...	...	<0.008 pF.
C _{g'-k''} = C _{g''-k'}	...	...	...	<0.003 pF.

*Each Section.

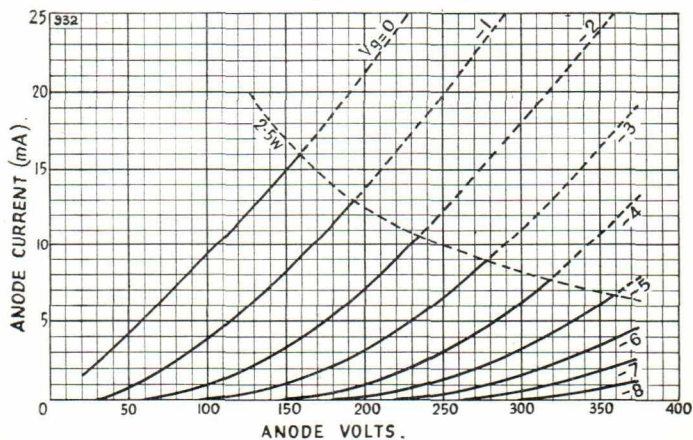
†Measured with external shield.



Typical I_a/V_g Characteristics.



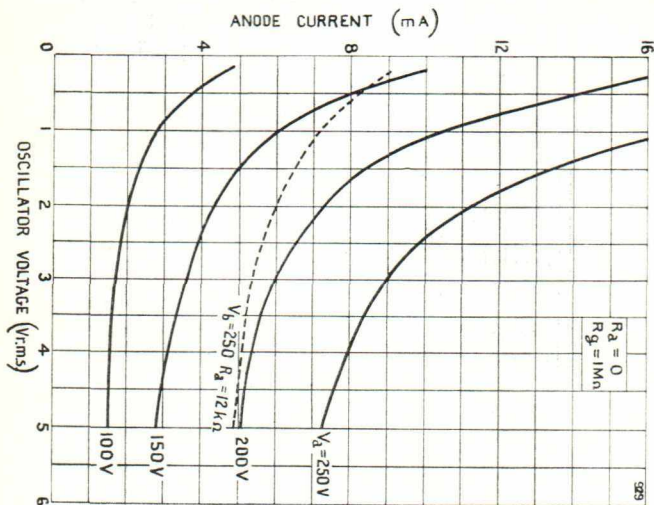
Typical I_a/V_a Characteristics.



ECC85

6AQ8

Ferranti

Typical I_a/V_{osc} Characteristics.Typical g_c/V_{osc} Characteristics.