Osram VALVES

X61M TRIODE-HEXODE FREQUENCY CHANGER

DESCRIPTION

Type X61M is an indirectly heated triode-hexode. It has a high conversion conductance and a comparatively low cathode current giving a good signal to noise ratio, and is suitable for use up to 60 Mc/s.

The X61M is a near equivalent of the American type 6K8G.

RATINGS

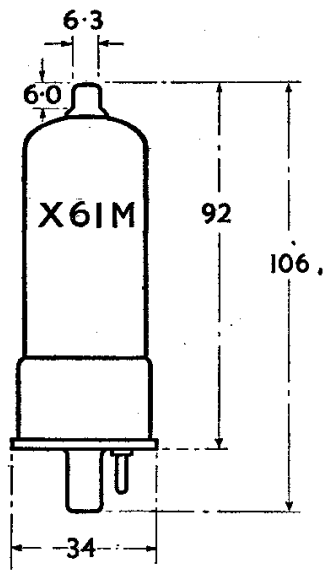
Heater Voltage ...	6·3	volts
Heater Current	0·3	approx. amp
Anode Voltage ...	250	max. volts
Screen Grid Voltage	100	max. volts
Signal Grid Voltage	–3	min. volts
Oscillator Anode Voltage	100	max. volts
Total Cathode Current ...	10	mA
Conversion Conductance*, at $Vg_1 = -3$	620	μA/V
at $Vg_1 = -25$	5	μA/V
Conversion Impedance*	0·7	megohm
Input Impedance, at 30 Mc/s.*	13,000	ohms

* measured at $Va = 250$; $Vg_{2,4} = 100$; $Voa = 100$; $Vg_1 = -3$

Capacitances :

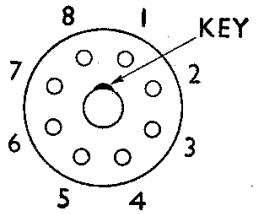
Oscillator Anode to all other electrodes	6·0	approx. pF
Signal Grid to all other electrodes ...	4·9	,, ,,
Hexode Anode to all other electrodes	11·5	,, ,,
Oscillator Grid to all other electrodes	10·5	,, ,,

DIMENSIONS



All dimensions are in mm. and are the maximum except where otherwise stated.

BASE



View looking on underside of base.

8-PIN OCTAL

1 : Metallising
2 : Heater
3 : Anode
4 : Screen Grids $g_{2,4}$
5 : Oscillator and Mixer Grid g_3
6 : Oscillator Anode
7 : Heater
8 : Cathode
Top Cap : Signal Grid g_1

OPERATING CONDITIONS

It is desirable to supply the screen grids from a low resistance potentiometer as shown in the diagram overleaf. This potentiometer may provide screen voltage for other valves in the receiver. In DC/AC receivers the heater of type X61M should be placed as near the earthy end of the heater chain as possible. In AC receivers one side of the heater should be earthed close to the valve holder, and a capacitor of 0·001 μF connected from the other side to earth. The tuned anode oscillator circuit as shown opposite should always be used.

Anode Voltage	250	volts
Screen Grid Voltage (Potentiometer supply)	100	volts
Signal Grid D.C. Voltage	–3	volts
Oscillator Anode D.C. Voltage (series supply)	100	volts
Oscillator Anode Resistor (from 250v. supply)	30,000	ohms
Optimum R.F. Oscillator Grid Voltage, peak	15	volts
Oscillator Grid Resistor	50,000	ohms
Total Cathode Current ...	10	mA