Osram Valves

Made in England.

TYPE X41

TRIODE-HEXODE FREQUENCY CHANGER.

With Indirectly Heated Cathode.
(For Operation from A.C. Mains).

Maximum dimensions : Overall length (including pins) 135 m/m. Diameter of bulb 45 m/m.

The OSRAM X41 is a multi-electrode valve designed to perform as a mixer, first detector or frequency changer valve in a superheterodyne receiver. It is fitted with an Indirectly Heated Cathode common to two sets of electrodes :

(1) The Hexode.
(2) The Triode.

The triode grid is connected to a mixer grid internally so that oscillations generated by the triode modulate the hexode cathode stream. The control grid of the hexode portion may be connected to an A.V.C. line, as it has "variable mu" characteristics.

The triode hexode offers the following points of advantage :

(1) Almost complete absence of interaction between triode and hexode sections.
(2) High mutual conductance in the triode section.
(3) High conversion gain due to its high impedance.

Type X41 is applicable to short wave reception in a suitable circuit as shown.

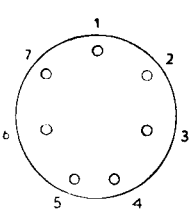
CHARACTERISTICS.

Heater Volts	4.0	
Heater Current	1.2 amp. approx.	
	Max.	Recommended Operating Condition.
Anode Volts	250	250
Screen Volts	80	70
Oscillator Anode Volts	150	100
Oscillator Grid Peak Swing	12 peak.	10—12 peak.
Control Grid Voltage	..	—1.5v.
Conversion Conductance average	..	640 micromhos.
Conversion Impedance	..	0.75 megohms.
Total Cathode Current average	..	7.6 ma.

Interelectrode Capacities :—

Control Grid—Anode	0.046 micromicrofarad approx.
Anode—Earth	21.5 ,, ,, ,,
Control Grid—Earth	7.0 ,, ,, ,,
Oscillator Grid—Oscillator Anode	3.56 ,, ,, ,,
Oscillator Anode—Earth	8.5 ,, ,, ,,
Oscillator Grid—Earth	17.0 ,, ,, ,,
Oscillator Grid—Control Grid (Taken on metallised valve)	0.26 ,, ,, ,,

For prices see pages 126-129.



VIEW LOOKING ON UNDERSIDE OF BASE

BASE 7-PIN.

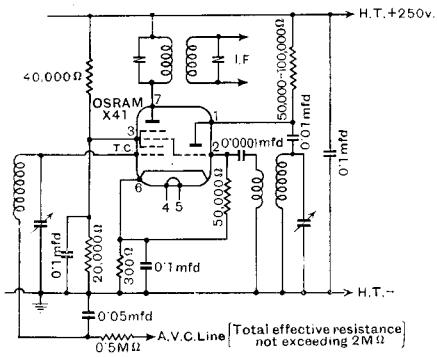
1 : Oscillator Anode (A_o)
2 : Oscillator and Mixer Grids (G_o G_1)
3 : Screen (G_2 G_4)
4 : Heater
5: Heater
6 : Cathode
7 : Anode (A)
Top Cap : Control Grid (G_1)

Type X41 is supplied in metallised or plain carbonised bulb, according to requirements.

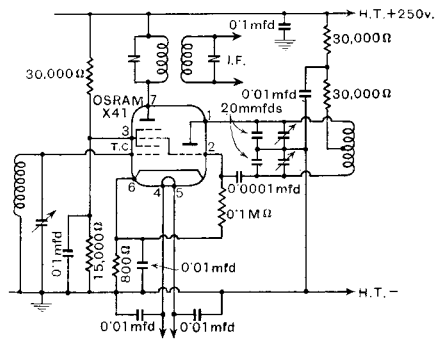
TYPE X41

TYPICAL OPERATING CONDITIONS.

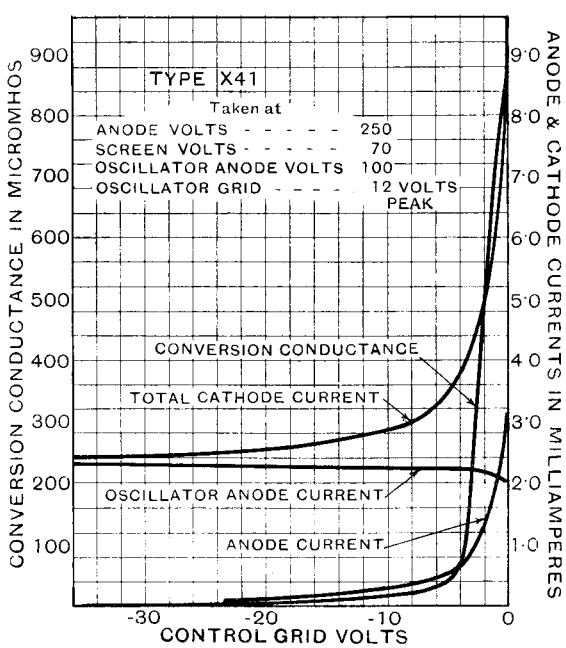
A typical circuit is shown herewith. The Screen grid should be fed from a low resistance potentiometer and care should be taken to reduce to a minimum any coupling between the oscillator and signal frequency circuits. To prevent modulation hum in short wave receivers condensers of approximately 0.01 mfd. should be connected from each side of the heater to earth. Care should be taken that the total resistance in the control grid to cathode circuit (A.V.C. decoupling resistances, etc.) does not exceed 2 megohms effective value.



OSRAM X41 for Long, Medium, & Short wave reception (2,000-10metres)



OSRAM X41 for Ultra Short wave reception (5-10metres)



CHARACTERISTIC CURVES OF AVERAGE VALVE