

Osram Valves

Made in England.



Maximum Dimensions :
Overall length (including pins)
130 m/m.
Diameter of bulb
45 m/m.

TYPE MX40 HEPTODE FREQUENCY CHANGER With Indirectly Heated Cathode (For operation from A.C. mains).

The OSRAM MX40 is a multi-electrode type valve designed to perform as a frequency changer in superheterodyne receivers.

Type MX40 contains five electrodes in addition to the normal cathode and anode, the function of these electrodes being as follows :

- G₁ (in proximity to cathode) : Oscillator Grid.
- G₂ Oscillator Anode.
- G₃ Screen Grid.
- G₄ Control Grid with "Variable Mu" characteristics.
- G₅ Screen Grid (joined internally to G₃).

The control grid of this valve has variable-mu characteristics which makes it suitable for use in circuits employing automatic volume control.

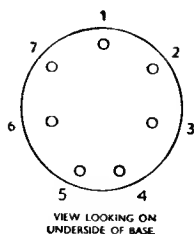
CHARACTERISTICS.

Heater Volts	..	..	..	..	..	..	..	4.0
Heater Current.. .. .	..	..	..	..	..	..	..	1.0 amp. approx.
				Max.	Recommended Operating Condition.			
Anode Volts	..	..	..	250	250			
Screen Volts	..	..	..	100	80			
Oscillator Anode Volts..	..	..	..	150	150			
Oscillator Grid Peak Swing	..	..	..	..	10 volts			
Control Grid Voltage ..	..	..	..	..	-3	-10	-30	
Total Cathode Current average	..	..	..	..	5.85	5.7	5.4 ma	
Conversion Conductance average	..	..	..	..	500	30	2.5 micromhos	
Conversion Impedance..	..	..	..	..	0.5 megohm			

Interelectrode Capacities :—

Control Grid—Anode	..	..	0.3 micro-microfarad approx.
Control Grid—Oscillator Anode	..	..	0.2 " " "
Control Grid—other electrodes	..	..	13.3 " " "
Oscillator Grid—Oscillator Anode	..	..	2.6 " " "
Oscillator Anode—other electrodes	..	..	9.4 " " "
Oscillator Grid—other electrodes	..	..	11.25 " " "
Oscillator Grid—Control Grid	..	..	0.22 " " "

For prices see
pages 126-129.



BASE, 7-PIN.

- 1 : Oscillator Anode G₂
- 2 : Oscillator Grid G₁
- 3 : Screen G₃ G₅
- 4 : Heater
- 5 : Heater
- 6 : Cathode & Metallising
- 7 : Anode

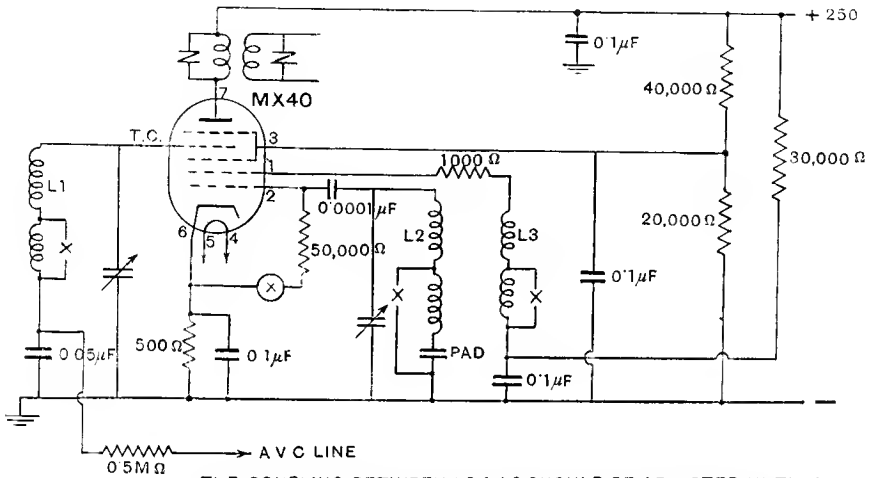
Top Cap : Control Grid G₄

Type MX40 is supplied with metallised or plain carbonised bulb, according to requirements.

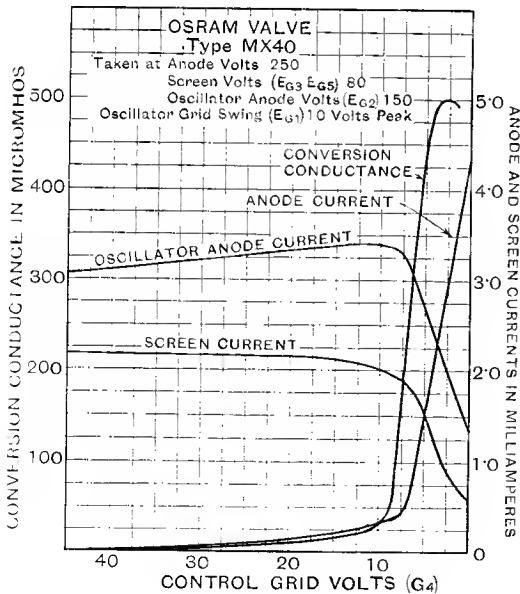
TYPE MX40

TYPICAL OPERATING CONDITIONS.

When operating as a Frequency Changer, the oscillator anode voltage should be about twice that of the screen voltage. The optimum performance is obtained when the screen voltage is of the order of 80 volts. Lower values than this will increase the sensitivity but may lead to parasitic oscillation of the oscillator under certain conditions.



THE COUPLING BETWEEN L2 & L3 SHOULD BE ADJUSTED UNTIL A MILLIAMMETER INSERTED AT THE POINT (X) IN SERIES WITH THE GRID LEAK GIVES A READING OF 0.2 MILLIAMPERES



CHARACTERISTIC CURVES
OF
AVERAGE VALVE.