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 :

G_1 (in proximity to cathode) : Oscillator Grid.
G_2 Oscillator Anode.
G_3 Screen Grid.
G_4 Control Grid with "Variable Mu" characteristics.
G_5 Screen Grid (joined internally to G_3).

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

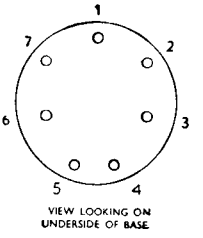
CHARACTERISTICS.

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 (taken on metallised valve)	0.22	,,	,,	,,

For prices see pages 126-129.



VIEW LOOKING ON UNDERSIDE OF BASE

BASE, 7-PIN.

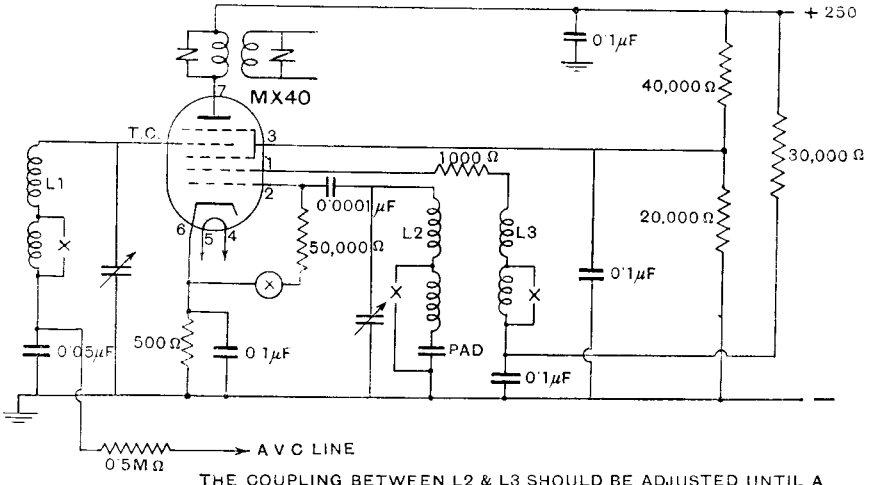
1 : Oscillator Anode G_2
2 : Oscillator Grid G_1
3 : Screen G_3 G_5
4 : Heater
5 : Heater
6 : Cathode & Metallising
7 : Anode
Top Cap : Control Grid G_4

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

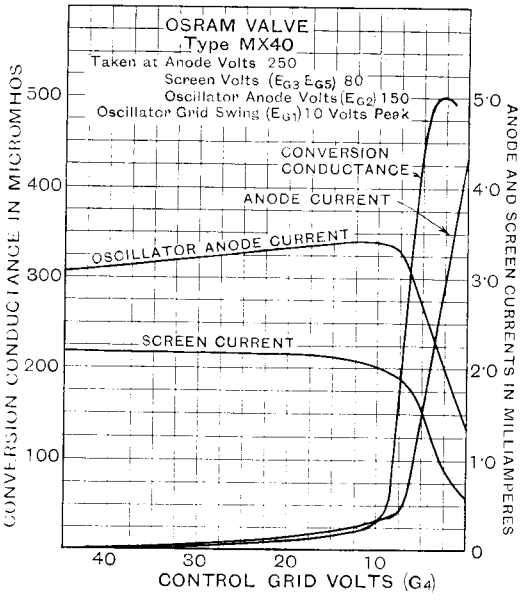
TYPE MX40

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.