



# Osram Valves

Made in England

## TYPE MSP4 SCREEN-PENTODE DETECTOR AND AMPLIFYING VALVE

With Indirectly Heated Cathode  
(For operation from A.C. mains).

The OSRAM MSP4 is an Indirectly Heated Pentode for use with A.C. Mains Receivers, suitable for operation in the High Frequency portion of a receiver.

The MSP4 may also be used as a Detector or Low Frequency amplifier valve.

As a Detector it operates with high efficiency and imposes very little damping on the input circuit.

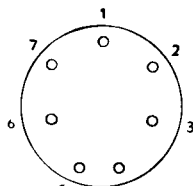
Maximum Dimensions :  
Overall length (including pins)  
140 m/m.

Diameter of bulb 45 m/m.

### CHARACTERISTICS.

Heater Volts .. .. .	..	..	..	..	..	..	..	4.0
Heater Current .. .. .	..	..	..	..	..	..	..	1.0 amp. approx.
								Recommended Operating Conditions.
Anode Volts .. .. .	..	..	..	..	..	..	Max.	250
Screen Volts .. .. .	..	..	..	..	..	..		100
								As Detector (Grid Leak)
								As Detector (Anode Bend)
Grid Volts .. .. .	..	..	..	..	..	..	In Amplifier	0
Anode Current average .. .. .	..	..	..	..	..	..		9.5 ma
Screen Current average .. .. .	..	..	..	..	..	..		3.0 ma
Automatic Bias Resistance .. .. .	..	..	..	..	..	..		—
Anode Load Resistance .. .. .	..	..	..	..	..	..		25,000 ohms
Mutual Conductance .. .. .	..	..	..	..	..	..		2,4 ma/volt
								4.0 m/a volt
<b>Interelectrode Capacities</b> :—							(at grid volts —1.75)	(at grid volts 0)
Grid—Anode (others earthed) .. .. .	..	..	..	..	..	..		0.013 micro-microfarad approx.
Grid—other electrodes .. .. .	..	..	..	..	..	..	17.2	”
Anode—other electrodes .. .. .	..	..	..	..	..	..	10.0	”
								”
								”

For prices see  
pages 126-129.



VIEW LOOKING ON  
UNDERSIDE OF BASE

### BASE, 7-PIN.

- 1: Metallising
- 2: Grid
- 3: Suppressor Grid
- 4: Heater
- 5: Heater
- 6: Cathode
- 7: Screen

Top Cap: Anode

Types MSP4 and MSP41 have carbonised bulbs and can be supplied metallised if required.

## TYPE MSP41

Maximum Dimensions :  
Overall length (including pins)  
140 m/m.

Diameter of bulb  
45 m/m.

For prices see  
pages 126-129.

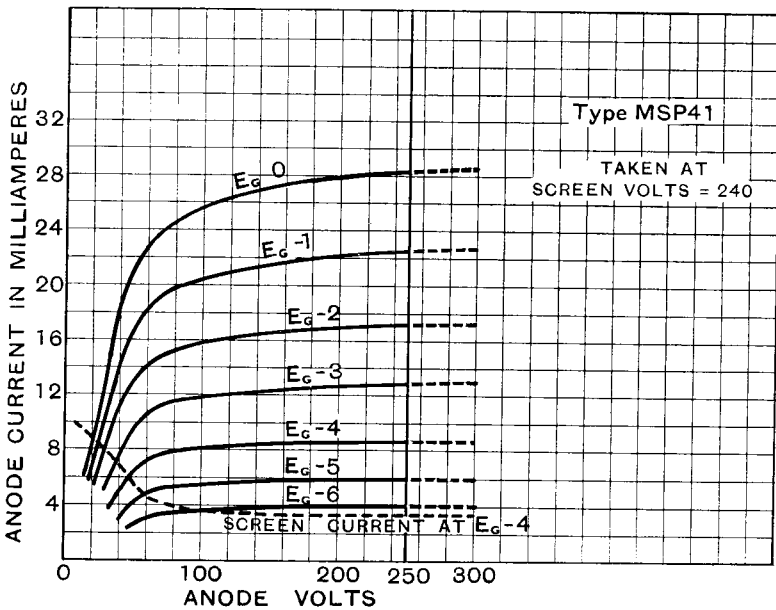
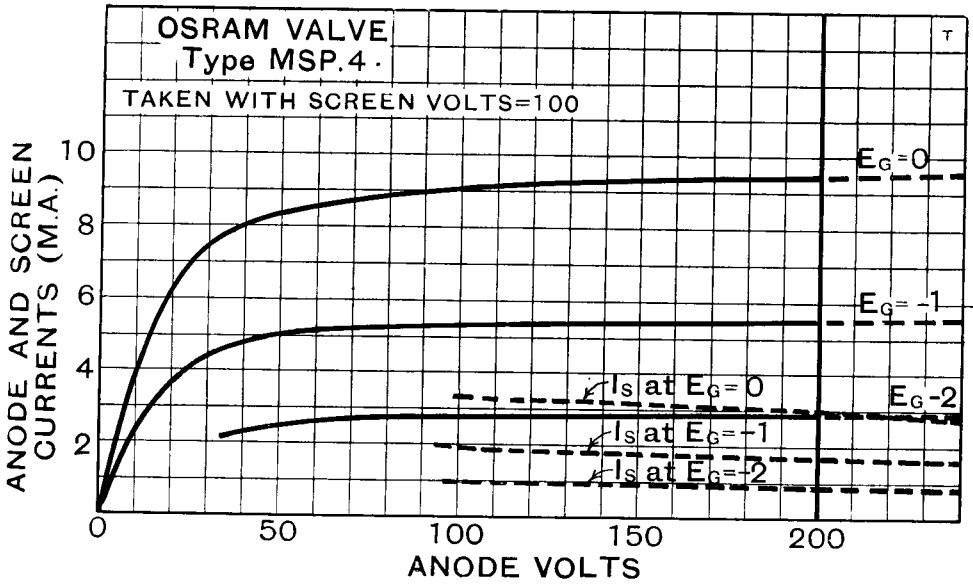
The OSRAM MSP41 is a screen pentode similar in characteristic to type MSP4 but designed to withstand screen voltages up to 240 max.

The mutual conductance under working conditions in an amplifier is higher than with type MSP4 and the available stage gain thus increased.

Mutual conductance 3.2 m.a./volt.  
at Anode volts 250  
Screen volts 240  
Grid volts -4

Total cathode current 12 m.a. approx.  
Base, 7-pin : connections as for MSP4.

# TYPE MSP4 & TYPE MSP41



CHARACTERISTIC CURVES OF AVERAGE VALVES.