

# VALVE DATA PREFERRED TYPES **4**

## OSCILLOSCOPE AND PICTURE TUBES **J**

### OPERATING CONDITIONS

|                 |              |   |
|-----------------|--------------|---|
| $V_{a1}=V_{a3}$ | 2,000        | V |
| $V_{a2}$        | 250 to 450   | V |
| $V_g$           | -1.0 to -100 | V |

**ECR 60**

(contd.)

### LIMITING VALUES

|                      |       |   |
|----------------------|-------|---|
| $V_{a1}=V_{a3}$ max. | 2,500 | V |
| $V_{h-k}$            | 50    | V |

### DEFLECTION SENSITIVITY

|          |                             |
|----------|-----------------------------|
| X plates | $\frac{600}{V_{a3}}$ mm/V   |
| Y plates | $\frac{1,150}{V_{a3}}$ mm/V |

Viewed from the screen end and with the tube positioned so that the spigot key of the base is uppermost, a positive voltage on X' will deflect the spot to the left and a positive voltage on Y' will deflect the spot upwards.



**BASE :**  
B12D

**DIMENSIONS :**  
L=432 mm  
D=160 mm

**Picture Tube with 2½ in. diameter metal-backed screen, for use in Projection Television**

**MW6-2**

### HEATER

$V_h$  6.3 V  $I_h$  0.3 A Suitable for series or parallel operation

**Important Note.**—When used in a series heater chain the surge heater voltage must not exceed 8.5 V (r.m.s.) when the supply is switched on. A current limiting device should therefore be included in the circuit to ensure that this voltage is not exceeded.

### MOUNTING POSITION

The tube may be mounted in any position except screen downward with the axis at an angle of less than 50° to the vertical.

### EXTERNAL CONDUCTIVE COATING

This tube has an external conductive coating designated M, which must be connected to chassis. The capacitance of this coating to the anode may be used to provide smoothing for the E.H.T. supply.

### SPARK TRAP

An internal spark trap, which must be connected to chassis, prevents flash-over between anode and grid within the tube.

### CAPACITANCES

|             |     |            |
|-------------|-----|------------|
| $C_{g-all}$ | 6.3 | $\mu\mu F$ |
| $C_{k-all}$ | 6.3 | $\mu\mu F$ |
| $C_{a-M}$   | 450 | $\mu\mu F$ |



# 4 VALVE DATA J OSCILLOSCOPE AND PICTURE TUBES

## MW6-2 (contd.)

**SCREEN** Metal-backed

### LUMINESCENT COLOUR

White.

The picture diameter must not exceed 57.5 mm

### FOCUSING AND DEFLECTION

Magnetic

The number of ampere-turns required for focusing at  $V_a=25KV$  and with an air-gap of 11 to 13 mm in the magnetic circuit is 920.

The inner diameter of the focus coil should be 27.5 mm, and provision should be made for adjusting in through 2.5 to 3° in both the horizontal and vertical directions for picture centering.

The deflection angle is 38°

### TYPICAL OPERATING CONDITIONS

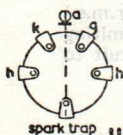
|                     |            |         |
|---------------------|------------|---------|
| $V_a$               | 25         | KV      |
| $I_a$ (av)          | 100        | $\mu A$ |
| * $V_g$ for cut-off | -40 to -90 | V       |

\*In no circumstances must the grid be allowed to become positive with respect to the cathode

### LIMITING VALUES

|                   |           |    |
|-------------------|-----------|----|
| $V_a$ max.        | 25        | KV |
| ** $V_{h-k}$ max. | $\pm 125$ | V  |

\*\* It is necessary to ensure that this value is not exceeded during the warming up period immediately after switching on.



**BASE :**  
V

### DIMENSIONS

L=268 mm  
D= 65 mm

**MW22-14** Television picture tubes with 9 in. diameter screen.

**MW22-14C** These tubes are suitable for series operation

**MW22-17** HEATER

$V_h$  6.3 V  $I_h$  0.3 A

**MW22-18**

**Important Note.**—The heater voltage must not exceed 8.5 V when the supply is switched on. If the heater is connected in series with the heaters of other valves a current limiting device should be included in the circuit to ensure that this voltage is not exceeded.

### CAPACITANCES

|            |       |            |
|------------|-------|------------|
| $C_g$ -all | <10   | $\mu\mu F$ |
| $C_k$ -all | <10   | $\mu\mu F$ |
| $C_{a2-M}$ | 1,000 | $\mu\mu F$ |

