

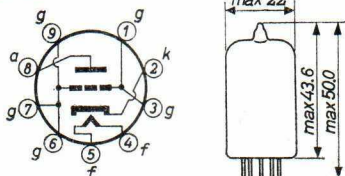
TRIODE for use as grounded grid U.H.F. amplifier in tuners for television bands IV and V

## HEATING

Indirect by A.C. or D.C.; parallel supply

$$\begin{aligned} \text{Heater voltage } V_f &= 6.3 \text{ V} \\ \text{Heater current } I_f &= 165 \text{ mA} \end{aligned}$$

Dimensions in mm



Base: NOVAL

## CAPACITANCES

### Without external screening

$$\text{Anode to grid} \quad C_{ag} = 1.2 \text{ pF}$$

### With external screening (inside diameter 22.2 mm)

$$\text{Anode to grid} \quad C_{ag} = 1.7 \text{ pF}$$

$$\text{Grid to heater and cathode} \quad C_{g(k+f)} = 3.8 \text{ pF}$$

$$\text{Anode to heater and cathode} \quad C_{a(k+f)} = 0.055 \text{ pF}$$

## LIMITING VALUES (Design centre limits)

|                                                                    |                          |                     |
|--------------------------------------------------------------------|--------------------------|---------------------|
| Anode voltage in cold condition                                    | $V_{ao}$                 | = max. 550 V        |
| Anode voltage                                                      | $V_a$                    | = max. 175 V        |
| Anode dissipation                                                  | $W_a$                    | = max. 2 W          |
| Cathode current                                                    | $I_k$                    | = max. 13 mA        |
| Negative grid voltage                                              | $-V_g$                   | = max. 50 V         |
| External grid resistance (at cathode resistor $R_k = 100 \Omega$ ) | $R_g (R_k = 100 \Omega)$ | = max. 1 M $\Omega$ |
| Voltage between heater and cathode                                 | $V_{kf}$                 | = max. 100 V        |

## CHARACTERISTICS

|                             |            |                            |
|-----------------------------|------------|----------------------------|
| Heater voltage              | $V_f =$    | 6.3 V <sup>1)</sup>        |
| Anode voltage               | $V_a =$    | 160 V <sup>1)</sup>        |
| Cathode resistor            | $R_k =$    | 100 $\Omega$ <sup>1)</sup> |
| Anode current               | $I_a =$    | 12.5 mA                    |
| Mutual conductance          | $S =$      | 13.5 mA/V                  |
| Amplification factor        | $\mu =$    | 65                         |
| Equivalent noise resistance | $R_{eq} =$ | 240 $\Omega$               |
| Noise figure                | $F =$      | 10 dB                      |

|                       |          |             |
|-----------------------|----------|-------------|
| Heater voltage        | $V_f =$  | 6.3 V       |
| Anode voltage         | $V_a =$  | 0 V         |
| Positive grid current | $+I_g =$ | 0.3 $\mu$ A |
| Negative grid voltage | $-V_g =$ | max. 1.3 V  |

## Series resonance frequencies

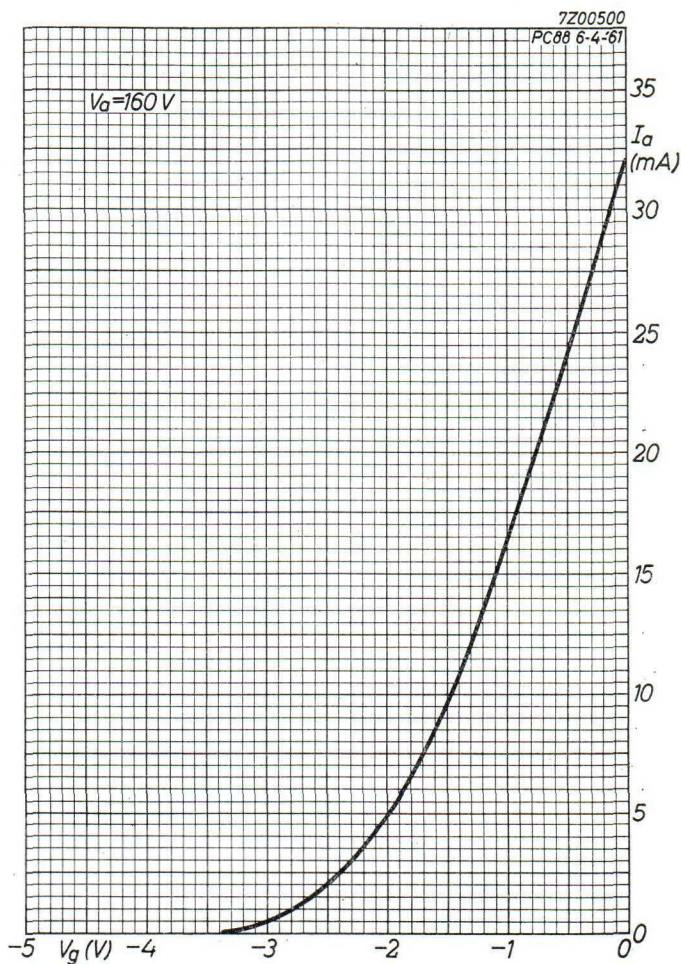
Measured between a point on the relevant tube pin close to the tube bottom and a point close to the relevant pin on a metal reference plane, placed against the tube bottom. All the pins, except the relevant one, are connected to the reference plane with a negligible impedance. The tube is screened by a metal cylinder with an inside diameter of 22.2 mm placed upon the metal reference plane.

|                             |            |           |
|-----------------------------|------------|-----------|
| Heater voltage              | $V_f =$    | 0 V       |
| Anode voltage               | $V_a =$    | 0 V       |
| Anode resonance frequency   | $f_{0a} =$ | 1700 Mc/s |
| Cathode resonance frequency | $f_{0k} =$ | 1000 Mc/s |

<sup>1)</sup> Recommended operating conditions

# PHILIPS

## EC88



4.4.1961

A

**EC88****PHILIPS**