# PHILIPS

# EC1000

SPECIAL QUALITY TRIODE for use as amplifier tube in probes

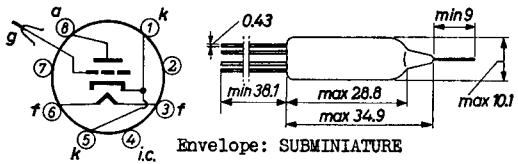
HEATING

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

Heater voltage $V_f$ = 6.3 V

Heater current $I_f$ = 185 mA

Dimensions in mm




Envelope: SUBMINIATURE

CAPACITANCES Without external shield

| | | |
|---|---|---|
| Anode to grid | $C_{ag}$ | = 1.9 pF |
| Anode to cathode | $C_{ak}$ | = 0.5 pF |
| Anode to heater | $C_{af}$ | = 0.3 pF |
| Grid to cathode | $C_{gk}$ | = 3.5 pF |
| Grid to heater | $C_{gf}$ | = 0.05 pF |

LIMITING VALUES (Absolute limits)

| | | | |
|---|---|---|---|
| Anode voltage in cold condition | $V_{a_o}$ | = max. | 275 V |
| Anode voltage | $V_a$ | = max. | 110 V |
| Anode dissipation | $W_a$ | = max. | 1.5 W |
| Negative grid voltage | $-V_g$ | = max. | 55 V |
| External grid resistance | $R_g$ | = | 1) |
| Cathode current | $I_k$ | = max. | 22 mA |
| Voltage between heater and cathode | $V_{kf}$ | = max. | 55 V |
| Bulb temperature | $t_{bulb}$ | = max. | 170 °C |

1) The grid resistance should be restricted to a value such that no limiting values are exceeded at $-I_g$ = 0.01 µA. For calculating the max. permissible value of Rg the D.C. feedback factor of the operating circuit may be taken into account
In practice the maximum usable $R_g$ value will also be defined by the required current stability and the permissible hum level

TYPICAL CHARACTERISTICS

| | | |
|---|---|---|
| Heater voltage | $V_f$ | = 6.3 V |
| Anode voltage | $V_a$ | = 80 V |
| Anode current | $I_a$ | = 14 mA |
| Mutual conductance | S | = 14.5 mA/V |
| Amplification factor | $\mu$ | = 24 |
| Heater voltage | $V_f$ | = 6.3 V |
| Anode voltage | $V_a$ | = 80 V |
| Grid voltage | $V_g$ | = -2 V |
| Anode current | $I_a$ | = 14 mA |
| Input resistance at 250 Mc/s | $r_g$ | = 450 Ω |
| Input resonance frequency | $f_{res}$ | = 400 Mc/s |
| Negative grid current after 1000 hours of operation | $-I_g$ | < 0.01 μA [1] |
| Equivalent noise voltage on the grid | $V_{gnoise}$ | < 1 mV [2] |
| Equivalent microphony voltage on the grid | $V_{gmicr}$ | < 1 mV [3] |
| Heater voltage | $V_f$ | = 6.3 V |
| Grid resistor | $R_g$ | = 0.5 MΩ |
| Cathode resistor at f = 50 c/s | $R_k$ | = 100 Ω |
| Equivalent hum voltage on the grid | $V_{ghum}$ | < 1 mV [4] |

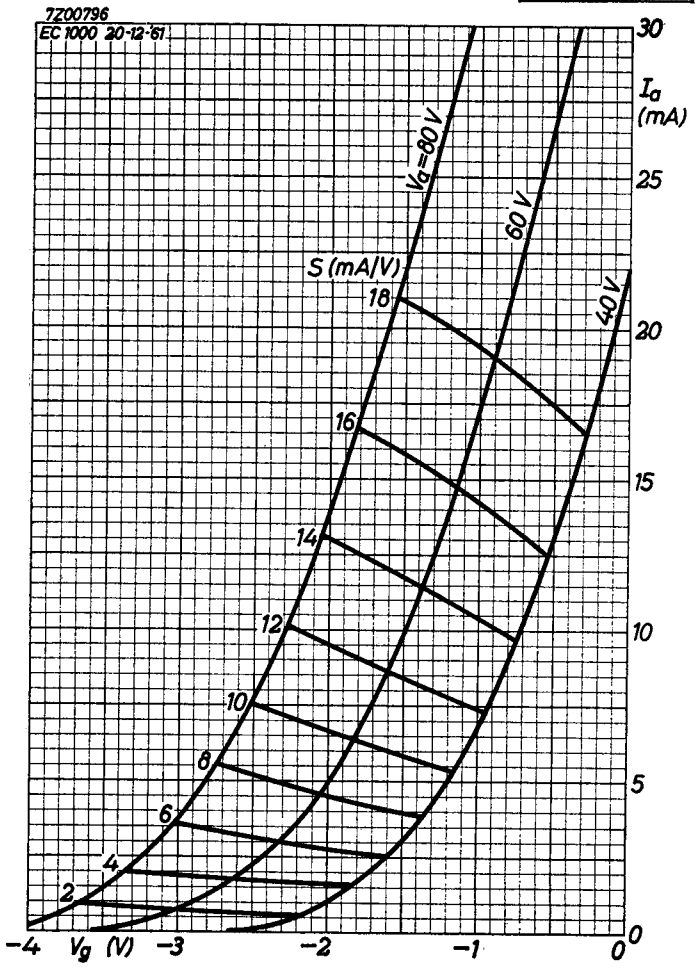
1) End of life value

2) R.M.S. value measured with a straight response filter 0-10000 c/s

3) R.M.S. value measured with an acceleration with a peak value of 4 g at a frequency of 50 c/s

4) R.M.S. value measured with a straight response filter at a heater supply frequency of 50 c/s + 3 % 500 c/s. Heater centre connected to earth

SQ **PHILIPS** **EC1000**




7.7.1962

A

# EC1000

# PHILIPS SQ




B

PHILIPS

Electronic Tube

HANDBOOK

**EC1000**

| page | sheet | date |
|---|---|---|
| 1 | 1 | 1962.07.07 |
| 2 | 2 | 1962.07.07 |
| 3 | A | 1962.07.07 |
| 4 | B | 1962.07.07 |
| 5 | FP | 1999.06.15 |