

High slope, low noise DOUBLE TRIODE with variable mutual conductance for use as V.H.F. cascode amplifier in television tuners

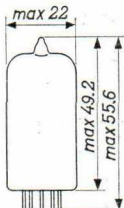
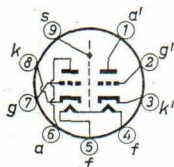
## HEATING

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

Heater current  $I_f = 300 \text{ mA}$

Heater voltage  $V_f = 7.6 \text{ V}$

Dimensions in mm



Base: NOVAL

## REMARK

The system a,g,k should be used as the grounded cathode input section and the system a',g',k' as the grounded grid output section

## CAPACITANCES

### Triode system a,g,k

|                                     |                 | 1)     | 2)      |
|-------------------------------------|-----------------|--------|---------|
| Grid to cathode, heater and screen  | $C_{g-(k+f+s)}$ | 3.5    | 3.5 pF  |
| Anode to cathode, heater and screen | $C_{a-(k+f+s)}$ | 1.7    | 2.3 pF  |
| Anode to grid                       | $C_{ag}$        | 1.9    | 1.9 pF  |
| Grid to heater                      | $C_{gf}$        | < 0.28 | 0.28 pF |

### Triode system a',g',k'

|                                    |                   | 1)   | 2)      |
|------------------------------------|-------------------|------|---------|
| Cathode to grid, heater and screen | $C_{k'-(g'+f+s)}$ | 6.0  | 6.0 pF  |
| Anode to grid, heater and screen   | $C_{a'-(g'+f+s)}$ | 3.4  | 4.0 pF  |
| Anode to cathode                   | $C_{a'k'}$        | 0.18 | 0.17 pF |
| Cathode to heater                  | $C_{k'f}$         | 3.0  | 3.0 pF  |
| Anode to grid                      | $C_{a'g'}$        | 1.9  | 1.9 pF  |

### Between the two triode systems

|                        |           | 1)      | 2)       |
|------------------------|-----------|---------|----------|
| Anode to anode         | $C_{aa'}$ | < 0.045 | 0.015 pF |
| Grid (g) to anode (a') | $C_{ga'}$ | < 0.004 | 0.004 pF |

- 1) Without external shield  
2) With external shield

## TYPICAL CHARACTERISTICS (each system)

|                      |       |   |                |
|----------------------|-------|---|----------------|
| Anode voltage        | $V_a$ | = | 90 V           |
| Grid voltage         | $V_g$ | = | -1.4 V         |
| Anode current        | $I_a$ | = | 15 mA          |
| Mutual conductance   | $S$   | = | 12.5 mA/V      |
| Internal resistance  | $R_i$ | = | 2.5 k $\Omega$ |
| { Grid voltage       | $V_g$ | = | -5 V           |
| { Mutual conductance | $S$   | = | 0,625 mA/V     |
| { Grid voltage       | $V_g$ | = | -9 V           |
| { Mutual conductance | $S$   | = | 0.125 mA/V     |

## LIMITING VALUES (Design centre limits; each system)

|                                                  |           |   |                          |
|--------------------------------------------------|-----------|---|--------------------------|
| Anode voltage in cold condition                  | $V_{a0}$  | = | max. 550 V               |
| Anode voltage                                    | $V_a$     | = | max. 130 V               |
| Anode dissipation                                | $W_a$     | = | max. 1.8 W               |
| Negative grid voltage                            | $-V_g$    | = | max. 50 V                |
| Grid circuit resistance                          |           |   |                          |
| system a,g,k                                     | $R_g$     | = | max. 1 M $\Omega$        |
| system a',g',k'                                  | $R_g$     | = | max. 0.5 M $\Omega$      |
| Cathode current                                  | $I_k$     | = | max. 22 mA               |
| Circuit resistance between<br>cathode and heater | $R_{kf}$  | = | max. 20 k $\Omega$       |
| Voltage between cathode and<br>heater            |           |   |                          |
| system a,g,k                                     | $V_{kf}$  | = | max. 80 V                |
| system a',g',k'<br>(cathode positive)            | $V_{k'f}$ | = | max. 180 V <sup>1)</sup> |

## REMARK

In order not to exceed the maximum permissible anode voltage when the tube is controlled, it is necessary to use a voltage divider for the grid of the grounded grid section

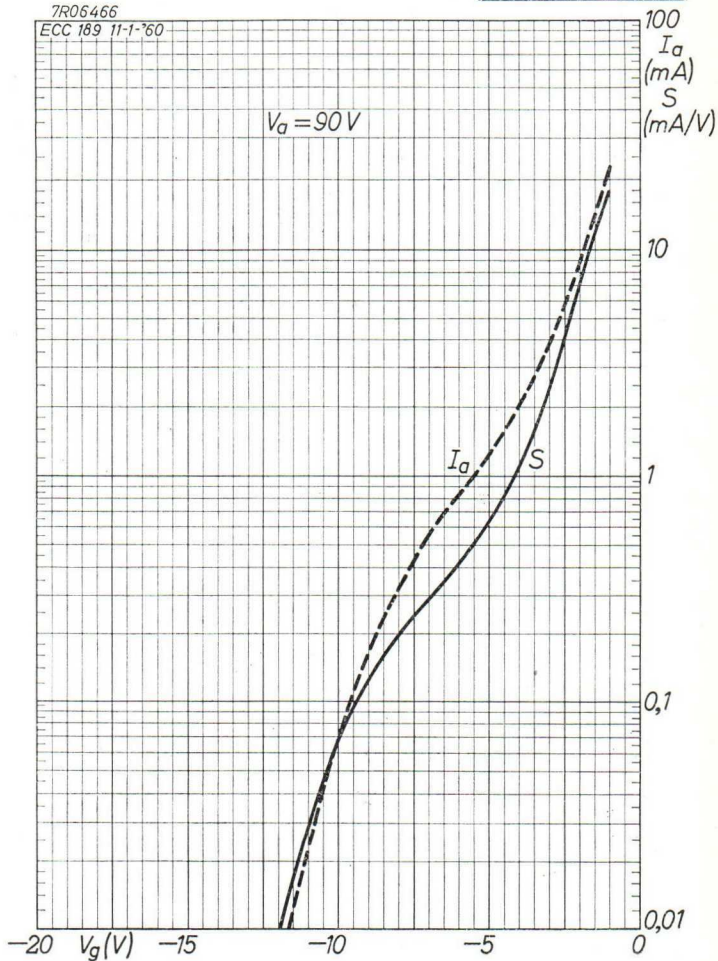
<sup>1)</sup> D.C. component max. 130 V

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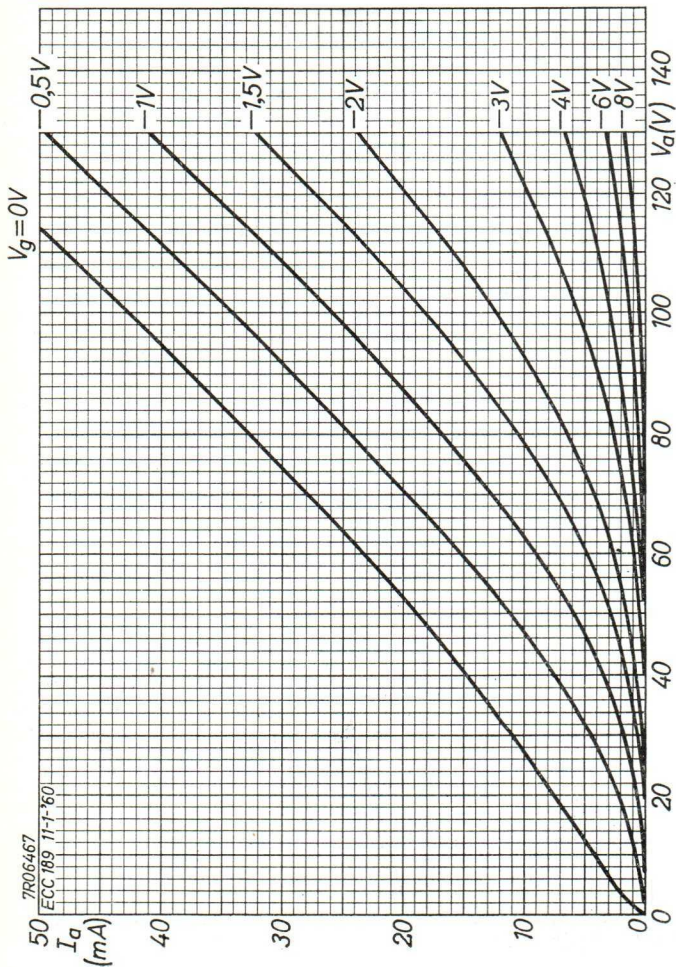


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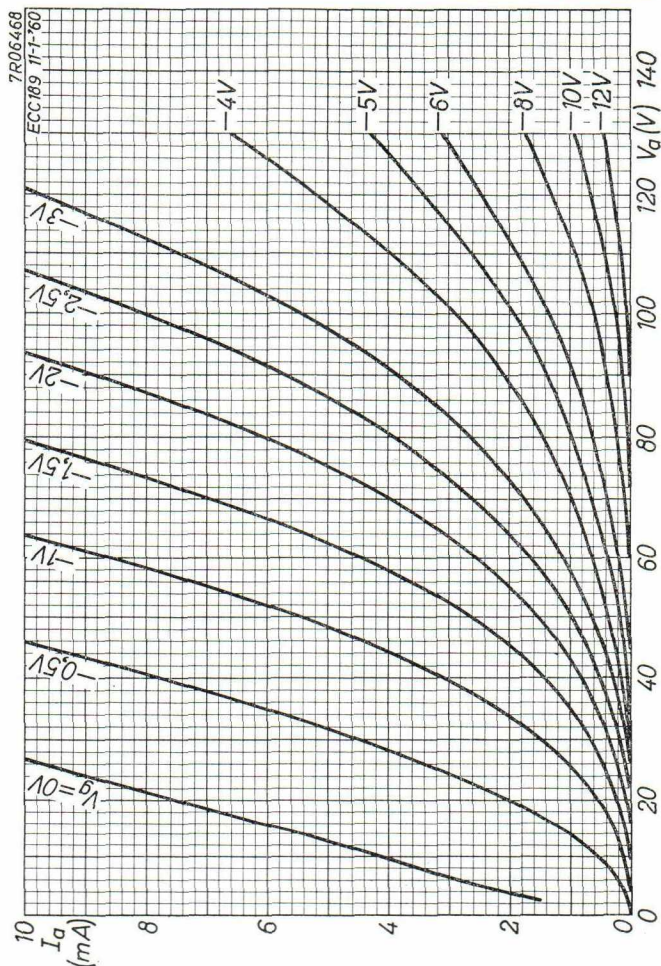
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