TRIODE-HEPTODE

Triode-heptode intended for use as pulse separator, noise inverter and sync. amplifier.

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HEATING: Indirect by A.C. or D.C.; series or parallel supply

Heater voltage $V_f$ 6.3 V

Heater current $I_f$ 300 mA

DIMENSIONS AND CONNECTIONS

Base: Noval

Dimensions in mm
CAPACITANCES

Triode section
Grid to all except anode \( C_{g(a)} \) = 3.0 pF
Anode to grid \( C_{ag} \) = 1.1 pF

Heptode section
Anode to grid No. 1 \( C_{ag1} \) = max. 0.009 pF

Between triode and heptode sections
Grid triode to grid No. 1 heptode \( C_{gTg1H} \) = max. 0.10 pF
Anode triode to grid No. 1 heptode \( C_{aTg1H} \) = max. 0.08 pF
Anode triode to grid No. 3 heptode \( C_{aTg3H} \) = max. 0.13 pF
Grid triode to anode heptode \( C_{gTaH} \) = max. 0.09 pF
Anode triode to anode heptode \( C_{aTaH} \) = max. 0.25 pF

TYPICAL CHARACTERISTICS

Triode section
Anode voltage \( V_a \) = 50 V
Grid voltage \( V_g \) = 0 V
Anode current \( I_a \) = 3 mA
Transconductance \( S \) = 3.7 mA/V
Amplification factor \( \mu \) = 50 -
Anode voltage \( V_a \) = 200 V
Grid voltage \( V_g \) = -11 V
Anode current \( I_a \) = max. 0.1 mA
TYPICAL CHARACTERISTICS (continued)

Heptode section

Anode voltage \( V_a \) 135 V

Grid No. 3 voltage \( V_{g3} \) 0 V

Grids No. 2 and 4 voltage \( V_{g2+4} \) 14 V

Grid No. 1 voltage \( V_{g1} \) 0 V

Anode current \( I_a \) 1.7 mA

Grids No. 2 and 4 current \( I_{g2+4} \) 0.9 mA

Transconductance \( S \) 2.2 mA/V

Grid No. 3 voltage \( V_{g3} \) -2 V

Grid No. 1 voltage \( V_{g1} \) 0 V

Anode current \( I_a \) 20 μA

Grid No. 1 voltage \( V_{g1} \) -1.9 V

Grid No. 3 voltage \( V_{g3} \) 0 V

Anode current \( I_a \) 20 μA

LIMITING VALUES (Design centre rating system)

Heptode section

Anode voltage \( V_{a0} \) max. 550 V

Anode dissipation \( W_a \) max. 1.7 W

Grids No. 2 + 4 voltage \( V_{g2+4o} \) max. 550 V

\( V_{g2+4} \) min. 10 V 1)

Grids No. 2 + 4 dissipation \( W_{g2+4} \) max. 0.8 W

Grid No. 3 voltage, negative peak \( -V_{g3p} \) max. 150 V

Grid No. 3 resistor \( R_{g3} \) max. 3 MΩ

Grid No. 1 voltage, negative peak \( -V_{g1p} \) max. 150 V

Grid No. 1 resistor \( R_{g1} \) max. 3 MΩ

Cathode current \( I_k \) max. 12.5 mA

Cathode to heater voltage \( V_{kf} \) max. 100 V

1) This value applies to an average tube operated under the worst probable conditions.
LIMITING VALUES (continued)

Triode section

Anode voltage

\[ V_{ao} \text{ max. } 550 \text{ V} \]

\[ V_a \text{ max. } 250 \text{ V} \]

Anode dissipation

\[ W_a \text{ max. } 1.3 \text{ W} \]

Grid voltage, negative peak

\[ -V_{gp} \text{ max. } 200 \text{ V} \]

Grid resistor

\[ R_g \text{ max. } 3 \text{ M}\Omega \]

Cathode current

\[ I_k \text{ max. } 10 \text{ mA} \]

Cathode to heater voltage

\[ V_{kf} \text{ max. } 100 \text{ V} \]
The diagram shows the relationship between $I_o$ (mA) and $V_{g3}$ (V) for a triode.

- $V_o = 135 \, V$
- $V_{g2+4} = 14 \, V$
- $V_{g1} = 0 \, V$

The graph includes curves for different values of $V_a$ (50V, 100V, 150V).
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