HEPTODE FREQUENCY CHANGER

Heptode primarily intended for use as a frequency changer.

HEATER

Suitable for series or parallel operation a.c. or d.c.

\[
\begin{align*}
V_h & = 6.3 \text{ V} \\
I_h & = 0.3 \text{ A}
\end{align*}
\]

MOUNTING POSITION

Any

CAPACITANCES (measured without an external shield)

\[
\begin{align*}
C_{a-a11} & = 8.6 \mu\text{F} \\
C_{g1-a11} & = 5.5 \mu\text{F} \\
C_{g2-a11} & = 7.2 \mu\text{F} \\
C_{a-g1} & < 0.05 \mu\text{F} \\
C_{a-k3} & < 0.3 \mu\text{F} \\
C_{g1-k3} & < 0.15 \mu\text{F} \\
C_{g1-k} & = 2.8 \mu\text{F}
\end{align*}
\]

OPERATING CONDITIONS (with separate excitation)*

\[
\begin{align*}
V_a & = 100 \quad 250 \text{ V} \\
V_{R2\ldots R4} & = 100 \quad 100 \text{ V} \\
V_{R3} & = -1.5 \quad -1.5 \text{ V} \\
R_{g1-k} & = 20 \quad 20 \text{ k}\Omega \\
I_k & = 10.6 \quad 10.6 \text{ mA} \\
I_a & = 2.8 \quad 3.0 \text{ mA} \\
I_{g2\ldots R4} & = 7.3 \quad 7.1 \text{ mA} \\
I_{g1} & = 500 \quad 500 \mu\text{A} \\
g_c & = 455 \quad 475 \mu\text{A/V} \\
r_a & = 0.5 \quad 1.0 \text{ M}\Omega \\
V_{R1} & \text{ (for 100 : 1 reduction in } g_c) \quad -30 \quad -30 \text{ V}
\end{align*}
\]

*The operating conditions shown with separate excitation correspond very closely with those obtained in a self-excited oscillator circuit operating with zero bias.

OSCILLATOR SECTION

\[
\begin{align*}
V_a & = 100 \text{ V} \\
V_{R2\ldots R4} & = 100 \text{ V} \\
V_{R3} & = 0 \text{ V} \\
V_{R1} & = 0 \text{ V} \\
I_a & = 25 \text{ mA} \\
g_m(R1\ldots R2\ldots R4; a) & = 7.25 \text{ mA/V} \\
g_{\lambda}(R1\ldots R2\ldots R4; a) & = 20
\end{align*}
\]

LIMITING VALUES

\[
\begin{align*}
V_{h(b)} \text{ max.} & = 550 \text{ V} \\
V_h \text{ max.} & = 300 \text{ V} \\
p_a \text{ max.} & = 1.0 \text{ W} \\
V_{R2\ldots R4(b)} \text{ max.} & = 300 \text{ V} \\
V_{R2\ldots R4} \text{ max.} & = 100 \text{ V} \\
P_{R2\ldots R4} \text{ max.} & = 1.0 \text{ W} \\
I_k \text{ max.} & = 14 \text{ mA} \\
R_{g3\ldots k} \text{ max.} & = 3.0 \text{ M}\Omega \\
V_{h\ldots k} \text{ max.} & = 90 \text{ V}
\end{align*}
\]
EK90

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IS07

B7G BASE

Mullard

ISSUE 1

EK90 754-2
HEPTODE FREQUENCY CHANGER

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CONVERSION CONDUCTANCE AND CATHODE CURRENT PLOTTED AGAINST OSCILLATOR GRID CURRENT

Mullard

ISSUE 1
HEPTODE FREQUENCY CHANGER

Heptode primarily intended for use as a frequency changer.

CONVERSION CONDUCTANCE PLOTTED AGAINST CONTROL GRID VOLTAGE