DOUBLE DIODE OUTPUT PENTODE

High-sensitivity output pentode for use in A.C. mains-operated equipment, and combined with twin diodes.

HEATER

\[ \begin{align*}
V_h & = 6.5 \text{ V} \\
I_h & = 1.5 \text{ A}
\end{align*} \]

CAPACITANCES

\[ \begin{align*}
c_{ad} & < 0.35 \text{ } \mu\text{F} \\
c_{ad-k} & = 3.0 \text{ } \mu\text{F} \\
c_{ad-k} & = 3.6 \text{ } \mu\text{F} \\
c_{ad-gl} & < 0.15 \text{ } \mu\text{F} \\
c_{ad-gl} & = 0.15 \text{ } \mu\text{F} \\
c_{ad-a} & = 1.0 \text{ } \mu\text{F} \\
c_{ad-a} & = 0.5 \text{ } \mu\text{F}
\end{align*} \]

OPERATING CONDITIONS AS CLASS "A" AMPLIFIER

\[ \begin{align*}
V_a & = 250 \text{ V} \\
V_{g2} & = 250 \text{ V} \\
I_a & = 36 \text{ mA} \\
R_k & = 146 \text{ ohms} \\
V_{g1} & = -6.0 \text{ V} \\
I_{g2} & = 5.0 \text{ mA} \\
E_m & = 9.5 \text{ mA/V} \\
R_a & = 50,000 \text{ ohms} \\
R_{a} & = 7,000 \text{ ohms} \\
W_{out} & = 4.3 \text{ W} \\
D_{tot} & = 10 \% \\
Vin \text{ (rms)} & = 3.6 \text{ V} \\
Vin \text{ (rms) } (50 \text{ mW}) & = 0.35 \text{ V}
\end{align*} \]
DOUBLE DIODE OUTPUT PENTODE

High-sensitivity output pentode for use in A.C. mains-operated equipment, and combined with twin diodes.

**LIMITING VALUES**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_a(b)$</td>
<td>550 V</td>
</tr>
<tr>
<td>$V_a$ max.</td>
<td>250 V</td>
</tr>
<tr>
<td>$I_a$ max.</td>
<td>9 W</td>
</tr>
<tr>
<td>$I_k$ max.</td>
<td>55 mA</td>
</tr>
<tr>
<td>$V_{g2}(b)$ max.</td>
<td>550 V</td>
</tr>
<tr>
<td>$V_{g2}$ max.</td>
<td>250 V</td>
</tr>
<tr>
<td>$V_{g2}$ max.</td>
<td>1.5 W</td>
</tr>
<tr>
<td>$V_{g1}$ max. $(I_{g1}=0.3\mu A)$</td>
<td>-1.3 V</td>
</tr>
<tr>
<td>$R_{g1-a}$ max.</td>
<td>1 megohm</td>
</tr>
<tr>
<td>$V_{h-k}$ max.</td>
<td>50 V</td>
</tr>
<tr>
<td>$R_{h-k}$ max.</td>
<td>5,000 ohms</td>
</tr>
<tr>
<td>$V_{ad'}$ max.</td>
<td>200 V</td>
</tr>
<tr>
<td>$V_{ad''}$ max.</td>
<td>200 V</td>
</tr>
<tr>
<td>$I_{ad'}$ max.</td>
<td>0.8 mA</td>
</tr>
<tr>
<td>$I_{ad''}$ max.</td>
<td>0.8 mA</td>
</tr>
<tr>
<td>$V_{ad'}$ max. $(I_{ad'}=0.3\mu A)$</td>
<td>-1.3 V</td>
</tr>
<tr>
<td>$V_{ad''}$ max. $(I_{ad''}=0.3\mu A)$</td>
<td>-1.3 V</td>
</tr>
</tbody>
</table>

**ARRANGEMENT OF ELECTRODES AND BASE CONNECTIONS**

**DIMENSIONS**

[Diagram of the tube with labels for connections and dimensions]

OCTAL BASE
DOUBLE DIODE OUTPUT PENTODE

High-sensitivity output pentode for use in A.C. mains-operated equipment, and combined with twin diodes.

$V_{a} = V_{g2} = 250V$

$V_{g1}$

$mA$

$V_{g1}$

$I_{a}$

$I_{g2}$
EBL31 DOUBLE DIODE OUTPUT PENTODE

High-sensitivity output pentode for use in A.C. mains-operated equipment, and combined with twin diodes.

[Graph showing characteristics of the EBL31 diode with axes and labels.]

Mullard

ISSUE 2

EBL31 1546/4
DOUBLE DIODE OUTPUT PENTODE

High-sensitivity output pentode for use in A.C. mains-operated equipment, and combined with twin diodes.

\[ V_{in}, V_{out} \]

\[ R_a = 38 \text{ mA} \]
\[ R_k = 146 \text{ } \Omega \]
\[ R_d = 7000 \text{ } \Omega \]

\[ V_a, V_b = 250 \text{V} \]