THE 3DK6 IS A SHARP CUTOFF PENTODE IN THE 7-PIN MINIATURE CONSTRUCTION DESIGNED FOR SERVICE AS A WIDE-BAND HIGH-FREQUENCY AMPLIFIER. THE VERY HIGH TRANSCONDUCTANCE AT LOW PLATE AND SCREEN POTENTIALS, COMBINED WITH THE LOW INTERELECTRODE CAPACITANCES MAKES IT PARTICULARLY SUITABLE FOR USE AS AN RF AMPLIFIER IN TELEVISION RECEIVERS. THERMAL CHARACTERISTICS OF THE HEATER ARE CONTROLLED SUCH THAT HEATER VOLTAGE SURGES DURING THE WARM-UP CYCLE ARE MINIMIZED PROVIDED IT IS USED WITH OTHER TYPES WHICH ARE SIMILARLY CONTROLLED. EXCEPT FOR HEATER RATINGS, THE 3DK6 IS IDENTICAL TO THE 40K6.

DIRECT INTERELECTRODE CAPACITANCES
WITHOUT EXTERNAL SHIELD

| GRID #1 TO PLATE (MAX.)* | 0.029 | μμμF |
| INPUT | 6.3 | μμμF |
| OUTPUT | 1.9 | μμμF |

RATINGS
INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

HEATER VOLTAGE
3.15 VOLTS

MAXIMUM PLATE VOLTAGE
350 VOLTS

MAXIMUM GRID #2 SUPPLY VOLTAGE*
350 VOLTS

MAXIMUM GRID #2 VOLTAGE
SEE GRID #2 INPUT RATING CURVE

MAXIMUM PLATE DISSIPATION
2.3 WATTS

MAXIMUM GRID #2 DISSIPATION
0.95 WATTS

MAXIMUM GRID #1 VOLTAGE:
POSITIVE VALUE
0 VOLTS

MAXIMUM HEATER CATHODE VOLTAGE:
HEATER NEGATIVE WITH RESPECT TO CATHODE
TOTAL DC AND PEAK
300 VOLTS

HEATER POSITIVE WITH RESPECT TO CATHODE
DC COMPONENT
100 VOLTS

TOTAL DC AND PEAK
200 VOLTS

HEATER WARM-UP TIME (APPROX.)

*HEATER WARM-UP TIME IS DEFINED AS THE TIME REQUIRED FOR THE VOLTAGE ACROSS THE HEATER TO REACH 80% OF ITS RATED VOLTAGE AFTER APPLYING 4 TIMES RATED HEATER VOLTAGE TO A CIRCUIT CONSISTING OF THE TUBE HEATER IN SERIES WITH A RESISTANCE OF VALUE 3 TIMES THE NOMINAL HEATER OPERATING RESISTANCE.

*INDICATES AN ADDITION CONTINUED ON FOLLOWING PAGE
**TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEATER VOLTAGE</td>
<td>3.15</td>
<td>VOLTS</td>
</tr>
<tr>
<td>HEATER CURRENT</td>
<td>0.6×10⁻⁶</td>
<td>AMP.</td>
</tr>
<tr>
<td>PLATE VOLTAGE</td>
<td>125</td>
<td>VOLTS</td>
</tr>
<tr>
<td>GRID #3 (SUPPRESSOR) CONNECTED TO CATHODE AT SOCKET</td>
<td></td>
<td>VOLTS</td>
</tr>
<tr>
<td>GRID #2 VOLTAGE</td>
<td>125</td>
<td>VOLTS</td>
</tr>
<tr>
<td>CATHODE BIAS RESISTOR</td>
<td>56</td>
<td>OHMS</td>
</tr>
<tr>
<td>PLATE RESISTANCE (APPROX.)*</td>
<td>0.35</td>
<td>MEGOHM</td>
</tr>
<tr>
<td>TRANSCONDUCTANCE</td>
<td>9800</td>
<td>μMHO</td>
</tr>
<tr>
<td>PLATE CURRENT</td>
<td>12.0</td>
<td>MA.</td>
</tr>
<tr>
<td>GRID #2 CURRENT</td>
<td>3.8</td>
<td>MA.</td>
</tr>
<tr>
<td>GRID #1 CUTOFF BIAS^</td>
<td>-6.5</td>
<td>VOLTS</td>
</tr>
</tbody>
</table>

^FOR PLATE CURRENT OF 20 MA.

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**Graphs**

- **3DK6**
- $E_f = 3.15$ Volts
- $E_b = 125$ Volts
- $E_{C2} = 125$ Volts
3DK6

$E_f = 125$ Volts
$E_{C2} = 125$ Volts

GRID VOLTS

PLATE MILLIAMPERES

0 100 200 300 400 500

0 5 10 15 20

-3.5 -3.0 -2.5 -2.0 -1.5 -1.0 -0.5

PLATE VOLTS

3DK6

$E_f = 3.15$ Volts
$E_{C2} = 125$ Volts

SCREEN MILLIAMPERES

0 100 200 300 400 500

0 5 10 15

0.5 1.0 1.5 2.0
3DK6

Ef = 3.15 Volts
Eb = 125 Volts
Ec2 = 125 Volts

3DK6

Ef = 3.15 Volts

Grid #2 Dissipation expressed as % of max. grid #2 supply voltage

Grid #2 voltage expressed as % of max. grid #2 supply voltage