Dual Triode
With High-Mu Unit and Low-Mu Unit

GENERAL DATA

Electrical:
Heater, for Unipotential Cathodes:
  Voltage (AC or DC) .................................. 6.3 ± 10% volts
  Current at 6.3 volts ................................ 0.925 amp
Direct Interelectode Capacitances (Approx.):

<table>
<thead>
<tr>
<th>Unit No. 1</th>
<th>Unit No. 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid to plate .................................. 4.8</td>
<td>10 μF</td>
</tr>
<tr>
<td>Grid to cathode and heater .................... 2.2</td>
<td>7 μF</td>
</tr>
<tr>
<td>Plate to cathode and heater ................... 0.6</td>
<td>1.8 μF</td>
</tr>
</tbody>
</table>

Characteristics, Class A1 Amplifier:

<table>
<thead>
<tr>
<th>Unit No. 1</th>
<th>Unit No. 2</th>
</tr>
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<tbody>
<tr>
<td>Plate Voltage ................................... 250</td>
<td>150 volts</td>
</tr>
<tr>
<td>Grid Voltage .................................... -3</td>
<td>-20 volts</td>
</tr>
<tr>
<td>Amplification Factor ............................ 68</td>
<td>5.4</td>
</tr>
<tr>
<td>Plate Resistance (Approx.) ..................... 40000</td>
<td>750 ohms</td>
</tr>
<tr>
<td>Transconductance ................................ 1600</td>
<td>7200 μmhos</td>
</tr>
<tr>
<td>Plate Current ................................... 1.4</td>
<td>50 ma</td>
</tr>
<tr>
<td>Plate Current for plate volts = 60 and grid volts = 0 .......... -</td>
<td>95 ma</td>
</tr>
<tr>
<td>Plate Current for grid volts = -20 .......... -</td>
<td>10 ma</td>
</tr>
<tr>
<td>Grid Voltage (Approx.) for plate μa = 10 .................. -5.5</td>
<td>- volts</td>
</tr>
<tr>
<td>Grid Voltage (Approx.) for plate μa = 100 ................ -</td>
<td>-45 volts</td>
</tr>
</tbody>
</table>

Mechanical:

Operating Position .................................. Any
Maximum Overall Length ................................ 2-7/8"
Maximum Seated Length ................................ 2-5/16"
Maximum Diameter .................................. 1-9/32"
Bulb .................................................. T9
Base ................................................. Short Intermediate-Shell Octal 8-Pin
  with External Barriers (JEDEC Group 1, BB-58)
Basing Designation for BOTTOM VIEW .................. 8BD

Pin 1—Grid of ........................................ Unit No. 2
Pin 2—Plate of ....................................... Unit No. 2
Pin 3—Cathode of ................................... Unit No. 2
Pin 4—Grid of ........................................ Unit No. 1
Pin 5—Plate of ....................................... Unit No. 1
Pin 6—Cathode of ................................... Unit No. 1
Pin 7—Heater ......................................... Pin 8—Heater

⇒ Indicates a change.
VERTICAL-DEFLECTION OSCILLATOR
Values are for Unit No. 1

Maximum Ratings, Design-Maximum Values:
For operation in a 525-line, 30-frame system\textsuperscript{b}

DC PLATE VOLTAGE .......................... 330 max. volts
PEAK NEGATIVE-PULSE GRID VOLTAGE ...... 400 max. volts
CATHODE CURRENT:
Peak ........................................... 77 max. ma
Average ....................................... 22 max. ma
PLATE DISSIPATION ........................... 1.5 max. watts
PEAK HEATER-CATHODE VOLTAGE:
Heater negative with respect to cathode.. 200 max. volts
Heater positive with respect to cathode.. 200\textsuperscript{c} max. volts

Maximum Circuit Values:
Grid-Circuit Resistance:
For grid-resistor-bias or cathode-bias operation .......................... 2.2 max. megohms

VERTICAL-DEFLECTION AMPLIFIER
Values are for Unit No. 2

Maximum Ratings, Design-Maximum Values:
For operation in a 525-line, 30-frame system\textsuperscript{b}

DC PLATE VOLTAGE .......................... 330 max. volts
PEAK POSITIVE-PULSE PLATE VOLTAGE\textsuperscript{d} ............... 1500 max. volts
PEAK NEGATIVE-PULSE GRID VOLTAGE ...... 250 max. volts
CATHODE CURRENT:
Peak ........................................... 175 max. ma
Average ....................................... 50 max. ma
PLATE DISSIPATION ........................... 10 max. watts
PEAK HEATER-CATHODE VOLTAGE:
Heater negative with respect to cathode.. 200 max. volts
Heater positive with respect to cathode.. 200\textsuperscript{c} max. volts

Maximum Circuit Values:
Grid-Circuit Resistance:
For grid-resistor-bias or cathode-bias operation .......................... 2.2 max. megohms

\textsuperscript{a} Without external shield.
\textsuperscript{b} As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.
\textsuperscript{c} The dc component must not exceed 100 volts.
\textsuperscript{d} This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.

OPERATING CONSIDERATIONS
The bulb becomes hot during operation. To insure adequate cooling, therefore, it is essential that free circulation of air be provided.