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

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:
Heater Characteristics and Ratings (Design-Maximum Values):
Voltage (AC or DC).................. 6.3 ± 0.6 volts
Current at heater volts = 6.3........ 0.900 amp
Peak heater-cathode voltage (Each unit):
   Heater negative with
   respect to cathode............. 200 max. volts
   Heater positive with
   respect to cathode............... 200 max. volts
Direct Interelectrode Capacitances (Approx.):\(^b\)

<table>
<thead>
<tr>
<th>Unit No. 1</th>
<th>Unit No. 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid to plate</td>
<td>4.0</td>
</tr>
<tr>
<td>Grid to cathode and heater</td>
<td>2.2</td>
</tr>
<tr>
<td>Plate to cathode and heater</td>
<td>0.52</td>
</tr>
</tbody>
</table>

Characteristics, Class A\(_1\) Amplifier:

<table>
<thead>
<tr>
<th>Unit No. 1</th>
<th>Unit No. 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Voltage</td>
<td>250</td>
</tr>
<tr>
<td>Grid Voltage</td>
<td>17.5 -11</td>
</tr>
<tr>
<td>Amplification Factor</td>
<td>8750</td>
</tr>
<tr>
<td>Transconductance</td>
<td>2000</td>
</tr>
<tr>
<td>Plate Current</td>
<td>5.5 80(c)</td>
</tr>
<tr>
<td>Plate Current for grid volts = -24</td>
<td>-</td>
</tr>
<tr>
<td>Grid Voltage (Approx.) for plate (\mu A = 10)</td>
<td>-</td>
</tr>
<tr>
<td>Grid Voltage (Approx.) for plate (\mu A = 50)</td>
<td>-</td>
</tr>
</tbody>
</table>

Mechanical:
Operating Position.................................. Any
Type of Cathodes.................................. Coated Unipotential
Maximum Overall Length.......................... 2-5/8"\(d\)
Maximum Seated Length............................. 2-3/8"\(e\)
Length, Base Seat to Bulb Top (Excluding tip) | 2" ± 3/32" |
Diameter........................................ 0.750" to 0.875"
Dimensional Outline.............................. See General Section
Bulb............................................. Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW. ............... 9HF

Pin 1 - Plate of
Unit No.2
Pin 2 - Grid of
Unit No.2
Pin 3 - Grid of
Unit No.2
Pin 4 - Heater
Pin 5 - Heater

Pin 6 - Plate of
Unit No.1
Pin 7 - Grid of
Unit No.1
Pin 8 - Cathode of
Unit No.1
Pin 9 - Cathode of
Unit No.2

VERTICAL-DEFLECTION OSCILLATOR

Values are for Unit No. 1

Maximum Ratings, Design-Maximum Values:

For operation in a 525-line, 30-frame system

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

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

DC PLATE VOLTAGE. .................. 275 max. volts
PEAK POSITIVE-PULSE PLATE VOLTAGE# 1500 max. volts
PEAK NEGATIVE-PULSE GRID VOLTAGE. 250 max. volts
CATHODE CURRENT:
Peak. ................................. 175 max. ma
Average ................................ 50 max. ma
PLATE DISSIPATION ................... 7 max. watts

Maximum Circuit Values:

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

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a The dc component must not exceed 100 volts.
b Without external shield.
c This value can be measured by a method involving a recurrent wave form
such that the maximum ratings of the tube will not be exceeded.
d As described in "Standards of Good Engineering Practice Concerning Tele-
vision Broadcast Stations," Federal Communications Commission.

Indicates a change.
This rating is applicable when 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.
6DE7
DUAL TRIODE
With Medium-Mu Unit and Low-Mu Unit
9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:
Heater, for Unipotential Cathodes:
  Voltage .................. 6.3 ± 10% ... ac or dc volts
  Current .................. 0.9 ............... amp
Direct Interelectrode Capacitances (Approx.):

<table>
<thead>
<tr>
<th>Unit No. 1 Unit No. 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid to plate ........... 4 8.5 μf</td>
</tr>
<tr>
<td>Grid to cathode and heater .... 2.2 5.5 μf</td>
</tr>
<tr>
<td>Plate to cathode and heater .......... 0.52 1 μf</td>
</tr>
</tbody>
</table>

Characteristics, Class A Amplifier:

<table>
<thead>
<tr>
<th>Unit No. 1 Unit No. 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Voltage ........... 250 60 150 volts</td>
</tr>
<tr>
<td>Grid Voltage ........... -11 0 -17.5 volts</td>
</tr>
<tr>
<td>Amplification Factor ........... 17.5 6</td>
</tr>
<tr>
<td>Plate Resistance (Approx.) .... 8750 925 ohms</td>
</tr>
<tr>
<td>Transconductance ........... 2000 6500 μmhos</td>
</tr>
<tr>
<td>Plate Current ........... 5.5 80* 35 ma</td>
</tr>
<tr>
<td>Plate Current for grid voltage of -24 volts ........... - - 10 ma</td>
</tr>
<tr>
<td>Grid Voltage (Approx.) for plate current of 10 μa ........... -20 - - volts</td>
</tr>
<tr>
<td>Grid Voltage (Approx.) for plate current of 50 μa ........... - - -44 volts</td>
</tr>
</tbody>
</table>

Mechanical:
Operating Position .................................. Any
Maximum Overall Length ................................ 2-5/8"
Maximum Seated Length ................................ 2-3/8"
Length, Base Seat to Bulb Top (Excluding tip) ........... 2" ± 3/32"
Diameter ........................................... 0.750" to 0.875"
Dimensional Outline .................................. See General Section
Bulb .............................................. T6-1/2
Base .............................................. Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW ..................... 9HF

Pin 1 - Plate of Unit No. 2  
Pin 2 - Grid of Unit No. 2  
Pin 3 - Grid of Unit No. 2  
Pin 4 - Heater  
Pin 5 - Heater  
Pin 6 - Plate of Unit No. 1  
Pin 7 - Grid of Unit No. 1  
Pin 8 - Cathode of Unit No. 1  
Pin 9 - Cathode of Unit No. 2

6-59  TENTATIVE DATA 1

ELECTRON TUBE DIVISION  
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
### VERTICAL-DEFLECTION OSCILLATOR

**Values are for Unit No. 1**

**Maximum Ratings, Design-Maximum Values:**

For operation in a 525-line, 30-frame system

<table>
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<th>Parameter</th>
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<tr>
<td>DC PLATE VOLTAGE</td>
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<tr>
<td>CATHODE CURRENT:</td>
<td></td>
</tr>
<tr>
<td>Peak</td>
<td>77 max. ma</td>
</tr>
<tr>
<td>Average</td>
<td>22 max. ma</td>
</tr>
<tr>
<td>PLATE DISSIPATION®</td>
<td>7 max. watts</td>
</tr>
<tr>
<td>PEAK HEATER-CATHODE VOLTAGE:</td>
<td></td>
</tr>
<tr>
<td>Heater negative with respect to cathode</td>
<td>200 max. volts</td>
</tr>
<tr>
<td>Heater positive with respect to cathode</td>
<td>200 max. volts</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Parameter</th>
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<tbody>
<tr>
<td>DC PLATE VOLTAGE</td>
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<td>PEAK POSITIVE-PULSE PLATE VOLTAGE*</td>
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**Maximum Circuit Values:**

Grid-Circuit Resistance:

For grid–resistor–bias or cathode–bias operation. 2.2 max. megohms

---

* Without external shield.

* This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

* As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

* In stages operating with grid–resistor bias, an adequate cathode–bias resistor or other suitable means is required to protect the tube in the absence of excitation.

* The dc component must not exceed 100 volts.