Sharp-Cutoff Twin Pentode
With Common Cathode, Grid No.1, & Grid No.2

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 .......................... 0.300 amp
Peak heater-cathode voltage:
Heater negative with respect to cathode ................. 200 max. volts
Heater positive with respect to cathode ................. 200 max. volts
Direct Interelectrode Capacitances:
Grid No.3 to plate (Each unit) .......................... 2.0 pf
Grid No.1 to all other electrodes ...................... 6.0 pf
Grid No.3 (Each unit) to all other electrodes ......... 3.6 pf
Plate (Each unit) to all other electrodes ............... 3.0 pf
Grid No.3 (Unit No.1) to grid No.3 (Unit No.2) ....... 0.015 max. pf

Characteristics, Class A1 Amplifier:
With one unit operating and plate and grid No.3 of other unit connected to ground
Plate Voltage .................................................. 100 100 volts
Grid-No.3 Voltage ........................................... 0 0 volts
Grid-No.2 Voltage ........................................... 67.5 67.5 volts
Grid-No.1 Voltage ........................................... 0 c volts
Grid-No.3-to-Plate Transconductance .................. - 450 μmhos
Grid-No.1-to-Plate Transconductance .................. 1100 - μmhos
Plate Current ................................................. - 2 ma
Grid-No.3 Voltage (Approx.) for plate μa = 100. ...... -3.5 volts
Grid-No.1 Voltage (Approx.) for plate μa = 100. ....... -2.3 volts

With both units operating
Plate Voltage (Each unit) ................................. 100 100 volts
Grid-No.3 Voltage (Each unit) ......................... -10 0 volts
Grid-No.2 Voltage ........................................... 67.5 67.5 volts
Grid-No.1 Voltage ........................................... 0 c volts
Plate Current (Each unit) ................................. - 2 ma
Grid-No.2 Current ........................................... 7 4.4 ma
Cathode Current ............................................. 7.1 8.5 ma

* Indicates a change.
Mechanical:
Operating Position. ................. Any
Type of Cathode .................. Coated Unipotential
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, ........ 9FG

| Pin 1 – Cathode       | Pin 2 – Grid No.2, Internal Shield |
| Pin 3 – Plate of Unit No.2 |
| Pin 4 – Heater        | Pin 5 – Heater                     |
| Pin 6 – Grid No.3 of Unit No.2 |
| Pin 7 – Grid No.1     | Pin 8 – Plate of Unit No.1         |
| Pin 9 – Grid No.3 of Unit No.1 |

AMPLIFIER — Class A1

Maximum Ratings, Design—Maximum Values:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLATE VOLTAGE (Each unit)</td>
<td>300 max. volts</td>
</tr>
<tr>
<td>GRID-No.3 (SUPPRESSOR-GRID) VOLTAGE</td>
<td></td>
</tr>
<tr>
<td>Peak positive value</td>
<td>50 max. volts</td>
</tr>
<tr>
<td>DC negative value</td>
<td>50 max. volts</td>
</tr>
<tr>
<td>DC positive value</td>
<td>3 max. volts</td>
</tr>
<tr>
<td>GRID-No.2 (SCREEN-GRID) VOLTAGE</td>
<td>150 max. volts</td>
</tr>
<tr>
<td>GRID-No.1 (CONTROL-GRID) VOLTAGE</td>
<td></td>
</tr>
<tr>
<td>Negative-bias value</td>
<td>50 max. volts</td>
</tr>
<tr>
<td>CATHODE CURRENT</td>
<td>12 max. ma</td>
</tr>
<tr>
<td>GRID-No.2 INPUT</td>
<td>0.75 max. watt</td>
</tr>
<tr>
<td>PLATE DISSIPATION (Each unit)</td>
<td>1.1 max. watts</td>
</tr>
</tbody>
</table>

Maximum Circuit Values:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid-No.3—Circuit Resistance (Each unit)</td>
<td>0.5 max. megohm</td>
</tr>
<tr>
<td>Grid-No.1—Circuit Resistance</td>
<td>0.5 max. megohm</td>
</tr>
</tbody>
</table>

a The dc component must not exceed 100 volts.
b Without external shield.
c Adjusted to give a dc grid-No.1 current of 100 microamperes.

→ Indicates a change.
AVERAGE PLATE CHARACTERISTICS
Each Unit

$E_t = 6.3$ VOLTS
GRID—No. 3 VOLTS = 0
GRID—No. 2 VOLTS = 67.5
PLATE AND GRID No. 3 OF
OTHER UNIT CONNECTED
to GROUND.
AVERAGE PLATE CHARACTERISTICS
Each Unit

Eₚ = 6.3 VOLTS
GRID—No. 2 VOLTS = 67.5
GRID—No. 1 MILLIAMPERES = 0.1
PLATE AND GRID No. 3 OF OTHER UNIT CONNECTED TO GROUND.

PLATE MILLIAMPERES

PLATE VOLTS

2.5
2
0.5
0

92CM = 11102

RADIO CORPORATION OF AMERICA
Electron Tube Division
Harrison, N. J.
AVERAGE CHARACTERISTICS
Each Unit

E₁ = 6.3 VOLTS
PLATE Volts = 150
GRID-No. 3 VOLTS = 0
PLATE AND GRID No. 3 OF
OTHER UNIT CONNECTED
TO GROUND.
AVERAGE CHARACTERISTICS
Each Unit

$E_t = 6.3$ VOLTS
PLATE VOLTS = 150
GRID—No. 1 MILLIAMPERES = 0.1
PLATE AND GRID No. 3 OF
OTHER UNIT CONNECTED
TO GROUND.