Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE
For Equipment Having Series Heater-String Arrangement

GENERAL DATA

Electrical:
Heater, for Unipotential Cathode:

<table>
<thead>
<tr>
<th>Heater arrangement</th>
<th>Series</th>
<th>Parallel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage (AC or DC)</td>
<td>12.6 ± 10%</td>
<td>6.3 volts</td>
</tr>
<tr>
<td>Current</td>
<td>0.3</td>
<td>0.6 ± 6% amp</td>
</tr>
<tr>
<td>Warm-up time (Average)</td>
<td>-</td>
<td>11 sec</td>
</tr>
</tbody>
</table>

Direct Interelectrode Capacitances:

- Grid No.1 to plate: 0.063 µf
- Grid No.1 to cathode, grid No.3 & internal shield, grid No.2, and heater: 10.2 µf
- Plate to cathode, grid No.3 & internal shield, grid No.2, and heater: 3.5 µf

Characteristics, Class A1 Amplifier:

- Plate Supply Voltage: 250 volts
- Grid No.3: Connected to cathode at socket
- Grid-No.2 Supply Voltage: 180 volts
- Cathode Resistor: 100 ohms
- Plate Resistance (Approx.): 93000 ohms
- Transconductance: 11000 µmhos
- Plate Current: 26 ma
- Grid-No.2 Current: 5.75 ma
- Grid-No.1 Voltage (Approx.) for plate µa = 20: -11.6 volts

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: 9BF

Pin 1 - Cathode
Pin 2 - Grid No.1
Pin 3 - Grid No.3, Internal Shield
Pin 4 - Heater
Pin 6 - Heater Tap
Pin 7 - Plate
Pin 8 - Grid No.2
Pin 9 - Grid No.3, Internal Shield

*Indicates a change.*
AMPLIFIER — Class A

Maximum Ratings, Design—Maximum Values:

PLATE VOLTAGE ........................................ 330 max. volts
GRID No.3 (SUPPRESSOR GRID) ...Connect to cathode at socket
GRID-No.2 (SCREEN-GRID) VOLTAGE .......... 190 max. volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:
   Negative-bias value ................................. 55 max. volts
   Positive-bias value ................................. 0 max. volts
GRID-No.2 INPUT ....................................... 1.2 max. watts
PLATE DISSIPATION .................................. 6.5 max. watts
PEAK HEATER-CATHODE VOLTAGE:
   Heater negative with
      respect to cathode. ......................... 200 max. volts
   Heater positive with
      respect to cathode. ......................... 200\textsuperscript{b} max. volts

Maximum Circuit Values:

Grid-No.1—Circuit Resistance:
   For fixed-bias operation. ........................ 0.25 max. megohm
   For cathode-bias operation. ................. 1 max. megohm

\textsuperscript{a} Without external shield.
\textsuperscript{b} The dc component must not exceed 100 volts.
AVERAGE PLATE CHARACTERISTICS

$E_i = 12.6$ VOLTS
SERIES HEATER ARRANGEMENT,
GRID NO. 3 CONNECTED TO CATHODE
AT SOCKET.
GRID NO. 2 VOLTS = 180