6DE6

SHARP-CUTOFF PENTODE

7-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:
- Voltage: 6.3 ± 10% volts
- Current: 0.3 amp

Direct Interelectrode Capacitances:

<table>
<thead>
<tr>
<th>Without External Shield</th>
<th>With External Shield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid No.1 to plate</td>
<td>0.025 max.</td>
</tr>
<tr>
<td>Grid No.1 to cathode,</td>
<td>0.015 max.</td>
</tr>
<tr>
<td>grid No.3 &amp; internal</td>
<td>μf</td>
</tr>
<tr>
<td>shield, grid No.2, and</td>
<td></td>
</tr>
<tr>
<td>heater</td>
<td></td>
</tr>
<tr>
<td>Plate to cathode, grid</td>
<td>6.5 μf</td>
</tr>
<tr>
<td>No.3 &amp; internal shield,</td>
<td></td>
</tr>
<tr>
<td>grid No.2, and heater</td>
<td>2 μf</td>
</tr>
</tbody>
</table>

Characteristics, Class A1 Amplifier:

- Plate Supply Voltage: 125 volts
- Grid No.3: 56 ohms
- Grid-No.2 Supply Voltage: 125 volts
- Cathode Resistor: 0.25 megohm
- Plate Resistance (Approx.): 8000 μmhos
- Plate Current: 4.2 ma
- Grid-No.2 Current: 15.5 ma
- Grid-No.1 Voltage (Approx.) for plate μa = 20: -9 volts
- Grid-No.1 Voltage (Approx.) for transconductance (μmhos) = 700 and cathode resistor (ohms) = 0: -5.5 volts

Mechanical:

- Operating Position: Any
- Maximum Overall Length: 2-1/8"
- Maximum Seated Length: 1-7/8"
- Length, Base Seat To Bulb Top (Excluding tip): 1-1/2" ± 3/32"
- Diameter: 0.650" to 0.750"
- Dimensional Outline: See General Section
- Bulb: T5-1/2
- Base: Small-Button Miniature 7-Pin (JEDEC No.E7-1)

Indicates a change.
SHARP-CUTOFF PENTODE

Basing Designation for BOTTOM VIEW ............. 7CM

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

AMPLIFIER — Class A1

Maximum Ratings, Design—Maximum Values:

PLATE VOLTAGE ........................................ 330 max. volts
GRID-No.3 (SUPPRESSOR-GRID) VOLTAGE ........ 0 max. volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE .... 330 max. volts
GRID-No.2 VOLTAGE ................................. See Grid-No.2 Input Rating Chart at front of Receiving Tube Section
GRID-No.1 (CONTROL-GRID) VOLTAGE:
Positive-bias value ............................ 0 max. volts
GRID-No.2 INPUT:
For grid-No.2 voltages up to 165 volts ........ 0.55 max. watt
For grid-No.2 voltages between 165 and 330 volts . See Grid-No.2 Input Rating Chart at front of Receiving Tube Section

PLATE DISSIPATION .................................... 2.3 max. watts

PEAK HEATER-CATHODE VOLTAGE:
Heater negative with respect to cathode ............ 200 max. volts
Heater positive with respect to cathode .......... 200* 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

* With external shield JEDEC No.316 connected to cathode.
@ Connected to cathode at socket.
# The dc component must not exceed 100 volts.
AVERAGE PLATE CHARACTERISTICS

$E_f = 6.3$ VOLTS
GRID NR. 3 CONNECTED TO CATHODE AT SOCKET.
GRID-NR. 2 VOLTS = 125
AVerage Characteristics

$E_c = 6.3$ Volts
Plate Volts = 125
Grid No. 3 connected to Cathode at Socket.
Grid No. 2 Volts = 125

Grid No. 1 Volts

Plate (Ia) or Grid-2 (TC2) Milliamperes

Conductance (m) - Micromhos

Electron Tube Division
Radio Corporation of America, Harrison, New Jersey

92CM-8575RI