6CB6
SHARP-CUTOFF PENTODE
MINIATURE TYPE

GENERAL DATA

Electrical:
Heater, for Unipotential Cathode:
Voltage: ................. 6.3 ....... ac or dc volts
Current: ................. 0.3 ....... amp
Direct Inter-electrode 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>0.020 max.</td>
</tr>
<tr>
<td>Grid No.1 to cathode,</td>
<td>0.010 max. μf</td>
</tr>
<tr>
<td>grid No.3 &amp; internal</td>
<td></td>
</tr>
<tr>
<td>shield, grid No.2,</td>
<td></td>
</tr>
<tr>
<td>and heater ............</td>
<td>6.5 μf</td>
</tr>
<tr>
<td>Plate to cathode,</td>
<td>6.5 μf</td>
</tr>
<tr>
<td>grid No.3 &amp; internal</td>
<td></td>
</tr>
<tr>
<td>shield, grid No.2,</td>
<td></td>
</tr>
<tr>
<td>and heater ............</td>
<td>1.9 μf</td>
</tr>
<tr>
<td></td>
<td>3.0 μf</td>
</tr>
</tbody>
</table>

Mechanical:
Mounting 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"
Maximum Diameter ....................................... 3-4"
Bulb ......................................................... T-5-1/2"
Base ....................................................... Small-Button Miniature 7-Pin (JETEC No.E7-1)
Basing Designation for BOTTOM VIEW .................. 7CM

Pin 1 - Grid No.1
Pin 2 - Cathode
Pin 3 - Heater
Pin 4 - Heater
Pin 5 - Plate
Pin 6 - Grid No.2
Pin 7 - Grid No.3, Internal Shield

AMPLIFIER - Class A1

Maximum Ratings, Design-Center Values:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>PLATE VOLTAGE</td>
<td>300 max. volts</td>
</tr>
<tr>
<td>GRID-No.2 (SCREEN) SUPPLY VOLTAGE</td>
<td>300 max. volts</td>
</tr>
<tr>
<td>GRID-No.2 VOLTAGE</td>
<td>See Grid-No.2 Input Rating Chart at front of Receiving Tube Section</td>
</tr>
<tr>
<td>PLATE DISSIPATION</td>
<td>2 max. watts</td>
</tr>
<tr>
<td>GRID-No.2 INPUT:</td>
<td></td>
</tr>
<tr>
<td>For grid-No.2 voltages up to 150 volts</td>
<td>0.5 max. watt</td>
</tr>
<tr>
<td>For grid-No.2 voltages between 150 and 300 volts</td>
<td>See Grid-No.2 Input Rating Chart at front of Receiving Tube Section</td>
</tr>
</tbody>
</table>

O with external shield JETEC No.316 connected to cathode.

MAR. 1, 1955
TUBE DIVISION
DATA
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
PEAK HEATER–CATHODE VOLTAGE:
Heater negative with respect to cathode. 200 max. volts
Heater positive with respect to cathode. 200 max. volts

Typical Operation and Characteristics:
Plate Voltage ............................................. 200 volts
Grid No.3 (Suppressor). .......................... Connected to cathode at socket
Grid-No.2 Voltage ......................................... 150 volts
Cathode-Bias Resistor ............................. 180 ohms
Plate Resistance (Approx.) ..................... 0.6 megohm
Transconductance ................................. 6200 μhoms
Grid-No.1 Voltage (Approx.) for
plate current of 10 μamp. .................. -8 volts
Plate Current ........................................... 9.5 ma
Grid-No.2 Current ................................. 2.8 ma

▲ The dc component must not exceed 100 volts.
$E_p = 6.3\ \text{VOLTS}$
$\text{GRID-N°2 VOLTS} = 150$
AVERAGE CHARACTERISTICS

$E_f = 6.3$ VOLTS
PLATE VOLTS = 200
GRID-$N_1$ VOLTS = 150

GRID-$N_1$ VOLTS

PLATE ($I_b$) OR GRID-$N_2$ ($I_{C2}$) MILLIAMPERES

11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000

TRANSCONDUCTANCE ($g_m$) MICROMOSHS

-7 -6 -5 -4 -3 -2 -1 0

SEPT. 28, 1949
TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY 92CM-7375