6CB6-A
SHARP-CUTOFF PENTODE
7-PIN MINIATURE TYPE

With heater having controlled warm-up time

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:
  Voltage. 6.3 ac or dc volts
  Current. 0.3 ± 6% .amp
  Warm-up time (Average). 11 sec

For definition of heater warm-up time and method of determining it, see sheet HEATER WARM-UP TIME MEASUREMENT at front of this Section.

Direct Interelectrode Capacitances:

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

Characteristics, Class A Amplifier:

<table>
<thead>
<tr>
<th></th>
<th>Without External Shield</th>
<th>With External Shield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate-Supply Voltage.</td>
<td>125 volts</td>
<td>125 volts</td>
</tr>
<tr>
<td>Grid No.3</td>
<td></td>
<td>▼</td>
</tr>
<tr>
<td>Grid-No.2 Supply Voltage.</td>
<td>125 volts</td>
<td>▼</td>
</tr>
<tr>
<td>Grid-No.1 Voltage</td>
<td>-3 volts</td>
<td>▼</td>
</tr>
<tr>
<td>Cathode Resistor.</td>
<td></td>
<td>- 56 ohms</td>
</tr>
<tr>
<td>Plate Resistance (Approx.)</td>
<td>0.28 megohm</td>
<td>▼</td>
</tr>
<tr>
<td>Transconductance.</td>
<td></td>
<td>8000 µmhos</td>
</tr>
<tr>
<td>Plate Current</td>
<td>2.8 ma</td>
<td>▼</td>
</tr>
<tr>
<td>Grid-No.2 Current</td>
<td>3.7 ma</td>
<td>▼</td>
</tr>
<tr>
<td>Grid-No.1 Voltage (Approx.)</td>
<td>for plate µa = 20</td>
<td>-6.5 volts</td>
</tr>
</tbody>
</table>

Mechanical:

Operating Position. Any
Maximum Overall Length. 2-1/8" Max
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)

See next page.
6CB6-A

SHARP-CUTOFF PENTODE

Basing Designation for Bottom View. ....... 7CBM

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-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 be-
tween 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.
$E_F = 6.3$ VOLTS
GRID NO. 3 CONNECTED TO CATHODE AT SOCKET.
GRID NO. 2 VOLTS = 125

ELECTRON TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
E<sub>p</sub>=6.3 VOLTS
PLATE VOLTS=125
GRID N°3 CONNECTED TO CATHODE AT SOCKET.
GRID-N°2 VOLTS=125