



6CB6-A

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## 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. . . . .                 | $0.3 \pm 6\%$ | . . . . . 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:

|                                                                                             | <i>Without<br/>External<br/>Shield</i> | <i>With<br/>External<br/>Shield<sup>o</sup></i> |               |
|---------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------|---------------|
| Grid No.1 to plate. . . . .                                                                 | 0.025 max.                             | 0.015 max.                                      | $\mu\text{f}$ |
| Grid No.1 to cathode &<br>internal shield & grid<br>No.3, grid No.2, and<br>heater. . . . . | 6.5                                    | 6.5                                             | $\mu\text{f}$ |
| Plate to cathode & internal<br>shield & grid No.3, grid<br>No.2, and heater. . . . .        | 2                                      | 3                                               | $\mu\text{f}$ |

**Characteristics, Class A<sub>1</sub> Amplifier:**

|                                                                       |     |      |                  |
|-----------------------------------------------------------------------|-----|------|------------------|
| Plate-Supply Voltage. . . . .                                         | 125 | 125  | volts            |
| Grid No.3 . . . . .                                                   | ◆   | ◆    |                  |
| Grid-No.2 Supply Voltage. . . . .                                     | 125 | 125  | volts            |
| Grid-No.1 Voltage . . . . .                                           | -3  | -    | volts            |
| Cathode Resistor. . . . .                                             | -   | 56   | ohms             |
| Plate Resistance (Approx.) . . . . .                                  | -   | 0.28 | megohm           |
| Transconductance. . . . .                                             | -   | 8000 | $\mu\text{mhos}$ |
| Plate Current . . . . .                                               | 2.8 | 13   | ma               |
| Grid-No.2 Current . . . . .                                           | -   | 3.7  | ma               |
| Grid-No.1 Voltage (Approx.)<br>for plate $\mu\text{a} = 20$ . . . . . | -   | -6.5 | 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" $\pm$ 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) |

o, ◆: See next page.

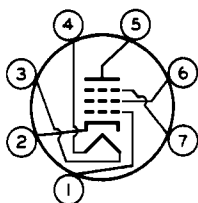


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## SHARP-CUTOFF PENTODE

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 A<sub>1</sub>

## 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 . . . . .             | <i>See Grid-No.2 Input</i> |       |

*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<br>to 165 volts. . . . . | 0.55 max. | watt |
|----------------------------------------------------|-----------|------|

|                                                                 |                            |  |
|-----------------------------------------------------------------|----------------------------|--|
| For grid-No.2 voltages be-<br>tween 165 and 330 volts . . . . . | <i>See Grid-No.2 Input</i> |  |
|-----------------------------------------------------------------|----------------------------|--|

*Rating Chart at front of Receiving Tube Section*

|                             |          |       |
|-----------------------------|----------|-------|
| PLATE DISSIPATION . . . . . | 2.3 max. | watts |
|-----------------------------|----------|-------|

PEAK HEATER-CATHODE VOLTAGE:

|                                                     |          |       |
|-----------------------------------------------------|----------|-------|
| Heater negative with<br>respect to cathode. . . . . | 200 max. | volts |
|-----------------------------------------------------|----------|-------|

|                                                     |                       |       |
|-----------------------------------------------------|-----------------------|-------|
| Heater positive with<br>respect to cathode. . . . . | 200 <sup>▲</sup> 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.

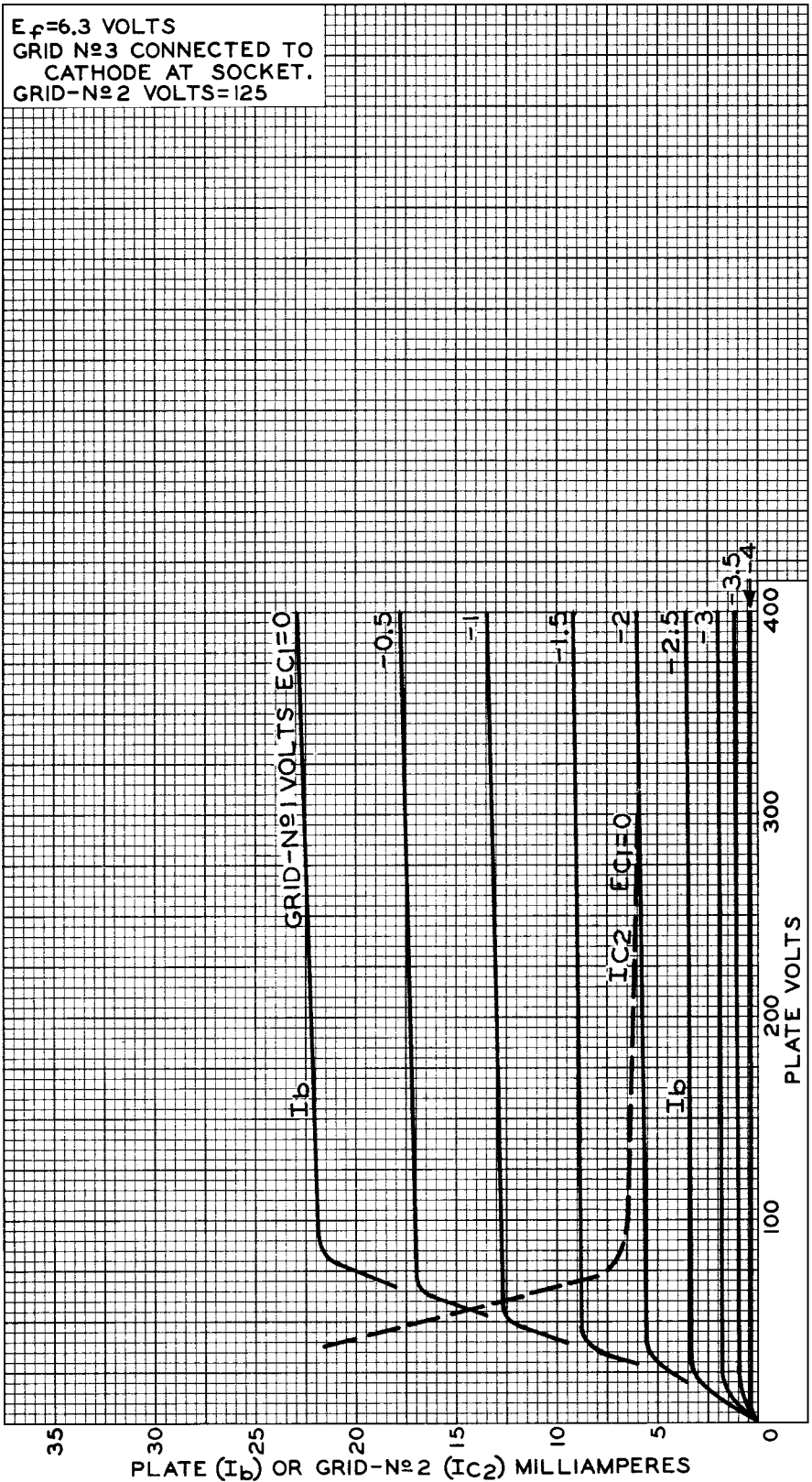


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# AVERAGE CHARACTERISTICS

$E_f = 6.3$  VOLTS  
GRID No 3 CONNECTED TO  
CATHODE AT SOCKET.  
GRID-No 2 VOLTS = 125



ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-9854

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## AVERAGE CHARACTERISTICS

