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## SHARP-CUTOFF PENTODE

7-PIN MINIATURE TYPE

## GENERAL DATA

## Electrical:

Heater, for Unipotential Cathode:

Voltage. . . . . 6.3 . . . . . ac or dc volts

Current. . . . . 0.15 . . . . . amp

Direct Interelectrode Capacitances:

|                                                                                             | <i>Without<br/>External<br/>Shield</i> | <i>With<br/>External<br/>Shield<sup>0</sup></i> |               |
|---------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------|---------------|
| Grid No.1 to plate . . . . .                                                                | 0.0035 max.                            | 0.0035 max.                                     | $\mu\text{f}$ |
| Grid No.1 to cathode,<br>grid No.3 & internal<br>shield, grid No.2,<br>and heater . . . . . | 5.4                                    | 5.4                                             | $\mu\text{f}$ |
| Plate to cathode,<br>grid No.3 & internal<br>shield, grid No.2,<br>and heater . . . . .     | 4.4                                    | 4.4                                             | $\mu\text{f}$ |

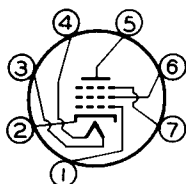
Characteristics, Class A<sub>1</sub> Amplifier:

|                                                                                  |                                       |      |                  |
|----------------------------------------------------------------------------------|---------------------------------------|------|------------------|
| Plate Voltage. . . . .                                                           | 100                                   | 250  | volts            |
| Grid No.3 (Suppressor) . . . . .                                                 | <i>Connected to cathode at socket</i> |      |                  |
| Grid-No.2 Voltage. . . . .                                                       | 100                                   | 150  | volts            |
| Grid-No.1 Voltage. . . . .                                                       | -1                                    | -1   | volt             |
| Plate Resistance (Approx.) . . . . .                                             | 0.7                                   | 1.4  | megohm           |
| Transconductance . . . . .                                                       | 3400                                  | 4600 | $\mu\text{mhos}$ |
| Plate Current. . . . .                                                           | 3.6                                   | 7.4  | ma               |
| Grid-No.2 Current. . . . .                                                       | 1.4                                   | 2.9  | ma               |
| Grid-No.1 Voltage (Approx.) for<br>plate current of 10 $\mu\text{amp}$ . . . . . | -5                                    | -7.7 | volts            |

## 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" $\pm$ 3-3/32"                         |
| Maximum Diameter . . . . .                              | 3/4"                                         |
| Dimensional Outline. . . . .                            | See General Section                          |
| 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

<sup>0</sup> With external shield JETEC No.316 connected to cathode.

← Indicates a change.

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## SHARP-CUTOFF PENTODE

AMPLIFIER - Class A<sub>1</sub>

## Maximum Ratings, Design-Center Values:

PLATE VOLTAGE. . . . . 300 max. volts

GRID-No.2 (SCREEN) SUPPLY VOLTAGE. . . . . 300 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:

Negative bias value. . . . . 50 max. volts

Positive bias value. . . . . 0 max. volts

PLATE DISSIPATION. . . . . 3 max. watts

→ GRID-No.2 INPUT:

For grid-No.2 voltages up to 150 volts . . 0.5 max. watt

For grid-No.2 voltages between 150

and 300 volts. . . . . See Grid-No.2 Input Rating Chart  
at front of Receiving Tube Section

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. . 90 max. volts

Heater positive with respect to cathode. . 90 max. volts

→ Indicates a change.

SEPT. 1, 1955

TUBE DIVISION

DATA

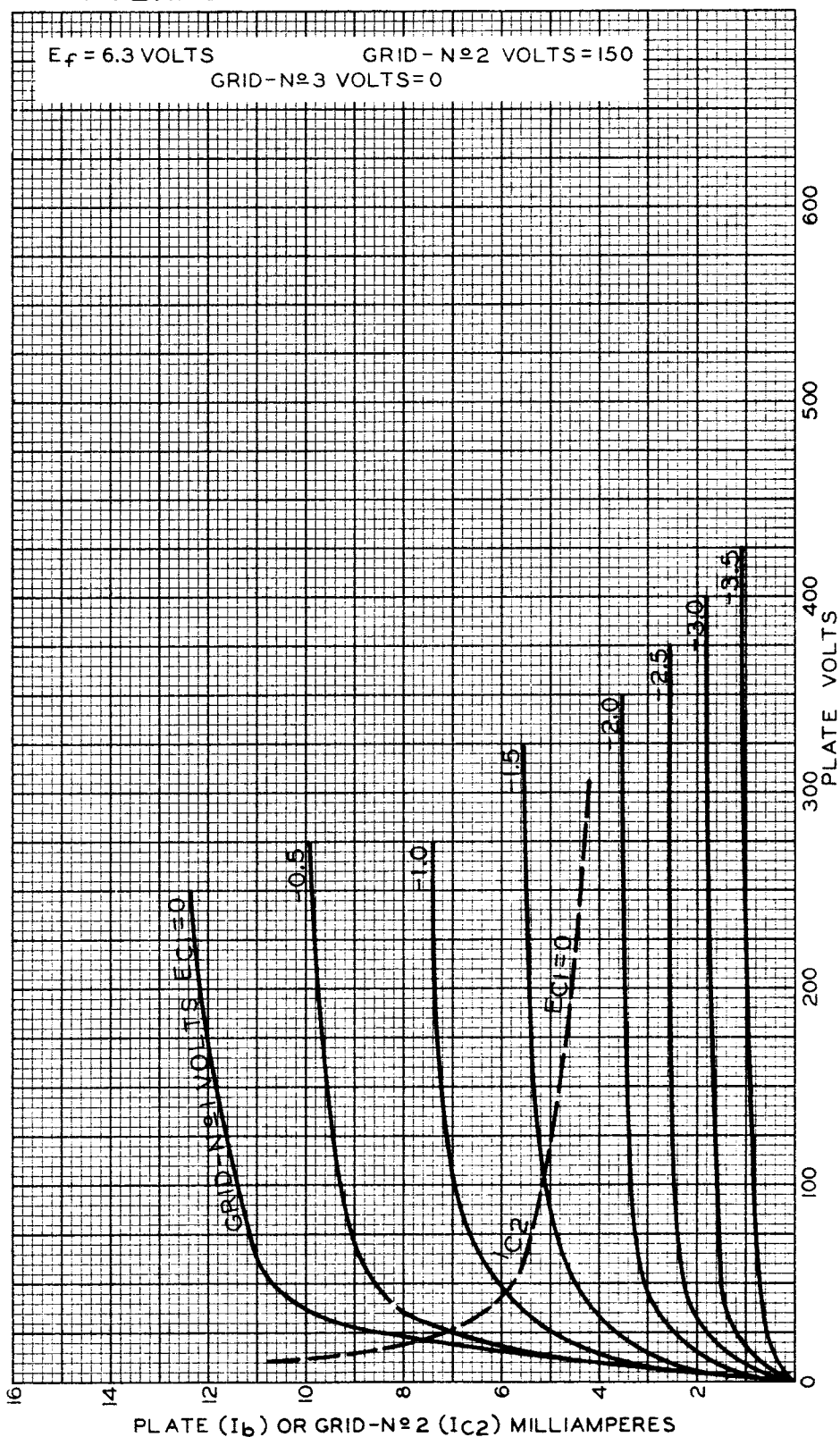
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



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## AVERAGE PLATE CHARACTERISTICS



AUG. 23, 1947

TUBE DEPARTMENT  
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

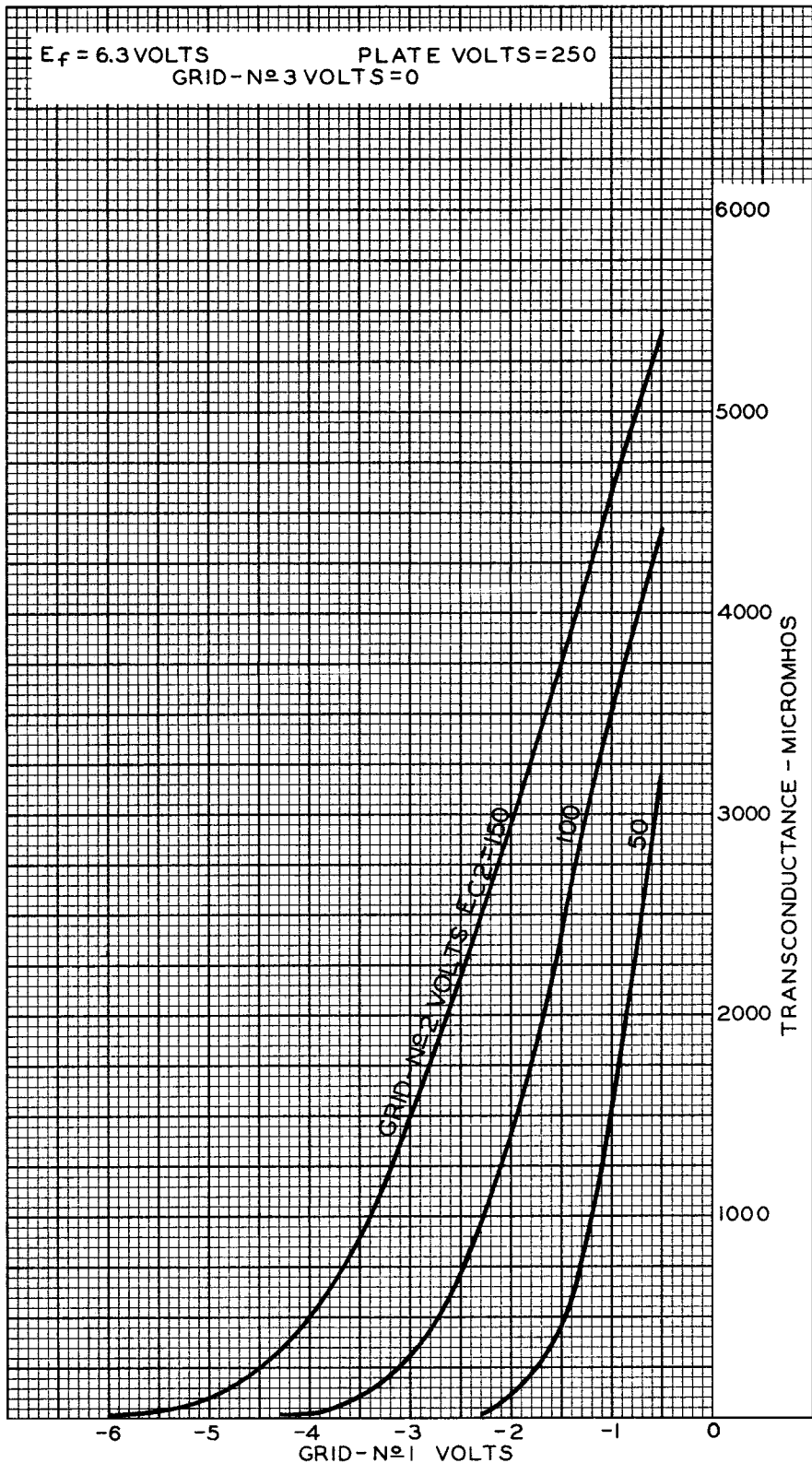
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# AVERAGE CHARACTERISTICS





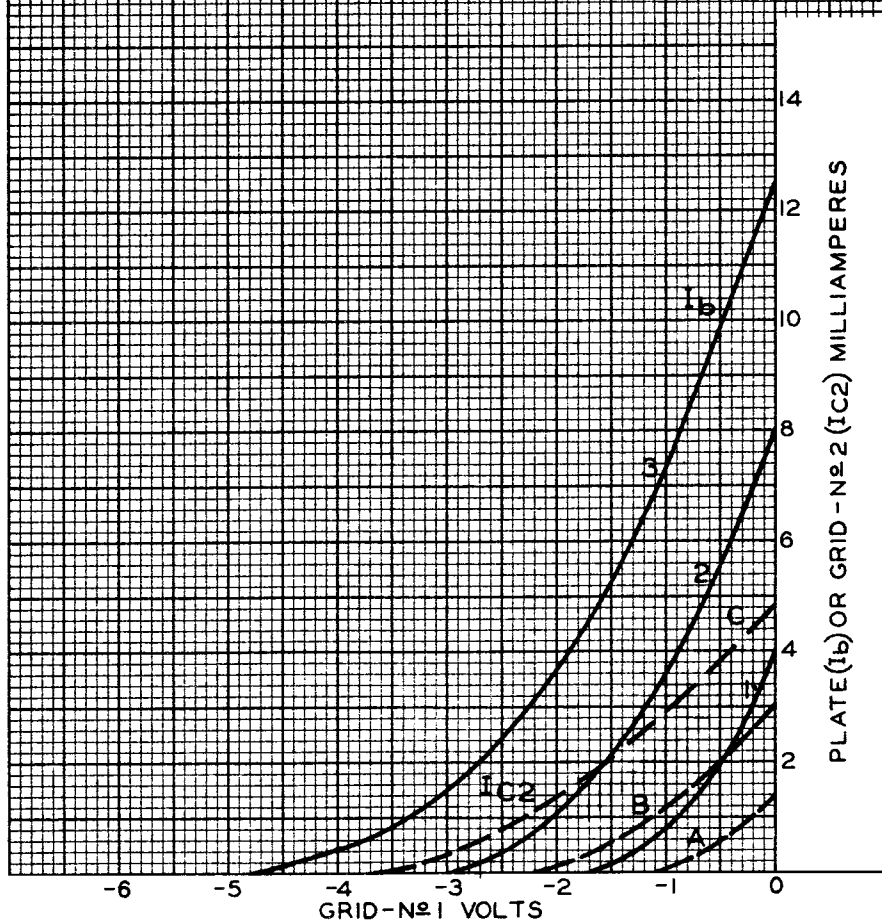
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# AVERAGE CHARACTERISTICS

$E_f = 6.3$  VOLTS PLATE VOLTS = 250 GRID - N<sup>o</sup> 3 VOLTS = 0

| CURVES  |             | GRID - N <sup>o</sup> 2<br>VOLTS |
|---------|-------------|----------------------------------|
| $I_b$ — | $I_{c2}$ -- |                                  |
| 1       | A           | 50                               |
| 2       | B           | 100                              |
| 3       | C           | 150                              |



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# AVERAGE PLATE CHARACTERISTICS TRIODE CONNECTION

