

# High-Mu Triode— Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

FRAME-GRID CONSTRUCTION

*For Use as a Combined Voltage Amplifier  
and Video Output Tube in TV Receivers*

## ELECTRICAL

## Heater Characteristics and Ratings

|                                                   |                  |   |
|---------------------------------------------------|------------------|---|
| Voltage (AC or DC) . . . . .                      | 6.3 ± 0.6        | V |
| Current at heater volts = 6.3 . . . . .           | 0.775            | A |
| Peak heater-cathode voltage (Each unit):          |                  |   |
| Heater negative with respect to cathode . . . . . | 200              | V |
| Heater positive with respect to cathode . . . . . | 200 <sup>a</sup> | V |

Direct Interelectrode Capacitances<sup>b</sup>

## Triode Unit:

|                                                                                        |           |    |
|----------------------------------------------------------------------------------------|-----------|----|
| Grid to plate . . . . .                                                                | 3.7       | pF |
| Grid to cathode, pentode cathode, pentode<br>grid No.3 & internal shield, and heater.  | 2.5       | pF |
| Plate to cathode, pentode cathode, pentode<br>grid No.3 & internal shield, and heater. | 2.4       | pF |
| Triode grid to pentode plate . . . . .                                                 | 0.015 max | pF |

## Pentode Unit:

|                                                                                       |          |      |
|---------------------------------------------------------------------------------------|----------|------|
| Grid No.1 to plate . . . . .                                                          | 0.12 max | pF ← |
| Grid No.1 to cathode & grid No.3 & internal<br>shield, grid No.2, and heater. . . . . | 13.0     | pF   |
| Plate to cathode & grid No.3 & internal<br>shield, grid No.2, and heater. . . . .     | 4.8      | pF   |
| Pentode plate to triode plate . . . . .                                               | 0.17 max | pF   |

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

|                                                                     | Triode<br>Unit | Pentode<br>Unit |            |
|---------------------------------------------------------------------|----------------|-----------------|------------|
| Plate Supply Voltage. . . . .                                       | -              | 125             | 200 V      |
| Plate Voltage . . . . .                                             | 200            | -               | V          |
| Grid-No.2 Supply Voltage. . . . .                                   | -              | 125             | 125 V      |
| Grid-No.1 Supply Voltage. . . . .                                   | -2             | -               | V          |
| Cathode Resistor. . . . .                                           | -              | 82              | 68 Ω       |
| Amplification Factor. . . . .                                       | 70             | -               | -          |
| Plate Resistance (Approx.). . . . .                                 | 17500          | 55000           | 75000 Ω    |
| Transconductance. . . . .                                           | 4000           | 21000           | 23000 μmho |
| Plate Current . . . . .                                             | 4              | 16.5            | 20 mA ←    |
| Grid-No.2 Current . . . . .                                         | -              | 3.1             | 3.5 mA ←   |
| Grid-No.1 Voltage (Approx.)<br>for plate current = 100 μA . . . . . | -4.5           | -4.2            | -4.2 V     |

← Indicates a change.

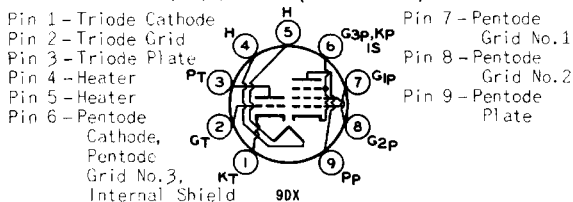


# 6KV8

## MECHANICAL

|                                                         |                                          |
|---------------------------------------------------------|------------------------------------------|
| Operating Position . . . . .                            | Any                                      |
| Maximum Overall Length . . . . .                        | 2-5/8 in                                 |
| Maximum Seated Length . . . . .                         | 2-3/8 in                                 |
| Length, Base Seat to Bulb Top (Excluding tip) . . . . . | $2 \pm 3/32$ in                          |
| Diameter . . . . .                                      | 0.750 to 0.875 in                        |
| Dimensional Outline . . . . .                           | See <i>General Section</i>               |
| Bulb . . . . .                                          | T6-1/2                                   |
| Base . . . . .                                          | Small-Button Noval 9-Pin (JEDEC No.E9-1) |

### BASING DIAGRAM (Bottom View)



### AMPLIFIER — Class A<sub>1</sub> Design-Maximum Ratings

|                                                              | Triode<br>Unit | Pentode<br>Unit      |   |
|--------------------------------------------------------------|----------------|----------------------|---|
| Plate Voltage . . . . .                                      | 300            | 300 max              | V |
| Grid-No.2 (Screen-Grid) Supply Voltage . . . . .             | -              | 300 max              | V |
| Grid-No.2 Voltage . . . . .                                  | -              | See <i>Grid-No.2</i> |   |
| <i>Input Rating Chart at front of Receiving Tube Section</i> |                |                      |   |
| Grid-No.1 (Control-Grid) Voltage                             |                |                      |   |
| Positive-bias value . . . . .                                | 0              | 0 max                | V |
| Grid-No.2 Input                                              |                |                      |   |
| for grid-No.2 voltages up to 150 V. . . . .                  | -              | 1 max                | W |
| For grid-No.2 voltages between 150 and 300 V. . . . .        | -              | See <i>Grid-No.2</i> |   |
| <i>Input Rating Chart at front of Receiving Tube Section</i> |                |                      |   |
| Plate Dissipation . . . . .                                  | 1              | 5 max                | W |

### Maximum Circuit Values

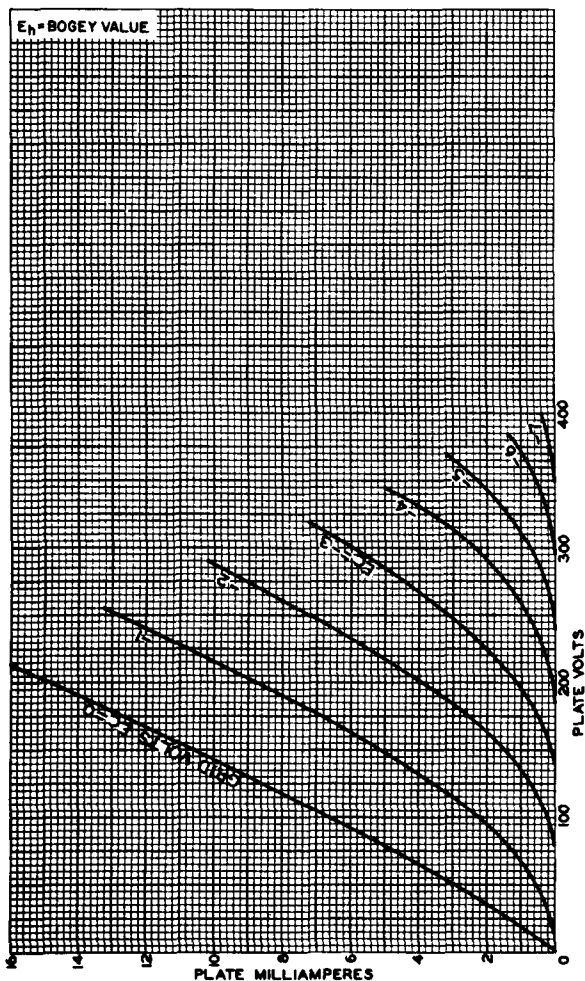
|                                      | Triode<br>Unit | Pentode<br>Unit |
|--------------------------------------|----------------|-----------------|
| Grid-No.1-Circuit Resistance         |                |                 |
| For fixed-bias operation . . . . .   | 0.5            | 0.1 max MΩ      |
| For cathode-bias operation . . . . . | 1              | 0.25 max MΩ     |

<sup>a</sup> The dc component must not exceed 100 volts.

<sup>b</sup> Without external shield.



## Average Plate Characteristics Triode Unit

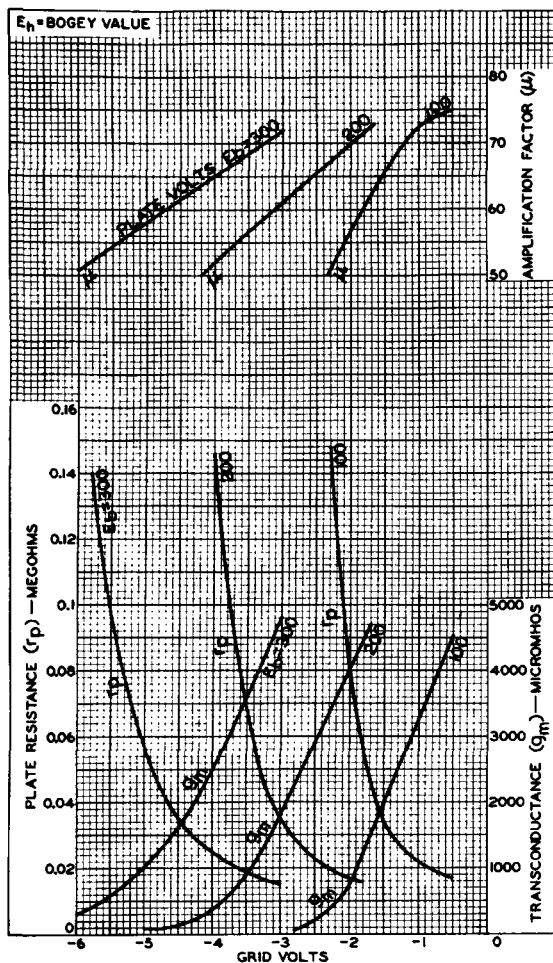


92CM-6644R1



# 6KV8

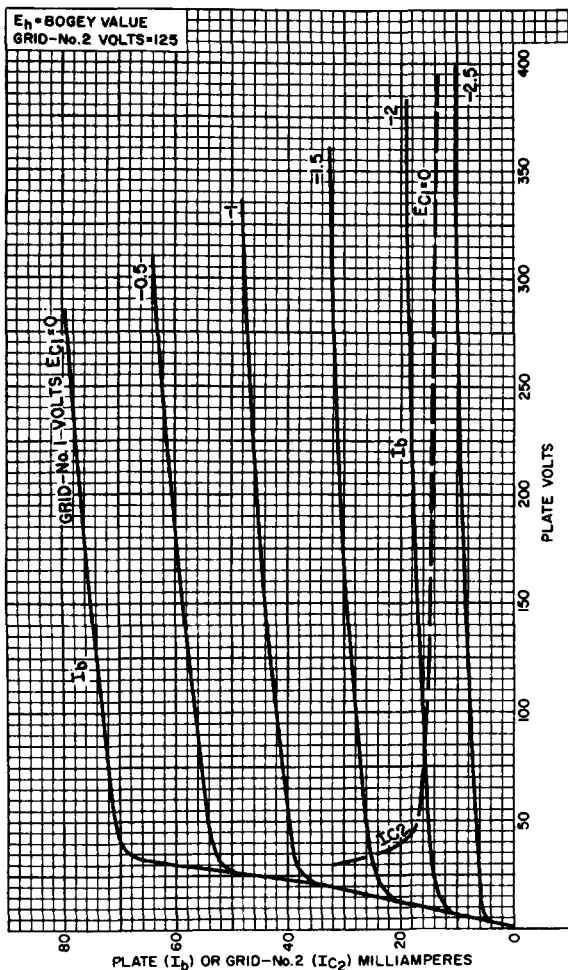
## Average Characteristics Triode Unit



92CM-10874RI



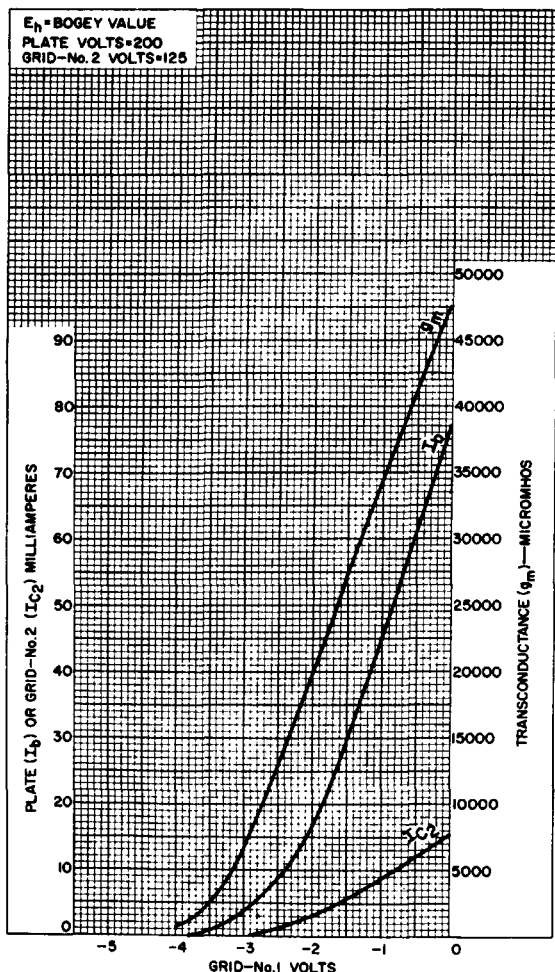
# Average Characteristics Pentode Unit



92CM-11946R2



## Average Characteristics Pentode Unit



92CM-11947R2

