



6662

6662/6BJ6

## REMOTE-CUTOFF PENTODE

7-PIN MINIATURE TYPE

For use in mobile communications equipment

## GENERAL DATA

## Electrical:

Heater, for Unipotential Cathode:

Voltage. . . . .  $6.3 \pm 20\%$  . . . . . ac or dc volts  
 Current at 6.3 volts . . . . . 0.15 . . . . . amp  
 Direct Interelectrode Capacitances:

|                                                                                      | Without<br>External<br>Shield | With<br>External<br>Shield <sup>o</sup> |               |
|--------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------|---------------|
| Grid No.1 to plate . . . . .                                                         | 0.0035 max.                   | 0.0035 max.                             | $\mu\text{f}$ |
| Grid No.1 to cathode, grid<br>No.3 & internal shield,<br>grid No.2, and heater. . .  | 4.5                           | 4.5                                     | $\mu\text{f}$ |
| Plate to cathode, grid No.3<br>& internal shield, grid<br>No.2, and heater . . . . . | 5.5                           | 5.5                                     | $\mu\text{f}$ |

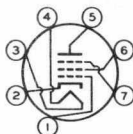
Characteristics, Class A<sub>1</sub> Amplifier:

|                                                                                     |                                |      |                  |
|-------------------------------------------------------------------------------------|--------------------------------|------|------------------|
| Heater Voltage. . . . .                                                             | 6.3                            | 6.3  | volts            |
| Plate Supply Voltage. . . . .                                                       | 100                            | 250  | volts            |
| Grid No.3 . . . . .                                                                 | Connected to cathode at socket |      |                  |
| Grid-No.2 Supply Voltage. . . . .                                                   | 100                            | 100  | volts            |
| Cathode Resistor. . . . .                                                           | 80                             | 80   | ohms             |
| Plate Resistance (Approx.). . . . .                                                 | 0.25                           | 1.3  | megohms          |
| Transconductance. . . . .                                                           | 3650                           | 3600 | $\mu\text{mhos}$ |
| Plate Current . . . . .                                                             | 9                              | 9.2  | ma               |
| Grid-No.2 Current . . . . .                                                         | 3.5                            | 3.3  | ma               |
| Grid-No.1 Voltage (Approx.) for<br>transconductance = 10 $\mu\text{mhos}$ . . . . . | -20                            | -20  | 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) |
| 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



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AMPLIFIER — Class A<sub>1</sub>

## Maximum Ratings, Design-Maximum Values:

|                                                           |                                                                     |
|-----------------------------------------------------------|---------------------------------------------------------------------|
| PLATE VOLTAGE. . . . .                                    | 330 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:                         |                                                                     |
| Negative-bias value. . . . .                              | 55 max. volts                                                       |
| Positive-bias value. . . . .                              | 0 max. volts                                                        |
| GRID-No.2 INPUT:                                          |                                                                     |
| For grid-No.2 voltages up to 165 volts. . . . .           | 0.65 max. watt                                                      |
| For grid-No.2 voltages between 165 and 330 volts. . . . . | See Grid-No.2 Input Rating Chart at front of Receiving Tube Section |
| PLATE DISSIPATION. . . . .                                | 3.3 max. watts                                                      |
| PEAK HEATER-CATHODE VOLTAGE:                              |                                                                     |
| Heater negative with respect to cathode. . . . .          | 100 max. volts                                                      |
| Heater positive with respect to cathode. . . . .          | 100 max. volts                                                      |

\* When the heater is operated from storage-battery-with-charger supply or similar supplies, the normal battery-voltage fluctuation may be as much as 35 per cent or more. Although such variation in heater voltage is permissible for short periods, reliability can be increased with improved supply-voltage regulation.

° With external shield JEDEC No.316 connected to cathode.

## SPECIAL RATINGS &amp; PERFORMANCE DATA

## Heater-Cycling Life Performance:

This test is performed on a sample lot of tubes from each production run. A minimum of 2000 cycles of intermittent operation is applied under the following conditions: heater volts = 7.5 cycled one minute on and one minute off, heater 135 volts positive with respect to cathode, and all other elements connected to ground. At the end of this test, tubes are checked for heater-cathode shorts and open circuits.

## Transconductance at Reduced Heater Voltage:

|                                                                                                                                                                     |                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Average Value. . . . .                                                                                                                                              | 2900 $\mu$ mhos |
| With heater volts = 5, plate supply volts = 250, grid No.3 connected to cathode at socket, grid-No.2 supply volts = 100, and cathode resistor (ohms) bypassed = 80. |                 |