

## Beam Power Tube

## 9-PIN MINIATURE TYPE

## GENERAL DATA

## Electrical:

Heater, for Unipotential Cathode:

|                              |     |       |
|------------------------------|-----|-------|
| Voltage (AC or DC) . . . . . | 6.3 | volts |
| Current . . . . .            | 1.2 | amp   |

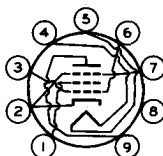
Direct Interelectrode Capacitances  
(Approx.):\*

|                                                                      |     |               |
|----------------------------------------------------------------------|-----|---------------|
| Grid No.1 to plate. . . . .                                          | 0.2 | $\mu\text{f}$ |
| Grid No.1 to cathode & grid No.3,<br>grid No.2, and heater . . . . . | 13  | $\mu\text{f}$ |
| Plate to cathode & grid No.3,<br>grid No.2, and heater . . . . .     | 8   | $\mu\text{f}$ |

## Mechanical:

|                                                        |                                          |
|--------------------------------------------------------|------------------------------------------|
| Operating Position. . . . .                            | Any                                      |
| Maximum Overall Length. . . . .                        | 2-3/4"                                   |
| Maximum Seated Length . . . . .                        | 2-1/2"                                   |
| Length, Base Seat to Bulb Top (Excluding tip). . . . . | 2-1/8" $\pm$ 3/32"                       |
| Diameter. . . . .                                      | 0.750" to 0.875"                         |
| Bulb. . . . .                                          | T6-1/2                                   |
| Base. . . . .                                          | Small-Button Noval 9-Pin (JEDEC No.E9-1) |
| Basing Designation for BOTTOM VIEW. . . . .            | 9GR                                      |

Pin 1-Grid No.2  
Pin 2-Cathode,  
Grid No.3  
Pin 3-Grid No.1  
Pin 4-Heater  
Pin 5-Heater  
Pin 6-Grid No.1



Pin 7-Cathode,  
Grid No.3  
Pin 8-Internal Con-  
nection—  
Do Not Use  
Pin 9-Plate

AMPLIFIER — Class A<sub>1</sub>

## Maximum Ratings, Design-Center Values:

|                                                   |                  |      |       |
|---------------------------------------------------|------------------|------|-------|
| PLATE VOLTAGE . . . . .                           | 300              | max. | volts |
| GRID-No.2 (SCREEN-GRID) VOLTAGE . . . . .         | 150              | max. | volts |
| GRID-No.2 INPUT . . . . .                         | 1.25             | max. | watts |
| PLATE DISSIPATION . . . . .                       | 10               | max. | watts |
| PEAK HEATER-CATHODE VOLTAGE:                      |                  |      |       |
| Heater negative with respect to cathode . . . . . | 200              | max. | volts |
| Heater positive with respect to cathode . . . . . | 200 <sup>b</sup> | max. | volts |

## Typical Operation and Characteristics:

|                                           |      |     |       |
|-------------------------------------------|------|-----|-------|
| Plate Supply Voltage. . . . .             | 110  | 200 | volts |
| Grid-No.2 Supply Voltage. . . . .         | 110  | 125 | volts |
| Grid-No.1 (Control-grid) Voltage. . . . . | -7.5 | -   | volts |
| Cathode Resistor. . . . .                 | -    | 180 | ohms  |



# 6DB5

|                                        |       |       |       |
|----------------------------------------|-------|-------|-------|
| Peak AF Grid-No.1 Voltage. . . . .     | 7.5   | 8.5   | volts |
| Zero-Signal Plate Current. . . . .     | 49    | 46    | ma    |
| Max.-Signal Plate Current. . . . .     | 50    | 47    | ma    |
| Zero-Signal Grid-No.2 Current. . . . . | 4     | 2.2   | ma    |
| Max.-Signal Grid-No.2 Current. . . . . | 10    | 8.5   | ma    |
| Plate Resistance (Approx.) . . . . .   | 13000 | 28000 | ohms  |
| Transconductance . . . . .             | 8000  | 8000  | μmhos |
| Load Resistance. . . . .               | 2000  | 4000  | ohms  |
| Total Harmonic Distortion. . . . .     | 10    | 10    | %     |
| Max.-Signal Power Output . . . . .     | 2.1   | 3.8   | watts |

## Maximum Circuit Values:

### Grid-No.1-Circuit Resistance:

|                                      |          |         |
|--------------------------------------|----------|---------|
| For fixed-bias operation . . . . .   | 0.1 max. | megohm  |
| For cathode-bias operation . . . . . | 2.2 max. | megohms |

## VERTICAL-DEFLECTION AMPLIFIER

### Maximum Ratings, Design-Center Values Except as Noted:

*For operation in a 525-line, 30-frame system<sup>c</sup>*

|                                                                                |                        |       |
|--------------------------------------------------------------------------------|------------------------|-------|
| DC PLATE VOLTAGE . . . . .                                                     | 300 max.               | volts |
| PEAK POSITIVE-PULSE PLATE VOLTAGE<br>(Absolute maximum) <sup>d</sup> . . . . . | 2000 <sup>e</sup> max. | volts |
| DC GRID-No.2 (SCREEN-GRID) VOLTAGE . . .                                       | 150 max.               | volts |
| PEAK NEGATIVE-PULSE GRID-No.1<br>(CONTROL-GRID) VOLTAGE . . . . .              | 250 max.               | volts |
| CATHODE CURRENT:                                                               |                        |       |
| Peak . . . . .                                                                 | 200 max.               | ma    |
| Average. . . . .                                                               | 55 max.                | ma    |
| GRID-No.2 INPUT. . . . .                                                       | 1.25 max.              | watts |
| PLATE DISSIPATION. . . . .                                                     | 10 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>b</sup> max.  | volts |

## Maximum Circuit Values:

### Grid-No.1-Circuit Resistance:

|                                      |          |         |
|--------------------------------------|----------|---------|
| For fixed-bias operation . . . . .   | 0.1 max. | megohm  |
| For cathode-bias operation . . . . . | 2.2 max. | megohms |

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

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

<sup>c</sup> As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

<sup>d</sup> This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.

<sup>e</sup> Under no circumstances should this absolute value be exceeded.

