

# Dual Triode

## With High-Mu Unit and Low-Mu Unit

### GENERAL DATA

#### Electrical:

##### Heater Characteristics and Ratings:

|                                                   |                       |       |
|---------------------------------------------------|-----------------------|-------|
| Voltage (AC or DC) . . . . .                      | 6.3 ± 0.6             | volts |
| Current at heater volts = 6.3 . . . . .           | 1.05                  | amp   |
| Peak heater-cathode voltage (Each unit):          |                       |       |
| Heater negative with respect to cathode . . . . . | 200 max.              | volts |
| Heater positive with respect to cathode . . . . . | 200 <sup>a</sup> max. | volts |

##### Direct Interelectrode Capacitances (Approx.):<sup>b</sup>

|                                      | Unit No. 1 | Unit No. 2 |    |
|--------------------------------------|------------|------------|----|
| Grid to plate. . . . .               | 4.0        | 8.0        | pf |
| Grid to cathode and heater . . . . . | 2.2        | 6.0        | pf |
| Plate to cathode and heater. . . . . | 0.6        | 1.3        | pf |

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

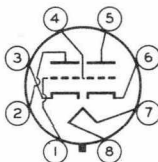
|                                            | Unit No. 1 | Unit No. 2                  |                 |
|--------------------------------------------|------------|-----------------------------|-----------------|
| Plate Voltage. . . . .                     | 250        | 275                         | 60 175 volts    |
| Grid Voltage . . . . .                     | -3         | <sup>c</sup> 0 <sup>d</sup> | -25 volts       |
| Amplification Factor . . . . .             | 66         | -                           | 5               |
| Plate Resistance (Approx.) . . . . .       | 30000      | -                           | 780 ohms        |
| Transconductance . . . . .                 | 2200       | 1600                        | 6400 $\mu$ mhos |
| Plate Current. . . . .                     | 2          | 13                          | 100 46 ma       |
| Grid Voltage (Approx.) for plate $\mu$ a = |            |                             |                 |
| 20 . . . . .                               | -5.3       | -                           | - volts         |
| 200. . . . .                               | -          | -                           | -60 volts       |

#### Mechanical:

|                                  |                                                           |
|----------------------------------|-----------------------------------------------------------|
| Operating Position . . . . .     | Any                                                       |
| Type of Cathodes . . . . .       | Coated Unipotential                                       |
| Maximum Overall Length . . . . . | 3"                                                        |
| Maximum Seated Length. . . . .   | 2-7/16"                                                   |
| Maximum Diameter . . . . .       | 1-9/32"                                                   |
| Bulb . . . . .                   | T9                                                        |
| Base . . . . .                   | Intermediate-Shell Octal 8-Pin, (JEDEC Group 1, No. B8-6) |

Basing Designation for BOTTOM VIEW . . . . . 8BD

- Pin 1 - Grid of Unit No. 2  
 Pin 2 - Plate of Unit No. 2  
 Pin 3 - Cathode of Unit No. 2  
 Pin 4 - Grid of Unit No. 1



- Pin 5 - Plate of Unit No. 1  
 Pin 6 - Cathode of Unit No. 1  
 Pin 7 - Heater  
 Pin 8 - Heater



## VERTICAL-DEFLECTION OSCILLATOR

Values are for Unit No.1

### Maximum Ratings, Design-Maximum Values:

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

|                                           |          |       |
|-------------------------------------------|----------|-------|
| DC PLATE VOLTAGE. . . . .                 | 350 max. | volts |
| PEAK NEGATIVE-PULSE GRID VOLTAGE. . . . . | 400 max. | volts |
| PLATE DISSIPATION . . . . .               | 1 max.   | watt  |

### Maximum Circuit Values:

#### Grid-Circuit Resistance:

|                                     |          |         |
|-------------------------------------|----------|---------|
| For fixed-bias operation. . . . .   | 1 max.   | megohm  |
| For cathode-bias operation. . . . . | 2.2 max. | megohms |

## VERTICAL-DEFLECTION AMPLIFIER

Values are for Unit No.2

### Maximum Ratings, Design-Maximum Values:

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

|                                                          |                      |       |
|----------------------------------------------------------|----------------------|-------|
| DC PLATE VOLTAGE. . . . .                                | 550 max.             | volts |
| PEAK POSITIVE-PULSE PLATE VOLTAGE <sup>f</sup> . . . . . | 1500 max.            | volts |
| PEAK NEGATIVE-PULSE GRID VOLTAGE. . . . .                | 250 max.             | volts |
| CATHODE CURRENT:                                         |                      |       |
| Peak. . . . .                                            | 175 max.             | ma    |
| Average . . . . .                                        | 50 max.              | ma    |
| PLATE DISSIPATION . . . . .                              | 10 <sup>g</sup> max. | watts |

### Maximum Circuit Values:

#### Grid-Circuit Resistance:

|                                     |          |         |
|-------------------------------------|----------|---------|
| For fixed-bias operation. . . . .   | 1 max.   | megohm  |
| For cathode-bias operation. . . . . | 2.2 max. | megohms |

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

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

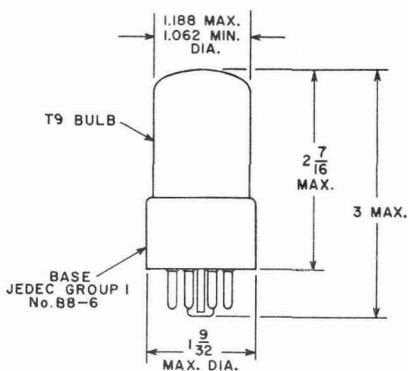
<sup>c</sup> Adjusted for plate ma.=13.

<sup>d</sup> Applied for short interval (two seconds maximum) so as not to damage tube.

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

<sup>f</sup> This rating is applicable when 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 milli-seconds.

<sup>g</sup> In stages operating with grid-leak bias, an adequate cathode-bias resistor or other suitable means is required to protect the tube in the absence of excitation.



92CS-11963

ALL DIMENSIONS IN INCHES



