

## Direct Interelectrode Capacitances (Approx.)\*

|                                                                         |      |    |
|-------------------------------------------------------------------------|------|----|
| Grid No.1 to Plate                                                      | 0.02 | pF |
| Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield | 5.8  | pF |
| Grid No.3 to Plate                                                      | 1.7  | pF |
| Grid No.1 to Grid No.3                                                  | 0.1  | pF |
| Grid No.3 to Cathode, Heater, Grid No.1, Grid No.2, and Internal Shield | 6.1  | pF |

\* External shield connected to cathode.

Class A<sub>1</sub> Amplifier

## CHARACTERISTICS

|                                                             |                                |            |
|-------------------------------------------------------------|--------------------------------|------------|
| Plate Supply Voltage                                        | 150                            | volts      |
| Grid No.3 (Suppressor Grid)                                 | Connected to cathode at socket |            |
| Grid-No.2 (Screen-Grid) Supply Voltage                      | 100                            | volts      |
| Cathode-Bias Resistor                                       | 560                            | ohms       |
| Plate Resistance (Approx.)                                  | 0.15                           | megohm     |
| Transconductance, Grid No.1 to Plate                        | 1350                           | $\mu$ mhos |
| Transconductance, Grid No.3 to Plate                        | 515                            | $\mu$ mhos |
| Plate Current                                               | 1.55                           | mA         |
| Grid-No.2 Current                                           | 1.8                            | mA         |
| Grid-No.1 Voltage (Approx.) for plate current of 10 $\mu$ A | -5.2                           | volts      |
| Grid-No.3 Voltage (Approx.) for plate current of 10 $\mu$ A | -4.2                           | volts      |

## FM Detector

## MAXIMUM RATINGS (Design-Maximum Values)

|                                                       |                   |       |
|-------------------------------------------------------|-------------------|-------|
| Plate Voltage                                         | 330               | volts |
| Grid-No.3 Voltage                                     | 28                | volts |
| Grid-No.2 Supply Voltage                              | 330               | volts |
| Grid-No.2 Voltage                                     | See curve page 98 |       |
| Grid-No.1 (Control-Grid) Voltage, Positive-bias value | 0                 | volts |
| Plate Dissipation                                     | 1.7               | watts |
| Grid-No.2 Input:                                      |                   |       |
| For grid-No.2 voltages up to 165 volts                | 1.1               | watts |
| For grid-No.2 voltages between 165 and 330 volts      | See curve page 98 |       |

## MAXIMUM CIRCUIT VALUES

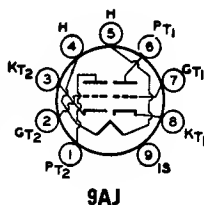
|                               |      |        |
|-------------------------------|------|--------|
| Grid-No.1-Circuit Resistance: |      |        |
| For fixed-bias operation      | 0.25 | megohm |
| For cathode-bias operation    | 0.5  | megohm |

## 6DT8

12DT8

## HIGH-MU TWIN TRIODE

Miniature type used in radio and television receiver applications and in push-pull rf amplifiers or as frequency converter in FM tuners. Outlines section, 6B; requires miniature 9-contact socket. Type 12DT8 is identical with type 6DT8 except for the heater ratings. Except for heater and heater-cathode ratings, interelectrode capacitances, and basing arrangement, these types are identical with miniature type 12AT7.



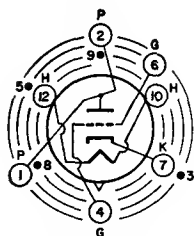
9AJ

|                                                                         | 6DT8          | 12DT8         |        |
|-------------------------------------------------------------------------|---------------|---------------|--------|
| Heater Voltage (ac/dc)                                                  | 6.3           | 12.6          | volts  |
| Heater Current                                                          | 0.3           | 0.15          | ampere |
| Heater-Cathode Voltage:                                                 |               |               |        |
| Peak value                                                              | $\pm 200$ max | $\pm 200$ max | volts  |
| Average value                                                           | 100 max       | 100 max       | volts  |
| Direct Interelectrode Capacitances (Approx., Each Unit Except as Noted: |               |               |        |
| Grid to Plate                                                           | 1.6*          | 1.6*          | pF     |
| Grid to Cathode, Heater, and Internal Shield                            | 2.7*          | 2.7*          | pF     |
| Plate to Cathode, Heater, and Internal Shield                           | 1.6*          | 1.6*          | pF     |
| Heater to Cathode                                                       | 3*            | 3*            | pF     |
| Cathode to Grid, Heater, and Internal Shield (Unit No.2)                | 5.3†          | 5.3†          | pF     |
| Plate to Grid, Heater, and Internal Shield (Unit No.2)                  | 2.8†          | 2.8†          | pF     |

† With external shield connected to grid of unit under test.

\* With external shield connected to ground.

\* With external shield connected to cathode of unit under test.



INDEX = LARGE LUG  
● = SHORT PIN

## 12EA

## HIGH-MU TRIODE

## 6DV4

2DV4

Nuvistor type used at frequencies up to 1000 MHz in uhf oscillator stages of color and black-and-white television receivers. Outlines section, 1; requires nuvistor socket. Type 2DV4 is identical with type 6DV4 except for heater ratings.

|                                              | 2DV4     | 6DV4     |         |
|----------------------------------------------|----------|----------|---------|
| Heater Voltage (ac/dc)                       | 2.1      | 6.3      | volts   |
| Heater Current                               | 0.45     | 0.135    | ampere  |
| Heater Warm-up Time (Average)                | 8        | —        | seconds |
| Peak Heater-Cathode Voltage                  | ±100 max | ±100 max | volts   |
| Direct Interelectrode Capacitance (Approx.): |          |          |         |
| Grid to Plate                                |          | 1.8      | pF      |
| Grid to Cathode, Heater, and Shell           |          | 4.4      | pF      |
| Plate to Cathode, Heater, and Shell          |          | 1.9      | pF      |
| Plate to Cathode                             |          | 0.25     | pF      |
| Heater to Cathode                            |          | 1.4      | pF      |
| Grid to Cathode                              |          | 3.7      | pF      |

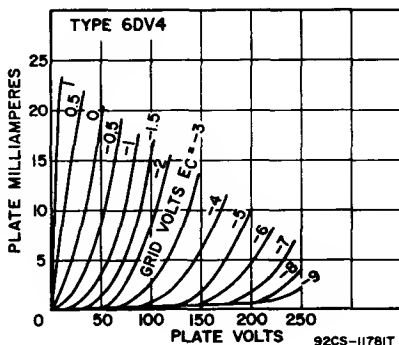
Class A<sub>1</sub> Amplifier

## MAXIMUM RATINGS (Design-Maximum Values)

|                      |     |       |
|----------------------|-----|-------|
| Plate Supply Voltage | 300 | volts |
| Plate Voltage        | 125 | volts |
| Grid Voltage:        |     |       |
| Negative-bias value  | 55  | volts |
| Peak positive value  | 2   | volts |
| Plate Dissipation    | 1   | watt  |
| Cathode Current      | 15  | mA    |

## CHARACTERISTICS

|                                                   |       |       |
|---------------------------------------------------|-------|-------|
| Plate Supply Voltage                              | 75    | volts |
| Cathode-Bias Resistor                             | 100   | ohms  |
| Amplification Factor                              | 35    |       |
| Plate Resistance (Approx.)                        | 3100  | ohms  |
| Transconductance                                  | 11500 | μmhos |
| Plate Current                                     | 10.5  | mA    |
| Grid Voltage (Approx.) for plate current of 10 μA | —7    | volts |



## TYPICAL OPERATION AS OSCILLATOR AT 950 MHz

|               |      |       |
|---------------|------|-------|
| Plate Voltage | 60   | volts |
| Grid Voltage  | —2   | volts |
| Grid Resistor | 5600 | ohms  |
| Plate Current | 8    | mA    |
| Grid Current  | 350  | μA    |