

|                                                               |           |        |
|---------------------------------------------------------------|-----------|--------|
| Heater Voltage (ac/dc)                                        | 6.3       | volts  |
| Heater Current                                                | 0.8       | ampere |
| Heater-Cathode Voltage:                                       |           |        |
| Peak value                                                    | ±200 max  | volts  |
| Average value                                                 | 100 max   | volts  |
| Direct Interelectrode Capacitances:**                         |           |        |
| Unit No. 1:                                                   |           |        |
| Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3,           |           |        |
| Grid No.3 of Unit No.2, and Internal Shield                   | 11        | pF     |
| Plate to Cathode, Heater, Grid No.2, Grid No.3, Grid No.3     |           |        |
| of Unit No.2, and Internal Shield                             | 2.8       | pF     |
| Unit No. 2:                                                   |           |        |
| Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, Grid No.3 |           |        |
| of Unit No.1, and Internal Shield                             | 11        | pF     |
| Plate to Cathode, Heater, Grid No.2, Grid No.3, Grid No.3 of  |           |        |
| Unit No.1, and Internal Shield                                | 3.2       | pF     |
| Grid No.1 to Plate (Each Unit)                                | 0.04 max  | pF     |
| Cathode of Unit No.1 to Cathode of Unit No.2                  | 0.02 max  | pF     |
| Grid No.1 of Unit No.1 to Plate of Unit No.2                  | 0.003 max | pF     |
| Grid No.1 of Unit No.2 to Plate of Unit No.1                  | 0.003 max | pF     |
| Plate of Unit No.1 to Plate of Unit No.2                      | 0.03 max  | pF     |

\*\* With external shield connected to cathode.

### Class A<sub>1</sub> Amplifier (Each Unit)

#### MAXIMUM RATINGS (Design-Maximum Values)

|                                                       |                   |       |
|-------------------------------------------------------|-------------------|-------|
| Plate Voltage                                         | 330               | volts |
| Grid-No.2 (Screen-Grid) 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                                     | 3.1               | watts |
| Grid-No.2 Input:                                      |                   |       |
| For grid No.2 voltages up to 165 volts                | 0.65              | watt  |
| For grid No.2 voltages between 165 and 300 volts      | See curve page 98 |       |

#### CHARACTERISTICS

|                                                        |                                |        |
|--------------------------------------------------------|--------------------------------|--------|
| Plate Supply Voltage                                   | 125                            | volts  |
| Grid No.3 (Suppressor Grid)                            | Connected to cathode at socket |        |
| Grid-No.2 Voltage                                      | 125                            | volts  |
| Cathode-Bias Resistor                                  | 56                             | ohms   |
| Plate Resistance (Approx.)                             | 0.2                            | megohm |
| Transconductance                                       | 13000                          | μmhos  |
| Plate Current                                          | 11                             | mA     |
| Grid-No.2 Current                                      | 3.8                            | mA     |
| Grid-No.1 Voltage (Approx.) for plate current of 20 μA | —3                             | volts  |

#### MAXIMUM CIRCUIT VALUE

|                                                          |      |        |
|----------------------------------------------------------|------|--------|
| Grid-No.1-Circuit Resistance, for cathode-bias operation | 0.25 | megohm |
|----------------------------------------------------------|------|--------|

## 6JB6

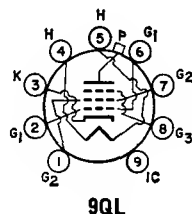
Refer to chart at end of section.

## 6JB6A

## BEAM POWER TUBE

### 12JB6A, 17JB6A

Novar types used as high-efficiency horizontal-deflection amplifiers in television receivers. Outlines section, 32A; requires novar 9-contact socket. Types 12JB6A and 17JB6A are identical with type 6JB6A except for heater ratings.



|                                                        | 6JB6A    | 12JB6A   | 17JB6A   |         |
|--------------------------------------------------------|----------|----------|----------|---------|
| Heater Voltage (ac/dc)                                 | 6.3      | 12.6     | 16.8     | volts   |
| Heater Current                                         | 1.2      | 0.6      | 0.45     | amperes |
| Heater Warm-up Time (Average)                          | —        | 11       | 11       | seconds |
| Heater-Cathode Voltage:                                |          |          |          |         |
| Peak value                                             | ±200 max | ±200 max | ±200 max | volts   |
| Average value                                          | 100 max  | 100 max  | 100 max  | volts   |
| Direct Interelectrode Capacitances (Approx.):          |          |          |          |         |
| Grid No.1 to Plate                                     |          |          | 0.2      | pF      |
| Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3 |          |          | 15       | pF      |
| Plate to Cathode, Heater, Grid No.2, and Grid No.3     |          |          | 6        | pF      |

Class A<sub>1</sub> Amplifier

## CHARACTERISTICS

|                                             | Triode<br>Connection <sup>a</sup> | Pentode<br>Connection          |            |
|---------------------------------------------|-----------------------------------|--------------------------------|------------|
| Plate Voltage                               | 150                               | 60 150                         | volts      |
| Grid No.3 (Suppressor Grid)                 |                                   | Connected to cathode at socket | volts      |
| Grid-No.2 (Screen-Grid) Voltage             | —                                 | 150 150                        | volts      |
| Grid-No.1 (Control-Grid) Voltage            | -22.5                             | 0 -22.5                        | volts      |
| Mu-Factor, Grid No.2 to Grid No.1           | 4.4                               | —                              |            |
| Plate Resistance (Approx.)                  | —                                 | 15000                          | ohms       |
| Transconductance                            | —                                 | 7100                           | $\mu$ mhos |
| Plate Current                               | —                                 | 390 <sup>a</sup> 70            | mA         |
| Grid-No.2 Current                           | —                                 | 32 <sup>a</sup> 2.1            | mA         |
| Grid-No.1 Voltage for plate current of 1 mA | —                                 | — -42                          | volts      |

<sup>a</sup> Grid No.2 connected to plate.

\* This value can be measured by a method involving a recurrent waveform such that the maximum ratings of the tube will not be exceeded.

## Horizontal-Deflection Amplifier

For operation in a 525-line, 30-frame system

## MAXIMUM RATINGS (Design-Maximum Values)

|                                                |      |       |
|------------------------------------------------|------|-------|
| DC Plate Supply Voltage                        | 770  | volts |
| Peak Positive-Pulse Plate Voltage <sup>#</sup> | 6500 | volts |
| Peak Negative-Pulse Plate Voltage              | 1500 | volts |
| DC Grid-No.3 Voltage <sup>†</sup>              | 70   | volts |
| DC Grid-No.2 Voltage                           | 220  | volts |
| DC Grid-No.1 Voltage                           | -55  | volts |
| Peak Negative-Pulse Grid-No.1 Voltage          | 330  | volts |
| Peak Cathode Current                           | 550  | mA    |
| Average Cathode Current                        | 175  | mA    |
| Plate Dissipation <sup>*</sup>                 | 17.5 | watts |
| Grid-No.2 Input                                | 3.5  | watts |
| Bulb Temperature (At hottest point)            | 240  | °C    |

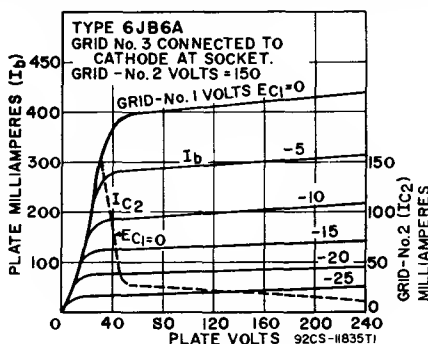
## MAXIMUM CIRCUIT VALUE

Grid-No.1-Circuit Resistance, for grid-resistor-bias operation . . . . . 1 megohm

<sup>#</sup> Pulse duration must not exceed 15% of a horizontal scanning cycle (10 microseconds).

<sup>†</sup> For horizontal-deflection service, a positive voltage may be applied to grid No.3 to minimize "snivets" interference in both vhf and uhf television receivers. A typical value is 30 volts.

\* A bias resistor or other means is required to protect the tube in absence of excitation.



## SHARP-CUTOFF PENTODE

**6JC6**  
**6JC6A**

3JC6A, 4JC6, 4JC6A

Miniature type with frame grid used in if-amplifier stages of color and black-and-white television receivers utilizing intermediate frequencies in the order of 40 MHz. Outlines section, 6B; requires miniature 9-contact socket. Type 4JC6 is identical with type 6JC6 except for heater ratings. Types 3JC6A and 4JC6A are identical with type 6JC6A except for heater ratings.

