

|                                                                |     |      |     |   |       |
|----------------------------------------------------------------|-----|------|-----|---|-------|
| Plate Current .....                                            | —   | 450* | 46  | — | mA    |
| Grid-No.2 Current .....                                        | —   | 29*  | 1.8 | — | mA    |
| Grid-No.1 Voltage (Approx.) for<br>plate current of 1 mA ..... | —64 | —    | —32 | — | volts |

\* Grid-No.2 tied 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.

**21HJ5**

Refer to chart at end of section.

**21JS6A**

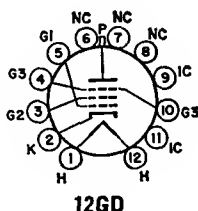
For replacement use type 23JS6A.

**21JV6**

Refer to chart at end of section.

**21JZ6****BEAM POWER TUBE**

Duodecar type used as horizontal-deflection amplifier in television receivers. Outlines section, 39A; requires duodecar 12-contact socket. Heater: volts (ac/dc), 21; amperes, 0.45; average warm-up time, 11 seconds; maximum heater-cathode volts,  $\pm 200$  peak, 100 average.

**12GD****Class A<sub>1</sub> Amplifier**

| CHARACTERISTICS                                                  | Triode <sup>a</sup><br>Connection |      | Pentode Connection   |           |            |
|------------------------------------------------------------------|-----------------------------------|------|----------------------|-----------|------------|
|                                                                  | 13J                               | 5000 | 50                   | 130       |            |
| Plate Voltage .....                                              | —                                 | 5000 | 50                   | 130       | volts      |
| Grid No.3 (Suppressor Grid) .....                                | —                                 | —    | Connected to cathode | at socket |            |
| Grid-No.2 (Screen-Grid) Voltage .....                            | —                                 | 130  | 130                  | 130       | volts      |
| Grid-No.1 (Control-Grid) Voltage .....                           | —20                               | —    | 0                    | —20       | volts      |
| Amplification Factor .....                                       | 4.8                               | —    | —                    | —         |            |
| Plate Resistance (Approx.) .....                                 | —                                 | —    | —                    | 9900      | ohms       |
| Transconductance .....                                           | —                                 | —    | —                    | 9000      | $\mu$ mbos |
| Plate Current .....                                              | —                                 | —    | 450                  | 46        | mA         |
| Grid-No.2 Current .....                                          | —                                 | —    | 29                   | 1.8       | mA         |
| Grid-No.1 Voltage (Approx.) for plate<br>current of 1.0 mA ..... | —                                 | —64  | —                    | —32       | volts      |

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

**Horizontal-Deflection Amplifier**

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

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

|                                                 |      |       |
|-------------------------------------------------|------|-------|
| Plate Supply Voltage .....                      | 770  | volts |
| Peak Positive-Pulse Plate Voltage# .....        | 6500 | volts |
| Peak Negative-Pulse Plate Voltage .....         | 1500 | volts |
| DC Grid-No.3 Voltage, Positive-bias value ..... | 70   | volts |
| Grid-No.2 Voltage .....                         | 220  | volts |
| DC Grid-No.1 Voltage, Negative-bias value ..... | 55   | volts |
| Peak Negative-Pulse Grid-No.1 Voltage .....     | 330  | volts |
| Peak Cathode Current .....                      | 800  | mA    |
| Average Cathode Current .....                   | 230  | mA    |
| Plate Dissipation* .....                        | 18   | watts |
| Grid-No.2 Input .....                           | 3.5  | watts |
| Bulb Temperature (At hottest point) .....       | 220  | °C    |

**MAXIMUM CIRCUIT VALUE**

|                                    |   |        |
|------------------------------------|---|--------|
| Grid-No.1-Circuit Resistance ..... | 1 | megohm |
|------------------------------------|---|--------|

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

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