



12GW

## BEAM POWER TUBE

# 6KD6

30KD6, 36KD6/40KD6

Duodecar type used as horizontal-deflection amplifier in television receivers. Outlines section, 16C; requires duodecar 12-contact socket. Types 30KD6 and 36KD6/40KD6 are identical with type 6KD6 except for heater ratings.

|  | 6KD6     | 30KD6    | 36KD6/40KD6 |         |
|--|----------|----------|-------------|---------|
| Heater Voltage .....   | 6.3      | 30       | 36          | volts   |
| Heater Current .....   | 2.85     | 0.6      | 0.45        | amperes |
| Heater Warm-up Time .....                                    | —        | 11       | 11          | seconds |
| <b>Heater-Cathode Voltage:</b>                               |          |          |             |         |
| Peak value .....   | ±200 max | ±200 max | ±200 max    | volts   |
| Average value .....  | 100 max  | 100 max  | 100 max     | volts   |
| <b>Direct Interelectrode Capacitances:</b>                   |          |          |             |         |
| Grid No.1 to Plate .....                                     |          |          | 0.8         | pF      |
| Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3 ..... |          |          | 40          | pF      |
| Plate to Cathode, Heater, Grid No.2, and Grid No. 3 .....    |          |          | 16          | pF      |

### Horizontal-Deflection Amplifier

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

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

|   |      |       |
|---|------|-------|
| DC Plate Supply Voltage .....               | 990  | volts |
| Peak Positive-Pulse Plate Voltage# .....    | 7000 | volts |
| Positive DC Grid-No.3 Voltage .....         | 20   | volts |
| Grid-No.2 Voltage .....                     | 200  | volts |
| Peak Negative-Pulse Grid-No.1 Voltage ..... | 250  | volts |
| Peak Cathode Current .....                  | 1400 | mA    |
| Average Cathode Current .....               | 400  | mA    |
| Plate Dissipation* .....                    | 33   | watts |
| Grid-No.2 Input .....                       | 5    | watts |
| Bulb Temperature (At hottest point) .....   | 225  | °C    |

### Class A<sub>1</sub> Amplifier

#### CHARACTERISTICS

|                                   | Triode†<br>Connection | Pentode<br>Connection          |       |
|-----------------------------------|-----------------------|--------------------------------|-------|
| Plate Voltage .....               | 150                   | 60 150                         | volts |
| Grid No.3 (Suppressor Grid) ..... |                       | Connected to cathode at socket |       |

|  |       |       |       |       |
|--|-------|-------|-------|-------|
| Grid-No.2 (Screen-Grid) Voltage .....                            | 150   | 110   | 110   | volts |
| Grid-No.1 (Control-Grid) Voltage .....                           | -22.5 | 0     | -22.5 | volts |
| Amplification Factor .....                                       | 4     | —     | —     |       |
| Plate Resistance (Approx.) .....                                 | —     | —     | 6000  | ohms  |
| Transconductance .....   | —     | —     | 14000 | μmhos |
| Plate Current .....  | —     | 750** | 120   | mA    |
| Grid-No.2 Current .....  | —     | 42**  | 1.8   | mA    |
| Grid-No.1 Voltage (Approx.) for plate current<br>of 1.0 μA ..... | —     | —     | -40   | volts |

#### MAXIMUM CIRCUIT VALUE

|                                    |  |      |         |
|------------------------------------|--|------|---------|
| Grid-No.1-Circuit Resistance ..... |  | 2.2  | megohms |
| Grid-No.3-Circuit Resistance ..... |  | 0.01 | 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).