

9GR

# BEAM POWER TUBE

Miniature type used as vertical-deflection-amplifier tube in television receivers. Outlines section, 6F; requires miniature 9-contact socket. Type 12DB5 is identical with type 6DB5 except for heater ratings.

## 6DB5

12DB5

|                               | 6DB5     | 12DB5    |         |
|-------------------------------|----------|----------|---------|
| Heater Voltage (ac/dc)        | 6.3      | 12.6     | volts   |
| Heater Current                | 1.2      | 0.6      | ampere  |
| Heater Warm-up Time (Average) | —        | 11       | seconds |
| Heater-Cathode Voltage:       |          |          |         |
| Peak value                    | ±200 max | ±200 max | volts   |
| Average value                 | 100 max  | 100 max  | volts   |

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

### MAXIMUM RATINGS (Design-Center Values)

|                                 |      |       |
|---------------------------------|------|-------|
| Plate Voltage                   | 300  | volts |
| Grid-No.2 (Screen-Grid) Voltage | 150  | volts |
| Plate Dissipation               | 10   | watts |
| Grid-No.2 Input                 | 1.25 | watts |

### TYPICAL OPERATION

|                                  |       |          |
|----------------------------------|-------|----------|
| Plate Supply Voltage             | 200   | volts    |
| Grid-No.2 Supply Voltage         | 125   | volts    |
| Cathode-Bias Resistor            | 180   | ohms     |
| Peak AF Grid-No.1 Voltage        | 8.5   | volts    |
| Zero-Signal Plate Current        | 46    | mA       |
| Maximum-Signal Plate Current     | 47    | mA       |
| Zero-Signal Grid-No.2 Current    | 2.2   | mA       |
| Maximum-Signal Grid-No.2 Current | 8.5   | mA       |
| Plate Resistance (Approx.)       | 28000 | ohms     |
| Transconductance                 | 8000  | μmhos    |
| Load Resistance                  | 4000  | ohms     |
| Total Harmonic Distortion        | 10    | per cent |
| Maximum-Signal Power Output      | 3.8   | watts    |

### MAXIMUM CIRCUIT VALUES

|                               |     |         |
|-------------------------------|-----|---------|
| Grid-No.1 Circuit Resistance: |     |         |
| For fixed-bias operation      | 0.1 | megohm  |
| For cathode-bias operation    | 2.2 | megohms |

## Vertical-Deflection Amplifier

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

### MAXIMUM RATINGS (Design-Center Values)

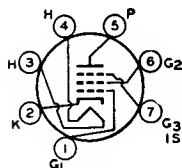
|                                                       |       |       |
|-------------------------------------------------------|-------|-------|
| DC Plate Voltage                                      | 300   | volts |
| Peak Positive-Pulse Plate Voltage (Absolute Maximum)* | 2000* | volts |
| DC Grid-No.2 (Screen-Grid) Voltage                    | 150   | volts |
| Peak Negative-Pulse Grid-No.1 (Control-Grid) Voltage  | 250   | volts |
| Peak Cathode Current                                  | 200   | mA    |
| Average Cathode Current                               | 55    | mA    |
| Plate Dissipation                                     | 10    | watts |
| Grid-No.2 Input                                       | 1.25  | watts |

### MAXIMUM CIRCUIT VALUES

|                               |     |         |
|-------------------------------|-----|---------|
| Grid-No.1-Circuit Resistance: |     |         |
| For fixed-bias operation      | 0.1 | megohm  |
| For cathode-bias operation    | 2.2 | megohms |

\* Pulse duration must not exceed 15% of a vertical scanning cycle (2.5 milliseconds).

\* Under no circumstances should this absolute maximum value be exceeded.



7CM

# SHARP-CUTOFF PENTODE

## 6DC6

Miniature type used in the gain-controlled picture if stages of color and black-and-white television receivers and as an rf amplifier in the tuners of such receivers. Outlines section, 5C; requires 7-contact miniature socket.

|                                                                         |          |        |
|-------------------------------------------------------------------------|----------|--------|
| Heater Voltage (ac/dc)                                                  | 6.3      | volts  |
| Heater Current                                                          | 0.3      | ampere |
| Heater-Cathode Voltage:                                                 |          |        |
| Peak value                                                              | ±200 max | volts  |
| Average value                                                           | 100 max  | volts  |
| Direct Interelectrode Capacitances:                                     |          |        |
| Grid No.1 to Plate                                                      | 0.02 max | pF     |
| Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield | 6.5      | pF     |
| Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield     | 2        | pF     |

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

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

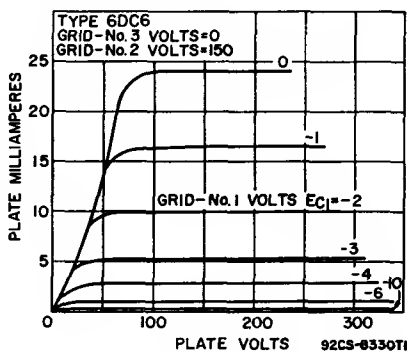
|                                                       |                   |       |
|-------------------------------------------------------|-------------------|-------|
| Plate Voltage                                         | 300               | volts |
| Grid-No.3 (Suppressor-Grid) Voltage, Positive value   | 0                 | volts |
| Grid-No.2 Supply Voltage                              | 300               | volts |
| Grid-No.2 (Screen-Grid) Voltage                       | See curve page 98 |       |
| Grid-No.1 (Control-Grid) Voltage, Positive-bias value | 0                 | volts |
| Plate Dissipation                                     | 2                 | watts |
| Grid-No.2 Input:                                      |                   |       |
| For grid-No.2 voltages up to 150 volts                | 0.5               | watt  |
| For grid-No.2 voltages between 150 and 300 volts      | See curve page 98 |       |

#### CHARACTERISTICS

|                                                              |                                |        |
|--------------------------------------------------------------|--------------------------------|--------|
| Plate Supply Voltage                                         | 200                            | volts  |
| Grid No.3                                                    | Connected to cathode at socket |        |
| Grid-No.2 Supply Voltage                                     | 150                            | volts  |
| Cathode-Bias Resistor                                        | 180                            | ohms   |
| Plate Resistance (Approx.)                                   | 0.5                            | megohm |
| Transconductance                                             | 5500                           | μmhos  |
| Plate Current                                                | 9                              | mA     |
| Grid-No.2 Current                                            | 3                              | mA     |
| Grid-No.1 Voltage (Approx.) for transconductance of 50 μmhos | -12.5                          | volts  |

#### MAXIMUM CIRCUIT VALUES

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



6DC8

Refer to chart at end of section.

## 6DC8/ EBF89

### TWIN DIODE—SEMIREMOTE- CUTOFF PENTODE

Miniature type used as rf- and if-amplifier tube in radio and television receivers. Outlines section, 6E; requires 9-contact socket.

|                             |          |        |
|-----------------------------|----------|--------|
| Heater Voltage (ac/dc)      | 6.3      | volts  |
| Heater Current              | 0.3      | ampere |
| Peak Heater-Cathode Voltage | ±100 max | volts  |

