

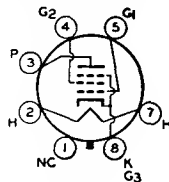
|                                                                                       |     |     |         |
|---------------------------------------------------------------------------------------|-----|-----|---------|
| Average Cathode Current .....                                                         | 22  | 50  | mA      |
| Plate Dissipation .....                                                               | 1.5 | 7   | watts   |
| <b>MAXIMUM CIRCUIT VALUES</b>                                                         |     |     |         |
| Grid-Circuit Resistance:                                                              |     |     |         |
| For grid-resistor bias or cathode-bias operation .....                                | 2.2 | 2.2 | megohms |
| # Pulse duration must not exceed 15% of a vertical scanning cycle (2.5 milliseconds). |     |     |         |

## 6DG6GT

### BEAM POWER TUBE

Glass octal type used as output tube in audio-amplifier applications. Outlines section, 13D; requires octal socket. This type may be supplied with pin 1 omitted.

|                                                              |          |         |
|--------------------------------------------------------------|----------|---------|
| Heater Voltage (ac/dc) .....                                 | 6.3      | volts   |
| Heater Current .....                                         | 1.2      | amperes |
| Heater-Cathode Voltage:                                      |          |         |
| Peak value .....                                             | ±200 max | volts   |
| Average value .....                                          | 100 max  | volts   |
| Direct Interelectrode Capacitances (Approx.):                |          |         |
| Grid No.1 to Plate .....                                     | 0.6      | 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 .....     | 10       | pF      |



7S

### Class A<sub>1</sub> Audio-Frequency Power Amplifier

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

|                                       |      |       |
|---------------------------------------|------|-------|
| Plate Voltage .....                   | 200  | volts |
| Grid-No.2 (Screen-Grid) Voltage ..... | 125  | volts |
| Plate Dissipation .....               | 10   | watts |
| Grid-No.2 Input .....                 | 1.25 | watts |

#### TYPICAL OPERATION

|                                               |       |       |          |
|-----------------------------------------------|-------|-------|----------|
| Plate Supply Voltage .....                    | 110   | 200   | volts    |
| Grid-No.2 Supply Voltage .....                | 110   | 125   | volts    |
| Grid-No.1 (Control-Grid) Supply Voltage ..... | -7.5  | —     | volts    |
| Peak AF Grid-No.1 Voltage .....               | 7.5   | 8.5   | volts    |
| Cathode-Bias Resistor .....                   | —     | 180   | ohms     |
| Zero-Signal Plate Current .....               | 49    | 46    | mA       |
| Maximum-Signal Plate Current .....            | 50    | 47    | mA       |
| Zero-Signal Grid-No.2 Current .....           | 4     | 2.2   | mA       |
| Maximum-Signal Grid-No.2 Current .....        | 10    | 8.5   | mA       |
| Plate Resistance (Approx.) .....              | 13000 | 28000 | ohms     |
| Transconductance .....                        | 8000  | 8000  | μmhos    |
| Load Resistance .....                         | 2000  | 4000  | ohms     |
| Total Harmonic Distortion .....               | 10    | 10    | per cent |
| Maximum-Signal Power Output .....             | 2.1   | 3.8   | watts    |

#### MAXIMUM CIRCUIT VALUES

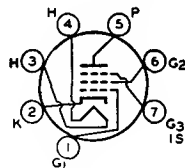
|                                  |     |        |
|----------------------------------|-----|--------|
| Grid-No.1-Circuit Resistance:    |     |        |
| For fixed-bias operation .....   | 0.1 | megohm |
| For cathode-bias operation ..... | 0.5 | megohm |

## 6DK6

3DK6, 4DK6, 12DK6

### SHARP-CUTOFF PENTODE

Miniature type used as if-amplifier tube in color and black-and-white television receivers. Outlines section, 5C; requires miniature 7-contact socket. Types 3DK6, 4DK6, and 12DK6 are identical with type 6DK6 except for heater ratings.



7CM

|                                                                              | 3DK6       | 4DK6     | 6DK6     | 12DK6     |         |
|------------------------------------------------------------------------------|------------|----------|----------|-----------|---------|
| Heater Voltage (ac/dc) .....                                                 | 3.15       | 4.2      | 6.3      | 12.6      | volts   |
| Heater Current .....                                                         | 0.6        | 0.45     | 0.3      | 0.15      | ampere  |
| Heater Warm-up Time (Average) .....                                          | 11         | 11       | —        | —         | seconds |
| Heater-Cathode Voltage:                                                      |            |          |          |           |         |
| Peak value .....                                                             | { +200 max | ±200 max | ±200 max | ±200 max  | volts   |
|                                                                              | { -300 max |          |          |           |         |
| Average value .....                                                          | 100 max    | 100 max  | 100 max  | 100 max   | volts   |
| Direct Interelectrode Capacitances:                                          |            |          |          |           |         |
| Grid No.1 to Plate .....                                                     |            |          |          | 0.025 max | pF      |
| Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3 and Internal Shield ..... |            |          |          | 6.3       | pF      |
| Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield .....    |            |          |          | 1.9       | pF      |

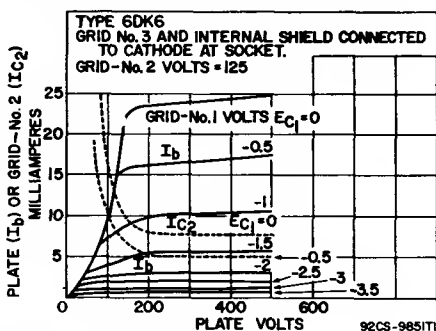
Class A<sub>1</sub> Amplifier

## MAXIMUM RATINGS (Design-Maximum Values)

|                                                       |                   |       |
|-------------------------------------------------------|-------------------|-------|
| Plate Voltage                                         | 330               | volts |
| Grid-No.3 (Suppressor-Grid) Voltage, Positive value   | 0                 | 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                                     | 2.3               | watts |
| Grid-No.2 Input:                                      |                   |       |
| For grid-No.2 voltages up to 165 volts                | 0.55              | watt  |
| For grid-No.2 voltages between 165 and 330 volts      | See curve page 98 |       |

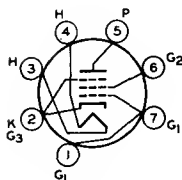
## CHARACTERISTICS

|                                                             |                                |            |
|-------------------------------------------------------------|--------------------------------|------------|
| Plate Supply Voltage                                        | 125                            | volts      |
| Grid No.3                                                   | Connected to cathode at socket |            |
| Grid-No.2 Supply Voltage                                    | 125                            | volts      |
| Cathode-Bias Resistor                                       | 56                             | ohms       |
| Plate Resistance (Approx.)                                  | 0.35                           | megohm     |
| Transconductance                                            | 9800                           | $\mu$ mhos |
| Plate Current                                               | 12                             | mA         |
| Grid-No.2 Current                                           | 3.8                            | mA         |
| Grid-No.1 Voltage (Approx.) for plate current of 20 $\mu$ A | -6.5                           | volts      |



Refer to chart at end of section.

6DL5



7DQ

## POWER PENTODE

6DL5/EL95

Miniature type used in audio output applications in automobile radios. Outlines section, 5E; requires miniature 7-contact socket. Heater: volts, 6.3; amperes, 0.2; maximum heater-cathode volts,  $\pm 100$ .

Class A<sub>1</sub> Amplifier

## MAXIMUM RATINGS (Design-Maximum Values)

|                                        |     |       |
|----------------------------------------|-----|-------|
| Plate Supply Voltage                   | 550 | volts |
| Plate Voltage                          | 300 | volts |
| Grid-No.2 (Screen-Grid) Supply Voltage | 550 | volts |
| Grid-No.2 Voltage                      | 300 | volts |
| Cathode Current                        | 35  | mA    |
| Plate Dissipation                      | 2.5 | watts |
| Grid-No.2 Input                        | 6   | watts |

## TYPICAL OPERATION

|                                         |      |       |          |
|-----------------------------------------|------|-------|----------|
| Plate Voltage                           | 200  | 250   | volts    |
| Grid-No.2 Voltage                       | 200  | 250   | volts    |
| RMS AF Grid-No.1 (Control-Grid) Voltage | 4.5  | 5     | volts    |
| Cathode-Bias Resistor                   | 230  | 320   | ohms     |
| Plate Current                           | 23   | 24    | mA       |
| Grid-No.2 Current                       | 4.2  | 4.5   | mA       |
| Load Resistance                         | 8000 | 10000 | ohms     |
| Total Harmonic Distortion               | 12   | 12    | per cent |
| Power Output                            | 2.3  | 3     | watts    |

## MAXIMUM CIRCUIT VALUE

|                                                          |   |         |
|----------------------------------------------------------|---|---------|
| Grid-No.1-Circuit Resistance, for cathode-bias operation | 2 | megohms |
|----------------------------------------------------------|---|---------|