



# SHARP-CUTOFF PENTODE

**6HS6**

Miniature type used as if-amplifier and limiter tube in FM receivers. Outlines section, 5C; requires miniature 7-contact socket.

|                                                                         |               |         |
|-------------------------------------------------------------------------|---------------|---------|
| Heater Voltage (ac/dc)                                                  | 6.3           | volts   |
| Heater Current                                                          | 0.45          | ampere  |
| Heater Warm-up Time (Average)                                           | 11            | seconds |
| Heater-Cathode Voltage:                                                 |               |         |
| Peak value                                                              | $\pm 200$ max | volts   |
| Average value                                                           | 100 max       | volts   |
| Direct Interelectrode Capacitances:                                     |               |         |
| Grid No.1 to Plate                                                      | 0.006 max     | volts   |
| Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield | 8.8           | pF      |
| Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield     | 5.2           | pF      |

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

### MAXIMUM RATINGS (Design-Maximum Values)

|                                                     |                    |       |
|-----------------------------------------------------|--------------------|-------|
| Plate Supply Voltage                                | 300                | volts |
| Grid-No.3 (Suppressor-Grid) Voltage, Positive Value | 0                  | volts |
| Grid-No.2 (Screen-Grid) Supply Voltage              | 300                | volts |
| Grid-No.2 Voltage                                   | See curve page 300 |       |
| Grid-No.1 (Control-Grid) Voltage:                   |                    |       |
| Negative-bias value                                 | 50                 | volts |
| Positive-bias value                                 | 0                  | volts |
| Plate Dissipation                                   | 3                  | volts |
| Grid-No.2 Input:                                    |                    |       |
| For grid-No.2 voltages up to 150 volts              | 1                  | watt  |
| For grid-No.2 voltages between 150 and 300 volts    | See curve page 300 |       |

### CHARACTERISTICS

|                                                             |                                |      |            |
|-------------------------------------------------------------|--------------------------------|------|------------|
| Plate Supply Voltage                                        | 75                             | 150  | volts      |
| Grid No.3                                                   | Connected to cathode at socket |      |            |
| Grid-No.2 Supply Voltage                                    | 75                             | 75   | volts      |
| Grid-No.1 Supply Voltage                                    | 0                              | 0    | volts      |
| Cathode-Bias Resistor                                       | 68                             | 68   | ohms       |
| Amplification Factor*                                       | 50                             | —    |            |
| Plate Resistance (Approx.)                                  | —                              | 0.5  | megohm     |
| Transconductance                                            | —                              | 9500 | $\mu$ mhos |
| Plate Current                                               | —                              | 8.8  | mA         |
| Grid-No.2 Current                                           | —                              | 2.8  | mA         |
| Grid-No.1 Voltage (Approx.) for plate current of 20 $\mu$ A | —                              | —4   | volts      |

### MAXIMUM CIRCUIT VALUES

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

\* Grid No.2 connected to plate.

