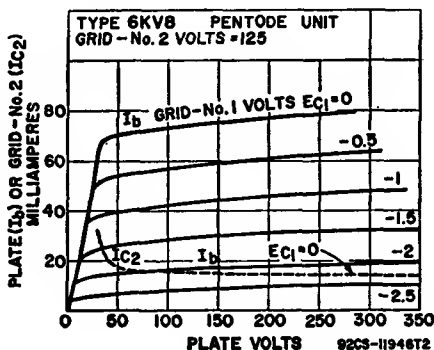


**CHARACTERISTICS**

|                                                                    | Triode Unit | Pentode Unit |                 |
|--------------------------------------------------------------------|-------------|--------------|-----------------|
| Plate Supply Voltage .....                                         | 200         | 125          | 200 volts       |
| Grid-No.2 Supply Voltage .....                                     | —           | 125          | 125 volts       |
| Grid-No.1 Supply Voltage .....                                     | -2          | 0            | 0 volts         |
| Cathode-Bias Resistor .....                                        | —           | 82           | 68 ohms         |
| Amplification Factor .....                                         | 70          | —            | —               |
| Plate Resistance (Approx.) .....                                   | 17500       | 55000        | 75000 ohms      |
| Transconductance .....                                             | 4000        | 21000        | 23000 $\mu$ hos |
| Plate Current .....                                                | 4           | 16.5         | 20 mA           |
| Grid-No.2 Current .....                                            | —           | 3.1          | 3.5 mA          |
| Grid-No.1 Voltage (Approx.) for plate current of 100 $\mu$ A ..... | -4.5        | -4.2         | -4.2 volts      |

**MAXIMUM CIRCUIT VALUES**

| Grid-No.1-Circuit Resistance:    | Triode Unit | Pentode Unit |        |
|----------------------------------|-------------|--------------|--------|
| For fixed-bias operation .....   | 0.5         | 0.1          | megohm |
| For cathode-bias operation ..... | 1           | 0.25         | megohm |

**6KY6**

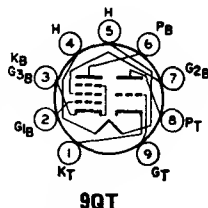
Refer to chart at end of section.

**6KY8**

Refer to chart at end of section.

**6KY8A****15KY8A****HIGH-MU TRIODE—  
BEAM POWER TUBE**

Novar type used in combined vertical-deflection-oscillator and vertical-deflection-amplifier applications in black-and-white television receivers having low-voltage "B" supplies. Outlines section, 30A; requires novar 9-contact socket. Type 15KY8A is identical with type 6KY8A except for heater ratings.



|                                                              |               |               |         |
|--------------------------------------------------------------|---------------|---------------|---------|
| Heater Voltage (ac/dc) .....                                 | 6.3           | 15            | volts   |
| Heater Current .....                                         | 1.1           | 0.45          | amperes |
| Heater Warm-up Time (Average) .....                          | —             | 11            | seconds |
| Heater Cathode Voltage:                                      |               |               |         |
| Peak value .....                                             | $\pm 200$ max | $\pm 200$ max | volts   |
| Average value .....                                          | 100 max       | 100 max       | volts   |
| Direct Interelectrode Capacitances (Approx.):                |               |               |         |
| Triode Unit:                                                 |               |               |         |
| Grid to Plate .....                                          |               | 0.44          | pF      |
| Grid to Cathode and Heater .....                             |               | 15            | pF      |
| Plate to Cathode and Heater .....                            |               | 7             | pF      |
| Pentode Unit:                                                |               |               |         |
| Grid No.1 to Plate .....                                     |               | 0.048         | pF      |
| Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3 ..... |               | 2.6           | pF      |
| Plate to Cathode, Heater, Grid No.2, and Grid No.3 .....     |               | 0.28          | pF      |

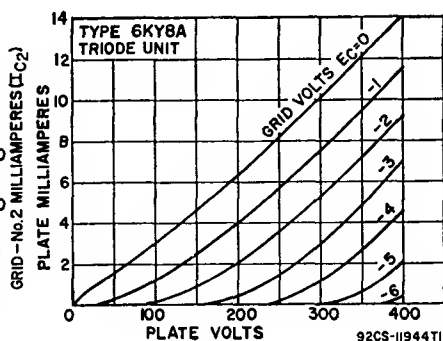
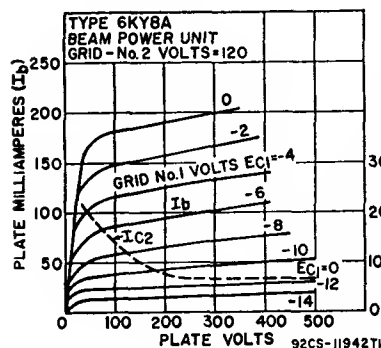
Class A<sub>1</sub> Amplifier

## CHARACTERISTICS

|                                                       | Triode Unit | Beam Power Unit |       |     |       |
|-------------------------------------------------------|-------------|-----------------|-------|-----|-------|
| Plate Voltage                                         | 250         | 50              | 135   | 120 | volts |
| Grid-No.2 (Screen-Grid) Voltage                       | —           | 120             | 120   | *   | volts |
| Grid-No.1 (Control-Grid) Voltage                      | -3          | 0               | -10   | -10 | volts |
| Amplification Factor                                  | 64          | —               | —     | 7   |       |
| Plate Resistance (Approx.)                            | 40000       | —               | 18000 | —   | ohms  |
| Transconductance                                      | 1600        | —               | 8400  | —   | μmhos |
| Plate Current                                         | 1.4         | 170*            | 39    | —   | mA    |
| Grid-No.2 Current                                     | —           | 20*             | 3     | —   | mA    |
| Grid-No.1 Voltage (Approx.) for plate current of 1 mA | —           | —               | -24   | —   | volts |

\* Triode connection, grid No.2 connected to plate at socket.

\* This value can be measured by a method involving a recurrent waveform such that the maximum ratings of the tube will not be exceeded.



## Vertical-Deflection Oscillator and Amplifier

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

## MAXIMUM RATINGS (Design-Maximum Values)

|                                                          | Triode Unit<br>Oscillator | Beam Power Unit<br>Amplifier |       |
|----------------------------------------------------------|---------------------------|------------------------------|-------|
| DC Plate Voltage                                         | 330                       | 300                          | volts |
| Peak Positive-Pulse Plate Voltage#<br>(Absolute Maximum) | —                         | 2200†                        | volts |
| DC Grid-No.2 Voltage                                     | —                         | 150                          | volts |
| Peak Negative-Pulse Grid-No.1 Voltage                    | 400                       | 250                          | volts |
| Peak Cathode Current                                     | 77                        | 200                          | mA    |
| Average Cathode Current                                  | 22                        | 60                           | mA    |
| Plate Dissipation                                        | 1.5                       | 12                           | watts |
| Grid-No.2 Input                                          | —                         | 1.9                          | watts |

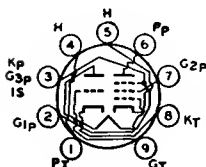
## MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:

For grid-resistor-bias operation 2.2 2.2 megohms

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

† Under no conditions should this maximum value be exceeded.



9FZ

MEDIUM-MU TRIODE—  
SHARP-CUTOFF PENTODE

6KZ8

5KZ8, 9KZ8

Miniature type used as combined oscillator and mixer in vhf color and black-and-white television receivers. Outlines section, 6B; requires miniature 9-contact socket. Types 5KZ8 and 9KZ8 are identical with type 6KZ8 except for heater ratings.