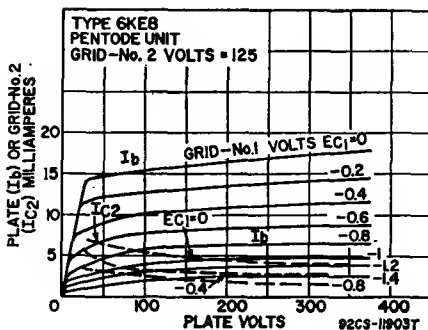
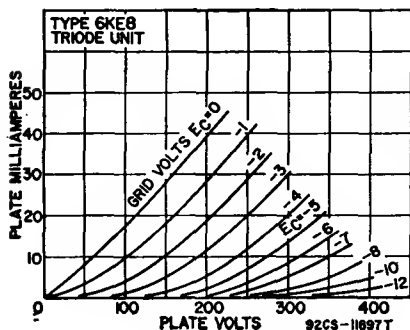


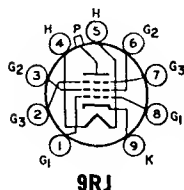
|                                        |     |      |        |
|----------------------------------------|-----|------|--------|
| Plate Current .....                    | 13  | 10   | mA     |
| Grid-No.2 Current .....                | —   | 2.8  | mA     |
| Grid-No.1 Voltage (Approx.):           |     |      |        |
| For plate current of 100 $\mu$ A ..... | 5   | —    | volts  |
| For plate current of 50 $\mu$ A .....  | —   | —3   | volts  |
| <b>MAXIMUM CIRCUIT VALUES</b>          |     |      |        |
| Grid-No.1-Circuit Resistance:          |     |      |        |
| For fixed-bias operation .....         | 0.5 | 0.25 | megohm |
| For cathode-bias operation .....       | 1   | 0.5  | megohm |



## POWER PENTODE

**6KG6A/  
EL509**

40KG6A/PL509



Magnoval type used as a horizontal-deflection amplifier in color television receivers. Outlines section, 38A; requires 9-contact magnoval socket. Type 40KG6A/PL509 is identical with type 6KG6A/EL509 except for heater ratings.

|                                     |     |     |         |
|-------------------------------------|-----|-----|---------|
| Heater Voltage (ac/dc) .....        | 6.3 | 40  | volts   |
| Heater Current .....                | 2   | 0.3 | amperes |
| Peak Heater-Cathode Voltage .....   | 250 |     | volts   |
| Direct Interelectrode Capacitances: |     |     |         |
| Plate to Grid-No.1 .....            | 2.5 |     | pF      |
| Grid-No.1 to Heater .....           | 0.2 |     | pF      |

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

### CHARACTERISTICS

|                                      |             |      |       |
|--------------------------------------|-------------|------|-------|
| Plate Voltage .....                  | 45          | 160  | volts |
| Grid-No.3 Voltage .....              | 0           | 0    | volts |
| Grid-No.2 Voltage .....              | 160         | 160  | volts |
| Grid-No.1 Voltage .....              | 0           | 0    | volts |
| Plate Current <sup>a</sup> .....     | 1000 (min.) | 1400 | mA    |
| Grid-No.2 Current <sup>a</sup> ..... | —           | 45   | mA    |

## Horizontal-Deflection Amplifier

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

### MAXIMUM RATINGS (Design-Maximum Values)

|                                                      |      |       |
|------------------------------------------------------|------|-------|
| Plate Supply Voltage .....                           | 700  | volts |
| Peak Positive-Pulse Plate Voltage <sup>a</sup> ..... | 7000 | volts |
| Grid-No.2 Voltage (zero-current) .....               | 700  | volts |
| Grid-No.2 Voltage .....                              | 250  | volts |
| Plate Dissipation (Absolute-Maximum Value) .....     | 34   | watts |
| Grid-No.2 Input .....                                | 7    | watts |
| Cathode Current .....                                | 500  | mA    |

**MAXIMUM CIRCUIT VALUES**

Grid-No.1-Circuit Resistance:

|                                  |      |         |
|----------------------------------|------|---------|
| For fixed-bias operation .....   | 0.25 | megohm  |
| For cathode-bias operation ..... | 2.2  | megohms |

† In horizontal-deflection service, 15 volts may be applied to grid-No.3 to minimize snivets.

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

\* Pulse duration must not exceed 15% of a horizontal scanning cycle (10 microseconds).

**6KL8**

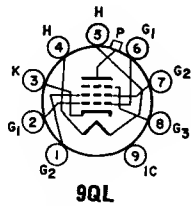
Refer to chart at end of section.

**6KM6**

**22KM6**

**BEAM POWER TUBE**

Novar type used as horizontal-deflection amplifier in color and black-and-white television receivers. Outlines section, 18A; requires novar 9-contact socket. Type 22KM6 is identical with type 6KM6 except for heater ratings.



|                                                              |          |          |         |
|--------------------------------------------------------------|----------|----------|---------|
| Heater Voltage (ac/dc) .....                                 | 6.3      | 22       | volts   |
| Heater Current .....                                         | 1.6      | 0.45     | amperes |
| Heater Warm-up Time .....                                    | —        | 11       | seconds |
| Heater-Cathode Voltage:                                      |          |          |         |
| Peak value .....                                             | ±200 max | ±200 max | volts   |
| Average value .....                                          | 100 max  | 100 max  | volts   |
| Direct Interelectrode Capacitances:                          |          |          |         |
| Grid No.1 to Plate .....                                     | —        | 1.2      | pF      |
| Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3 ..... | —        | 22       | pF      |
| Plate to Cathode, Heater, Grid No.2, and Grid No.3 .....     | —        | 9        | pF      |

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

**CHARACTERISTICS**

|                                                   | Triode Connection | Pentode Connection |       |
|---------------------------------------------------|-------------------|--------------------|-------|
| Plate Voltage .....                               | 140               | 60 140             | volts |
| Peak Positive-Pulse Plate Voltage** .....         | —                 | 6500               | volts |
| Grid-No.3 (Suppressed-Grid) Voltage .....         | 0                 | 30 30              | volts |
| Grid-No.2 (Screen-Grid) Voltage .....             | 140               | 140 140            | volts |
| Grid-No.1 (Control-Grid) Voltage .....            | -24.5             | 0 -24.5            | volts |
| Amplification Factor† .....                       | 4                 | —                  |       |
| Plate Resistance (Approx.) .....                  | —                 | 6000               | ohms  |
| Transconductance .....                            | —                 | 9500               | μmhos |
| Plate Current .....                               | —                 | 560†† 80           | mA    |
| Grid-No.2 Current .....                           | —                 | 31†† 2.4           | mA    |
| Grid-No.1 Voltage for plate current of 1 mA ..... | —                 | -110 -42           | volts |

