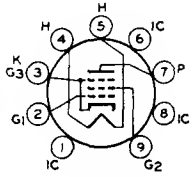
**6CW5** Refer to chart at end of section.

# 6CW5/ EL86

**8CW5/XL86, 10CW5/LL86, 15CW5/PL84**

## POWER PENTODE

Miniature type used for vertical-deflection amplifier service in color and black-and-white television receivers. Outlines section, 6G; requires miniature 9-contact socket. Types 8CW5/XL86, 10CW5/LL86, and 15CW5/PL84 are identical with type 6CW5/EL86 except for heater ratings.




9CV

| | 6CW5/EL86 | 8CW5/ XL86 | 10CW5/ LL86 | 15CW5/PL84 | |
|---|---|---|---|---|---|
| Heater Voltage (ac/dc) | 6.3 | 8 | 10.6 | 15 | volts |
| Heater Current | 0.76 | 0.6 | 0.45 | 0.3 | ampere |
| Heater Warm-up Time | — | — | 11 | — | seconds |
| Heater-Cathode Voltage: | | | | | |
| Peak value | ±330 max | ±330 max | ±330 max | ±330 max | volts |
| Average value | ±220 max | ±220 max | ±220 max | ±220 max | volts |

Direct Interelectrode Capacitances:

| | | |
|---|---|---|
| Grid No.1 to Plate | 0.6 | pF |
| Grid No.1 to Heater | 0.25 max | pF |
| Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3 | 13 | pF |
| Plate to Cathode, Heater, Grid No.2, and Grid No.3 | 6.8 | pF |

### Class $A_1$ or Class $AB_1$ Amplifier

**MAXIMUM RATINGS** (Design-Maximum Values)

| | | |
|---|---|---|
| Plate Voltage | 275 | volts |
| Plate Supply Voltage | 600 | volts |
| Grid-No.2 Voltage | 220 | volts |
| Grid-No.2 (Screen-Grid) Supply Voltage | 600 | volts |
| Cathode Current | 110 | mA |
| Plate Dissipation | 14 | watts |
| Grid-No.2 Input | 2.1 | watts |
| Peak Grid-No.2 Input | 7 | watts |

**CHARACTERISTICS**

| | | |
|---|---|---|
| Plate Voltage | 170 | volts |
| Grid-No.2 Voltage | 170 | volts |
| Grid-No.1 (Control-Grid) Voltage | —12.5 | volts |
| Mu Factor (Grid No.2 to Grid No.1) | 8 | |
| Plate Resistance | 26000 | ohms |
| Transconductance | 11000 | μmhos |
| Plate Current | 70 | mA |
| Grid-No.2 Current | 3.5 | mA |

**MAXIMUM CIRCUIT VALUE**

| | | |
|---|---|---|
| Grid-No.1-Circuit Resistance | 1 | megohm |

### Vertical-Deflection Amplifier

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

**MAXIMUM RATINGS** (Design-Maximum Values)

| | | |
|---|---|---|
| Plate Voltage | 275 | volts |
| Peak Positive-Pulse Plate Voltage# | 2200 | volts |
| Grid-No.2 Voltage | 275 | volts |
| Peak Negative-Pulse Grid-No.1 Voltage | 250 | volts |
| Peak Cathode Current | 240 | mA |
| Average Cathode Current | 110 | mA |
| Plate Dissipation | 12 | watts |
| Grid-No.2 Input | 2.1 | watts |

**MAXIMUM CIRCUIT VALUE**

| | | |
|---|---|---|
| Grid-No.1-Circuit Resistance | 2.2 | megohms |

# Pulse duration must not exceed 6% of a vertical scanning cycle (1.2 milliseconds).