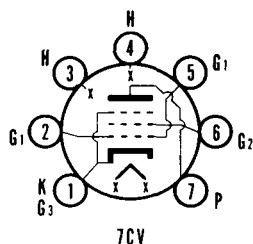


**SYLVANIA TYPE**    **6EH5**  
**12EH5**  
**25EH5**  
**50EH5**



## MECHANICAL DATA

|                        |                              |
|------------------------|------------------------------|
| Bulb.....              | T-5 $\frac{1}{2}$            |
| Base.....              | E7-1, Miniature Button 7-Pin |
| Outline.....           | 5-3                          |
| Basing.....            | 7CV                          |
| Cathode.....           | Coated Unipotential          |
| Mounting Position..... | Any                          |

## ELECTRICAL DATA

### HEATER CHARACTERISTICS

|                                                  | 6EH5 | 12EH5 | 25EH5 | 50EH5          |
|--------------------------------------------------|------|-------|-------|----------------|
| Heater Voltage.....                              | 6.3  | 12.6  | 25    | 50 Volts       |
| Heater Current.....                              | 1200 | 600   | 300   | 150 Ma         |
| Heater Warm-up Time <sup>1</sup> .....           | ...  | 11    | ...   | ... Seconds    |
| Heater-Cathode Voltage<br>(Design Center Values) |      |       |       |                |
| Heater Negative with Respect<br>to Cathode       |      |       |       |                |
| Total D C and Peak.....                          | 200  | 300   | 200   | 200 Volts Max. |
| Heater Positive with Respect<br>to Cathode       |      |       |       |                |
| D C.....                                         | 100  | 100   | 100   | 100 Volts Max. |
| Total D C and Peak.....                          | 200  | 200   | 200   | 200 Volts Max. |

### DIRECT INTERELECTRODES CAPACITANCES (Unshielded)

|                          |              |
|--------------------------|--------------|
| Grid No. 1 to Plate..... | 0.65 $\mu$ f |
| Input.....               | 17 $\mu$ f   |
| Output.....              | 9 $\mu$ f    |

### MAXIMUM RATINGS (Design Center Values)

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

|                               |            |
|-------------------------------|------------|
| Plate Voltage.....            | 135 Volts  |
| Grid No. 2 Voltage.....       | 117 Volts  |
| Grid No. 1 Voltage.....       | 0 Volts    |
| Plate Dissipation.....        | 5 Watts    |
| Grid No. 2 Dissipation.....   | 1.75 Watts |
| Grid No. 1 Circuit Resistance |            |
| Fixed Bias.....               | 0.1 Megohm |
| Cathode Bias.....             | 0.5 Megohm |

### CHARACTERISTICS AND TYPICAL OPERATION

|                                        |                   |
|----------------------------------------|-------------------|
| Plate Voltage.....                     | 110 Volts         |
| Grid No. 2 Voltage.....                | 115 Volts         |
| Cathode Resistor.....                  | 62 Ohms           |
| Peak AF Grid No. 1 Voltage.....        | 3 Volts           |
| Zero-Signal Plate Current.....         | 42 Ma             |
| Maximum Signal Plate Current.....      | 42 Ma             |
| Zero Signal Grid No. 2 Current.....    | 11.5 Ma           |
| Maximum Signal Grid No. 2 Current..... | 14.5 Ma           |
| Transconductance.....                  | 14,600 $\mu$ mhos |
| Plate Resistance (approx.).....        | 11,000 Ohms       |
| Load Resistance.....                   | 3000 Ohms         |
| Maximum Signal Power Output.....       | 1.4 Watts         |
| Total Harmonic Distortion.....         | 7 Percent         |

### NOTE:

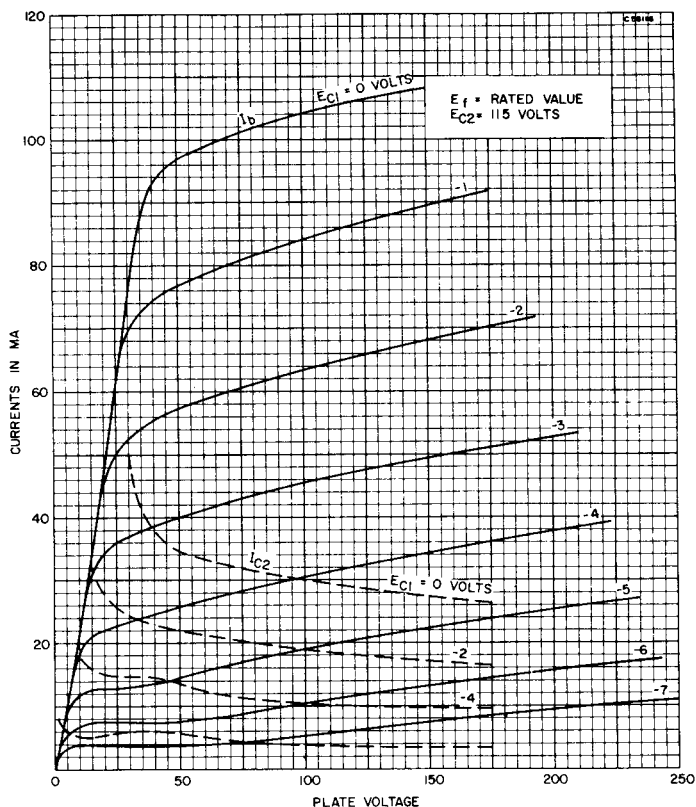
1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of the rated heater voltage after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times the rated heater voltage divided by the rated heater current.

## APPLICATION

The Sylvania Types 6EH5, 12EH5, 25EH5 and 50EH5 are miniature power pentodes designed for service as audio power amplifiers. Type 12EH5 differs from the others in that it is controlled for heater warm-up time and has a higher heater-cathode voltage rating.

# 6EH5, 12EH5, 25EH5, 50EH5 (Cont'd)

## AVERAGE PLATE CHARACTERISTICS



## OPERATION CHARACTERISTICS

