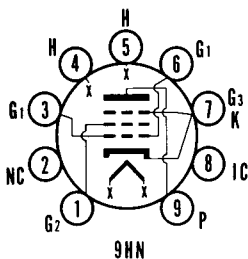


# SYLVANIA TYPES 6DT5 12DT5 25DT5



## MECHANICAL DATA

|                        |                          |
|------------------------|--------------------------|
| Bulb.....              | T-6 1/2                  |
| Base.....              | E9-1, Small Button 9-Pin |
| Outline.....           | 6-3                      |
| Basing.....            | 9HN                      |
| Cathode.....           | Coated Unipotential      |
| Mounting Position..... | Any                      |

## ELECTRICAL DATA

### HEATER CHARACTERISTICS

|  | 6DT5 | 12DT5 | 25DT5          |
|--|------|-------|----------------|
| Heater Voltage.....                            | 6.3  | 12.6  | 25 Volts       |
| Heater Current.....                            | 1200 | 600   | 300 Ma         |
| Heater Warm-up Time <sup>1</sup> .....         |      | 11    | 11 Seconds     |
| Heater-Cathode Voltage (Design Maximum Values) |      |       |                |
| Heater Negative with Respect to Cathode        |      |       |                |
| Total D C and Peak.....                        |      |       | 200 Volts Max. |
| Heater Positive with Respect to Cathode        |      |       |                |
| D C.....                                       |      |       | 100 Volts Max. |
| Total D C and Peak.....                        |      |       | 200 Volts Max. |

### DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

|                          |                       |
|--------------------------|-----------------------|
| Grid No. 1 to Plate..... | 0.57 $\mu\mu\text{f}$ |
| Input.....               | 12.5 $\mu\mu\text{f}$ |
| Output.....              | 4.9 $\mu\mu\text{f}$  |

### MAXIMUM RATINGS<sup>2</sup> (Design Maximum Values)

#### Vertical Deflection Amplifier<sup>3</sup>

|  |             |
|--|-------------|
| Plate Voltage.....                                 | 315 Volts   |
| Grid No. 2 Voltage.....                            | 285 Volts   |
| Peak Positive Pulse Plate Voltage (Abs. Max.)..... | 2200 Volts  |
| Peak Negative Pulse Grid Voltage.....              | 250 Volts   |
| Plate Dissipation <sup>4</sup> .....               | 9.0 Watts   |
| Grid No. 2 Dissipation <sup>4</sup> .....          | 2.0 Watts   |
| Average Cathode Current.....                       | 55 Ma       |
| Peak Cathode Current.....                          | 190 Ma      |
| Grid Circuit Resistance                            |             |
| Fixed Bias.....                                    | 0.5 Megohms |
| Cathode Bias.....                                  | 1.0 Megohms |

### CHARACTERISTICS

|   |                       |
|---|-----------------------|
| Plate Voltage.....                            | 250 Volts             |
| Grid No. 2 Voltage.....                       | 250 Volts             |
| Grid No. 1 Voltage.....                       | -16.5 Volts           |
| Plate Current.....                            | 44 Ma                 |
| Grid No. 2 Current.....                       | 1.5 Ma                |
| Transconductance.....                         | 6200 $\mu\text{mhos}$ |
| Ec1 for Ib = 100 $\mu\text{a}$ (approx.)..... | -35 Volts             |

### INSTANTANEOUS PLATE KNEE VALUES

Eb = 60 V, Ec2 = 150 V, and Ec1 = 0 V  
Ib = 95 Ma and Ic2 = 8.5 Ma

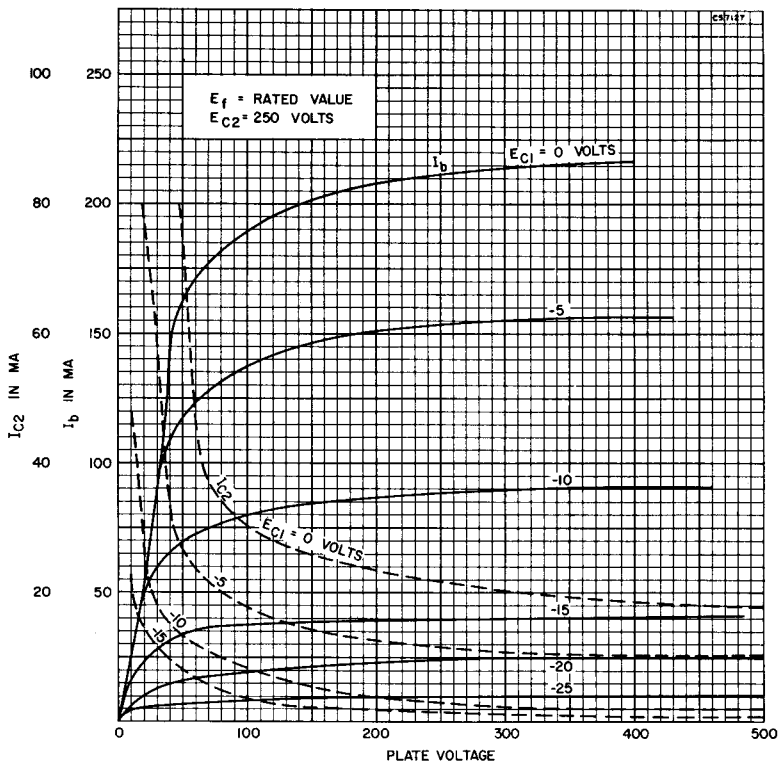
### NOTES:

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.
2. Design-Maximum Ratings are the limiting values expressed with respect to bogy tubes at which satisfactory tube life can be expected to occur. To obtain satisfactory circuit performance, therefore, the equipment designer must establish the circuit design so that no design-maximum value is exceeded with a bogy tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, and environmental conditions.
3. For operating in a 525-line, 30-frame system as described in "Standards of Good Engineering Practice for Television Stations; Federal Communications Commission."
4. In stages operating with grid-leak bias, an adequate bias resistor or other suitable means is required to protect the tube in the absence of excitation.

## APPLICATION

The Sylvania Types 6DT5, 12DT5 and 25DT5 are miniature beam power tubes designed primarily for vertical deflection amplifier service in television receivers employing 110° deflection systems. Both types feature high zero-bias plate current and are designed to operate at relatively low B supply voltages. The 12DT5 and 25DT5 features controlled heater warm-up time for operation in receivers employing a series heater string.

**AVERAGE PLATE CHARACTERISTICS**



**AVERAGE TRANSFER CHARACTERISTICS**

