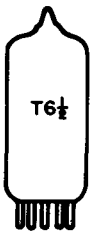
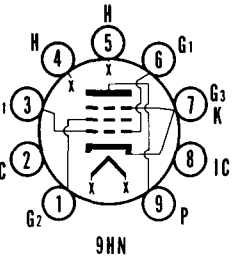


SYLVANIA TYPES 6DT5 12DT5 25DT5



MECHANICAL DATA

Bulb	T-6½
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[1]		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 μμf
Input	12.5 μμf
Output	4.9 μμf

MAXIMUM RATINGS[2] (Design Maximum Values)

Vertical Deflection Amplifier[3]

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[4]	9.0 Watts
Grid No. 2 Dissipation[4]	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 μmhos
Ec1 for Ib = 100 μa (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 bogey 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 bogey 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.

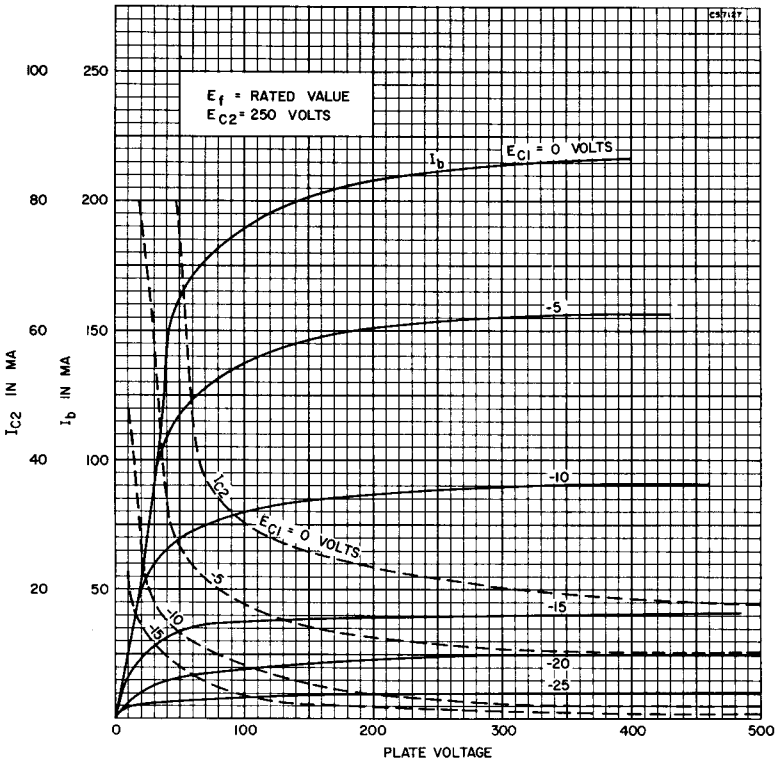
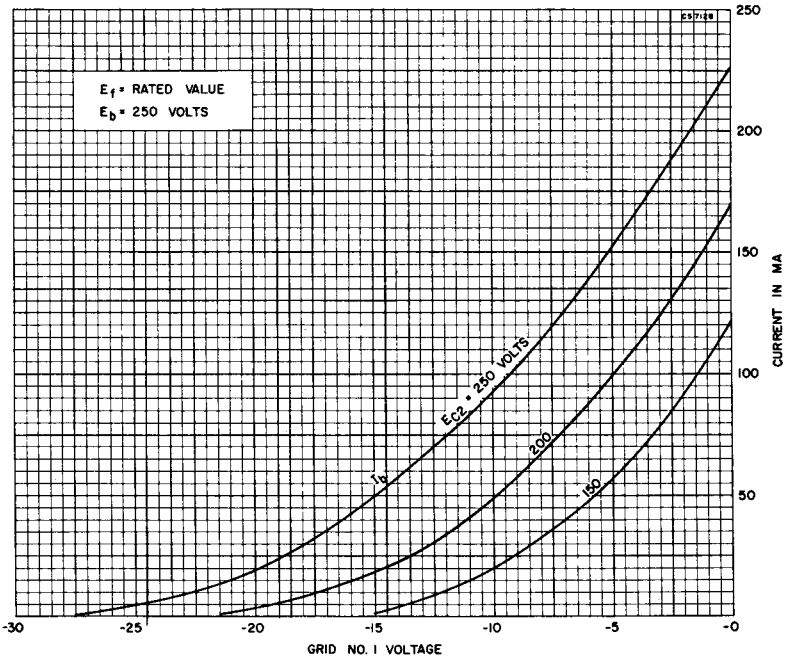
APPLICATION

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.

SYLVANIA ELECTRONIC TUBES

SYLVANIA TYPES 6DT5, 12DT5, 25DT5 (Cont'd)

AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS