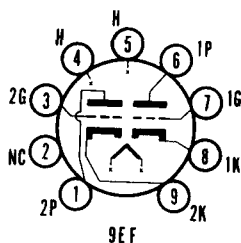


# SYLVANIA TYPE 6CS7 8CS7

DOUBLE TRIODE



## MECHANICAL DATA

|                        |                           |
|------------------------|---------------------------|
| Bulb.....              | T-6 $\frac{1}{2}$         |
| Base.....              | E9-1, Small Button, 9-Pin |
| Outline.....           | 6-3                       |
| Basing.....            | 9EF                       |
| Cathode.....           | Coated Unipotential       |
| Mounting Position..... | Any                       |

## ELECTRICAL DATA

### HEATER CHARACTERISTICS

|                                               | 6CS7 | 8CS7          |
|-----------------------------------------------|------|---------------|
| Heater Voltage.....                           | 6.3  | 8.4 Volts     |
| Heater Current.....                           | 600  | 450 Ma        |
| Heater Warm-up Time (See Appendix).....       | 11   | 11 Seconds    |
| Heater-Cathode Voltage (Design Center 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)

|                              | Triode No. 1 <sup>1</sup> | Triode No. 2         |
|------------------------------|---------------------------|----------------------|
| Grid to Plate.....           | 2.6                       | 2.6 $\mu\mu\text{f}$ |
| Input: g to (k+h+e.s.).....  | 1.8                       | 3.0 $\mu\mu\text{f}$ |
| Output: p to (k+h+e.s.)..... | 0.5                       | 0.5 $\mu\mu\text{f}$ |

### RATINGS (Design Center Values—Except as Noted)

#### Vertical Deflection Oscillator and Amplifier<sup>2</sup>

|                                                       | Triode No. 1 <sup>1</sup><br>(Oscillator) | Triode No. 2<br>(Amplifier) |
|-------------------------------------------------------|-------------------------------------------|-----------------------------|
| D C Plate Voltage.....                                | 500                                       | 500 Volts Max               |
| Peak Positive Pulse Plate Voltage<br>(Abs. Max.)..... |                                           | 2200 Volts                  |
| Peak Negative Pulse Grid Voltage.....                 | 400                                       | 250 Volts Max               |
| Plate Dissipation <sup>3</sup> .....                  | 1.25                                      | 6.5 Watts Max               |
| Average Cathode Current.....                          | 20                                        | 30 Ma Max                   |
| Peak Cathode Current.....                             | 70                                        | 105 Ma Max                  |
| Grid Circuit Resistance.....                          | 2.2                                       | 2.2 Megohms Max             |

### AVERAGE CHARACTERISTICS

|                                               | Triode No. 1 <sup>1</sup> | Triode No. 2          |
|-----------------------------------------------|---------------------------|-----------------------|
| Plate Voltage.....                            | 250                       | 250 Volts             |
| Grid Voltage.....                             | -8.5                      | -10.5 Volts           |
| Plate Current.....                            | 10.5                      | 19.0 Ma               |
| Transconductance.....                         | 2200                      | 4500 $\mu\text{mhos}$ |
| Amplification Factor.....                     | 17.0                      | 15.5                  |
| Plate Resistance.....                         | 7700                      | 3450 Ohms             |
| Plate Current at $E_c = -16$ Volts.....       |                           | 3.0 Ma                |
| Grid Voltage for $I_b = 10 \mu\text{a}$ ..... | -24                       | Volts                 |
| Grid Voltage for $I_b = 50 \mu\text{a}$ ..... |                           | -22 Volts             |

### NOTES:

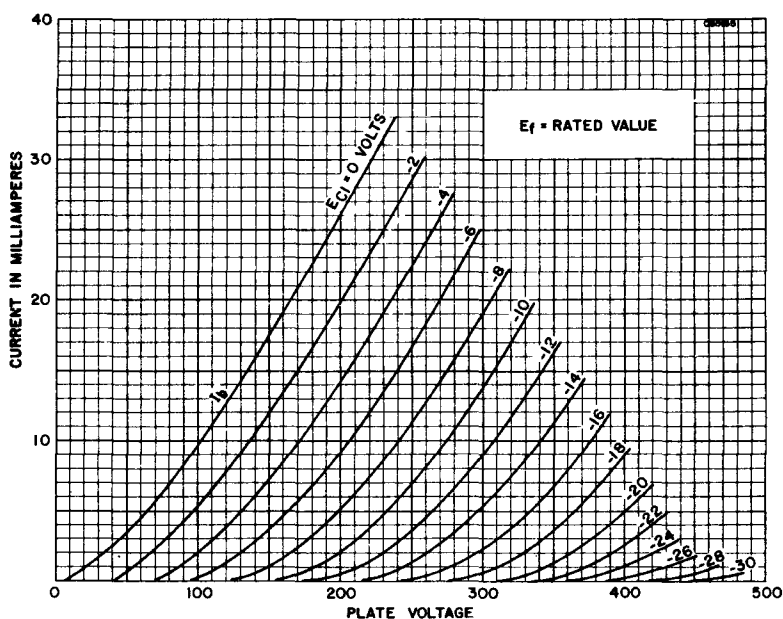
1. Triode No. 1 connects to pins 6, 7 and 8.  
Triode No. 2 connects to pins 1, 3 and 9.
2. For operation in a 525 line, 30-frame system as described in "Standards of Good Engineering Practice for Television Broadcasting Stations; Federal Communications Commission." The duty cycle of the voltage pulse must not exceed 15% of one scanning cycle.
3. In stages operating with grid leak bias, an adequate cathode bias resistor or other suitable means is required to protect the tube in the absence of excitation.

## APPLICATION

The Sylvania Types 6CS7 and 8CS7 are miniature, double triodes having dissimilar sections. Section No. 1 is intended for operation as a vertical deflection oscillator and Section No. 2 as a vertical deflection amplifier. The 6CS7 and 8CS7 incorporates controlled heater warm-up time to insure dependable operation in television receivers employing a series heater string.

# 6CS7, 8CS7 (Cont'd)

## AVERAGE PLATE CHARACTERISTICS TRIODE NO. 1



## AVERAGE PLATE CHARACTERISTICS TRIODE NO. 2

