

## MECHANICAL DATA

|                     |                              |
|---------------------|------------------------------|
| Bulb                | T-6 1/2                      |
| Base                | E9-1, Miniature Button 9-Pin |
| Outline             | 6-2                          |
| Basing              | 9DE                          |
| Cathode             | Coated Unipotential          |
| Mounting Position   | Any                          |
| Shock and Vibration | Note 1                       |

## ELECTRICAL DATA

### HEATER CHARACTERISTICS

|                                                          |           |
|----------------------------------------------------------|-----------|
| Heater Voltage                                           | 6.3 Volts |
| Heater Current                                           | 335 Ma    |
| Maximum Heater-Cathode Voltage (Absolute Maximum Values) |           |
| Heater Negative with Respect to Cathode                  |           |
| Total DC and Peak                                        | 120 Volts |
| Heater Positive with Respect to Cathode                  |           |
| Total DC and Peak                                        | 60 Volts  |

### DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

|                                    | Section 1        | Section 2 |
|------------------------------------|------------------|-----------|
| Grid to Cathode + Heater           | 3.1              | 3.1 pf    |
| Plate to Cathode + Heater          | 0.5              | 0.4 pf    |
| Grid to Cathode + Heater + Shield  | 3.1              | 3.1 pf    |
| Plate to Cathode + Heater + Shield | 1.75             | 1.65 pf   |
| Plate to Grid                      | 1.4              | 1.4 pf    |
| Plate to Cathode                   | 0.18             | 0.18 pf   |
| Plate to Shield                    | 1.3              | 1.3 pf    |
| Cathode to Heater                  | 2.6              | 2.7 pf    |
|                                    | Between Sections |           |
| Plate to Plate                     |                  | .045 pf   |
| Grid to Grid                       |                  | .005 pf   |
| Plate to Grid (Either Section)     |                  | .005 pf   |
| Grid to Cathode (Either Section)   |                  | .005 pf   |

### Grounded Grid Operation

|                                   | Section 1 | Section 2 |
|-----------------------------------|-----------|-----------|
| Plate to Grid + Heater + Shield   | 3.0       | 2.9 pf    |
| Cathode to Grid + Heater + Shield | 6.0       | 6.0 pf    |

### RATINGS (Absolute Maximum Values—Each Section)

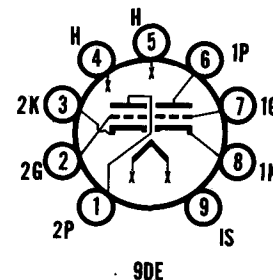
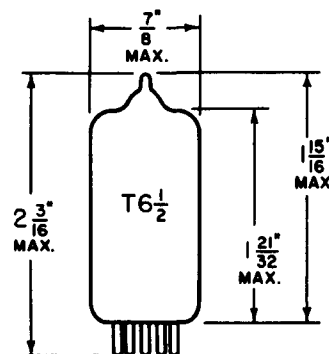
|                                         |            |
|-----------------------------------------|------------|
| Plate Voltage (Cold Cathode)            | 550 Volts  |
| Plate Voltage (Ib = 0 Ma)               | 400 Volts  |
| Plate Voltage                           | 250 Volts  |
| Plate Dissipation (Both Plates) Maximum | 2.2 Watts  |
| Plate Dissipation (Both Plates)         | 2.0 Watts  |
| Plate Dissipation                       | 1.65 Watts |
| Grid Dissipation                        | .03 Watts  |
| Cathode Current                         | 22 Ma      |
| Peak Cathode Current <sup>2</sup>       | 110 Ma     |
| Negative Grid Voltage                   | 110 Volts  |
| Peak Negative Grid Voltage <sup>2</sup> | 200 Volts  |
| Bulb Temperature                        | 165 °C     |
| Grid Circuit Resistance                 |            |
| Fixed Bias                              | 0.5 Megohm |
| Self Bias                               | 1.0 Megohm |

## QUICK REFERENCE DATA

The Sylvania Type 7308 is a T-6 1/2 duo triode designed for use as a multivibrator, cathode follower, VHF amplifier and VHF cascode amplifier.

Special features of the tube are: long life, ruggedized construction, high transconductance, and low noise and microphonics.

The Sylvania 7308 is a special quality twin triode similar to the Sylvania Type 6922.



## SYLVANIA ELECTRONIC TUBES

A Division of  
Sylvania Electric Products Inc.

### RECEIVING TUBE OPERATIONS

EMPORIUM, PA.

Prepared and Released By The  
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RECEIVING TUBES

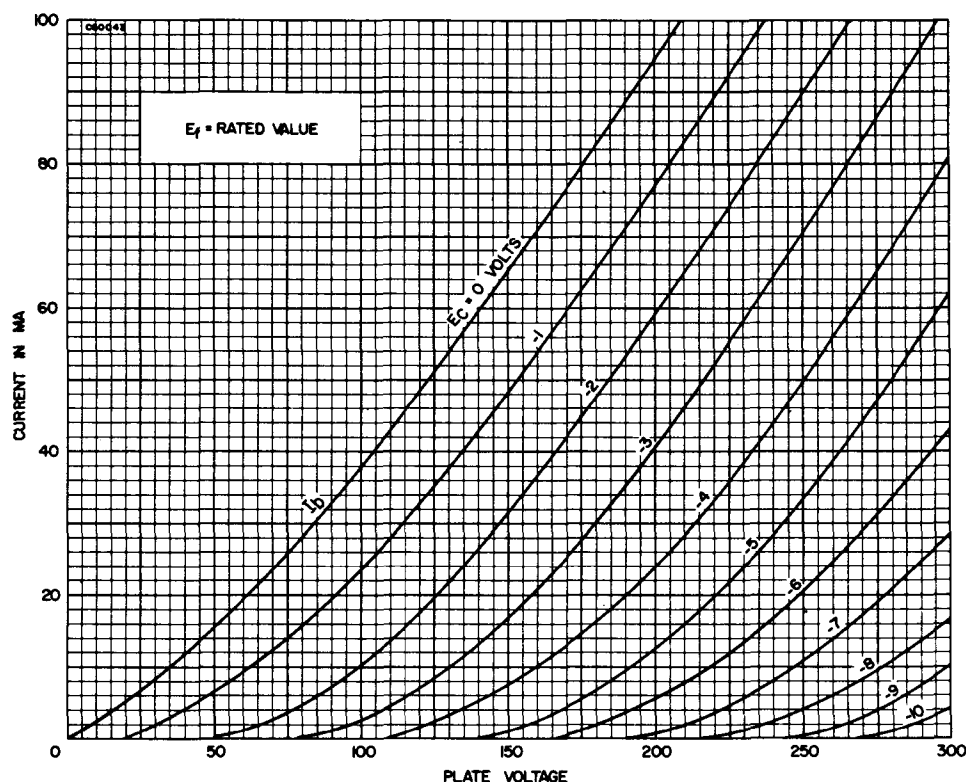
## CHARACTERISTICS AND TYPICAL OPERATION

|                                          |                  |                   |
|------------------------------------------|------------------|-------------------|
| Plate Voltage                            | 100 <sup>3</sup> | 90 Volts          |
| Grid Voltage                             | +9               | 0 Volts           |
| Plate Current                            | 15               | 12 Ma             |
| Cathode Resistor                         | 680              | 120 Ohms          |
| Transconductance                         | 12,500           | 11,500 $\mu$ mhos |
| Amplification Factor                     | 33               | —                 |
| Equivalent Noise Resistance <sup>4</sup> | 250              | — Ohms            |
| Noise Factor <sup>5</sup>                | 4.6              | — db              |
| Input Damping (F = 100 mc/s)             | 3000             | — Ohms            |

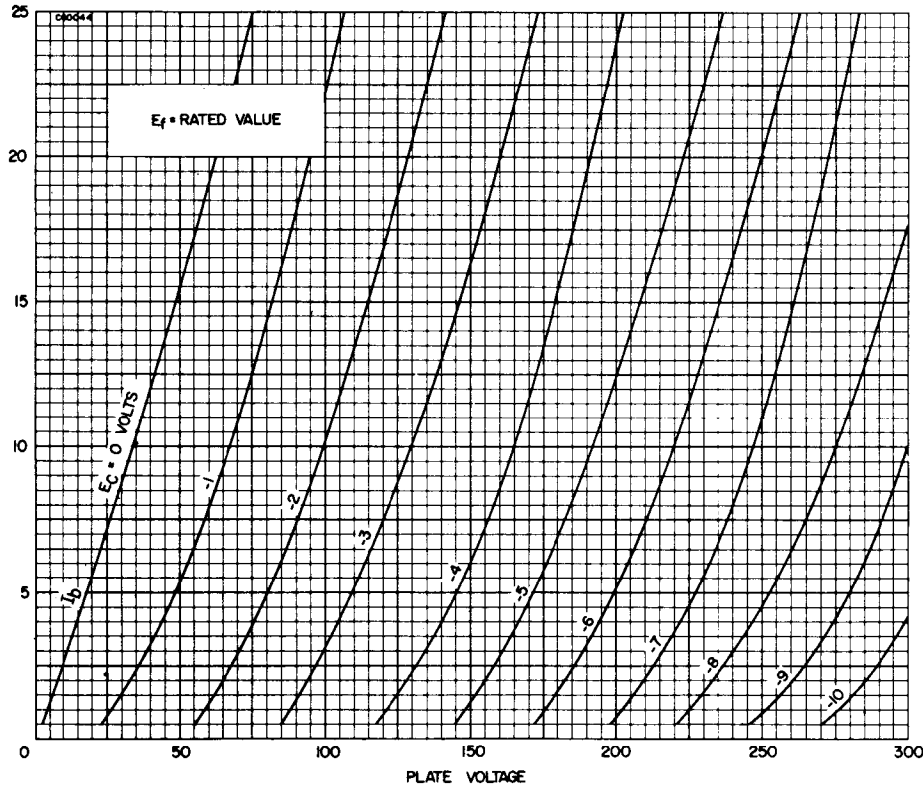
### NOTES:

1. A shock rating of about 500 g was obtained by using the NRL impact machine to deliver 5 blows to the tube at an angle of 30° in each of four different directions.  
A fatigue rating of 2.5 g was obtained by applying vibrational forces for 32 hours in each of three directions at a frequency of 50 cps. These conditions are given for evaluation of mechanical ruggedness. They are not to be interpreted as suitable operating conditions.
2. Pulse Duration, 200  $\mu$  sec. Max.; duty cycle 10 %.
3. Operation under conditions listed in this column is recommended because of the small spread in characteristics.
4. Measured at frequency = 45 mc/s.
5. Measured in a cascode circuit at frequency = 200 mc/s and matched for minimum noise.

## AVERAGE PLATE CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS

