

**SYLVANIA****SYLVANIA****engineering data service****8334****MECHANICAL DATA**

Bulb . . . . .	T-5 1/2
Base . . . . .	E7-1, Miniature Button 7-Pin
Outline . . . . .	5-1
Basing . . . . .	7DK
Cathode . . . . .	Coated Unipotential
Mounting Position . . . . .	Any

**RATINGS<sup>1</sup>**

Operational Altitude . . . . .	80,000 Ft.
Radiation Environment . . . . .	
Total Dosage—(Neutrons/Sq. Cm) . . . . .	$10^{16}$ nvt
Dose Rate —(Neutrons/Sq. Cm/Sec.) . . . . .	$10^{12}$ nv

**DURABILITY CHARACTERISTICS<sup>2</sup>**

Impact Acceleration <sup>3</sup> . . . . .	500 G
Vibration Acceleration for an Extended Period <sup>4</sup> . . . . .	2.5 G
On-Off Heater Cycles <sup>5</sup> . . . . .	2000

**ELECTRICAL DATA****HEATER CHARACTERISTICS**

Heater Voltage . . . . .	6.3 Volts
Heater Current . . . . .	225 mA
Maximum Heater-Cathode Voltage . . . . .	100 Volts

**CONTROLLED DETERIMENTS**

Minimum Interelectrode Insulation <sup>6</sup> . . . . .	100 Megohms
Maximum Total Grid Current <sup>7</sup> . . . . .	-1.5 $\mu$ Adc
Maximum Vibration Output as Equivalent Grid Voltage <sup>8</sup> . . . . .	3.0 mVac
Maximum Heater-Cathode Leakage <sup>9</sup> . . . . .	10 $\mu$ Adc

**DIRECT INTERELECTRODE CAPACITANCES**

	Shielded <sup>10</sup>	Unshielded
Grid to Plate . . . . .	1.7	1.7 pf
Input: g to (h+k+slid) . . . . .	3.3	2.9 pf
Output: p to (h+k+slid) . . . . .	1.8	0.25 pf
Grounded Grid Input: k to (g+h+slid) . . . . .	5.2	5.5 pf
Output: p to (g+h+slid) . . . . .	3.0	1.8 pf
Heater to Cathode . . . . .	2.9	3.0 pf

**RATINGS<sup>1</sup> (Absolute Maximum Values)**

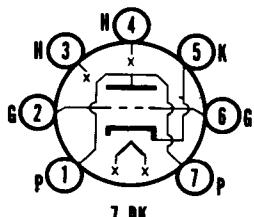
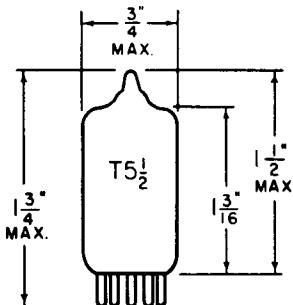
Heater Voltage Variation . . . . .	$\pm 10\%$ Volts
Plate Voltage . . . . .	330 Vdc
Average Cathode Current . . . . .	33 mAdc
Plate Dissipation . . . . .	4.4 Watts
Grid Circuit Resistance . . . . .	1.0 Megohm

**AVERAGE CHARACTERISTICS**

Conditions	
Heater Voltage . . . . .	6.3 V
Plate Voltage . . . . .	200 Vdc
Grid Voltage . . . . .	0 Vdc
Cathode Resistor . . . . .	100 Ohms
Plate Current . . . . .	18 mAdc
Transconductance . . . . .	10,750 $\mu$ mhos
Amplification Factor . . . . .	55
Grid Voltage for Ib = 20 $\mu$ A (Approx.) . . . . .	-7.0 Vdc

**QUICK REFERENCE DATA**

The Sylvania Type 8334 is a miniature high mu triode designed for use as a grounded grid amplifier in UHF applications. The tube is manufactured and inspected to meet the applicable Mil-E-1 specification.

**SYLVANIA ELECTRONIC TUBES**

A Division of  
Sylvania Electric Products Inc.

**RECEIVING TUBE OPERATIONS**  
**EMPORIUM, PA.**

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*File Under*  
**RECEIVING TUBES**

**SYLVANIA**

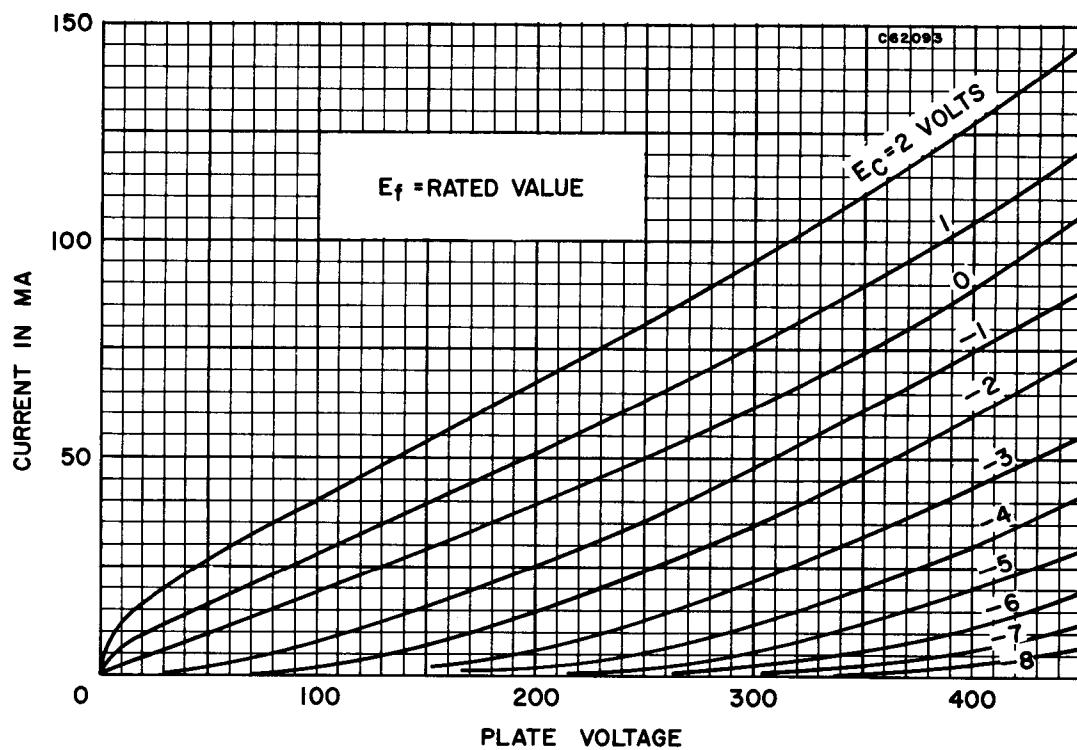
**8334**

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**NOTES:**

1. Limiting values beyond which normal tube life and normal tube performance may be impaired.
2. Tests performed as a measure of the mechanical durability of the tube structure.
3. Force as applied in any direction by the Navy Type High Impact (Flyweight) Shock Machine for Electronic Devices. Shock duration =  $\frac{3}{4}$  milliseconds.
4. Vibrational forces applied in any direction for a period of 96 hours.
5. One cycle consists of the application of  $E_f = 7.5 V$  for one minute and interruption of the filament voltage for four minutes. A voltage of  $E_{hk} = 140 V_{ac}$  is applied continuously.
6. Measure with  $E_f = 6.3 V$ ;  $E_g\text{-all} = -100 V_{dc}$ ;  $E_p\text{-all} = -300 V_{dc}$ ; Cathode is positive so that no cathode emission occurs.
7. Measure with  $E_f = 6.3 V$ ;  $E_b = 250 V_{dc}$ ;  $E_c = 0 V_{dc}$ ;  $R_k = 250 \Omega$ .
8. Test with  $E_f = 6.3 V$ ;  $E_b = 200 V_{dc}$ ;  $E_c = 0 V_{dc}$ ;  $R_k = 100 \Omega$ ;  $R_p = 2,000 \Omega$ ;  $F = 25 \text{ cps}$ ;  $A_{cc} = 2.5 G$ ;  $C_k = 1,000 \mu F$ .
9. Measure with  $E_f = 6.3 V$ ;  $E_{hk} = \pm 100 V_{dc}$ .
10. Capacitances are measured with External Shield No. 316.

## AVERAGE PLATE CHARACTERISTICS



## AVERAGE TRANSFER CHARACTERISTICS

