ADVANCE DATA

MECHANICAL DATA

Bulb	T-3
Base	E8-10, Subminiature Button Flexible Leads
Outline	JEDEC 3-1
Basing	8DG
Cathode	Coated Unipotential
Mounting Position	Any

RATINGS[1] (Absolute Maximum)

Bulb Temperature (Per JEDEC JO-H1)	220 °C
Altitude	80,000 Ft.
Radiation	
Total Dosage (∫ neutrons/sq. sm/sec.)	10^{16} nvt
Dose Rate (neutrons/sq. cm/sec.)	10^{12} nv

DURABILITY CHARACTERISTICS[2]

Impact Acceleration (3/4 msec Duration)[3]	750 G	Max.
Fatigue (Vibrational Acceleration for Extended Periods)[4]	2.5 G	Max.
On-Off Heater Cycles[5]	2000	Min.

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage	26.5 V
Heater Current	90 mA

DIRECT INTERELECTRODE CAPACITANCES

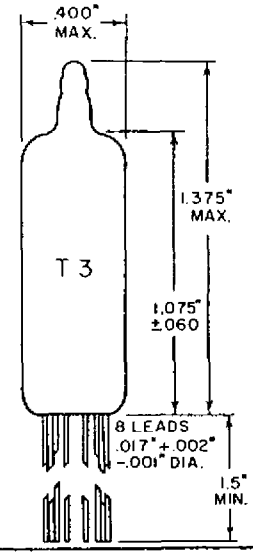
	Shielded[6]	Unshielded	
Grid to Plate (Each Section)	1.4	1.5 μμf	
Input (Each Section): g to (h+k)	2.1	1.9 μμf	
Output			
Section No. 1: p to (h+k)	1.3	0.28 μμf	
Section No. 2: p to (h+k)	1.4	0.32 μμf	
Grid to Grid	0.010	0.011 μμf	Max.
Plate to Plate	0.30	0.50 μμf	Max.

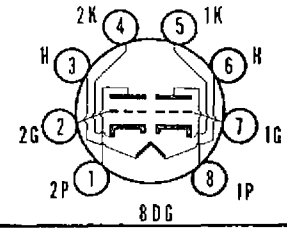
CONTROLLED DETRIMENTS

Interelectrode Insulation[7]	100 Meg.	Min.
Total Grid Current[8]	-0.3 μAdc	Max.
Grid Emission[9]	-0.5 μAdc	Max.
Vibration Output as equivalent Ecl[10]	2.5 mVac	Max.
Heater-Cathode Leakage[11]	5.0 μAdc	Max.

QUICK REFERENCE DATA

The Premium Subminiature Type 7887 is a general purpose, medium mu, double triode having separate cathode connections for each section. It is particularly useful in oscillator, amplifier and low power servo circuit applications. The 7887 is designed to provide dependable operation under conditions of severe shock, vibration, high temperature and high altitude and is manufactured and inspected to meet the applicable MIL-E-1 specification for reliability.





SYLVANIA
ELECTRONIC TUBES
A Division of
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RECEIVING TUBE
OPERATIONS
EMPORIUM, PA.

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from JEDEC release #3120, Jan. 23, 1961

RATINGS[1] (Absolute Maximum)

Heater Voltage	26.5 (±10%) V
Plate Voltage	165 Vdc
Peak Plate Forward Voltage	330 v
Plate Dissipation	1.1 W
Plate Current (Each Section)	22 mAdc
DC Grid Voltage	
Positive Value	0 Vdc
Negative Value	55 Vdc
Grid Current	5.5 mAdc
Heater-Cathode Voltage	
Heater Positive with Respect to Cathode	200 v
Heater Negative with Respect to Cathode	200 v
Grid Circuit Resistance	1.1 Meg

CHARACTERISTICS (Each Section)

Plate Voltage	100 Vdc
Cathode Resistor	220 Ohms
Plate Current	8.5 mAdc
Transconductance	5000 µmhos
Amplification Factor	20
Grid Voltage for Ib = 100 µAdc	-9 Vdc

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 Impace (Flyweight) Shock Machine for Electronic Devices. Shock duration = 3/4 milliseconds.

4. Vibrational forces applied in any direction for a period of 96 hours.

5. One cycle consists of the application of Ef = 29.0 V for one minute and interruption of the filament voltage for four minutes. A voltage of Ehk = 140 Vac is applied continuously.

6. Capacitances are measured with an external shield No. 318.

7. Measure each section separately with Ef = 26.5 V Eg-All = -100 Vdc; Ep-all = -300 Vdc; cathode is positive so that no cathode emission occurs.

8. Measure each section separately with Ef = 26.5 V; Eb = 100 Vdc; Rk = 220 ohms.

NOTES: (Cont'd)

9. Each section preheated for five minutes with Ef = 31.5 V; Eb = 100 Vdc; Rk = 220 ohms; Rg = 1.0 Meg; then each section tested separately with Ef = 31.5 V; Eb = 100 Vdc; Ec1 = -9.0 Vdc; Rg = 1.0 Meg.

10. Test each section separately with Ef = 26.5 V; Eb = 100 Vdc; Rk = 220 ohms; Ck = 1000 µf; Rp = 10,000 ohms; F = 40 cps; Acc = 15 g.

11. Measure each section separately with Ef = 26.5 V; Ehk = ±100 Vdc.