SYLVANIA

TYPE 5977

JETEC Registration Data

TRIODE

The Type 5977 is a subminiature medium-mu triode designed primarily for operation in control circuits. This type is characterized by long life and stable performance. It is suitable for service where severe conditions of mechanical shock and vibration are encountered.

MECHANICAL DATA

GENERAL

Style ..... subminiature
Cathode ..... coated unipotential
Bulb T-3
Base ..... E8-10, Subminiature Button Flexible Leads
Basing 8DK
Connections:
Lead 1 - grid
Lead 2 - no connection
Lead 3 - heater
Lead 4 - no connection
Lead 5 - cathode
Lead 6 - heater
Lead 7 - no connection
Lead 8 - plate

Outline 3-1
Maximum Diameter ..... 0.400 inch
Maximum Overall Bulb Length.. 1.375 inches
Minimum Lead Length ..... 1.500 inches
Mounting Position ..... any

RATINGS(1)

Maximum Impact Acceleration(2).... 450 g
Maximum Uniform Acceleration(3).. 1,000 g
Maximum Vibrational Acceleration for Extended Periods(4) ..... 2.5 g
Maximum Bulb Temperature ..... 250 °C

ELECTRICAL DATA

GENERAL

Heater Voltage (ac or dc) ..... 6.3 volts
Heater Current ..... 150 ma

Life Expectancy:
30 °C Ambient Temperature... 5,000 hours
175 °C Ambient Temperature.. 1,000 hours

Direct Interelectrode Capacitances:

	Unshielded	Shielded(5)
Grid to Plate	1.3	1.3 μμf
Input	2.0	2.0 μμf
Output	0.8	2.2 μμf

RATINGS(1)-Absolute Values

Heater Voltage(6) ..... 6.3(±5%) volts
Maximum Plate Voltage (dc) .... 180 volts
Maximum Plate Dissipation ..... 3.3 watts
Maximum Plate Current ..... 22 ma
Maximum Grid Current ..... 4.4 ma

Maximum Negative Grid Voltage ..... 55 volts
Maximum Heater-Cathode Voltage ..... ±200 volts

CHARACTERISTICS

Conditions:
Heater Voltage ..... 6.3 volts
Plate Voltage (dc) ..... 100 volts
Cathode Resistor ..... 270 ohms
Plate Current ..... 10.0 ma
Amplification Factor 16
Transconductance ..... 4,500 μmhos

Grid Voltage for 10 μa Plate Current ..... -13.5 volts

Noise Output Voltage(7), maximum ..... 50 mv

Notes

(1) Limitations beyond which normal tube performance and tube life may be impaired.

(2) Forces in any direction as applied by the Navy Type High Impact (Flyweight) Shock Machine for Electronic Devices, or equivalent.

(3) Forces in any direction applied gradually, as in centrifuge.

(4) Vibrational forces in any direction at 60 cycles per second for a period exceeding 100 hours.

(5) With external shield of 0.405 inch diameter connected to cathode.

(6) Tube life and reliability of performance are directly related to the degree of regulation of the heater voltage to its center-rated value of 6.3 volts.

(7) Across plate resistor of 10,000 ohms, with applied vibrational acceleration of 15 g at 40 cycles per second.