SONOTONE CORPORATION

TYPE 6223

JETEC Registration Data

PENTODE

The Type 6223 is a sharp cut-off pentode designed for applications where reliable performance under conditions of extreme vibration and shock is essential. The design features include close tolerance on filament current and delta transconductance/Ef, together with resistance to vibration frequencies up to 2000 cycles as indicated by peak to peak readings.

MECHANICAL DATA

GENERAL

Style su Cathode coated u	mipotential Maximum Diameter	0.400 inch	
Bulb	•		
Base Subminiat			
Flex	kible Leads Mounting Position	any	
Basing Connections: Lead 1—grid 1	Ratings		
Lead 2-cathode, shield, grid 3	Maximum Impact Acceleration	n(1) 600 g	
Lead 3—heater		Maximum Vibrational Acceleration for Extended Periods(2)	
Lead 4—cathode, shield, grid 3	for Extended Periods(2)		
Lead 5—plate		Maximum Bulb Temperature (measured	
Lead 6—heater	at hottest point on bulb)	220° C	
Lead 7—grid 2			
Lead 8-cathode, shield, grid 3			

8DE

ELECTRICAL DATA

GENERAL

GENERAL	
Heater Voltage (ac or dc)	Maximum Heater-Cathode Voltage ±200 volts
Life Expectancy:	CHARACTERISTICS
220° C Ambient Temperature (3)1000 hours	Heater Voltage 6.3 volts
Heater Cycle Life (4) 2500 cycles	Plate Voltage (dc) 100 volts
Direct Interelectrode Capacitances:	Cathode Resistor 150 ohms
Shielded*	Plate Current
Grid to Plate 0.015 uuf	Grid No. 2 Current
Input 4.2 uuf	Plate Resistance, minimum 0.175 megohm
Output 3.4 uuf	Transconductance 5000 umhos
RATINGS—Absolute Values Heater Voltage 6.3(±5%) volts Maximum Plate Voltage (dc) 165 volts	Grid Voltage for 10 ua Plate Current9 volts
	Noise Output Voltage 1, maximum (peak to peak) (5) 25 mv
Maximum Grid No. 2 Voltage (dc) 155 volts	Noise Output Voltage 2,
Maximum Plate Dissipation 1.1 watts	maximum (peak to peak) (6) 100 mv
Maximum DC Cathode Current 16.5 ma	Noise Output Voltage 3
Maximum Grid No. 2 Input	maximum (peak to peak) (7) 100 mv
Maximum Negative Grid #1	Operation Time(8)
Voltage 55 volts	Mechanical as per MIL-E-17751A

*Having inside diameter of 0.405" and connected to cathode.

NOTES

- (1) Tubes are held rigid in three different positions in a Navy Type, High Impact (flyweight) Shock Machine and subjected to 600 g impact acceleration. Hammer angle=42°.
- (2) Tubes are rigidly mounted and subjected in each of three positions to 2.5 g vibrational acceleration at 25 cycles per second for 32 hours.
- (3) Life test is made with a heater voltage of 6.3 volts, plate supply voltage of 100 volts, de heater-cathode voltage (heater positive with respect to cathode) of 200 volts, cathode resistor of 150 ohms, grid-No. 2 supply voltage of 100 volts and a grid-No. 1 resistor of 1 megohm. Life test end points: \(\triangle \triangl
- (4) Under the following conditions: heater voltage of 7.5 volts cycled 1 minute on and 4 minutes off; heater-cathode voltage of 140 volts (rms); plate and grid voltages=0.
- (5) Under the following conditions: plate voltage supply of 100 volts with an impedance not ex-

- ceeding that of a 40-uf capacitor, plate load resistor of 10000 ohms, cathode resistor of 150 ohms, cathode bypass capacitor of 1000 uf, vibrational acceleration of 15 g at 40 cycles per second. Free free bar vibrator.
- (6) Under the following conditions: A 100-volt plate voltage supply having an impedance not exceeding that of a 40-uf capacitor, plate load resistor of 10000 ohms, cathode resistor of 150 ohms, cathode bypass capacitor of 1000 microfarads, and vibrational acceleration of 15 g, with sweep frequency of 20 to 500 cycles per second.
- (7) Under the following conditions: A 100-volt plate voltage supply having an impedance not exceeding that of a 40-uf capacitor, plate load resistor of 10000 ohms, cathode resistor of 150 ohms, cathode bypass capacitor of 1000 microfarads, and vibrational acceleration of 10 g, with sweep frequency of 500 to 2000 cycles per second.
- (8) Operation Time is the time in seconds required for the plate current to attain a value of 95% ±5% of the three minute plate current value when measured under average operating conditions.