



TENTATIVE DATA

MECHANICAL DATA

Dimensions	Per Outline
Envelope	T-20
Base	Super-Jumbo 4 pin with bayonet, A4-18 with ceramic insert
Mounting Position (1)	Any

ELECTRICAL DATA AND OPERATING CONDITIONS

RATINGS (Absolute)

	Max.	Min.
Heater voltage	6.3 + 7.5%	-7.5% Vac
Cathode heating time		300 sec
Starting anode voltage		4500 Vdc
Peak anode voltage (2)	16.0 kv	
Peak inverse anode voltage (3)	16.0 kv	5% of peak anode voltage
Peak anode current	325 amps	
Average anode current	200 mAdc	
Rate of rise (cathode current)	1500 amps / μ sec	
Dissipation factor (4)		
Grid drive pulse (5)		
Peak grid voltage		200 v
Time of rise	0.5 μ sec	
Grid pulse duration		2 μ sec
Impedance of grid drive circuit	500 ohms	
Peak inverse grid voltage	200 volts	
Ambient temperature	-50 to + 90°C	

ELECTRICAL CHARACTERISTICS

Heater current at 6.3 Vac	9.6 to 11.6 amps
Anode delay time (max.) (6)	1.0 μ sec
Time jitter (Variation in firing time) (max.)	0.005 μ sec

APPLICATION DATA

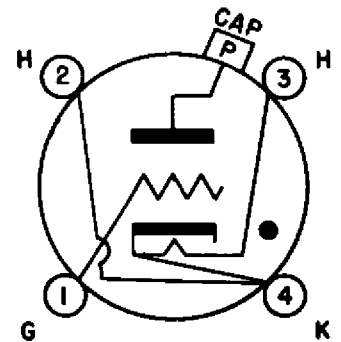
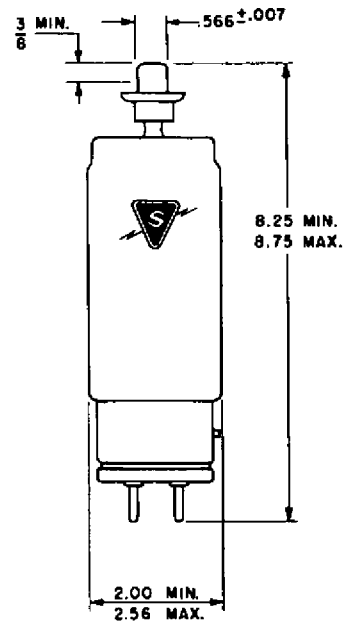
The Sylvania Type 5C22A is a hot-cathode grid-controlled hydrogen thyatron designed for pulsing service at high repetition rates, high peak currents, and high voltages. It is specifically designed to be used in place of the type 5C22 in circuits requiring low time jitter (variation in firing time from pulse to pulse).

The Type 5C22A may be used in a wide variety of applications which will take advantage of such features as:

- | | |
|--------------------------|---|
| 1. Low deionization time | 4. High plate voltages |
| 2. Low time jitter | 5. Moderate trigger requirements |
| 3. High peak currents | 6. Ability to be operated at zero bias. |

QUICK REFERENCE DATA

The Sylvania Type 5C22A is a hydrogen thyatron designed for pulsing service at high repetition rates, high peak currents, and high voltages. It is similar to the type 5C22 with improved time jitter characteristics.



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5C22A

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NOTES:

- (1) The tube may be clamped by the base and/or by the bulb in the area up to 4 ¼ inches above the top of the base.
No cooling stream of air should be directly applied to the tube envelope.
The tube should be kept away from stray fields which could ionize gas in the tube.
- (2) When the plate supply voltage is applied instantaneously, the plate voltage should not read 13.5 kv in less than 0.04 seconds.
- (3) In pulsed operation, the peak inverse anode voltage, exclusive of a spike of 0.05 µsec maximum duration, shall not exceed 5.0 kv during the first 25 µsec after the pulse.
- (4) The maximum dissipation factor depends on the peak forward anode voltage in volts (epy), the peak anode current in amps (ib), and the pulse repetition rate in pulses per second (pr) according to the formula:
$$epy \times ib \times pr = 3.2 \times 10^9 \text{ max.}$$

This formula is applicable for pulse repetition rates in the neighborhood of 1000 pps. For rates in excess of this, special caution should be exercised.
- (5) Measured at tube socket with thyratron grid disconnected.
- (6) The time interval between the point on the rising portion of the grid pulse which is 26% of the maximum unloaded pulse amplitude and the point where anode conduction takes place.